Zoning in on Food Riots, Wild Food and Food Security in Urban Cameroon

by

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This doctoral dissertation contributes to ongoing efforts to understand the causes and consequences of food related unrest or 'food riots', and to know more about the roles that wild, forest foods play in urban food and nutritional security in Cameroon's humid forest zone. It builds upon recent research on food security challenges in the African context through presenting data gathered over the course of five field visits to Cameroon between 2010 and 2013. Over the course of the research more than 400 household and market surveys of wild food traders and consumers were conducted, as well as over 100 semi-structured elite interviews. The dissertation proceeds through briefly reviewing the literatures on riots and forest products in Africa before detailing the methodology that informed the research. Subsequently, two manuscripts on riots are presented. The first offers a content analysis of media reports on the 2007-08 and 2010-11 riot events that sought to explain a link between food price volatility and riots in 14 African countries. The second riot-related manuscript presents a comparative analysis of the riots that occurred in Haiti and in Cameroon in 2008. The thesis then turns to the wild food theme through presenting a manuscript rooted in survey data that shows how wild foods feature in the diets of urban Cameroonians, and that reveals
local perspectives on the factors that impede the consumption of these foods. The final manuscript on wild foods contributes to the efforts of human geographers to better conceptualize the ‘zone’ in their research. It draws on survey data to show how the humid forest zone is a consequential concept vis-à-vis the analysis of Cameroon’s urban wild food trade. Overall then, to summarize the intellectual contributions of this work, the analyses presented in this dissertation show that food needs to be decentered from the study of riots in the African context, and that food must be brought to the fore in studies of edible wild forest products.

Keywords: food riot; wild food; food security; urban geography; Cameroon
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MULTIPLE AUTHORSHIP STATEMENTS

The manuscript *Food Riots: Media Perspectives on the Causes of Food Protest in Africa* was co-authored by Lauren Sneyd, Alexander Legwegoh and Evan D.G. Fraser. Following the guidelines set forth by the Department of Geography, the work predominantly comprises the intellectual contribution of the first author: conceptualization (LQS 50%, AL 25%, EDGF 25%); gathered data (LQS 60%, AL 40%); analysis (LQS 60%, AL 40%); writing (LQS 70%, AL 20%, EDGF 10%).

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1. INTRODUCTION

The 2007-08 Global Food Crisis brought the diversity of Africa’s food security challenges to light (Clapp, 2009; Ghosh, 2010). For decades Western media consumers had been subjected to the overly simplistic view that Africa was a hungry continent; a place where there simply was not enough food available to feed everybody, and where periodic famines and mass starvation recurred. As global food and fuel prices rose during the crisis, scholars and researchers working on African food emphasized a different set of problems: those associated with the inability of many Africans to pay for or access sufficient food (Cohen and Garrett, 2010; Crush and Frayne, 2011; Toye, 2009). In the context of the food and fuel crisis experts also identified a surge in state-backed, export-oriented land acquisitions and initiatives to produce biofuels for global markets on African soils (McMichael, 2011; Zoomers, 2010). Surveying these changes, the UN Food and Agriculture Organization issued a warning about impending ‘food neo-colonialism’ (Blas, 2008). Subsequently, as the World Bank prioritized agricultural investment and billionaire philanthropists and their foundations sought to increase agricultural productivity in Africa through the Alliance for a Green Revolution in Africa (AGRA), many Africans experienced consequential food price stress (Sasson, 2012). Social unrest in African cities hit the front pages. Thereafter, as food imports continued to surge, nutrition, diets and the cultural implications of Africa’s growing reliance on global food markets also came to the fore. Population growth, climate variability and change and Africa’s indigenous, traditional forest products – including edible insects – later became part of global conversations on the adequacy of African diets, and on Africa’s food futures more generally (Palm et al., 2010; FAO, 2013; Steyn and McHiza, 2014).

This thesis brings together and advances research on two topics from the range presented above that have attracted considerable attention since the crisis. The
thesis aims to bring greater academic rigor and conceptual clarity to the literature on social unrest or ‘riots’ at times of price stress, and also to the literature on the contributions forest products make to food security. On the first topic, scholars, policy-oriented researchers and journalists have devoted many articles and books to elaborating a concept they characterize as food riots (Bohstedt, 2010; Thompson, 1971; Tilly, 1983; Walton and Seddon, 1994). Regarding forest products, academics, professional researchers and journalists have devoted numerous works to elaborating a concept they refer to as non-timber forest products (NTFPs) (Ribot, 2010; Shanley, Pierce, Laird, and Guillen, 2002; Sunderland and Ndoye, 2004). This thesis shows that literatures on food riots and non-timber forest products do not adequately situate riots and forest products in the context of food security. The dissertation proposes an alternative conceptualization of riots: one that decenters the role of food. On the other theme, it advances the notion food should be brought to the fore in discussions of non-timber forest products. Many of these should be re-characterized as ‘wild foods’. By decentering food from riots and bringing food more fully into the treatment of forest products this thesis breaks new academic ground. Each of the themes will be discussed in turn below.

My research on riots endeavored to correct a silence in the global food security literature on riots in Africa. Specifically, this work has been profoundly silent on domestic perspectives on why riots have occurred. Global food security researchers studying riots in Africa have tended to assume linkages – however strong or weak – between riots and food insecurity (Berazneva and Lee, 2013; Holt-Gimenez and Patel, 2009; Messer and Cohen, 2011; O’Brien, 2012; Sasson, 2012). The commonly held belief has seemingly been that rising food prices make people desperate, and that this desperation destabilizes economies and destabilizes governance. E.P. Thompson (1971) argued that “rebellions of the belly” or desperation over food was too simple of an explanation when identifying the causes of a food riot. However, much of the research and media attention to this topic between 2007 and 2011 focused on this line of argumentation. For example, international media coverage sought to draw a causal link between poverty, hunger and riots. High-level
international personalities, including Dominique Strauss-Kahn, then managing
director of the IMF, and Robert Zoellick, then president of the Word Bank, reiterated
their agreement with this apparent ‘causal link’ in 2008 and 2011 respectively. This
thesis encourages scholars and policy-makers to rethink their perspectives on the
role of food in African riots. My research indicates that reactions to authoritarian
rule are also a key stimulant to riots. In the African context, it might also be the case
that empirical linkages between food shortages and riots might not exist empirically. Treatments that play-up ‘food riots’ consequently advance the
politically controversial and empirically erroneous notion that the world is running
out of food.

Many scholars have assuredly worked to refute the supposed ‘poverty-hunger-riot’
link, and some have even attempted to show that there are more factors at play than
food (Bush, 2010; Patel & McMichael, 2010). These scholars have argued that a loss
of sovereignty, structural deprivation and an erosion of entitlements drive riots
(Patel and McMichael 2010). However, scholarly outputs in this area have engaged
primarily in abstract, theoretical discussions of riots. Scholarship that has
questioned linkages between riots and food has not as yet been rooted in empirical
studies of perspectives from African markets on the drivers of food related unrest.
The global literature on this topic has not yet touched on local perceptions on food
related unrest. My research from Cameroon shows how there are differing
interpretations of what a food riot is even in one country, and also between
countries. The first paper in this thesis, published in Food Security, is a content
analysis comparing perspectives from global and domestic media sources on food
price rises and riots. My research stresses the need to take better account of
differing local perceptions of what a riot is, and the causes and consequences of a
riot event beyond price.

Scholars have only recently begun to ask people themselves about ‘food riots’ and
their possible linkages between food and other political economic factors. Recent
research on riots and food rights indicates that the preconditions for social unrest of
this type are more complex than previously thought (Hossain and Kalita, 2014). In one case, Engels (2014) argues that the protests in Burkina Faso in 2008 were more about the rising cost of living than the cost of food, and that rising food prices provided an opportunity for mobilization around the broader issue. Building on Hossain and Kalita’s work, the second paper in this thesis compares the riots that occurred in Haiti and in Cameroon. The survey work for this comparative study asked people in markets about riots about what they remembered their causes to be, and also their perceptions of the implications of the riot events. The contribution to knowledge of this paper is thereby straightforward. I sought to bring local perspectives on riots more fully into the global food security literature through original, country-based empirical research and a comparative approach.

Turning to the other area of focus of the dissertation – wild foods in Cameroon and in Africa – scholars and the international development research community including the UN Food and Agriculture Organization (FAO), the Centre for International Forestry Research (CIFOR), and the World Agroforestry Centre – have approached Africa’s forest food economies primarily through the lens of non-timber forest products (NTFPs) or non-wood forest products (NWFP) (D. Brown et al., 2009; H. C. P. Brown and Lassoie, 2010; Dauvergne and Lister, 2011; Degrande et al., 2006; Ingram, Ndoye, Iponga, Tieguhong, and Nasi, 2000; Kiptot, Franzel, and Degrande, 2014). NTFPs are a catch-all category that include all biological materials other than timber that are extracted from forests for human use (Belcher, 2003). This approach to conceptualizing forest products has informed quantitative analyses of the rural gathering of these products and the associated community challenges (Shackleton, Shanley, and Ndoye, 2007; Tieguhong and Ndoye, 2007). The NTFP framework has also been used effectively to promote forest conservation in the face of deforestation (Sunderland and Ndoye, 2004). Moreover, it has been employed as a way to understand how rural livelihoods in forested areas might be improved through NTFP production and trade (Belcher 2003; Wiersum et al. 2014).
This framing has detracted attention from the ways that numerous edible NTFPs continue to be used by many rural and urban Cameroonians as sources of dietary and nutritional diversity. As such, through characterizing these traditional foods as NTFPs and focusing on the community/conservation/livelihood context, many researchers working in the international development community in Cameroon have not spoken to the broader food security implications of these foods. This oversight has created a knowledge gap. NTFP researchers have not delved deeply into the wild food economies in the places where demand for these foods is highest: urban markets. This thesis builds on the foundation established by NTFP researchers in Cameroon and proposes a more food-based conceptualization of forest products. It is simply the point of this aspect of my dissertation to note that the focus of NTFP researchers on considerations of income and employment opportunities associated with the production and sale of forest products has obscured several consequential food security phenomena.

The NTFP lens has not enabled a research focus on the perceptions and needs of the people in local cities that demand forest foods. Similarly, the perspectives of local urban wild food traders have been absent from this literature. As such, the contributions that forest foods make to food security have not been subject to detailed study.

The limitations of the NTFP concept are explored in manuscripts three and four of the dissertation. My focus on wild foods in urban Cameroon shows that forest foods account for a large percentage of urban household food budgets. There is profound dietary and cultural reliance on these foods. As such, wild foods make a qualitatively significant contribution to the food security status of urban households. Many of the most significant NTFP studies in Cameroon was conducted before the food price crisis of 2007-2008 and 2010-2011 drew attention to the role of forest foods in Cameroonian food security (Perez et al. 2002). As food challenges persist, the reframing of edible NTFPs as wild foods consequently remains a key research and policy challenge. The possible examples here are many. For instance, my study
shows what happened after the government imposed staple food price subsidies to reduce food price volatility and quell riots, and how this subsidy scheme reduced the affordability of forest foods that were not targeted for subsidy. Through exclusively targeting staples, the price relief ‘solution’ ensured that nutritionally rich wild foods were subject to inflationary pressures. These foods became relatively more expensive for Cameroonian to buy over the course of my research, while regular people relied more on imported grains to get by in the context of broader price inflation. But as I detail below, the subsidy did not do away with Cameroonian’s revealed and stated preferences for wild forest foods. Moreover, re-conceptualizing NTFPs as wild foods is in tune with a new policy-oriented research agenda lead by the FAO on foods from the forest. The Edible Insect (2013) report produced by the FAO has shed new light on the importance of new investments in traditional yet unconventional food sources for food security.

In sum, this thesis de-centers food from the treatment of riots in the African context. It also brings food to the center of discussion on forest products. In addition to these original scholarly contributions to the literature on Africa’s development and food security challenges, the dissertation advances conceptual development in the field of geography. To do so the fourth paper of the thesis situates wild foods within their ‘zones’ of production and consumption. This work encourages geographers to continue to think more about a term – the ‘zone’ – often employed in geographic study, and contributes to ongoing efforts to add greater clarity and intellectual rigor to this concept.

***

The Introduction proceeds below through first reviewing the structure of the research in terms of its themes, objectives and papers. A brief presentation of my scholarly contributions concludes this introductory section.
The structure of the research: Two themes, four objectives and four papers

The core of my research is made up of two themes, each with two objectives as portrayed in Figure 1. Each of the research objectives is matched with a manuscript.

![Figure 1. The two themes of the research and the four research objectives](image)

**THEME 1:** To study the 2007-08 and 2010-11 *food riots* in Africa. The research on this theme had two objectives:

**Objective 1)** Document and chart, according to the international and local African media, the link between the 2007-08 and 2010-11 food price volatility and food riots in Africa

Manuscript One:
Objective 2) Empirically compare how people remember the food riot events of 2008 in two countries (Haiti and Cameroon) that experienced food related unrest and the impacts on the realization of food security.

Manuscript Two:

THEME 2: To study the role of wild foods in forested food systems. Two objectives guided the research:

Objective 3) Document the role and importance of wild foods in Cameroon’s urban humid forest zone and document how diets are changing after the 2008 food price crisis.

Manuscript Three:

Objective 4) Make a theoretical contribution to human geography by exploring how the concept of the ‘zone’ informs a study on Cameroon’s urban wild food trade.

Manuscript Four:
Sneyd, Lauren Q. (accepted pending revisions) “Zoning In: The contributions of buyam-sellams to constructing Cameroon’s wild food zone” Geoforum.
Summary of my contributions to scholarship

The concluding section of each manuscript emphasizes the contributions that this thesis makes to knowledge and scholarship. The overall conclusion of the thesis draws together many of the concluding points made in each manuscript. To briefly recount one of the principal overarching points, the thesis draws together the intersection of food price volatility, social unrest and dietary change. Regarding social unrest, the main empirical contribution is that the episodes of social mobilizations termed ‘food riots’ by the press were really about much more than food. Participants used ‘riots’ as platforms to challenge broader governance challenges such as authoritarianism and social exclusion. This finding has implications for domestic policy insofar as it demonstrates that governments in Cameroon and elsewhere are likely to have a lot more on their plates than high food prices when it comes to redressing the concerns of future rioters. Scholars focusing on ‘food riots’ consequently need to pay much more attention to the political contexts surrounding these events, as causal connections between riots and high food prices cannot be assumed a priori.

Turning to the main empirical contributions of the two manuscripts on wild food, these show the effects of the high food prices on diets in urban Cameroon’s humid forest zone. The survey results suggest that many in Cameroon have experienced a nutrition transition out of necessity, and not necessarily out of popular desire or personal preference. This dietary transition emerged in the context of a surge in imported foods after higher and more volatile staple food prices forced the government to embrace staple food subsidies while letting the prices of wild foods freely float. The staple subsidies were implemented in response to the 2008 ‘riots’: a policy development that established a clear rationale for the dual focus of this thesis on wild foods and social unrest. My findings on the dietary transition recounted in the manuscript on the ‘zone’ are important for policy as they document numerous
governance and market failures tied to the persistent informality of the wild food sector. These findings contribute to scholarly debates on the nutrition transition across Africa through showing that policies that contribute to making staple foods more accessible might have the unintended effect of undermining the nutritional adequacy of diets. To durably enhance dietary adequacy and make Cameroon's food system work better for nutrition, greater policy attention to the ways and means necessary to sustainably enhance wild food availability is warranted.

***

The dissertation now turns to a literature review that details the concepts and literature that informed the study. Afterwards the project’s methodology is presented. That chapter explains the objectives of the data collection and fieldwork necessary for this study. The four manuscripts follow sequentially. At the outset of each of these chapters a statement about the research and writing process specific to each manuscript has been included. Subsequently, the practical implications of the wild food research for food security policy and practice are detailed. The conclusion then covers my theoretical, empirical and conceptual findings and contributions. Also included in the dissertation are two appendices. The first of these includes the non-peer reviewed media outputs related to this research project. The second includes all of the surveys that were used for data collection in Cameroon.

References


2. LITERATURE REVIEW

To better frame and articulate the linkages between the four papers, a literature review is presented below. This review is structured to emphasize the three premises of the research and cover the core literature that informs the four manuscripts. In terms of organization, the review subsequently commences through presenting an analysis of the definitions of food security and how those definitions have changed over time. This broad review of definitions establishes ways of conceptualizing food security outcomes and identifies major themes in this literature that appear throughout the dissertation. The review then considers how the geographical concept of scale is employed to study food and food systems in Africa. My take on the limitations of this concept for analyzing Cameroon’s wild food trade is presented in the fourth manuscript, where I argue that it is necessary to explore or employ another geographical concept: the ‘zone’. Next, the review focuses on the literature on historical food riots and considers what ‘food riots’ are and what they represent today. The review continues through outlining how wild food features in the food security literature and identifying key concepts in the area on forest food and dietary change. The review ends by engaging with notions of men’s work and women’s work in African food systems, and with insights that seek to explain the challenges and opportunities women face to earn a living in urban African food sectors. This latter literature informs the fourth manuscript and the practical implications of the findings from the analysis on wild food.

My research shares three premises conveyed by three distinct literatures: (i) from the political economy literature, the premise that the political and economic realms are not distinct or separable (Friedmann 1993, Roseberry 1994, Leys 1996, Harvey 2006); (ii) from the geography literature, the premise that a spatial level of analysis is required to comprehend food security challenges and opportunities (Grivetti 2000, Jessop, Brenner and Jones 2008, Watts and Bohle 1993); and (iii) from the development studies literature, the premise that ‘development’ is a desirable
condition entailing processes of qualitative social change (Johnson 2009, Peet and Hartwick 2009, Scoones 2009).

Regarding the first theoretical premise, it was clear at the outset that a study of the ways that wild foods contribute to food security for example, would fall short if it focused solely on analyzing the political factors that undermine food security outcomes in Cameroon, or exclusively on the economic factors that bear upon the production, distribution, marketing, trade and consumption of wild food products. The study of any particular food stuff (wild foods in the case of this research) and the contributions of states and markets to food security or the lack thereof may be more richly understood if these factors are studied in tandem. Similarly, a study of food riots would fall short if politics were separate from economics in the analysis.

As regards the second theoretical premise, to understand the obstacles and possibilities facing people connected to Cameroon’s wild food system for example, there is a need to differentiate places and spaces of food security and insecurity (Niles and Roff 2008). City dwellers relied increasingly on rising quantities and varieties of local wild food products found within urban areas to fight staple food price inflation (Gockowski et al. 2003, Mahyao et al. 2009). It is possible that direct producers of wild foods in peri-urban and rural areas might not be as food secure as those that they supply or vice versa. A spatial level of analysis draws attention to this potential inequity within the political economy of wild food systems. Therefore, to understand food security and the empirical ways that wild foods may contribute in food security it is necessary to understand the place (Bebbington 2003).

On the third premise, food security is ultimately a development concept (Baro and Deubel 2006, FAO 1996, Fullbrook 2010, Jha 2009). The concept projects a view of development as a desirable process of qualitative social change. Food security has been broadly defined as the availability and accessibility of food for maintaining an adequate diet (Pinstrup-Anderson 2009). My research and approach assumes that processes of globalization and development are not spread evenly across space and
time. Also, the processes of development are not experienced in the same ways across the globe. To further a study on regional food systems and globalization in developing countries and in understanding the complexity of food security, all of the literature listed in this document allows for an exploration into various theories, concepts and methods as they relate to the study of food.

**Definitions of food security over time**

To understand the contribution of this thesis in more detail, it is first necessary to explore definitions of food security and how they have changed over time. Using a general understanding of environments, a “food system may be described simply as a process that turns natural and human-made resources and inputs into food” (Pinstrup-Andersen 2010: 1). Food systems are not stagnant. Pinstrup-Andersen argues that food systems “can change in response to changes in the behavior of the various decision makers and agents in the system, such as consumers, producers, market agents, resource owners, nongovernmental organizations, and governments” (2010: 1). Further, food systems operate within biophysical, socioeconomic, political and demographic environments (Pinstrup-Andersen 2010: 2). Stretching this evaluation can bring about an understanding as to “how and why food is produced (or not produced), the ways in which it is distributed (or not distributed) and the manners in which it is, variously, prepared, eaten, shared, thought about, imagined, discussed and fought over in different parts of the world” (Inglis and Gimlin 2009: 3).

The definition of food security has changed over time, but three themes in the literature have generally remained constant: the availability of food, its accessibility or affordability (or lack thereof) and appropriateness of food. In this section, I will first discuss several ideas about what food security is; next I will review the definitions as they changed over time. I will then discuss themes in the food sovereignty literature that help us to understand the local dimensions of the food
security concept. Finally, I will discuss the manifestations of policy outcomes that can be linked to the 1996 definition of food security.

What food security is and how it can be improved are “widely debated” (Pottier 1999). Part of the problem with defining food security is that the concept is concerned with interconnected domains that seek to address questions of agriculture, population, society, environment, employment, income, marketing, health and nutrition (Pottier 1999; Jha 2009). Definitions of food security are interesting for geographers as conceptualizing the phenomenon necessarily entails discussions relating to time and space. More specifically, three key elements that jointly comprise food security are the availability of food resources, access to those resources and sufficient consumption and appropriate utilization of food in a sanitary and nutritious manner. Without all of these elements, food security cannot be assured in particular places or at particular times (Baro and Deubel 2006:526). These key elements also suggest issues of scale as they entail attention to the status of populations at the international, national, community and household levels (Baro and Deubel 2006). Global and local forces impacting food security outcomes are dynamically interrelated and the impact of external structures differs according to geographic location (McMichael and Schneider 2011).

Patel argues that it is possible to tell a coherent story of the evolution of ‘food security’ definitions by looking at the particular times and political economic contexts within which they were articulated (2009: 664). Fairbairn (2010) would agree with this statement and would extend this analysis by attempting to frame and categorize the international political and economic contexts within which different definitions have emerged.

Fairbairn found that the concept of ‘food regimes’ developed by Harriet Friedmann and Philip McMichael (1989) is a useful tool for linking international relations of food production and consumption through periods of capitalist accumulation (Burch and Lawrence 2009; Fairbairn 2010; Friedmann 2009, 1982; McMichael
food regimes, I will address the demarcation of the changing nature of the food system and draw linkages to scholarly debates.

Food was very much at the forefront of development thinking in the 1970s. Food security was initially conceptualized as a global supply problem: the world needed to secure flows of basic foodstuffs at stable prices. Guyer indicates that there were frictions with this prevailing idea insofar as “‘cheap’ and ‘predictable’ were always in potential tension” (1987a: 144). Initially, scholars and UN agencies such as the Food and Agriculture Organization (FAO) offered a definition of food security within a context of increasingly volatile prices and supply constraints (Patel 2009). Following a “large grain glut in the immediate postwar world food economy, a massive shortage of staple foodstuffs emerged” (Watts 1983: 1; Friedmann 1982). The earliest definition of food security was offered up at the World Food Conference of 1974 and focused on “the availability at all times of adequate world supplies of basic foodstuffs to sustain a steady expansion of food consumption” (Baro and Deubel 2006: 525). The first official framing of ‘food security’ at the World Food Conference in 1974 reads:

The availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices.

The definition above was agreed after the world food crisis in 1972. At that time “several parts of the world experienced poor harvests, leading to the massive sale of U.S. grain to the Soviet Union,” effectively eliminating the U.S. grain reserve.
(Fairbairn 2010: 21). This forced policymakers to “reevaluate their accustomed approach to food and hunger” (Fairbairn 2010: 22; Swan et al. 2010).

A 1977 World Bank working paper operationalizes food insecurity as:

The probability of food grain consumption in developing countries falling below a desired level due to a fixed upper limit on the food import bill they can afford and an unfavourable combination of poor harvests and world food grain prices.

This definition focuses on food availability at the national level and implies government intervention in markets. A FAO report from 1981 extends the concept to yet another definition:

Food security in its broadest sense is the availability of adequate food supplies now and in the future. In the narrower sense, food security means food stocks and arrangements to govern their establishment and use as a protection against crop failures or shortfalls in imported food supplies (Fairbairn 2010: 23).

This definition implies that states are responsible for steady food supplies: if supply cannot be maintained, government intervention is necessary. By 1986 this approach had shifted to an emphasis on food access, as shown by the World Bank’s definition of food security as “access by all people at all times to the food required for them to lead a healthy and productive life” (Baro and Deubel 2006: 526).

While some of these definitions have not taken hold, the 1996 definition is most widely used today. This definition was agreed by 182 countries at the 1996 World Food Summit, and gave the world a new set of concepts to work with:

Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.
The underpinnings of this definition, it is believed, stem from Sen’s 1981 work, *Poverty and Famines*. This work challenged the idea that national food availability does not necessarily translate into household food access. The food security definition underwent a parallel shift in focus from national supply to individual caloric intake. The 1996 definition “hinges on individual access rather than national-level food availability” (Fairbairn 2010: 24). Further, this definition followed structural adjustment and other neoliberal policies largely reflecting relations of power that “characterize decisions about how food security should be attained” (Patel 2009: 665). Consequently, Sen effectively introduced a language that shifted food security attention from states to individuals (Peet and Hartwick 2009). (See paper three also published in Sustainability in 2013 for a conceptualization and operationalization of Oliver de Schutter’s (2010), the UN Special Rapporteur on the Right to Food, definition of food security).

What makes the 1996 shift so interesting is that it created a space for nutritionists to join the debate to re-define and re-shape what seems to be a largely taken for granted concept. By shifting the ontological focus, nutritionists called for definitions that went beyond staple food security and argued for micronutrient food security (Kuhnlein, Erasmus, and Spigelski 2009). The 1996 definition made it clear that “access to a nutritious diet is inherent in food security... sufficient calories without the needed balance of macro and micronutrients would make a ’healthy and active life’ impossible” (Herforth 2010: 138; Pinstrup-Andersen 2010). Additionally, the definition has been used synonymously with ‘caloric adequacy’ as the only measurement of food security used around the world “continues to be national-level per capita calorie availability” (Herforth 2010: 139). Table 1 below charts the changing definition of food security, the focus found within the approach and the impact of the definition.
### Table 1. Changing Definitions and Approaches to Food Security

<table>
<thead>
<tr>
<th>Year</th>
<th>Definition</th>
<th>Focus (Approach)</th>
<th>Impact/Result/Shift</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974 World Food Conference</td>
<td>The availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices</td>
<td>Eliminate large U.S. grain glut of the postwar food economy after poor harvests in several parts of the world</td>
<td>Shortage of staple foods</td>
</tr>
<tr>
<td>1977 World Bank working paper</td>
<td>The probability of food grain consumption in developing countries falling below a desired level due to a fixed upper limit on the food import bill they can afford and an unfavourable combination of poor harvests and world food grain prices.</td>
<td>Focuses on food availability at the national level</td>
<td>Government intervention in food markets</td>
</tr>
<tr>
<td>1981 FAO report</td>
<td>Food security in its broadest sense is the availability of adequate food supplies now and in the future. In the narrower sense, food security means food stocks and arrangements to govern their establishment and use as a protection against crop failures or shortfalls in imported food supplies</td>
<td>States are responsible for steady food supplies</td>
<td>If supply can not be maintained, government intervention is necessary</td>
</tr>
<tr>
<td>1996 World Food Summit</td>
<td>Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe food</td>
<td>National food availability does not translate to household food access; focus on individual caloric</td>
<td>Steers development thinking towards increasing calories neglecting other facets of meeting nutritional needs</td>
</tr>
</tbody>
</table>
and nutritious food that meets their dietary needs and food preferences for an active and healthy life. 

\[ \text{intake; focus on staple crops} \quad \text{and stronger reliance on global food markets} \]

Expanding on this idea, scholars interested in rural livelihoods, note that the prevailing 1996 FAO definition of food security invites an interpretation towards food related policies that emphasize “maximizing food production and enhancing food access opportunities, without particular attention to how, where and by whom food is produced” (Wittman, Desmarais, and Wiebe 2010: 3). This definition is also uncritical of current patterns of food consumption and distribution. This approach and the resulting policy has been characterized as the “‘free market approach to food security’, with the basic premise being that increased foreign exchange would enhance a country's capacity to access the bounty of global food markets, bringing lower prices and more stable supplies” (McMichael, 2005; Weis, 2007). However, for many countries of the Global South, the net long-term result has been “deepening dependence on cheap food imports, while agro-export earnings of tropical commodities have been subject to protracted declines in terms of trade” (Weis 2007; Holt-Gimenez 2009). Increased food supply “does not automatically mean increased food security for all” (UNCTAD-UNEP 2008: 3). What is important is “who produces the food, who has access to the technology and knowledge to produce it, and who has the purchasing power to acquire it” (UNCTAD 2008: 3). Moreover, a focus on increasing agricultural yields and food production has neglected the fact that the issue for food security is one of access and utilization as much as availability (Swan et al. 2010: 116; Sen 1981).

While this thesis does not focus on food sovereignty, the concept is included in this review. Food sovereignty was coined in 1996 to recognize the political and economic power dimension inherent in the food and agriculture debate (Rosset 2008; Holt-Gimenez and Patel 2009; Edelman and James 2011). Food sovereignty,
broadly defined is “the right of nations and peoples to control their own food systems, including their own markets, production modes, food cultures and environments” (Wittman 2010: 2). It is a critical alternative to the dominant model for agriculture and trade. It calls for the control of the productive resources (land, water, seeds and natural resources) to be in the hands of those who produce food. This seemingly simple idea of democratizing the food system has been couched in local struggles for autonomy and power that a highly globalized food system has restructured.

The notion of food sovereignty evolved from the experience of those most immediately affected by a series of pro-market reforms in national and international agricultural policy introduced in the 1980s and 1990s (Chang 2009; Peet and Hartwick 2009). The food sovereignty ‘movement’ argues that governments and agri-business corporations have pursued food security goals by promoting increased agricultural trade liberalization and the concentration of food production in the hands of fewer, and larger agri-business corporations (Weis 2007; Bello and Baviera 2010). This has had devastating impacts on domestic agricultural systems. These systems have not been able to compete with the influx of subsidized ‘global’ commodities that have saturated ‘local’ markets. Adherents to the food sovereignty perspective would argue that domestic agriculture systems in Africa will not be able to ensure food ‘security’ unless or until they can become more self-sufficient and autonomous. Global calls for food sovereignty focus on bringing about change that improves the livelihoods of land-based peoples - change that enhances local food production for local consumption, change that is based on the equitable distribution of power and control over resources, and change that opens democratic spaces and empowers peoples with a greater say over issues affecting their daily lives (Navarro and Desmarais 2009).

The calls for bringing about these changes are part of the global food sovereignty movement and are gaining traction in many parts of the globe.
In terms of measurability and manifestations of policy outcomes, no indicator is consistently used across Sub-Saharan Africa to measure the prevalence of food insecurity understood in this context as per capita calorie availability, but approximations show that food insecurity presented in this (limited) way is widespread (Herforth 2010: 132; Pintrup-Andersen 2009; Shipton 1990). Measuring food security in terms of “per capita calorie availability” frames the food security problem as inadequate calories thus steering development thinking towards a solution that involves increasing calories, “while neglecting other facets of meeting nutritional needs” (Pintrup-Andersen 2010; Burchi, Fanzo, and Frison 2011; Lang 2005). This approach to the problem has pushed research and policy agendas to focus heavily on securing and producing staple crops such as rice, corn and wheat (Herforth 2010; Johns and Sthapit 2004; Shrestha and Dhillion 2005; Wilkes 1977). Further, overlooking the need for dietary diversity, the current measurement of food security as per capita calorie availability, “fails to generate political priority for foods that deliver essential nutrients” (Herforth 2010: 139; Thrupp 2000; see also paper three and the dietary change and forest food section below). It sets a paradigm of planting starch crops that generate the maximum food calories per unit of land, although cultivating a diversity of crops has greater possibilities for protecting ecosystem services and human health (Grivetti and Ogle 2000; Bharucha and Pretty 2010; Gockowski, Mbazo’o, Mbah, and Moulende 2003).

An idea borrowed from Sunderlin et al. (2005) is useful when thinking about conceptualizing food security outcomes. Sunderlin was referring to definitions of livelihoods, but the idea can be extended to a standard food security definition in that it “stresses the means rather than the outcomes” (Sunderlin et al. 2005). This is especially important as we have learned from the food price spikes of 2008 and 2011 that a strong government orientation toward particular staple foods has ramifications for other non-staple foods that people might consider to be essential for food security, such as wild forest foods.
*Local and global food scales*

The literature on local and global food scales hones in on an analysis of the scalar nature of food systems. Broadly this literature speaks to how geographers operationalize scale in their analyses. Many human geographers and social scientists generally have argued that contemporary economic, political, cultural and social processes, such as globalization, are rescaling people’s everyday lives across the planet in complex and contradictory ways (Leitner 2007; Marston, Jones, and Woodward 2005; Herod 2009; Inglis and Gimlin 2009). Rather than seeking to reduce the complexity of the world in order to make it amenable to analytical modeling, some human geographers “seek to grasp that complexity” (Sheppard and McMaster 2004: 260 see also paper four in this thesis). After describing the ways geographers employ scale this section will then describe a method articulated by McCann (2009) and Wilk (2011, 2006) that helps in understanding local and global processes as they relate to food.

Marston et al. (2005) argues that a scalar analysis in human geography is very much about the production of scale, rather than scale per se. Scale production is a political process, shaped by social, cultural and economic forces. Sheppard and McMaster (2004) argue that human geographers have long been aware that choice of scale and resolution affects the empirical analysis (see paper four). Human geographers have come to question the adequacy of understanding space in terms of coordinates alone and question what distance really means in the social realm (Sheppard and McMaster 2004: 15; Thrift 2009). Human geographers may agree that the actual distance between two places “may have little to do with the miles separating them” (Sheppard and McMaster 2004: 15). By problematizing scale some geographers argue that scale as a concept, is more malleable than in the past (Herod 2009; Escobar 2007; Smith 2004; Sheppard and McMaster 2004; paper four of this thesis).

Sheppard and McMaster argue that beginning in the 1970s, political economic geographers began to go beyond measurements of scale, to argue that scale is
produced through the “characteristic political economic processes of a certain societal system, such as capitalism” (Harvey 2005: 15, 2006; Jonas 2006; MacKinnon 2010). Scale is also used in political geography by drawing attention to political and social movements whose activities are not reducible to political economic processes alone (Smith 2004; Purcell and Brown 2005). Scale is also used in gender analyses in a way that extends scales downward to embrace the home and body but also upward to question the agency of women in the construction of scale (Marston 2004). Here a vital question had been raised: if space is not a fixed dimension, but is shaped by societal processes, how can we account for the construction of scale in our society? (The limitations of scalar concepts for understanding Cameroon’s wild food trade are discussed in paper four and a framework for the zone is presented.)

Scale theorists in human geography begin their analysis with two claims: first, “if space is socially constructed, the same must also be true for scale, so we need to think about how scales come into existence” (Sheppard and McMaster 2004: 15). Second, “if scale is socially constructed, then we cannot simply take for granted the existence and importance of the geographic scales” called upon in human geographic writing (Sheppard and McMaster 2004: 15). In the 1980s, geographers began questioning notions of scale. This debate revolved around conflicting epistemologies that were either idealist or materialist in their origins (Herod 2009). In these debates scale was either conceptualized as a way of framing our understanding of the world as a real, material thing and something that is the result of political struggle and/or social processes (Collinge 2006; Leitner and Miller 2007; Herod 2009; Sheppard and McMaster 2004a).

Researchers in this area argue that scale is a mental device for categorizing and ordering the world and questioned whether scales really exist as material social products (Herod 2009; Sheppard and McMaster 2004). Scale in this sense is no more than a handy conceptual mechanism for ordering the world or more specifically, a metaphor (Herod 2009). This analytical framework orders processes and practices so that these may be distinguished and separated from one another as
part of a hierarchy of spatial resolutions. Whereas materialists argue that scales are real social products that really exist in the world – and that “there is a politics to their construction” (Herod 2009: 219; Harvey 1982; Sheppard and McMaster 2004; Jonas 2006; MacKinnon 2010). They understand scale to be socially produced through processes of struggle and compromise. This debate essentially questions and problematizes what scale is ontologically.

Further, there are a number of important issues concerning how we think about and represent geographical scales in general, and scales such as the local and the global in particular (Marston et al. 2005; Herod 2009). Marston et al. (2005) argues that researchers should re-politicize notions of space and scale. Many human geographers and social scientists generally have argued that contemporary economic, political, cultural and social processes, such as globalization, are rescaling people’s everyday lives across the planet, in complex and contradictory ways (Leitner and Miller 2007; Marston et al. 2005; Herod 2009; Inglis and Gimlin 2009). Arguments surrounding the “processes of scale making” (Moore 2008:204) raise important conceptual questions about the rescaling of people’s lives and particularly about the relationship between what are often taken as the “two extremes of our scaled lives: the global and the local” (Herod 2009: 217). Thus scales do not just exist but come into being. The notion of ‘becoming’ focuses on the politics of producing scale and is typically framed within arguments concerning the global scale (Herod 2009: 219). For a reconceptualization of scale in forested environments and forest food see paper four.

Arguments surrounding the “processes of scale making” (Moore 2008: 204) raise important conceptual questions about the (re)scaling of people’s lives and particularly about the relationship between what are often taken as the “two extremes of our scaled lives: the global and the local” (Herod 2009: 217). The notion of ‘becoming’ focuses on the politics of producing scale and is typically framed within arguments concerning the global scale (Herod 2009: 219). In my research, I employed scale implicitly to make sense of and order the ways in which global
processes, power relations and transformations toward a global food system manifest at particular levels in the food supply chain. Scale can be a useful tool for studying food, food systems, markets and trade, as the foods of a place are not necessarily local, or necessarily global. 'Scaling food' and 'mapping the food landscape' creates a space to reconceptualize the 'globalized' food system and 'localized' food systems or a better understanding of both (Inglis and Gimlin 2009; Miller and Deutsch 2009; Blouin, Hawkes, Henson, Drager, and Dube 2010; Weis 2010; Zurayk 2013). However, my research found that in Cameroon’s forested regions scale mattered less than the site-to-site networks that are forged in the wild food trade (see paper four).

From an analytical standpoint, many of the authors reviewed here situate the global and local scales as inherently linked. So where ‘the local ends and the global begins’ might best be extrapolated using a method historian James C. McCann (2009) and anthropologist Richard Wilk (2006) find useful. They both rely on incorporating recipes into their analysis to tell stories of cooking and cuisine that unpack assumptions not only about gender and class, but also about ingredients, methods and ideas about where food comes from. For example, they detail how global ingredients and local products have embedded meanings whether the tomato comes in a can or the bouillon in the form of a Nestle Maggi cube. In their view, people do not live their lives within these defined categories. Combinations of “ingredients and structures of cooking... come from historical experiences shared among peoples and across generations” (McCann 2009: 7).

For example, the foods of particular places are not necessarily ‘local’ as dynamic forces and human agency “sweep ingredients, styles, and dishes from all over regions of conquest into a central menu” (McCann 2009: 30). According to McCann, the geographic reach of ingredients over the years (1500-2000) has inspired the

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1 Although through the research process, I learned that scale is not the only tool and other concepts and frameworks for site and place when combined can reveal patterns and trends overlooked in a solely scalar framework – see manuscript four.
adaptation of "local cuisines to even wider worlds" (2010: 9). McCann (2009) and Wilk (2006) argue that there has not historically been a cuisine that deserves recognition and celebration on its own terms. There is however, a common theme that marks African cookery. This theme lies in:

African cooks’ adaptation and indigenization of staples and ingredients collected from encounters with other world edible ecologies (for example, bananas, maize, cassava, Asian rice, capsicum peppers) and oceanic trade networks (the Indian Ocean, the Atlantic Rim, the Red Sea, the Persian Gulf) that contributed spices, herbs, and fruits to Africa’s bowls, mortars and cooking pots (McCann 2010: 8).

To the point, this discussion of cuisine and ecologies aims to impart a message about the global-local: things that are local interact with the global and things that are local can take on global forms. This may happen through cultural exchanges, contestations, adaptation, incorporation and negotiation (see manuscript four). I do not understand food systems to operate within a local/global binary. I do appreciate that global processes affect local outcomes or processes, and that analyses at the local scale may encourage a broader understanding of the ways food systems are structured globally (see manuscripts two and three).

Scalar language can also be used as a powerful tool to frame political struggles (something that was useful in manuscripts one and two under the food riot theme, but I found it is not the only tool, see manuscript four). Scale highlights how researchers conceptualize the relationship between the local and global and helps to determine how we understand the processes, both social and natural, which structure human and physical landscapes. The study of scale can also have immense political consequences. The various scales at which social actors and processes operate “cannot be conceived [as being] separate from the actors and processes that create them” (Herod 2009: 220; Leitner and Miller 2007). This is especially apparent in Cameroon’s forest zone, as the analysis found in manuscript four demonstrates. When authors in this field have made this kind of error they have argued erroneously that the ‘global’ is actively forged through social practices and
the local is somehow a more natural, less socially produced default scale (Born and Purcell 2006; Herod 2009). Human geographers using scale are increasingly cautious as they seek to avoid privileging one scale over another (Born and Purcell 2006; Marston et al. 2005). Bebbington indicates that the global and the local are in “fruitful tension” (2003: 297). Critiques of the food system highlight this tension when they discuss imbalances in power, access, production and consumption. The themes that run through this literature help us understand the local and global dimensions of food sovereignty (defined above) and are couched in language concerning power, politics, and diversity.

Assumptions about what constitutes the local and the global should be unpacked as the inherent complexity involves making decisions about what food is produced, who grows the food, where and how it is grown, and on what scale. Just as importantly, it effectively places those who produce and eat food at the centre of decision-making about food and agriculture policies (Navarro and Desmarais 2009). Any apparent ontological distinctions that are found in discussions of the local and global are simple explanatory techniques that allow researchers to delve into the complexities inherent in human systems to further our understandings of interactions at different sites, places and regions (Bebbington 2003). Ultimately, human geographers argue that the global and the local are intimately interlinked. Although manuscript four on the zone shows how horizontal linkages have a greater impact and are more intimate than scalar dynamics in Cameroon’s wild food trade as food systems are necessarily scalar processes - these processes are not the only factors, especially in forested zones in Africa.

**The multiple scales of African food systems**

Food systems in Africa “evolved historically as the product of a lively stew of culture, place, and migration within a world of politics, power and human interaction” (McCann 2009: 31). To understand the interaction between food
systems and scales, scholars have found it useful to understand 'the social life of things' (Appadurai 1986). In this light, the findings I report below are the result of studies concerning staple food commodities (Flynn 2005; Bryceson 1989; McCann 2009; Clark 1994; Carney 2004; Guyer 1987a; van de Walle 1989).

Methodologically, studies on commodities can foster an understanding of the complexity and contradictions associated with the multiple scales of African food systems. Below I present perspectives that I found useful for describing the articulations between multiple scales of African food systems and articulate how a scalar analysis can underscore a complex web of relations operative in time and space. To start, I describe food systems and their environments and then detail the conceptual underpinnings of scale in geography. Subsequently, I describe in this section the scales of African food systems and the dynamics between these scales.

Building on the discussion above, in both human and physical geography, scale was considered one of geography's core concepts and was largely taken for granted. Scale is the subject of highly theoretical debates, and scholarly positions on this topic can be divergent to the extreme (Brenner 2001; Marston et al. 2005; Collinge 2006; Jonas 2006; Leitner and Miller 2007). Smith, for example, argues that the production of geographical scale "provides the organizing framework for the production of geographically differentiated spaces and the conceptual means by which sense can be made of spatial differentiation" (2004: 196-197). Scale production is a political process, shaped by social, cultural and economic forces. Sheppard and McMaster (2004) argue that human geographers have long been aware that the choice of scale and resolution affects empirical analysis. Scale theorists in human geography generally begin their analyses with two claims: first, "if space is socially constructed, the same must also be true for scale, so we need to think about how scales come into existence" (Sheppard and McMaster 2004: 15). Second, "if scale is socially constructed, then we cannot simply take for granted the existence and importance of geographic scales" called upon in human geographic writing (Sheppard and McMaster 2004: 15). Geographers understand scale to be socially produced through processes of struggle and compromise (see manuscript
Turning to food in Africa, anthropologist, Gracia Clark (1994) produced a very detailed study on the Kumasi central market in Ghana. According to her,

Women... understand the relationships between scales [what she calls levels] to be constantly interact[ing], often reinforcing or contradicting each other. Most important, the specific social actions of contest that [have] significant impact[s] at one level often [are] the same actions used to establish or contest control at a higher or lower level (1994: 423).

This process involves articulations within scales: international, state, city, household and body. The multiple scales of African food systems are important to describe to develop a deeper understanding of how these scales operate independently and also how they interact with each other, although my research discovered it is not the only way. For a reconceptualization of scale and what the concept offers for an analysis in forested environments see manuscript four.

At the international scale, international aid regimes, transnational commercial interests and global market prices seem to have the most impact on scales at lower levels. Cooksey's conclusions on poverty in Tanzania on this front are compelling. Most famers, he claims, “are caught between a government/donor rock and a private sector/ ‘market economy’ hard place that delivers few benefits or incentives, but plenty of poverty” (2011: S78). The power struggles between various international actors in this instance have enabled a situation where the international scale penetrates scales below. These articulations forge unequal relationships at all levels of the food system in question. Regarding global prices, Swan et al. (2010) found that in Mali global market prices for food seem to have had the greatest impacts on lower scales as Mali and many other African economies rely more and more on the global market for food imports. High world food prices can have a range of impacts on the domestic markets in these countries, and these impacts can vary with the quality of infrastructure as well as the regional integration of states, local markets and food markets (Swan et al. 2010: 109).
Moving from the international to the domestic scale, factors within states themselves can have equally important impacts on food system sustainability and resilience. Cooksey found that “liberalization has taken root in both local and export markets and the re-empowerment of state-agencies does not protect the poor against the depredations of corporate capitalism” (2011: S59 original italics). On the contrary, it threatens to dis-empower and impoverish them even further. Van de Walle made similar claims about Cameroon in the 1980s, arguing that the “African state is weak is beyond dispute, by almost any definition of the term, and results from a low resource base and weak levels of managerial competence and institutionalization” (van de Walle 1989: 580). In terms of scale, the state is “highly fragmented, composed of divergent interests and permeated by patrimonial networks that link its top echelons with the most isolated villages” (van de Walle 1989: 580). Van de Walle found a paradox within the Cameroonian state system: “though the state is weak and its capacity to implement desired policies severely limited, its monopoly on coercive power and the absence of significant independent non-state institutions grant it much autonomy” (van de Walle 1989: 580; Lyon and Porter 2007). Patrimonial states and empowered marketing boards can pick and choose who gets to eat what, and in many African contexts, it is often the turn of the market governors to ‘eat’ (Wrong, 2010; this symbolic idea of eating is also discussed in manuscript four among market women of forest food).

At the city level, Guyer (1987) found that particular cities provide convenient units of analysis. Researchers can easily isolate the unique administrative histories of cities from larger national structures. Cities and food systems can also legitimately be claimed to represent “important sites for focusing on the larger social processes which link local, regional, national and international arenas” (Guyer 1987: 6). Flynn (2005) found this idea compelling, and she explored food-related exchanges in Mwanza, Tanzania to understand the food provisioning process in an urban area of East Africa. While this focus and claims based upon it can be robust, analysts who focus on this level acknowledge that cities bleed into other levels (i.e. peri-urban
areas), and that they can “derive their own structures, interests, capabilities, weaknesses and principles of legitimation from...regional” and other levels (Guyer 1987: 7; manuscript three in this thesis). So while the city scale can be thought of on its own, it also makes up a broader unit of analysis when one attempts to study food systems. The local prices are the outcome of multiple factors, global price levels being only one (Clapp 2009; Swan, Hadley, and Cichon 2010; Timmer 2010). Interactions between scales internationally, domestically and within cities can also be understood through examining the causes and consequences of food riots (Walton and Seddon 1994): phenomena that seem to be the result of a collision of scales. For a deeper discussion of food riots from the perspective of the local and international media and the impacts at different scales see manuscript one. Manuscript two considers and compares empirically how global food price spikes affects food security outcomes and stability in two poor countries.

Finally, moving down the scale to the village and household, this level has been prominent in the work of feminist geographers, many of whom have focused on women’s roles as the main food producers on the African continent (McCann 2009; Carney 2004; Perez, Ndoye, Eyebe, Ngono, and Pérez 2002; Freidberg 2003; Bryceson 2009; Boserup 1965; Sneyd 2013) Perez et al. argue that the role of African women in food trade “represents a natural extension of women’s roles as producers and processors of food, linking their domestic skills with rural and urban markets” (2002: 98). McCann recognizes African women to be among the more subtle intermediaries of scalar dynamics. Even though, as women, they were historically marginalized from “formal politics at the regional, national, and household levels” (McCann 2009: 31), African women are the custodians of an oral culture of reproducing food that marks the body as a site of the daily ritual of eating. Work by nutritionists studying African food systems will attest to the effects of the scalar nature of food systems on the body in food provisioning patterns for maintaining health (Herforth 2010; Pinstrup-Andersen 2010; Kuhnlein et al. 2007). For a detailed discussion of household food availability, accessibility and adequacy in households in cities in Cameroon in the context of dietary change, see manuscript
three. Rich empirical evidence from these studies demonstrates how political struggles, economic interests and food provisioning come together through the interaction and friction (Tsing 2005) produced between and within scales found in patterns of human-environmental interaction within food systems. This also involves horizontal site-to-site interactions presented in manuscript four.

**Food Riots: means of negotiating with the state?**

The major hypotheses from the literature that sought to explain the link between high food prices and instances of food riot are identified and explained in manuscript one. Bohstedt (2014) defines riot as crowd violence or coercion and when food is involved, these instances are food riots. The themes identified in manuscript one include issues that are related to food scarcity, distribution and access, merchant stockpiling and hoarding and urban poverty as the principal triggers of local food price rises and protest. These major themes help to explain this causal link however they do not explain the social contract between the rioters and those in power as this link works to bring about change (or relief) to the food system under stress.

This literature review is intended to augment the literature review presented in manuscripts one and two on food riots. This review is situated between papers one and two as the second manuscript delves deeper into Haiti and Cameroon’s food riot events of 2008. In both cases we heard from the rioting crowd (and those affected from the unrest), we learned of the repression measures that worked to stop (or create more in Cameroon’s case) violence, and the policies or changes brought about by the two governments. Food riots are not social movements in that riots are spontaneous events that are unpredictable and are often ignited by a spark (i.e. a sudden change in food prices) (Bohstedt 2014 personal communication). For example, the social movement literature engages with the idea that mass protest is organized and planned whereas the growing body of literature on food riots
approaches this topic from the perspective that riot events are not predictable and are not organized. As a consequence this dissertation does not engage with the social movement literature. The rational for this choice is straightforward: the topic I have selected is food riots and wild foods. I seek to contribute to theoretical and conceptual development of literatures that have touched on these topics in the past and draw them together in the presentation of this thesis. Therefore, before delving into the recent manifestations of the food riots, the focus of manuscripts one and two, it is necessary to explore the research on past food riots.

*The rioting crowd and food*

A major overarching theme from the research on historical food riots focuses on ways of understanding the rioting crowd during times of food shortage. It has been found from this literature on past riots that the legal evidence after a riot should be used with caution. Therefore, the method often adopted for analyzing food riots of the past has been to study media reports, diaries and stories of the events. Much of the work on 18th century riots in England concentrated on “the social composition of the rioting crowds, their aims, motivations and legitimizing rituals” (Nippel 1985). These crowds “involving men, women, and children,” occurred during periods of food “scarcity and high food prices, [and] were frequently restrained and somewhat ritualized” (Cunningham 2010: 129). For Thompson (1971), the context was usually the same: “fast rising prices; a strong belief that these reflected not the ‘reality’ of the market situation but trader greed; and some flashpoint, such as one purchaser refusing to pay, strong language, a scuffle or a barrow overturned” (Randall and Charlesworth 2000: 5; Tilly 1977, 1971). These three elements come together to spark a rioting crowd.

E.P. Thompson’s (1971) work on the moral economy of the English crowd has been very influential in the literature on food riots and “redefined” the way social historians interpreted popular protest (Randall and Charlesworth 2000: 1). He
argued that the “rebellions of the belly” or desperation over food was too simple of an explanation when identifying the causes of a food riot. Rather than the riot being driven solely by the acts of hungry people, Thompson explained that these events were more similar to instances of collective bargaining between the crowd and local authorities. For Thompson the objective of the rioting crowd “was not to win redress through plunder, but rather but to draw attention to breaches of an age-old social contract and to demand that the authorities enforce compliance with its terms” (Cunningham 2010: 129). Through reminding paternalist authorities of the code around the justice of the market - these terms he called the moral economy - evoked a 'legitimizing notion' to justify popular intervention during times of food scarcity. For Thompson, the crowd selectively reconstructed the moral economy as changes were resisted in the marketplace while also ensuring that the market customs and culture “encountered real and effective intimidation and retribution” (Randall and Charlesworth 2000: 4).

While widely popular, his analytical framework is not the only means for explaining popular protest around food. Sen (1981) in his presentation of ‘food entitlements' and Scott’s (1976) work on social conflict in peasant societies are informed by this conceptualization and contribute to the debate surrounding popular protest events around food. For these scholars, social conflict around food is not a struggle for calories alone rather these events speak to elements of a locally defined social justice, or “rights and obligations of reciprocity” (Randall and Charlesworth 2000; Sen 1981; Scott 1976). For Scott, the moral economy of the peasant society is constituted by "their notion of economic justice and their working definition of exploitation – their view of which claims on their product are tolerable and which are intolerable" (1976: 3). When these rights are violated, conflict follows between the peasants (or the poor) and the ruling elite. Whatever the historical causes may be, Nippel (1985) describes cases where the crowd was ‘read the riot act’ and soon relief from the government followed.
While the crowd’s approach to securing foodstuffs has been deemed successful, many historians agree that most often the behavior of the rioting crowd took two forms: 1) the riots was orderly and restrained whereby disaffected people paid for foodstuffs commandeered; and 2) violent where the riots were characterized as theft through the forced sale of a commodity at a price deemed lower than demanded by the seller (Bohstedt 1988; Orlove 1997; Randall and Charlesworth 2000; Rogers 1987; Serulnikov 1994; Mcfarland 2014). Both of these forms were prominent at the time and resulted in various protest strategies. These insights from past food riot events assist us in understanding the more recent wave of food riot in the wake of the 2007-08 and 2010-11 food price crisis.

Recent food riots

The more modern events of popular protest that swept across the world coincided with volatile food prices from 2007-2011. A reading of the news coverage on food riots at this time uncovered a tendency for the media over-simplify food riots by focusing on poverty, hunger, food shortage, and environmental effects on the food supply as the main drivers of riot. However a more nuanced reading during this time suggests the causes are "barely visible and difficult to comprehend" (Hossain 2009, manuscript one focuses on analyzing the links described in the media that sought to explain how rising food prices spark riots). The recent food riot episodes continue to obey “the rhythms of hardship, moral economy and state entitlements” identified above (Walton and Seddon 1994: 53; Sen 1981; Scott 1976). According to Walton and Seddon, “food riots are generated at the intersection of local grievances and national or even international forces of economy and politics... complete explanation must address both community and societal conditions as well as the form of their interactions” (Walton and Seddon 1994: 35, something that manuscript two attempts to do with empirical evidence from Cameroon and Haiti). Stories such as the following were appearing in the media more frequently since 2007 and deserve unpacking (see manuscript one for a media analysis of the food
riot events in 14 African countries). This clip from the Integrated Regional Information Network or the humanitarian news and analysis service from the UN Office for the Coordination of Humanitarian Affairs explains:

Banu Bibi’s experience is fairly typical. Her family is not starving; they still have food, but it is not the food they like and is not as nutritious as it could be. They certainly ate more and ate better before the food price shock and financial crisis of 2008. And across the world, homemakers are having to work harder, spending more time shopping or looking for food, and planning more carefully to stretch their budgets to feed their families. A woman in Lango Baya, Kenya, spoke for many when she told researchers: "You go to a shop to buy something with the same amount as you paid the previous day, only to be told that prices have risen." Although food and fuel prices did fall after the initial spike in 2008, they never went back to their previous levels, and this year they have jumped again (IRIN 2011).

The dominant narrative of this time focuses on changing local food entitlements, changing food budgets and also changing food baskets. These changes are often not positive and speak to the moral limits of the market when securing ‘provisions’ that are necessary for survival (Hossain and Bohstedt 2014 personal communication).

Episodes of food riots continue to provide “aggrieved assemblies with a means to express politically claims to unjust treatment” (Walton and Seddon 1994: 53, 41) or a more modern version of provision politics (Bohstedt 2010). Today, riots mark clear distributional implications and a high cost of survival. According to Walton and Seddon, the last great wave of riots in the 1990s undoubtedly coincided with the austerity measures and Structural Adjustment measures adopted during the 1980s and 1990s. Seeking to explain why certain forms of protest seemingly reappear under new conditions “that prove analogous to earlier transformations” is increasingly important for an analysis of food riots decades on (Faiola 2008: np). Most of the issues Walton and Seddon (1994) identified as motivating rioters in the 1990s have not gone away; and today, those issues have become deeply entrenched in the food system’s fabric. The comparison between Haiti and Cameroon found in manuscript two present some of these effects on the two country’s food systems.
Similar to the historians above, Walton and Seddon (1994) and Schneider and McMichael (2010) maintain that when inflation occurs, the state, through nationally and culturally appropriate policies, has a responsibility to its citizens to manage the effects of the market to address injustice, access and ultimately, survival. This is a theme that has remained in the literature on food riots since the food riots of 1347 were studied (Sharp 2000).

The effects of austerity measures - such as trade liberalization, subsidy cuts, real-wage reductions, price increases, income inequality, dependence on imports due to lack of investment in agriculture and national food storage systems and export driven agriculture - has resulted in a stagnation of living standards, import dependence, corporate control of the food system, shift in urban diets (more wheat, rice and soy) and most notable, less people growing food (Peet and Hartwick 2009, Weis 2010, Bush 2010, Patel and McMichael 2010). Today, a greater number of youth and urban dwellers are under or unemployed. Additionally, people’s access to daily food is highly compromised as cyclical weather patterns, the increase in the use of biofuels, and fuel and water scarcity that have implications beyond inadequate food distribution. It would seem that today’s rioters would have similar concerns of the past. Although, according to some, it would be easier for governments to “hope that world markets would lose their ‘volatility’ rather than for them to address [the much larger] issues of agricultural policy such as unequal access to land, inputs and markets” (Bush 2010: 127). Urging researchers to develop bolder interpretations of collective actions, Darnton argues that riots have “meanings as well as causes... to discover what they mean, we must learn to read them, scanning for patterns of behavior and looking for order in apparent anarchy that explodes under our noses” (1992: 46). Today's moral economy and provision politics does seem daunting but as Darcus Howe stated on the BBC of this volatile time “...it's the historical moment” (BBC 2011).
Linkages between dietary stability, food insecurity and unrest

The literature reviewed in this middle section is situated between the two themes of the research - food riots and wild food - as researchers have found links between dietary stability, food security and social unrest. Briefly this literature is characterized before reviewing the literature on forest food and dietary change, the limitations of the non-timber forest product concept are raised for an urban food study before considering the various coping strategies adopted during times of food insecurity. A final section concludes the review and presents perspectives on gender and work in Africa’s urban food system.

A research agenda that focuses only on dietary staples, such as corn, wheat and rice would fall short if the foods that compliment those staples were forgotten. Broadly, this thesis focuses on the foods that complement staples such as corn, wheat or rice. These complements including indigenous roots, tubers, fruits and vegetables have been deemed the orphan crops or ‘the lost crops of Africa’ (National Research Council 2008, 2006, 1996).

Much research attention on food security has been productivist oriented and focused on 1) improving varieties of staple foods, 2) increasing yields of these staples and 3) considering ways to decrease prices for staple foods. My point of entry focused implicitly on the ways in which the reliance on particular staple foods can fuel social and political unrest. Especially when the prices for those staples are high. Not only are the staples that are traded on international markets vulnerable to global price changes but these same foods are used as relief after a riot event (see manuscript two for the impacts on diets of the relief measures adopted in Haiti and Cameroon and also manuscript three for a discussion of dietary changes associated with increased subsidized rice consumption in Cameroon after the 2008 unrest).

The reliance on the production of a few staple commodities – such as corn, wheat, and rice - has decreased the biodiversity found in the environment and historically
available foods found in diets (Grivetti and Ogle, 2000). The core basket of staples has been found to be changing diets, often in negative ways. When food researchers consider the totality of diets or the ways in which people consume food and combine staple foods with other ingredients, a more accurate picture of dietary change is brought to light. For example, anthropologists of hunter gather societies found that diets are historically comprised of a starch and a stew made from accompanying vegetables, meat and wild plants (Doughty 1979). Pulling away from the simple focus of improving access to a simple staple has the potential of re-invigorating the 'lost crops' for safeguarding greater food security outcomes (access to macro and micro nutrients) in the future (see the Conclusion of this dissertation under the wild food theme and the section on the Practical Implications derived from the analysis in this thesis).

For example, evidence from Swan, Hadley, and Cichon (2010) suggest that vulnerability to high food prices is likely to be associated with the type of staple food consumed, the ability to substitute cheaper foods, trends in income and the degree to which households rely on the market for food. Recent literature has found a link between dietary reliance on one staple and experiences of food insecurity (Mason et al., 2011; Moseley, Carney, and Becker, 2010; Swan, Hadley, and Cichon, 2010; ). In some cases the link suggests an increase or decrease in the occurrence and frequency of unrest or riot.

Through a comparison of the Gambia, Côte d'Ivoire, and Mali, Moseley, Carney and Becker (2010) found that the rice sectors in each country were impacted by market reforms that were intended to improve food production and food security more generally, but resulted in an increasing reliance on imported rice. Structural Adjustment across Africa in the 1980s and 1990s lead to a series of policy changes that “favoured Asian rice exporters over West African [rice] producers” (Moseley et al. 2010: 5778). The removal of “production subsidies and declining tariff barriers led to a flood of Asian rice on local markets” as production declined and rice imports rose (Moseley et al. 2010: 5778). Further, this reliance created a vulnerable urban
rice eating population when world prices for rice spiked and remained volatile after 2008. By studying rice producing nations during a time of dependence on world markets, these researchers found that when local, traditional foods were available, such as local varieties of rice and sorghum like in Mali, the instance of unrest was decreased or non existent (Moseley et al. 2010; Moseley 2011). Findings such as this are crucial for Cameroon; a country that was once a rice producer now relies on meeting a large percentage of its rice needs from outside the country (van de Walle 1989). This is especially apparent after the 2008 riot event when Paul Biya’s regime implemented a rice subsidy during this volatile period. The subsidy remains today, six years later. Overall, the reliance on global markets is quite expensive for poor countries to maintain. As Toye (2009) argues this approach drains domestic savings and the balance of payments. The sustainability of the subsidy and the subsequent dietary change is troubling.

Similar to Moseley et al.’s (2010) approach in considering how local varieties of staple foods influence dietary stability, I extend my analysis to include local varieties of forest foods. My approach, through the consideration of accompanying foods that are not staples but foods that contribute to dietary diversity, rounds out the plate, so to speak, in this study. A study that focuses only on staple foods would fall short when the dietary and culinary compliments to those foods are not considered in tandem.

**Dietary change and forest food**

The literature reviewed in this section focuses on the second theme of the dissertation on wild food and presents literature that focuses on ways of analyzing and categorizing particular foods and dietary change. The literature on food security, food crises, global food markets and food prices has tended to emphasize a small number of prominent cultivated food commodities. This focus is understandable given that specialization in only a few primary food commodities in
Agricultural systems have led to the reality that 80% of total dietary intake globally is derived from twelve domesticated species: eight cereals (barley, maize, millet, rice, rye, sorghum, sugar cane, and wheat) and four tubers (cassava, potato, sweet potato, and yam) (Grivetti and Ogle 2000: 32). Anthropologists and nutritional geographers have argued that each development in “mankind’s progress in agricultural practices has brought about a decrease in the selection of foods available” thus shifting the human food supply (Doughty 1979: 164).

The drive to produce only a few staple foods to fulfill energy requirements, altered the eating habits of the early cultivators (Doughty 1979: 166). However, the eating habits that evolved still remain the foundation of the dietary patterns throughout the world to this day. The family food in almost all regions was based on preparations of the staple food or foods (Doughty 1979). This could be a cereal seed such as millet, rice, barley, maize or wheat, a starchy root or tuber such as potato, cassava, yams or taro or a starchy fruit such as breadfruit or plantain. Doughty reveals that these preparations, usually in the form of a paste or a porridge were monotonous in taste and texture, and, to make them appetizing, they were dipped in, or served with a sauce, stew or relish made from foods (usually vegetables and meats) collected wild from the bushland or forest (1979). The interlinked knowledge of preparing and cooking these foods and their accompanying sauces was “inherited from hunter-gatherer ancestors” (Doughty 1979: 166). The combination of the staple food with an accompanying sauce provided a balanced diet as, with very few exceptions, energy and protein requirements were satisfied by the main dish while the variety of foods in the relish provided extra nutrients, especially vitamins and minerals, and were particularly useful sources of vitamin A and C, often missing from the staple (Doughty 1979: 166).

The combination then provided both macronutrients (energy, fiber, protein and carbohydrates) and micronutrients (vitamins and minerals). Grivetti and Ogle argue that as humans focused more on domesticated cultivars and focused less on wild
species of plants - that once offered important flavour and texture satisfaction while also supplying essential micronutrients – the human diet declined over time (2000: 32).

Further, the overdependence on a few plant species has allowed other equally robust and nutritious domesticated, yet to be domesticated and wild species to be forgotten or neglected in research and in public discourses (Doughty 1979; Frison et al. 2006; Johns and Sthapit 2004). Consequently, modern agricultural systems have succeeded in providing more than sufficient calories derived from carbohydrate staples. However, in the process, the global food system has increased ‘hidden hunger’ or micronutrient malnutrition by displacing highly nutritious edible local plants gathered from surrounding environments (Modi, Modi, and Hendriks 2006; Sneyd 2013; for an in-depth discussion of the ways in which ‘lost crops’ have been ‘hidden’, see manuscript three).

Some have argued that the focus on few cultivars poses two additional significant problems. First, nutritional reliance on few species, paradoxically, places humans at “evolutionary risk as seen if a cereal-specific rust or smut evolved that attacked these critical foodstuffs” (Grivetti and Ogle 2000: 35). The second problem is a decline in knowledge. By focusing on domesticated cultivars the “collective skills needed to identify and prepare wild foods has declined precipitously” (Grivetti and Ogle 2000: 35). Since species that contained energy and micronutrients became peripheral or were abandoned, humans sometimes have starved in the midst of ‘wild food plenty’ (Bharucha and Pretty 2010; Grivetti and Ogle 2000; Shrestha and Dhillion 2005).

Collecting indigenous cultivars is often presented as a viable and well-established famine-coping strategy across much of Africa and Asia (Adams, et al. 1998; Corbett 1988; Tieguhong, et al. 2009; Yengoh, et al. 2010; although in Cameroon wild food consumption is not a coping strategy - these foods are a major part of the food system and food culture, see manuscriptss three and four). These foods are
nutritious, grow well in infertile soil, and are relatively tolerant of extreme weather. However, such plants in promoting food security has been under-studied and under-utilized by policy makers (Blouin, et al. 2010; Chang 2009; Rayner, et al. 2006; Waltner-Toews and Lang 2000). There are a number of reasons why food security policy and research has neglected these “orphan crops.” One reason is that mainstream food security work focuses mostly on cereal crops – but since poor families do not generally own land suitable for cereal, basing food security policy on grains misses the poorest and most vulnerable (Baro and Deubel 2006; Keen 1994; Pottier 1999; Shipton 1990). Today, a lack of purchasing power restricts food choices for vast sections of the world’s community (Bush 2010; McMichael 2000; Patel 2009; Patel and McMichael). That being said, there is substantial evidence that wild foods remain an important part of the global food basket (Bharucha and Pretty 2010; Kuhnlein, Erasmus, and Spigelski 2009; Frison, Cherfas, and Hodgkin 2011; Ogle and Grivetti E. 1985; Pimentel et al. 1992). The Food and Agriculture Organization (FAO) estimates that globally, over one billion people continue to rely on wild foods to meet their food needs (Aberoumand 2009; Toledo and Burlingame 2006). For a definition and conceptualization of wild food in Cameroon, see manuscript three.

National food balances (import-export) guide policies on trade, aid and the domestic and international declaration of food crises. Notably absent from food balance sheets at present and especially at the country level is the quantitative contribution made by wild edible species (FAO 2001; Bharucha and Pretty 2010; Galluzzi and López Noriega 2014). With the routine “underestimation of wild foods comes the danger of neglecting the provisioning ecosystems and supportive local knowledge systems that sustain these food chains” (Bharucha and Pretty 2010: 2913; see manuscript four).

The role and value of forests to food security is grossly underestimated (Ogle and Grivetti 1985; Pimentel et al. 1992; Scoones, and Pretty 1992; Sunderland 2013; Gockowski, et al. 2003). Pimentel et al. has found that “healthy forest ecosystems are
essential to world food security because they (i) directly provide food to large numbers of people; (ii) produce products and employment that enable people to purchase food; (iii) [and] protect the environment [in ways] that help...the productivity of forestry and agriculture” (1997: 111). Forest-dependent people who live in or near forests tend to be politically weak and hold very little power in decision-making processes relating to the management of forests (Sunderlin et al. 2005: 1388). This is reinforced by forest-dependent people’s geographic distance from urban centres where political alliances that might favor forest conservation tend to be formed and maintained (Cerutti and Tacconi 2008)

People living in and near forested areas collect wild plant roots, leaves, fruits and nuts from trees, shrubs and other plants and also hunt wild animals, fish and insects (Pimentel et al. 1997; Grivetti and Ogle 2000; Aberoumand 2008; see manuscript three and manuscript four). The economic value of foods that ‘hidden harvests’ from forest ecosystems produce varies, but may make a significant contribution to individual incomes and livelihoods (Malleson et al., 2008; Ndah et al., 2013; Tieguhong et al., 2009; see also manuscript four). Plant and animal foods harvested for private use reduce people’s dependency on the market and, of course, augment the nutritional value and variety of their diets (Pimentel et al. 1997; Grivetti and Ogle 2000; Godoy and Bawa 1993). The foods hunted and gathered from the forests, provide humans with calories, animal and plant protein, minerals – especially iron and iodine, and also vitamins A, the Bs, C, D and E (Pimentel et al. 1997; Bharucha and Pretty 2010). These are essential micronutrients that not only create a more secure and varied food system, but that help to combat the effects of ‘hidden hunger’ or micronutrient deficiencies (Herforth 2010; Pistrup-Andersen 2010; Kuhnlein et al. 2007).

It is estimated that there are 1,500 species of wild plants in West and Central Africa alone (Chenge 1994). Of those, wild leafy vegetables may be the major source of micronutrients for the majority of resource-poor people throughout the region (Modi, Modi, and Hendriks 2006; Smith and Longvah 2009; Ijarotimi, Ekeh, and
Leafy green vegetables are “mainstays in the diets of rural and urban households across most of Africa” more generally, and are especially important in Central Africa (Gockowski et al. 2003: 222; Smith and Longvah 2009; Sneyd 2013). These traditional leafy vegetables (in particular, *Amaranthus* spp., *Corchorus* spp., *Solanum* spp., *Manihot* *esculenta* and *Gnetum* spp.) on a per unit cost basis supply disproportionate shares of protein, minerals and vitamins (Gockowski et al. 2003: 222). These greens are particularly important in the supply of iron and vitamin C, which may alleviate high levels of anemia in Central Africa exacerbated by high incidences of malaria.

Accurately estimating the “total amount of food people in developing countries obtain from the wild is difficult because information is scarce” (Pimentel et al. 1997: 93; see manuscripts three and four). The amount of wild food obtained per person and hectare varies widely between countries and between regions within countries. It is however, widely accepted that “cultures are adapted to localities, and thus are configured with a wide variety of land use and livelihood” practices (Bharucha and Pretty 2010: 2914; Sunderlin et al. 2005; Grivetti and Ogle 2000; Scoones et al. 1992). As a result, foraging and farming across the world are actually “overlapping, interdependent, contemporaneous, coequal and complementary” (Bharucha and Pretty 2010: 2914; see manuscript four in this thesis). Within these systems there are no easy distinctions between ‘wild’ and ‘cultivated’ foods. While food research and policy tends to consider these types separately unless the focus is on agro-forestry issues, many local communities rarely make distinctions between foods from the forest or the field (Bharucha and Pretty 2010; Scoones et al. 1992).

Plant foods can thus be envisioned as existing along a continuum “ranging from the entirely wild to the semi-domesticated, or from noticeable human intervention to selective harvesting, transplanting, and propagation by seed and graft” (Bharucha and Pretty 2010: 2915-6). The complexity described above is the result of particular knowledge and understanding that is then “encoded into norms, rules, institutions and stories, and this forms the basis for continued adaptive management” of food
systems and environments over generations (Bharucha and Pretty 2010: 2914; Scott 1976). The literature on the human-plant continuum and empirical evidence from Cameroon informs the definition of wild food employed in this thesis. The definition is elaborated and explained in manuscript three. The continued availability of these marginalized plant foods depends on the maintenance of synergies between farming practices and wild biodiversity (Bharucha and Pretty 2010; IAASTD 2009; Thrupp 2000). Therefore, the linkages between nutritious diets and environmental sustainability are “undeniably a part of food security” experiences (Herforth 2010: 137).

Limitations of the non-timber forest product frame

Most of the literature and research on wild and traditional foods in Cameroon have been framed using the concept of non-timber forest products (NTFPs) (Ndoye, Perez, and Eyebe 1997; Awono, Ndoye, and Preece 2010; Amadi 1988) or non-wood forest products (NWFP) (Brown et al. 2008). Non-timber forest products are “all biological materials other than timber, which are extracted from forests for human use” (Belcher 2003: 161). The past research on NTFPs focused on three perspectives: 1) NTFPs as a commodity with a focus on rural incomes and markets; 2) as a expression of traditional knowledge and as a livelihood option for rural household needs and 3) as a key component of a sustainable forest management and conservation strategy. As a result, these forest products were seen as valuable commodities and important tools to promote the conservation of forests and as a mechanism for rural poverty alleviation and local development through their gathering and use (Belcher 2003; see manuscript four). Moreover, the terminology of these products as non-timber forest products carried a “political message and a particular development agenda: keep the forest standing through the promotion and use of NTFPs” (Belcher 2003: 165). Belcher has noted that there are five main elements to the interpretation of the NTFP concept that seem to matter most to users of this term. These are: “the nature of the product; the source of the product; the production system for the product; the scale of production; and the ownership...
and distribution of benefits” (2003: 165). Consequently, this literature does not address these products as **food** or for the promotion of **food security**, rather the literature on Cameroon stresses NTFPs and the contributions to income in rural areas.

Nowhere in conceptualization of this concept is there mention of the contributions these products make to food security (manuscript three aims to correct this omission in the literature). A major FAO-led project in Cameroon adopted this concept (Sunderland and Ndoye 2004), however the research continues to focus on rural livelihoods, conservation and sustainable forest management.

![Image 1. An image of the FAO project sign taken in Yaoundé 2011](image)

The past and current research absolutely lacks a critical element of the NTFP trade in Cameroon: their use by urban residents, the ways they feature in urban diets, and their contributions to food security in urban areas (manuscript three aims to correct this omission). When NTFPs are mentioned in the literature on Cameroon, the focus
is often on documenting the products that come from the forest, quantifying yields sold in markets (Ingram, Ndoye, Ipanga, Tieguhong, et al. 2000b; Ndoye, Perez, and Eyebe 1997; Perez, Ndoye, Eyebe, and Puntodewo 2000; Shackelton, Shanley, and Ndoye 2007; Tieguhong and Ndoye 2007) and measuring their economic importance in terms of employment and income (Awono, Ndoye, and Preece 2010; Brown and Lapuyade n.d.; Nkem et al. 2010; Perez, Ndoye, Eyebe, Ngono, and Pérez 2002).

Image 2. The NTFPs documented in the FAO-PFNL (produits forestiers non-ligneux) project office in Yaoundé

What is unknown is the frequency of wild food consumption in Cameroon’s urban forest zone. Historically, there has been little interest in NTFPs because most of
these products were “consumed by local populations and not marketed” very far outside of the region (Delang 2006, 2006). Overlooking the potential research on the buyers or consumers of these products misses an understanding of the demand driving the regional wild food economy. Manuscripts three and four makes a contribution to this overlooked area of research through the presentation of results from a household and market survey to describe the urban demand and utilization of Cameroon’s forest foods.

*Coping strategies and wild foods*

Within the literature on wild food, there is often mention of coping strategies associated with the collection wild food products (Grivetti and Ogle 2000). These strategies are primarily employed during times of food shortages (Swan et al. 2010; Herforth 2010). Often times the food shortages coincide with agricultural production and harvest fluctuations. This seasonality in agriculture results in food price shocks as food stocks deplete between harvests. Increases in consumption of wild fruits and vegetables during the hungry season appear to be a widespread phenomenon (Modi et al. 2006; Grivetti and Ogle 2000). Seasonal hunger is an outcome of the annual progression of the crop calendar and is usually most acute in the pre-harvest rainy season (Swan et al 2010). Seasonal hunger is “a cyclical dip in dietary intake, causing a temporary state of under-nutrition or exacerbating a chronic state of malnutrition” (Bryceson 1989: 425). Typically, a reduction in food quality by households in the hungry season is followed by a reduction in portion sizes and meal frequency, which substantially reduces essential calorie intake (Swan et al. 2010: 112) and restricts dietary diversity (Herforth 2010). Swan and colleagues have found in Mali and the Central African Republic that high global food prices ‘replicate’ or mimic seasonal vulnerability (2010: 115). Vulnerability (Smit and Wandel 2006) to fluctuating food import prices results in a reduction in food quality by households, followed by a reduction in portion sizes and meal frequency (Swan et al. 2010: 112). When high prices prevent easy access to imported foods,
people can return to the forests, or they can pursue other coping strategies (Ghosh 2010: 80).

Long periods of micronutrient deficiencies can impair the immune system, increasing human vulnerability to chronic malnutrition and disease (Pinstrup-Andersen 2010). These deficiencies can have long-term consequences for human development. Micronutrient malnutrition “manifests visibly in its later stages and is rarely captured in nutrition surveys” because the necessary biomedical tests used for diagnosis are expensive, time-consuming and impractical in many situations (Swan, Hadley, and Cichon 2010: 115).

Thus a better understanding of the foods that may be available for people to fall back on during times of global price volatility (Clapp 2009) is necessary. (See manuscript three for an empirical discussion of coping strategies and wild food in urban Cameroon. Also noted in this manuscript is a description of the differences in coping strategies found between Francophone and Anglophone Cameroon that emerged from survey data analysis).

Another related theme in the literature on coping strategies and changing food choices is ‘Bennett’s Law’ (1941) or the starchy staple ratio. This law states that as income increases the ratio of starchy staples compared to other foods in the diet falls (Leathers and Foster 2009). Higher incomes allow for the substitution of starchy staples with other varieties of staples such as refined rice (although the limitations of this approach are discussed in manuscript two). Along similar lines, the term nutrition transition was coined to describe the process that happened many decades ago in the developed countries but is now occurring in developing countries (Popkin 1998). It marks a shift from simple staples to a greater intake of high-value-added processed foods, industrial meat and dairy, and high sugar soft drinks (Waltner-Toews and Lang 2000). The transition accelerates the incidence of diet-related non-communicable diseases (Rayner, Hawkes, Lang, and Bello 2006; Blouin, Hawkes, Henson, Drager, and Dube 2010; Nestle 2007).
This transition is having multiple and varied impacts at sites and places where these new ‘foods’ are increasingly consumed (Winson 2014). The paradigm marked by “planting starchy crops that generate the maximum food calories per unit of land” (Herforth 2010: 139) is skewing our understanding of the ways in which populations have historically fed themselves in good times and in bad. By studying food crops such as wild foods that have been marginalized globally, a greater understanding of the dynamic relationship between humans and their environment as it relates to food can be fostered. (See manuscript three for a description of the ways in which Cameroon’s nutrition is underway).

**Gendered work in Africa’s informal urban food trade**

This section in gender and work in the African food trade situates the importance of women in this sector. This background literature was important for manuscript four as I charted the challenges and opportunities faced by women in Cameroon’s humid forest zone. Insights from this literature also inform the recommendations presented Conclusion as projects and initiatives that empower women are explored. The informal trade in food products in Cameroon is organized around various types of buyers and sellers (or *buyam-sellam* in Pidgin). The informal food sector is highly gendered and offers considerable challenges and also opportunities for those involved. Although, Ngoumou (2010) found that the informal system of feeding Cameroonian cities is highly effective. African women’s role in agricultural production and farming has been widely studied, more so than women’s participation in food marketing (Carney, 2004; Fonchingong, 1999; Fonjong and Athanasia, 2007; Freidberg, 2001). Most often overlooked in this body of research are the urban traders of forest food\(^2\). These foods in question are not agricultural

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\(^2\) Wild foods or foods from the forest are not traded on international markets and are separate from traditional staple foods found in Africa. It should be added that the staple foods for African countries – such as cassava, plantain, yams, millet, and sorghum in west and central Africa, and white maize in southern and east Africa – are not internationally traded or traded very much outside the region.
products; rather they are gathered from the surrounding environment and represent a consequential portion of the regional food system and local diet (Sneyd 2013 see also manuscript three in the thesis). After the food price crisis, many of the local and forest foods have been priced out of the reach of many households as they have not been targeted by the government’s subsidy scheme. An issue of the UN news and analysis publication *Africa Renewal* from April 2014 reported that Cameroon was **still experiencing** high food prices such as those reported in 2008 and 2010 (Rao, 2014)

Researchers belonging to a range of academic disciplines have carried out studies in order to better understand the functioning of African food markets (Watts 1983, Guyer 1987, Flynn 2005, Pinstrup-Andersen 2010). The ways in which gender and work are studied and described in the literature on African food systems assist us in thinking about the *buym-sells* of wild food in Cameroon and the food security implications of their work. The sections that follow emphasize the literature on the informal food trade and on gender and work in the food trade (the literature reviewed in this section compliment manuscript four and the Conclusion and Recommendation sections at the end of the thesis). The relationship between food systems and markets will be explored to understand the dynamic interactions of these concepts in the African context.

Empirical studies not only note the gender relations that mark the trading of foodstuffs on the one hand but also the informality of the sector and the urban nature of the exchange on the other (Roitman 1990, Freidberg 2001, also manuscript four). Niger-Thomas notes that Cameroon’s economic crisis of the 1980’s, the subsequent Structural Adjustment Programmes and the devaluation of

(Chang 2009: 141). Transportation costs are high in many of these countries and demand outside the sub-region is relatively low. What this means is that many African countries do not rely on international trade for their traditional staple foods, as much as it is possible for other countries, unless that staple is wheat or rice. Thus, for countries with low levels of economic development, whose staple foods have limited tradability and which have poor transportation infrastructure (Chang 2009, Cooksey 2011), focusing on the local trade of wild and traditional foods is not a misguided concern. For a conceptualization of wild foods in Cameroon, see Sneyd 2013.
the CFA franc in the 1990s made “informality a way of life for Cameroonian of all walks of life” (2001:44).

In the early 1970s, anthropologist Keith Hart (1973), after several years of field research in Ghana coined the phrase ‘informal economy.’ He was referring to the various activities that occur outside the formal framework of a liberal economy. Hart stressed the fact that the informal economy involves self-employed actors who used the market in order to gain a supplementary income from a formal activity. In a subsequent study, Hart (1982) highlighted that a real opportunity for exchange existed between the rural and fast-growing urban areas. Following a similar thread, Guyer (1987) noted that historically, the burgeoning African cities were fed by numerous “craft operators engaged alongside the official system of provisioning cities with food from the rural hinterland, and that public authorities were not able to control this economy” (as cited in Ngoumou 2010: 193). In Cameroon, the buyam-sellams of various products in this system tend to still be politically controversial and operate according to their own norms by sometimes engaging in what has been termed “fiscal disobedience” (Roitman 2005).

Overall, the marketing of foods in these urban African markets is geared toward Marx’s M-C-M arrangement (Marx, 1977; see also manuscript four). Trading in these systems is the main mechanism of extraction of surplus in many African countries (Bates, 1982; Gibbon, 1997; Wolf, 1982). Traders engage with this arrangement with the hope of a return on an investment whereby “monetary gain is the primary objective” (Ngoumou 2010:198). In this case, the commodity is a food product but it is also associated with the labour involved in the procurement and exchange of the

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3 Roitman’s (2005) book Fiscal Disobedience: An Anthropology of Economic Regulation in Central Africa documents the civil disobedience movement in Cameroon during the 1990s. The movement rose to counter the state’s fiscal authority after a failed coup attempt in 1984 kept President Paul Biya in power. As he tightened his grip on the country, practices and norms associated with fiscally undermining the state became the new political and economic arrangement as citizens and the state struggled for power, money and authority. These trends continue today as the buyam-sellams often talked about harassment from market officials and police and at times were skeptical of people asking questions for fear the information will be used to foster higher taxes and fuel corruption.
product (Gardiner Barber, 2004). These traders are involved in the sorting, grading and some degree of processing of agricultural products and wild foods before sale. In this context, women are key players in African food systems “accounting for 70 percent of farm labour and performing 80 percent of food processing” (Pinstrup-Andersen 2010:12). Traditionally, women are found to represent a disproportionate percentage of urban traders and their numbers are greater still in the marketing of food (Babb, 1998; Clark, 1994; Seligmann, 2001).

Ways of explaining the role of women as the main food producers and marketers on the African continent has been to characterize men and women’s work roles (Carney 2004, Freidberg 2001, Hovorka 2006). Through describing work roles researchers have drawn attention to changing roles, both visible work outside the home and invisible work inside the home (Waring 1988). Freidberg (2001) notes that the complexity of gender construction is not only found in place-based local histories but are often found in the interaction of places. Hovorka (2006) established that everyday notions of gender are important in understanding rural to urban linkages around food. For example, during the colonial period, African men were encouraged to produce cash crops for export and later Boserup (1965) identified men’s responsibility resting on cash crops whereas women were responsible for food production. Bryceson (1989) found in the 1980s that the sexual demarcation of cash cropping continued, sometimes with the effect of eroding women’s claims to cultivable land. Her finding is similar to Carney (2004) in the Gambia and Freidberg (2001, 2001) in Burkina Faso. Hart (1982) associated this trend with men historically having greater access to both capital and labour, especially in commercial agriculture, which was encouraged for economic growth.

The complementary stereotype that associates African men with cash crop production and women’s responsibility resting with food production has its parallel in the forest sector. The stereotype dictates that men are involved in the lumber industry and hunting, while women gather a variety of NTFPs. A more refined analysis put forward by Perez, et al. (2002) shows that both genders engage in a
large number of forest-related activities, and specialization is less pronounced than in the above dichotomy. Women may be involved in tree nurseries and planting, some hunting and fishing, the use of traps and other techniques, and the production of fuel wood for the market. Whereas men also collect a number of NTFPs, for consumption and sale, and both genders are usually engaged in gathering medicinal plants for various uses. The trade in NTFPs make up a large proportion of the livelihood portfolio in this region and the wild food trade hinges on gender relations that define this work (Ingram et al. 2014; and manuscript four). Two findings from Perez et al. (2002) suggest that 1) most buyam-sellams in Cameroon’s humid forest zone are women, and they may specialize in selling one NTFP or deal with a combination of NTFPs and agricultural products and 2) when women are engaged in the retail trade of NTFPs in Cameroon, men tend to dominate the wholesale market, high value products and, particularly, the export sector (Ingram et al. 2014). This pattern coincides with what is found in NTFP and food markets in most West and Central African countries.

The buying and selling of food represents an intrinsic component of women’s social relations in urban environments (see also manuscript four). Through her urban study, Hovorka found that African women become involved in the food sector for economic and social advancement (2006: 216). While there are many challenges involved in this trade, the opportunities to earn some cash from an activity in a domain in which women have the greatest control are high (manuscript four shows how the urban buyam-sellams who are mostly women have some control over the marketing of their goods, but the limitations of that reality are also demonstrated). For example, a study of women street food vendors involved in the sale of cooked food along the streets of Limbe, Cameroon demonstrated on the one hand the burden of this activity on women and on the other hand greater economic independence and positive impacts on living conditions in the household (Fonchingong 2005). Fonchingong asks how these cooked food vendors might be guaranteeing an improvement to their livelihoods by staving off poverty while exploring the challenges faced by these small-scale entrepreneurs (2005:244). For
these women, taking on additional income-earning roles has not always translated into economic empowerment and in most cases the women were barely earning enough (2005:251). Likewise, rents, high taxes, and household management eat up the meager profits earned by food vending. Further, slack periods marked by low sales and limited capital and opportunities for expansion, constrain work possibilities in the sector (Women who sell the raw foods to the cooked food sector experienced similar constraints - see manuscript four). Without a doubt, these vendors play a crucial role in the urban economy of Cameroon by meeting a growing demand for cheap, prepared food for the working urban population.

Overall, these studies highlight how men and women define and redefine their experience of constraints and opportunities by linking particular gender roles to the production and trade of food. By understanding the different definitions of what is considered “men’s work” and “women’s work” this body of scholarship seeks to understand women’s changing work roles and the challenges she faces to earn a living (while the focus of manuscript four analyzes the social construction of the zone, the empirical analysis focuses on the challenges and opportunities facing buyam-sellams of wild food.

Forward-looking recommendations that aim to improve the sector for greater gender empowerment and food security outcomes in urban Cameroon are explored in the Conclusion of the dissertation. The next section of the dissertation details my methodological approach, data needs, my positionality and the ways I analyzed the data collected for this study. The four manuscripts are then presented according to the two themes of the research and are accompanied by introductory statements of the two parts.

References


3. METHODOLOGY

This section is included to complement the individual methods sections found in each of the four manuscripts included in the thesis. It is not a stand-alone methods chapter. Rather, this section of the thesis intends to coherently present the methodological choices I made that informed data collection, reflection and the findings on which the thesis and manuscripts are based. It is a background document that links to the methods sections included in each manuscript. Please see Appendix 2 for the survey forms and interview questions from the fieldwork.

The PhD research had two aims 1) to understand the causes and consequences of food related unrest 2) to understand the role of wild food production, trade and consumption in enhancing food and nutritional security in urban areas. For nearly fifty years discourses on food security have focused primarily on cereal crops and the ways through which these staple foods can deliver essential calories and macronutrients (Burchi et al. 2011; FAO, 1996, 2001; Frison et al. 2006). In this context, preliminary research found that the potential for wild foods to address food security is understudied (Bharucha and Pretty 2010; Grivetti and Ogle 2000). The manuscripts included in this thesis help to fill this gap. Additionally, when prices for cereals and staple foods are high, food security outcomes are varied and constrained (FAO 2011; Webb 2009). This idea was explored in the included manuscripts. My approach was inductive and problem or question oriented and employed the use of a country case study to explore these specific issues. The research benefited from comparing this case to another country or countries in order to provide a greater understanding of food security outcomes in the aftermath of the 2008 food price crisis. The research was driven by the objectives outlined in the Introduction and the research questions included in each of the four manuscripts.

The case study selection and the research context
The criteria on which I selected Cameroon for examining the above two aims are straightforward: Cameroon had a riot event in 2008 and Cameroon has an active wild food economy. In Cameroon about two thirds of the population is located in the forest zone and engage in the forest food economy there (Mbaku 2005). Cameroon also had riots in that part of the country in 2008. Other countries that I could have selected in the African context did not adequately address the two research aims. I could have conducted this research in Sierra Leone and Guinea (FAO 2011). In Guinea Conakry for example, people eat wild foods in Conakry but reading and research early on in the study suggested that it was not to the same extent that bushmeat and edible forest foods are consumed in Central Africa (FAO 2011; Congo Basin Forest Partnership 2006). Furthermore, the riots in Guinea were mainly confined to the urban areas outside the forested zone (Schneider 2008). The rural forested parts of Guinea have a dependence on wild food but that is in a smaller part of the country than it is in Cameroon. Similarly, Cote D’Ivoire could have been a good case, but it was a conflict state in 2010 at the outset of my study (Seelow 2010). There is wild food consumption, in Cote D’Ivoire and there were food riots in the country in 2008 but I would not be able to get permission from my university to conduct research in a conflict state. Other countries in the region could have been good option for studying wild food, for example Congo Brazzaville or Gabon. However, in these countries three things affected this decision. First, access would have been an issue as there is less of an international research presence. Most of the organizations such as the Centre for International Forestry Research (CIFOR), the World Agroforestry Centre, the FAO NTFP project, and the World Food Program are all based in Yaoundé, Cameroon. Second, language would have been a barrier as there is less English spoken in these two countries. Finally, and most importantly there were no riots in these countries in 2008 or 2010.

Therefore, Cameroon seemed to be the best fit for this research project. The capital city in Cameroon has an international research presence. There are also linkages between Canada and Cameroon when it comes to forest dependence. Also, the bilingual situation there interested me (and made for an interesting comparison
between regions and languages, see below and manuscript three). Both language groups or the English speaking population and the French speaking population are dependent on wild foods in Cameroon. As far as I know, all ethnic groups in the southwest, central and east or two thirds of the country are dependent on wild foods. This seemed to be a logical place to go. At the time, no one was asking questions about riots in the Cameroon case and most of the researchers there were talking about NTFPs – and these were not being framed as food. The researchers in Cameroon at the time were talking about forest products and not forest food (see the Literature Review chapter, manuscripts three, four and the Practical Implications chapter).

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Before embarking on in-country preliminary research on Cameroon in 2010 a book landed on my desk: The Masked Rider by Neil Peart (2004), the drummer for the band Rush. As I read about Peart’s experience bicycling from Douala in Cameroon’s Littoral Region to the Extreme North Region of the country, I asked myself where I would focus my research in this vastly diverse country. Cameroon is often described as ‘Africa in Miniature’ as all of the ecological zones found throughout Africa can be found in this one unique country. To the south is Cameroon’s tropical forested zone, which gives way to the grasslands and then the mountainous region of Mount Cameroon and onwards to the arid and dry Sudano-Sahelian landscape in the far and Extreme North. Over the years I have also spent much time with the safe, measured and calculated driver, Ivo Ekane from CIFOR as he navigated us through the large forested zone: from the Pygmy camps around the Lobe waterfalls in Kribi, through New Bell market in Douala, around Mount Cameroon to the grasslands and the Sultan of Foumban to Ideneau and the Bakassi border with Nigeria in the Gulf of Guinea. I have learned and also experienced that each of these regions not only hold a distinct environment, but also distinct ethnic groups, languages, cultures, customs and people (Mbaku 2005). When embarking on the PhD research, it became apparent that I would have to draw lines and demarcate this diverse territory to
rein in a focus at the country level for my inductive study. After spending time in the country, those lines became firm as I learned more about the food, the culture, the environment, and the current state of research there. Three things became inescapably apparent.

First, I was attracted to studying a food system where the proximate environment played a role in maintaining local understandings of what is means to be food secure - especially when food prices are high. The tropical forests played with my research imagination as I observed the food carried out of the forest and brought to markets including caterpillars, larger and thicker than my thumb, forest snails larger than my forearm, bush meat advertised on the roadside with sticks and rope (see Image 3), woven baskets full of green leafy vegetables and piles of tropical bush fruit.

Leaving this forest meant leaving these foods and also the local ideas underpinning these foods in the culture and diet of Cameroonian.
From my initial research, I learned that these foods are often presented as non-timber forest products (NTFP) in the scholarly research on Cameroon (Ndoye, Perez, and Eyebe 1997; Awono, Ndoye, and Preece 2010; Ingram et al. 2014). Framing the foods as NTFPs sanitizes the contributions these foods make to food security outcomes and instead re-orient the research focus towards conserving the forest and the trees. Refining the category to focus on wild or forest food and food security for a geography and international development studies project enabled an analysis of these foods in the local food culture and the local diet. Further, as I asked questions about these forest foods, it seemed there was more opportunity to learn from this type of food system by staying in Cameroon’s humid forest zone than venturing outside of it.

Second, to further demarcate this territory, I learned that Cameroon’s urban environment is understudied, especially when it comes to analyses of urban food security. Because Cameroon is predicted to experience drastic changes to the climate and ecology, much of the recent research has crystalized around this very important topic (Bele, Tiani, Somorin, and Sonwa 2013; Somorin 2010). Similarly, because most of these changes will be more directly experienced in the rural forested areas, the current state of research has focused on these areas directly (Sikod 2007; Demerode, et al. 2004; Ros-Tonen and Wiersum 2003). But I wondered how people in the urban areas rely on forest foods as these consumers account for most of the local demand for the foods that come from these over-studied rural areas. As a consequence, or an opportunity, my study became an urban study of forest food.

Third, the global 2007-08 and 2010-11 crises have had a huge impact on the framing of my research. The government of Cameroon has had to adapt to global crises and change since the time of independence in 1960. The implementation of a structural adjustment program in the late 1980s (Ndoye and Kaimowitz 2000; Riddell 1997) and the devaluation of the currency in 1994 (Gbetnkom 2005;
Diagana et al. (1999) are notable events that have shaped and changed Cameroonian’s lives (Mbuagbo 2012; Albaugh 2011). The most notable outcome is that informality has become a way of life for most Cameroonians (Niger-Thomas 2001). High food prices and no subsidies for wild foods led to a shift in diet and subsequently health. This is something that is worth investigating.

Brown and Lapuyade (2001) documented these socio-economic changes and the subsequent impact on livelihoods in a rural village in Cameroon. Brown and Lapuyade claim their research builds on Jane Guyer’s work in Yaoundé in the late 1970s. The two researchers found that women’s positive perception of change captured by Guyer in 1978, and 1987 contrasts with the apocalyptic vision that women had developed from 1980 to 1999. Guyer (1978, 1987) found that women’s situation improved compared with the pre-colonial and colonial periods, when their role shifted from the cash crop economy to the provisioning of food for the urban market.

In the two decades since Guyer’s study, the pressures of economic crisis have brought about more profound transformations in Cameroon. Brown and Lapuyade’s (2001) exploration of men and women’s livelihood options reveal the increasing hardship Cameroonian women experience in order to make a living during times of unexpected change. Their findings uncover the social and environmental relations that mediate change at the micro-level by linking the wider and quite profound macro-scale economic changes associated with the crisis, with individual experience. A similar attempt I hoped to capture in urban Cameroon after the food crisis. Toye (2009) predicts that the economic impact of high food prices on development will be hardest for low-income urban households in developing countries that are net importers of food – and especially those countries with subsidies in place for imported foods. And this was especially apparent after Cameroon’s food riot event in 2008.
These three insights assisted me in zoning in on my Cameroon case study and established a research agenda. By selecting Cameroon as a case, this study sought to inform academic and policy debates about the promotion of and prospects for wild food and food security at a time of high food prices and social unrest. Specifically, it explored foods gathered from Cameroon's humid tropical forest (FAO 2012a, 2012b). This research sought to detail the contributions of traditional, wild foods to food security in urban areas and ultimately speaks to development challenges in this area, especially after a period of social unrest around food. It explored the ways that these foodstuffs enhance food security and articulates how various political, economic, cultural and institutional factors make these foods (and other foods) accessible to some people and inaccessible to others.

Fieldwork

I have made five field visits to Cameroon to build a research network that has enabled the success of this study. I had ethics clearance from the University of Guelph. I also had letters of invitation from CIFOR Yaoundé that had to be signed by the local police for the business visas that were required to do research in the country.

The first visit occurred prior to formally commencing the PhD program of study from June-August 2010. During this visit I established lasting contacts with the multi-donor funded, FAO-led project on Non-Timber Forest Products and with the Senior Forestry Officer at the World Bank country office. At this time, I also had cooking lessons to learn to identify, purchase, clean and prepare Cameroon’s forested foods. The second field visit in May 2011 identified possible research assistants, determined possible in-country research sites, and explored probable connections with researchers at the University of Buea in the Southwest region. Cameroon has a wet and a dry season and I returned to Cameroon twice in 2012 to conduct research, primarily survey work during both seasons. During the third visit
from June-July 2012 during the wet season I interviewed experts working in international and national development organizations and government ministries. During this time 147 surveys in markets and households were completed in two regions. Also in 2012 I visited Parisian African food markets of Marché Rue Dejean in Château-Rouge to explore the foods in Paris that left Cameroon’s forested zone. I returned to Cameroon the fourth time in November-December 2012 in the dry season and 220 market and household surveys were completed. Climate change is a major issue in the country and 23 surveys were destroyed by rain during the dry season. I returned the fifth time in November-December 2013 to gather additional data (life histories of 38 wild food gatherers and sellers) and to discuss locally the extent of ecological change and how the wild food trade is impacted by these changes. During this time I disseminated initial research findings (from manuscript one published in Food Security and manuscript three published in Sustainability). For this field visit, I hosted a paper workshop with local researchers on ecological change and the wild food trade (a co-authored paper with local researchers is in progress).

Returning to the country multiple times has been an immense asset to this project. First, I have been able to see and experience changes in this sector over time. Second, I have established trust with local researchers and market women in the cities. This trust gave me access to do research in an authoritarian country. Through my engagement with wild food dependent communities over a period of years, has enabled for several areas of research to be identified that local people would like me to focus on (specifically, wild food and ecological change (in progress) and space in Cameroon’s urban food markets - manuscript four).

**Objectives of the data collection**

The breadth of the described qualitative research methods aimed to maximize the depth of data collection possibilities in diverse cultural contexts where the
appropriateness or efficacies of particular methods are contingent upon local norms
(Robben and Sluka 2007; Scheyvens and Storey 2008; Brockington and Sullivan
2008).

The field methods were employed in an ethical and sensitive manner to facilitate the
collection of four essential forms of data: (i) data that identify and describe the
impacts of global-level factors and domestic institutional dynamics on food security
and the ways in which these factors play out during times of unrest around food; (ii)
data that enable a local understanding of food security and that details the extent to
which particular food products advance food security or detract from it; (iii); data
data that document the consumption and trading of wild food systems under study and
(iv) data that capture perceptions of and narratives on wild food best practices. Data
was collected until a point of saturation was reached and no “new” information was
revealed through collection efforts and coding.

Overall, the research collection involved a literature review, content analysis of
media sources, expert interviews, market and household surveys and ethnographic
data. I used participatory action-oriented methods such as elite, community level,
household and food trader interviews and participatory observation. Qualitative
methods were used in this research to "explore the meanings of people's worlds –
the myriad personal impacts of impersonal social structures, and the nature and
causes of individual behavior" (Robben and Sluka 2007; Scheyvens and Storey 2008;
Kuhnlein, Erasmus, and Spigelski 2009). As regards my thinking on this, I thought at
the outset of the project that the regional food system under study would be found
to have differential impacts on food security outcomes. Throughout the course of
the research, I found this to be true (see manuscript one published in Sustainability
and manuscript four on Zoning In).

The data collection had four key objectives. The sub-points correspond to data
collected to meet these objectives:
• Explore narratives that seek to explain the causes of food riots and food price volatility to better understand a) how regional food systems are impacted by global processes that can lead to social unrest and b) the intersection of regional food systems and food crises
  • Content analysis of western and local African media from 2007-2011 in English and French in 14 African countries (2,000 news items total)
  • Surveys in cities in Cameroon asking participants to reflect in the 2008 food riot and subsequent high food prices (n=371)
  • Compare results from the survey to another country surveyed (Haiti) that experienced food riots in 2008 to determine the causes and also the similarities and differences between food riots during this time (n= 113 surveys in Haiti or 484 total from the two countries)
• Gather data that describe what food security and insecurity means in Cameroon
  • Interview key experts in Yaoundé (n=100 from 2010-2013)
  • Survey and interview wild food traders and consumers/households (403 completed, see below)
  • Content analysis of local documents, government and research reports and news stories (about 140 documents)
• Chart the role of wild foods in conceptualizations of food security and insecurity in Cameroon’s forested zone
  • Derived from data gathered from interviews, surveys and secondary documents.
• Gather data to describe the urban trade and marketing systems of wild food
  • Interview marketers and traders (n=171 completed in 17 markets of over 66 foods in wet and dry seasons from 161 wild food buying sites; also completed were four surveys of restaurants that serve wild food in 2012; additional in depth interviews were completed one year later with 38 individuals in seven additional markets. In total the research focused on 24 urban markets in two regions of southern Cameroon.)
• Collect GIS points from the markets surveyed to create a map of food markets and wild food in the two regions studied. All of the maps from the GIS points collected are included in this dissertation and were created by Marie Puddister, a cartographer in the Geography Department at the University of Guelph. Adam Bonnycastle a GIS specialist in the department assisted with combining the map of Cameroon’s agroecolgical zones with the market points. This map is included in manuscript four. Ivo Ekane navigated each market site around Limbe and Buea to collect GIS points bring back to Marie Puddister for the maps. Researcher assistants in Yaoundé collected the points during the wet season survey phase also in 2012.
• Interview households (197 completed in wet and dry seasons in 2012)
• Gather recipes on the use of wild foods in dietary patterns and food culture of urban Cameroonians. Collect recipes using wild foods (420 recipes collected)

My positionality

The research process in Cameroon was phased and as any researcher could appreciate evolved by factors that were outside of my control (Barley 1986 and see also Appendix 1, A Fieldwork Riot). Violence was not uncommon and early on in the study I left a market in Yaoundé with a swollen, fat and bleeding lip. Riots over market space happened in this same food market two years later while collecting survey data for the food riot and wild food study. In 2012 I secured a SSHRC Doctoral Fellowship and also assisted with securing a SSHRC Insight Development Grant that provided funds to hire research assistants for this project. The timing could not have been more perfect because after the unrest in the city, the survey work required research assistants for safety and also trust reasons.
I selected, hired and trained a team of twelve researchers with vast experience conducting research in Cameroon on forests and food to conduct the surveys. At the minimum, each member of the team had previously received undergraduate training in Cameroon, and most had received graduate training in social science research at the Master’s or PhD-levels in Cameroon or at universities based in Europe or the United States. Additionally, many of my research assistants had previously conducted survey-based research for the Centre for International Forestry Research (CIFOR) and for other development agencies.

As my work proceeded in two different regions of the country I broke my team into two groups. The highest-level local researcher available led each regional sub-team under my direction. Both leaders have had numerous works published in globally recognized scholarly journals consistently over the past decade. The two individuals in leadership roles were excellent resources as they were able to address and navigate local cultural norms in the conduct of bottom-up research that I may not have been familiar with. They kept each group on task in terms of logistics and deadlines, and facilitated initial training that was conducted under my direction.

Team one in Yaoundé was lead by Phil René Oyono, an independent researcher with experience working for CIFOR. Amongst other consultancies, René conducts research for the Africa Program, Rights and Resources Initiative (RRI) based in Washington, DC. He is currently working on an REDD project in North Kivu in the Democratic Republic of Congo. René and myself trained and instructed his team in the ethics and goals of qualitative data collection. This team was comprised of Akoko Guy Martin Maurice, a law student at the University of Yaoundé II, Serge Kombo Samba a researcher for Société Forestière Industrielle de la Lokoundjé in Douala and Nden where he was researching Cameroon’s livelihoods and community forestry. René and Serge are published in the journal Conservation and Society (Oyono, Blaise, and Kombo 2012). Finally, Ngu Arrey Monica, a university student in Yaoundé finishing her undergraduate degree focused on the household surveys and rounded out the Yaoundé team. I worked closely with René and his team to select
appropriate market sites and train his team regarding the purposive selection of individuals in markets. To ensure that this team followed through on its responsibilities to survey individuals and gather the required information adequately, I made random visits to market sites where surveys were being conducted during the period of research where and when it was safe for me to do so. Additionally, I ensured that each member of the team provided me with a summary document that recounted the challenges they faced conducting the surveys at the end of the research.

Stella Asaha led the group in the Southwest region. She is the head of Forests and Resources for People (FOREP) in Cameroon, and previously was a key contributor to the UK Department for International Development’s Mount Cameroon project. Stella primarily conducts research on NTFPs and forests, and received a prestigious scholarship last year to receive further graduate training at the University of Buea (see her paper Malleson et al. 2008). For the survey work we hired and trained graduate-level researchers. Caleb Yengo Tata, a student who had recently completed his undergraduate degree at the University of Buea was perhaps the most novice, but was a quick study. Roland Ndah Njoh, a PhD student at the University of Buea in the Department of Botany and Plant Physiology was a strong contributor. His papers have been published in the *African Journal of Plant Science* (Ndah et al. 2013) and the *Journal of Biodiversity and Conservation* (Ndah, Chia, Egbe, Bechem, et al. 2013). Eugene Loh Chia also came to work on this project as a FOREP researcher when he returned from Oslo, Norway where he had studied for an MSc in International Environment Studies with a major in Natural Resource Management. Eugene also holds a BSc in Development Studies from the Department of International Environment and Development at the Norwegian University of Life Sciences. He is currently based at CIFOR in Yaoundé (his work is published here: Chia, Tiani, and Sonwa 2013). Fomeni Anne Christelle also assisted with research at FOREP at the time that data collection for this study took place before she moved to Ouagadougou, Burkina Faso to finish her degree. The Limbe team also benefited from the assistance of their driver Ashu Augustine Ayuk. As with the Yaoundé team,
the Limbe group was trained and subject to random check ups and the exit reflection to ensure that they followed through on their responsibilities.

Back in Yaoundé, I also learned from Mary (Nana) Nibba. The research benefited immensely from her knowledge and experience cooking and preparing Cameroonian dishes. I hired her for cooking lessons to teach me how to select, clean, prepare and cook prominent Cameroonian dishes and especially the dishes that incorporated wild foods and their accompaniments. Through this work I came to know Nana’s family. Nana’s junior sister taught me how to clean, wash and cook forest snails (pictured in Image 10) as we talked about her favourite forest food: snake. In 2012, I hired Nana’s brother Abdou Njida a high school student in Yaoundé who aspires to go to university to study geography. Abdou did excellent legwork around the city early in the study to identify places where wild foods are sold. His collection of samples of wild spices is featured in Image 4 of the thesis. In Yaoundé, Hubert (Nana), a very reliable taxi driver took me from market to market throughout the city, government ministries and research offices on many occasions.

The experience and working relationship with of all of these individuals from Cameroon’s forested zone made the data collection for this thesis possible.

Turning to the positionality of the researcher, the discussion focuses on the experience conducting the survey questionnaire. As outlined in manuscript three the questionnaire builds on the CFSVA study (World Food Programme 2009; WFP 2011) – posing slightly revised questions in light of a wild food study. What is interesting about this past study is that the World Food Program (WFP) did not cover English-speaking Cameroon! This oversight is troubling in light of my discussion in manuscript three. The inclusion of English-speaking Cameroon helped me to ascertain differences in the coping strategies employed in Cameroon: they remain quite different in the South West of the country than they are in the francophone Centre. The FAO/WFP work missed out on these and other possibly consequential nuances through excluding a vast swathe of the country.
Questions in the survey were also informed by Cunningham’s (2001) book *Applied Ethnobotany*, an Earthscan publication. I adapted the surveys commonly used in applied ethnobotany to draw out links between food security and particular unconventional food sources. I also engaged in email communication with Dr. Gracia Clark a professor in the Anthropology Department at Indiana State University and author of the ethnography *Onions are my Husband: Survival and Accumulation by West African Market Women* (1994). Dr. Clark’s work during this time involved extensive survey work (n=618) with market women in the Kumasi Central Market in Ghana. Similar to her experience in Ghana’s forest zone in the 1970s and 1980s I was finding it difficult to gather data on prices and profit margins and had similar issues with sensitive and/or dangerous topics (see below). In her experience (and mine) traders were likely in these instances to break off the interviews or provide misleading information. Dr. Clark offered tips, strategies and sample questions that would assist with the market survey process.

Phil René Oyono translated the survey into French for the Yaoundé team and also incorporated his knowledge of Cameroon’s administrative processes and regulation into the survey questionnaire for the market research. The surveys used in this study appear in Appendix 2 of this document. Surveys in Yaoundé were conducted in French and translated into English in Canada by Patrick Wight a PhD student at the University of Guelph from Montreal, Quebec who had previously done research in Cameroon in 2010. Surveys in Cameroon’s Anglophone region were conducted in English or Pidgin. If Pidgin was used, translation into English was done in Limbe by researchers employed by FOREP.

I initially conducted about 14 interviews with the help of a research assistant to test the questionnaire. I did this in different markets in Yaoundé. These preliminary survey responses were *not* included in the study as they were part of the project’s learning and data collection testing phase. This preliminary work also determined
local best practices vis-à-vis the ethics of doing this type of research work in Cameroon. From this phase I learned three things:

First, the research assistants were good at capturing some linguistic nuance that I might have missed from the conversation. This was invaluable in a place where English and French are primarily spoken but the lingua franca is Camfranglais (Kouega 2003). The latter continues to elude me, and is full of slang phrases embedded in the local context with a mix of Nigerian pidgin thrown in. After the trial interviews, we talked about the conversations and discussed ways of improving the survey questions to capture data needs.

Second, I learned how to phrase and pose sensitive questions or in some cases throw out questions all together. On the latter, one question in particular stands out in hindsight: What can the government do to make your business better? This was one question that people in Yaoundé did not want to talk about. Although, I found as we preceded though the revised questionnaire that people would talk about these things somewhat implicitly.

Finally, and most importantly, I learned that the markets are not always safe for ‘white’ researchers and that perhaps it was not culturally appropriate for a female Canadian to go around asking these questions (Shuller 2010). In some cases talking to me would make it unsafe for other people (i.e. we would hear comments from bystanders: why are you talking to the white person? What were you talking about?). Additionally, a riot in one of the markets that resulted in at least one death made it more challenging for the research assistants and myself to do this study. Initially in the 2012 wet season when the unrest in the markets was particularly bad, I had to hire and rely on male researchers to conduct the market survey. Most days in July 2012 they ‘protected’ me from the market and possible future unrest. For reasons of personal safety, they would identify days and markets I could go and do the research, mostly participant observation and picture taking on my own. The male research assistants would tell me about their time in the markets doing the survey.
They would pack the paper survey and a pencil and often leave their phones and personal items at home so they were not stolen or pick-pocketed.

The most important point with regards to my positionality is that the research assistants would tell me of the survey work: “Lauren, your presence [during the surveys] biases the results.” I broke cultural norms to attend a few interviews with the research assistants and after completion of those surveys they told me again: “Lauren, when you were here it was weird.” Meaning the participant was not as forthcoming with information and held back when answering. The research assistants also thought that my presence brought about statements from participants that were perhaps not always true with the aim of pleasing me with an answer that they thought I wanted to hear. Needless to say, I stepped back from the survey work after learning these lessons. I then focused my time conducting expert interviews in Yaoundé and the survey remained in their competent hands.

I acknowledge the limitations of relying on a team for data collection as information shared can be contingent on the time, the place, the season, the person asking the questions and the person answering etc. In this case I acknowledge that I only know exactly how the research assistants operated face-to-face from conversations I had with them before and after surveys were administered. However, I do know that the information they derived from the interview conversations were consistent with the questions being asked. To reiterate, on random bases, I witnessed the administration of surveys where and when it was safe and culturally appropriate for me to do so.

Because I could not be present for all of the surveys, I required all research assistants to submit written reflections on conducting the questionnaires. One research assistant’s reflection stands out. In one particular reflection he explained the process of delivering the questionnaire in the markets. His approach centered on having patience with the *buyam-sellams* when conducting the survey during selling times. He wrote in his reflection how he would pause the questioning until
the sale was completed, something that was encouraged of all researchers doing surveys in the markets. He stated in his reflection that he would observe the sale and ask follow up questions about what saw. The women appreciated this intimate exchange and reflected on the questions he posed. This particular research assistant had wrote later in his reflection: “I really liked doing this research, the women I talked to told me that ‘I am happy to be talking about these things, no one has ever asked me these questions before, thank you for including me.’” The appreciation for this research was unguarded. Although, not all of the researchers had the same experience - I learned that conversations in some households - after talking about food for so long - had caused émulation and some individuals wanted to be taken out to eat with the research assistants. These reflections were very important when conducting the research in multiple phases because lessons learned early on could easily be rectified in the next round. Any issues that were raised were addressed and rectified by myself and other members of the research team.

In addition to the reflections I had many meetings with the teams throughout the process at various phases. I brought the survey data, still in paper form, home with me on the plane to scan into electronic copies, translate the French material and enter the data into Excel.

**Data collection**

Overall, this research is based an analysis of a particular basket of commodities (i.e. wild foods) to understand the role of these commodities in food security in urban Cameroon. The methods outlined below allowed the researcher to chart the ‘social life’ of these things (Appadurai 1986) and to situate an analysis of particular food products within the food security discourse. Ethnographic methods allow researchers to “gain an understanding of a person or group’s social meaning of ordinary activities” such as the production and consumption of food (Babb 1998; Clark 1994; Lyon and Porter 2007; Flynn 2005). Most social groups have “shared
behaviors revolving around the manner in which they select, gather, prepare and share food” (Miller and Deutsch 2009: 140). Ethnographic methods allowed me to gain insights into “cultural behavior, cultural knowledge and cultural artifacts” to describe the human/wild food experience (Miller and Deutsch 2009: 140). This approach enabled me to learn “from people rather than studying people” (Jackson 2003: 145). Qualitative data is characterized by three commitments. First, it seeks to “understand the world through interacting with, empathizing with and interpreting the actions and perceptions of its actors” (Brockington and Sullivan 2008: 65). Second, qualitative research tends to collect data in natural settings and finally it tends to generate theory, rather than test it. This research is inductive in that it builds “theory from observations, rather than deductively, testing theories by trying to refute propositions” (Brockington and Sullivan 2008: 57). The methods outlined below make up the research design of this project.

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Initially, the research aimed to develop a framework for studying wild food consumption and sale. This framework was intended to enable a discussion on the usefulness of wild food and the contributions of these foods to food security in urban Cameroon. The following sub-sections outline the various scales that make up this framework early in the research process that were explored, in varying degrees, in this research (for a theoretical presentation of scale see the Literature Review section. The limitations of scale are described in manuscript four as I later learned scale was not robust enough to capture horizontal networks forged in site to site trading and interactions in Cameroon's HFZ):

Initial Wild Food Framework (later adapted in manuscript four)

a) Explore the culture of food in humid forest zone of Cameroon, focusing on food-related ideas, knowledge including culinary knowledge and practices, symbolic associations, and social constructions as they relate to wild food [ideological scale].

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b) Identify the ways that global factors such as food price inflation and domestic factors such as subsidies for staples have impacted wild food product systems in Southern Cameroon. In turn, this aspect of the research would detail how particular formal or informal institutions and moral economies (trust, rules and norms) underpin the local food system to chart the global impacts on local wild food production and trade [global scale].

c) Document the structural context of the food system in the HFZ of Cameroon, in particular government policies, international development programs, private sector initiatives, formal and informal regulations and discourse focused on recent food security issues [political economic scale].

d) Identify the ways that the regional and peri-urban environments through deforestation and development impact wild food product systems in Southern Cameroon [regional scale].

e) Characterize the food system in cities in Cameroon's forested zone in terms of their production (supply) and consumption (demand) components, highlighting production/gathering sites, marketing networks, food retailing sites, consumption patterns, and rural-urban linkages to situate wild food within the system [urban scale].

f) Compare and contrast levels of household food security across socio-economic circumstances, to understand households' possible reliance on and use of wild food products [household scale]

  g) Explore the assumptions, norms and dynamics prevalent within and between the above ideological, global, political economic, urban, and household scales to assess the role of wild or traditional food in shaping the food system and food security in the HFZ of Cameroon [cross-cutting theme]
While this framework was useful at the start of the project and informs manuscript three, and elements of manuscripts one and two; the final manuscript reflects on the usefulness of scale as a concept in Cameroon’s forested regions. Instead I developed a conceptual framework for ‘zone’ that was a more fruitful exercise than relying on scale alone. The framework in the fourth manuscript was more encompassing when analyzing the themes that emerged from the data as descriptions of horizontal site-to-site connections were more important amongst buyam-sellams of wild food than the vertical arrangements described above (see manuscript four).

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Investigating the culture of food at an ideological scale and documenting the structural context of the urban food system at a political economic scale required a similar approach to data collection and analysis. Focus for these objectives, I gathered evidence to describe how symbols, and language are embedded in how people talk about and associate with food, and how development projects and programs are developed and implemented in this area. Data collection for this component focused primarily on gathering secondary sources (e.g. narratives, recipes, folklore, policy documents, program overviews etc.).

Expert interviews (e.g. researchers, community leaders, members of development agencies and NGOs, etc. (n=100), surveys (of markets and households in two regions n=371), life histories of wild food traders (n=38), participant observation, informal conversations, and review of relevant documents comprised the bulk of primary data collected. Data collection also involved local and international media sources related to the topics of food, food security, food riots, forests and diets.

The following list breaks down my approach:

**Content analysis** and review of documents relevant to the topic was conducted. Examples include FAO and World Bank reports and also outputs from organizations
listed throughout and research think tanks working in this area such as Biodiversity International. Also included were news stories collected from newspapers online and in country. For manuscript one, local African and international media sources were collected for a broad overview of the African food riot episodes in 14 African countries when food prices spiked (n=2,000). The content analysis for manuscript four involved a review of scholarly journal articles (n=500) and local reports (n=140) for the ways in which the concept zone was used to inform a conceptualization of ‘the zone’ (see manuscripts one for food riots and four for zone).

**Semi-structured expert interviews** were conducted with groups and individuals identified in country working on wild foods and NTFPs in Cameroon (n=100). The potential actors and organizations at the country level that impact food systems, livelihood strategies and food in Cameroon include OECD donors and their organizations, multilateral institutions, private companies and NGOs both international and national. They include and are not limited to: the FAO NTFP project in Cameroon; Centre for International Forestry Research (CIFOR); Senior forestry officer at the World Bank Cameroon office; World Agroforestry Centre; International Institute for Tropical Agriculture (IITA); Biodiversity International; World Vegetable Centre in Yaoundé; UNDP Cameroon office; Cameroon Model Forests Project; SNV the Dutch aid agency; Cameroon REDD working group; Independent Forest Observer; WWF and leading climate researchers in Cameroon. To record the data from these meetings, I sought informed consent and asked the interviewee to choose if they prefer the interview to be digitally recorded and transcribed or if I should take hand written notes in this setting.

**Semi-structured interview surveys with food suppliers/marketers in the wet and dry seasons** (n=170) were gathered in the wet and dry seasons in 2012. These included purposive sampling of urban traders of wild foods. Wild food traders were identified by word of mouth or products sold. If it was learned early in the interview that the product under question was not a forest product the trader was not
included in the study. The interview explored who does what within the system, as well as the differential opportunities and challenges faced by men and women within food supply sectors, their connectivity to rural villages, and response to urban demand for particular foodstuffs like wild food. Questions focused on the setting of prices, how the trader makes and loses money, methods for managing perishability and recommendations for improving the trade. For the market interviews the interviews took place in the market between sales. Questions were also posed about remembering the 2008 riots and unrest in the markets and the impacts on the business.

*Semi-structured household interviews* in the capital city Yaoundé, and Cameroon’s Southwest region (n=197) were also conducted in the wet and dry seasons in 2012. The micro-scale investigation surveyed households in the two regions during the wet and the dry seasons. Households were stratified by gender (male- and female-headed households) and income level (low, middle, and high). Data were collected via semi-structured interview surveys aimed at characterizing the roles of various household members in producing, processing, purchasing and preparing foodstuffs for home consumption. Qualitative measurements of food security include indirect indicators (e.g. asset ownership, social support networks, household size, and immediate circumstances), perceptions of acceptability of certain foods (e.g. symbolic role of food and cultural appropriateness within household food patterns and tastes), and food coping strategies (e.g. household attempts to deal with times of insecurity through dietary changes, rationing consumption, establishing credit, drawing on social networks, etc.). Questions also focused on recipes of for wild food products and other meals commonly consumed in the household. Questions were also posed about the 2008 riots and unrest in the markets and the impacts on immediate food security in the household. An analysis of these data highlighted relative levels of food security within and between households at different income levels. I used textual means to explain reasons for varying circumstances and experiences for the use of wild food products.
Focus groups allowed the researcher to “learn from the way people discuss things as much as what they say” (Robben and Sluka 2007, Scheyvens and Storey 2008). To engage food studies methods, geographer Hayes-Conroy (2010) proposed visceral fieldwork methods employed in her study of the Slow Food Movement. This was inspired by a partnership approach. Hayes-Conroy invited participants to “come up with aspects of slow food that were significant for them and to create an experience of slow food in whatever ways they desired” (2010). The experiences her participants created centered around food and meals and involved cooking, gardening, food shopping and farm stays. This method allowed researcher and participant to “feel food” (Hayes-Conroy 2010: 736) through the experience of actively participating and engaging with the process of bringing food from soil to table or in this case from the forest to the pot. An approach such as this expands the qualitative tools available to the researcher in a traditional wild food study and has revealed significant cultural connections between humans, food and the environment. Focus groups included:

1) Producers (gatherers or cultivators) of the food products of interest, this entailed visits to the forest to participate in and document the process by which these products find their way into the market (n= four groups);

2) Sellers in the markets including street food vendors and petty traders. The focus groups also involved meetings with the ‘market boss’ and other women who sell wild food in markets in Yaoundé. During these meetings we documented where the products are coming from, prices, quantity purchased and sold and perishability of these food products. We also talked about common ways of sowing and growing popular leafy vegetables in urban gardens (n=four groups);

3) At the household level I spoke with individuals purchasing and preparing food, typically women, to document food choices, the quantity and quality of the products, prices of meals, and also knowledge operationalized in the preparation and recipes
of traditional, wild food in Cameroon. This also involved cooking with participants (n=10 groups).

Hayes-Conroy’s approach allowed for the scenarios described above to be food based-sensory experiences and created an interactive experience with participants. Incorporating the activities involved in this process allowed the researcher a greater understanding of the meanings of these foods in people’s lived-experiences. In her view, preparing, cooking and tasting the food from the cooking pot and gathering products from the forest or markets created a shared experience for the researcher and participant(s).

I am pleased to say that this experience enabled me to purchase, clean, prepare and eat and enjoy all of the wild foods listed and considered in this document. Except for some bushmeat (and absolutely monkey) even while in the village Ma’an in southeastern Cameroon where I learned “there is no meat here, only bushmeat.” Instead I visited a sanctuary for animals (mostly, simians) rescued from the bushmeat trade. I always stopped on the roadside on the way to Edea from Yaoundé for a picture of bushmeat advertised with rope and a stick on the side of the road (Image 3). I also visited the bushmeat market by the train station in Yaoundé (discussed in the Conclusion). After chatting with a group of women selling live tree pangolins, a partially dissected boa constrictor, antelope and other animals “from the black bush,” I was asked to leave by a large, drunk man selling piles and piles of dried monkey. While these experiences with bushmeat were productive, they were mostly organized on my own accord.

**Participant observation** of the activities described above and from five field visits from 2010-2013. This required me to become immersed in the place I was studying. The note taking involve in this process not only recorded the experience, patterns and processes but allowed for reflection of impressions and ideas of the data collected. This was important as qualitative ethnographic methods require the researcher to be placed in the field “and actually has her participating in the
activities that she is interested in” (Brockington and Sullivan 2008: 59). For this research, participant observation involved some gathering of products from the forest and market and cooking foods by learning the techniques and processes that bring these foods to the table. Additionally, I spent much time in food markets in Yaoundé and Buea to observe selling and purchasing patterns. I noted trends and patterns associated with food selling and purchasing.

Fieldwork diary allowed me to record day-to-day events, diet, recipes and personal observations and experiences of the work in the field. Here I also recorded personal biases to be aware of when collecting data. I also documented and catalogued photographs and videos taken throughout the fieldwork experience to document the plants, food and dishes of interest to this study.

Gathering of recipes, food-centred interviews and observation of food habits (described above) to record the overall consumption patterns of the products of interest. These have been presented as effective methods in food studies ethnographies (Miller and Deutsch 2009: 138). I collected over 420 recipes that include wild and traditional foods found in Cameroon.

Use of the above methods helped to gather and synthesize the data into direct narratives to describe the 2008 food riot experience and wild food consumption and trade.

Data analysis

To produce an in-depth study of wild food sale and consumption and the food security implications of food price volatility and unrest in Cameroon the analysis identified, observed and described patterns and trends that emerged in the data. Data was collected to the point of saturation. Each of the four manuscripts includes a methods section that hones in on the specific approach used to answer the specific research question included in that manuscript. For example, Hyperresearch was
used for the media analysis in manuscript one. The use of this qualitative data analysis software programme was excellent for coding large bodies of text between researchers. The data from the surveys were entered into Excel sheets and coded manually for manuscripts two, three and four. To quote from a social science research methods text book,

In qualitative research, investigators must immerse themselves fully in the vast amounts of narrative that result. This requires that one comes to truly understand what the data are saying. It involves an extensive amount of time spent in dialogue with the data (weeks or months) using inductive reasoning (Jackson 2003: 141).

During this phase of this research, I spent years reviewing, reading, re-reading and synthesizing the data collected from the study. In some cases where a gap emerged from the review process I returned to Cameroon to reflect on the findings, talk about the results and gather more information. This was especially important in November and December 2013 when I returned to Cameroon to present results from the third manuscript in this dissertation and to collect more data on ecological change and wild food. Because the ecological change data is so new it is still being analyzed with local researchers for a manuscript in progress. The more in-depth life history stories from this phase are however, included in manuscript four.

Analysis of documents, interview transcripts, and field notes proceeded through both manifest (counts of actual words, sentences used) and latent (meaning of words, sentences) to establish the nuanced understanding of assumptions and symbols embedded in people’s narratives and official documents. Qualitative content analysis of open-ended interview questions were coded based on categories and themes (similarities and differences) deemed relevant during the course of data collection. For example, the data presented in manuscript three is organized using De Schutter’s (2010) framework for studying food security: the availability of food, accessibility of that food and the adequacy and safety of that food in diets. Data were organized and analyzed around the categories of that particular framework.
The quotes from certain individuals that appear in this document are not outliers but are representative of the theme under discussion. For example, the question ‘How is perishability managed?’ was posed to the buyam-sellams of wild food in both regions. The answers to that question from the market survey in the Southwest region during the wet season ranged from “place in fresh airy place, dry in sun”; “always keep dry”; “airing it in an open space”; “smoke in the kitchen and dry under the sun”; “kept in an airy place or put in bags”; “kept in a dry place”; “put in a dry place”; “tie in bags and keep it dry.” The theme from these responses is: keep the product dry. I would then choose the quote that best expressed this point under the theme. In many cases the answers would come from sellers of different food products. I would then refer back to the part of the survey that mentioned what was sold and link that to the responses. For example, the preservation of bush mango pits (*Irvingia* spp.) involved a slightly different method: “when in very cold places it gets mold; when in hot place it extracts oil so needs a moderate temperature.” This coding approach was used throughout the survey data whether the content was about food riots, food security or trading practices. The same approach was adopted for the secondary data collected. Ethnographic methods were considered throughout this process:

Although ethnographers examine small details of a cultural scene, at the same time they seek to understand the broader cultural landscape. Through the analysis process and the writing of the ethnographic report the researcher is hoping to provide an in-depth study of selected domains, an overview of the cultural scene and a description that conveys a sense of the whole (Jackson 2003: 151).

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With those goals in mind, the dissertation document proceeds by examining the two broad themes of the research: food riots and wild foods. A small introductory statement that hones in on the specific manuscripts under each theme is also included. The conclusion draws together major findings and contributions from the research and presents recommendations for ways of improving food security outcomes in Cameroon and perhaps Africa more broadly.
References


4. MANUSCRIPT ONE

Theme one of this project explored the causes and consequences of the 2007-08 and 2010-11 global food price spikes and the reported instances of social and political unrest across the world at that time. Africa was particularly hard hit by these events, and many international commentators labeled these events ‘food related unrest’ or ‘food riots.’ The first co-authored manuscript in this section identifies and analyzes hypotheses in the scholarly literature that sought to explain a link between a food price rise and riots. Using data from journalistic sources, this manuscript charts and compares the international and local media reporting in 14 African countries during that time. It presents four themes that emerged from reading over 2,000 related news stories on this topic.

This manuscript was an early attempt to draw out the linkages between high food prices and food related unrest. Desk-based research for this paper commenced in the summer of 2011, was submitted to Food Security in May 2012 and a peer-reviewed version of this manuscript was accepted and published in Food Security in May 2013.

This article was co-authored with Dr. Alexander Legwegoh, a Cameroonian-Canadian, whose insights and French reading were crucial to the presentation. Alexander’s other published research on food security in Africa has focused on urban Botswana and diets. Dr. Evan Fraser also provided exceptional insight through his exploration of complex systems diagrams. We adapted several of his ideas in the article. Overall, this piece received positive and wide-ranging recognition from researchers, including those who work on complex systems models at Cornell University. Researchers there have re-created and shared with us the diagrams from our publication in Food Security to account for both positive and negative feedback loops. The Canadian Association of Geographers also listed this article as a “Hot Paper by Canadian Geographers” in 2013.
This media analysis paper also had a further impact on the overall thesis. It afforded me an invitation to contribute to a findings workshop at the Institute for Development Studies (IDS) at the University of Sussex. Dr. Naomi Hossain, the lead researcher on a DFID-ESRC funded project entitled 'Food Riots and Food Rights: the Moral and Political Economy of Accountability for Hunger' (2012-14) brought together 24 food security and food riot researchers from February 11-14th at IDS in Sussex. The Food Riots and Food Rights findings workshop focused on four country case studies to identify ways to improve the prospects for accountability for food security at a time of price volatility. Naomi also mentioned this manuscript on her IDS blog in the entry titled 'Reading Riots,' and several others have now cited it.
FOOD RIOTS: MEDIA PERSPECTIVES ON THE CAUSES OF FOOD PROTEST IN AFRICA


Abstract: When food prices spiked in 2007–08, urban Africa experienced more instances of food riots than any other part of the world. Problems were then encountered again during the 2010–11 food price spikes. This paper explores the cases of 14 African countries where food riots occurred during these two periods by presenting a qualitative content analysis of news reports on the riots drawn from both global and local African news sources. This analysis highlights the ways in which the media portrayed the links between food price rises and food riots in Africa. Briefly, our results show that the international media generally portrayed poverty and hunger as the factors that linked the incidence of food price rises with the occurrence of riots. By contrast, the African media tended to portray food riots as being caused by a more complex set of factors, including citizen dissatisfaction and people’s ability to mobilize. Exploring both the international and local interpretations of the drivers behind the food riots is important for the understanding of the multi-scalar and multifaceted factors that shape increasing food insecurity in urban Africa.

Introduction

The fate of nations hangs upon their choice of food.

Jean-Anthelme Brillat-Savarin (1825)

Many academics, policy makers and journalists have asked if the era of cheap food is over (World Bank 2008; Clapp 2009; Toye 2009; UN High Level Taskforce on the
Global Food Security Crisis HLTF 2010; Financial Times 2011). Since 2005, food prices have dramatically skyrocketed, and by 2008 were back to levels not seen since the 1970s (Toye 2009). Using data from the 1972–73 and 2007–08 food crises, Timmer (2010) searched for similarities between the last global food crisis that occurred in the 1970s and the global food crisis in 2007–08. He discovered that “the actual price panic that resulted [in 2008] had little rationale in the fundamentals of supply and demand” and was not triggered by any one activity (Timmer 2010: 3). The change in price was not driven by the specifics of one particular food market but affected virtually all food commodities, across the board (Toye 2009). For example, between 2000 and 2008, the prices of “wheat, butter and milk tripled; the prices of rice, maize and poultry almost doubled; and prices of meat, palm oil and cassava also rose sharply, but not by as much” (Toye 2009: 759). What followed was a dramatic explosion of one of the oldest forms of collective action: food riots.

Food price volatility is “particularly problematic for the world’s poorest countries, which are typically agricultural-based and food import dependent” (Clapp 2009: 1189). International food commodity prices remained high in 2009 by recent historical standards and volatile (Food and Agriculture Organization FAO 2009). The FAO’s report The State of Food Insecurity in the World 2009 highlights that, even before the food crisis and the economic crisis, the number of hungry people had been increasing slowly but steadily. With the onset of the 2007–08 crisis, however, the number of hungry people in the world increased sharply (Food and Agriculture Organization FAO 2009). The president of the World Bank suggested that, in all, some 33 countries were vulnerable to outbreaks of social unrest on account of food insecurity (Toye 2009: 762).

In 2009 a group of researchers at the Institute of Development Studies, based at the University of Sussex conducted a qualitative study on the effects of high food prices on the poor in developing countries. The team of researchers came to two conclusions. The first was that the crisis was not over. The second found that people were adopting damaging coping strategies to better manage their food insecurity,
such as: “spending a greater share of income on food, buying lower cost items, reducing the quality and diversity of food, gathering wild foods, eating less and going hungry” (Institute of Development Studies 2009: 11–12). When prices spiked again in 2011 people were already food insecure. Their hunger drove them back to the streets and brought new African countries onto the scene. It is now concluded that, in many African countries, national policy approaches, which target hunger and malnutrition, are “fragmented, poorly coordinated and lacking in political leadership” (Africa Progress Panel 2012).

Still much remains unknown about how food price volatility and political volatility interact. For instance, if food riots were simply caused by hungry people growing so desperate that they take to the streets, then why is it that the riots across Africa were the most explosive? And in some cases these riots toppled long-standing regimes. More work needs to be done to unpack the relationship between food price volatility, and political volatility if we are to be able to take appropriate policy measures to prevent further crises.

In the medium-term and since 2011 food prices have begun to level off. However, the International Food Policy Research Institute (IFPRI) estimates that by “2050, international prices for maize will double, while wheat and rice prices will increase by around 60%” (Africa Progress Panel 2012: 37; Ringler et al. 2010). The risk of food insecurity is higher in Africa than in any other region. Despite differences between countries, all countries across the continent are at risk of experiencing food insecurity (Africa Progress Panel 2012: 38). The map below (Map 1) highlights the African countries that experienced food riots in 2007–2008 and by 2010–2011 additional countries were added to the map of continent wide food protest. Overall the African continent experienced more civil unrest due to high food prices than any other area of the world. As a result, there is a need to better understand the triggers of food protest, especially as it relates to volatile food prices and increased food insecurity.

This paper explores this issue by focusing on the possible ways in which food price
volatility between 2007 and 2011 triggered widespread food riots across Africa. We conducted a content analysis of qualitative data from international and African media reports, in both English and French on the crisis, to explore how and why the riots occurred. Media system theory suggests that mass media, broadly, becomes an important source of information to help understand events during periods of political instability (Hindman 2004; Loveless 2008). This paper’s central research question is: according to the media how did a food price rise translate into a riot? More specifically, this paper is organized as follows: the next section explores the literature that identifies the possible triggers whereby food scarcity or price rises lead to political unrest. Next, a brief overview of the history of recent food riots across urban Africa is presented before describing our methodology. The subsequent section presents the results of a qualitative analysis of media reports on riots across Africa to answer our research question. The concluding section reflects on these results in a discussion focusing on food security predictions and agricultural policy for the future.

**Themes from the literature on the ways that a food price rise may trigger riots**

The literature outlined below seeks to explain how a food price rise triggers food protest or social unrest. (For a more detailed review of the literature on food riots please see the Introduction and Conclusion included in this document.) Food riots are defined as crowd violence or coercion around food issues (Bohstedt 2010). Broadly, the literature on food riots and food price volatility highlight issues related to food scarcity, distribution and access, merchant stockpiling and hoarding and urban poverty as the principal triggers of food protest. These elements come together in volatile ways.

According to some, riots occur when poor people start to starve and become so hungry that they fight for food and protest in order to express their demand for adequate entitlement. Recent literature on food crises posits that unless the world produces more food then hunger and poverty will increase and this will translate
into political and economic upheaval (Beddington 2010; Godfray et al. 2010; Foresight 2011). This line of argument builds on the Malthusian hypothesis that social collapses inevitably occur when a population over-consumes and runs out of food (Malthus 1798). By emphasizing scarcity and competition over scarce resources, Oster’s (2004) arguments in this literature suggest that scarcity leads society to create scapegoats (see profiteering below). The Malthusian literature also holds much in common with the social sciences tradition of materialism that was in vogue in the early 20th century and tried to explain how societies are shaped by material resources (see, for example, Toynbee 1934). But many social scientists dismiss Malthusianism and materialism as too simplistic and deterministic. For example, Sen’s Poverty and Famines (1981) discounts the role of the environment or food supply in causing food insecurity arguing that the mechanisms by which people demand food, political economic structures, and household distribution are far more important than productivity or supply.

Similarly, research on possible links between warfare and environmental scarcity have found only the weakest of relationships between incidents of conflict and a lack of material goods in the 20th century (Buhaug 2010). Such quantitative empirical conclusions have led some scholars to adopt the lens of cultural theory and critical realism to explore the ways in which society and nature interact. A key conclusion of this group is that “problems” such as food insecurity are socially constructed. However, many other scholars, often historians, present evidence that contradicts this claim and argue that there are complex and significant links between environmental problems and a host of social issues. For instance, Goldstone’s work on the English, French and Russian revolutions shows how volatility in the food market (which was caused by crop failures) combined with restlessness for political reform destabilized long-established political regimes in Early Modern Europe (Goldstone 1991).

Zhang et al. (2007) relies on many centuries or what they call, quantitative macrohistorical data on climate change, agriculture and war from Europe and China.
The analysis demonstrates that there are causal pathways between civil violence that often corresponds with crop failure and poor growing conditions. Oster (2004) even shows that there was a relationship between temperature change, crop failure, and witchcraft trials during the Little Ice Age. She builds on this empirical observation to propose that indicators of social crisis rise with material hardship. Finally, Fraser (2011) documents how population growth coincided with climatic changes to drive a wave of economic and political upheaval in the late medieval period.

According to other aspects of the literature, food riots occur when elite members of society feel disempowered and marginalized from political power structures as the state becomes too fiscally weak to provide for all who seek elite positions. Thus rising food prices represents the proverbial “straw that breaks the camel’s back” thereby giving the elite the opportunity to air a large number of grievances that are rooted in their frustrations at a lack of political power. This theme builds on Goldstone’s (1991) argument that revolutions tend to occur when scarcity coincides with times when newly emerged elite members of society feel disenfranchised and disaffection leads to popular uprisings, thereby “heightening mass mobilization potential” (1991: 460). Building on his argument, Goldstone notes that as popular unrest grows “competition for land, urban migration, flooded labour markets, declining real wages, and increased youthfulness” raise the mobilization potential of the entire populace (1991: 460).

Moreover, according to some of the literature, people engage in food riots when they grow outraged at the sight of other people (especially merchants) profiteering from rising prices. This account of food riots builds on Thompson’s (1971) argument that instability comes not from scarcity but from the perception that some people are profiteering from scarcity. Hence civil unrest comes from feelings of injustice brought about by the profiteering shopkeeper rather than poverty.

More specific to the issue of food riots, work done on the history of early modern Europe shows that a spate of food riots coincided with poor growing conditions, the
growth of national markets and the transition from paternalism to laissez-faire economics. This combination of factors led Thompson (1971) to hypothesize that food riots are likely when shortages trigger price rises that happen in conjunction with other social changes.

Building on this argument, and exploring empirical evidence of food riots occurring in the 1990s, Walton and Seddon (1994) argue that food rioting most often increases during periods of social, political and economic transition and market expansion. For instance, the food/IMF riots of the 1980s-1990s mark a wave of grievances over state policies of economic liberalization (Walton and Seddon 1994: 39). This is significant to the present moment, as an emergent theme in a growing body of literature is that food riots have occurred because many developing countries are unable to protect national staple food supplies, presumably because of a growing reliance on international food markets (Devereux 2009; Hossain 2009; Fullbrook 2010; Moseley et al. 2010; Cribb 2011; Shiferaw et al. 2011; Levine 2012).

As the work of Swan et al. (2010) and Moseley et al. (2010) suggests, cities are places where increasing amounts of earnings are spent on food as purchasing power declines. This leads many people to eating less food, perhaps of poorer quality but overall spending more money on food in order to survive (Swan et al. 2010). The resulting desperation translates into civil unrest and is in line with Walton and Seddon's (1994) argument that contemporary food riots tend to occur in response to an ever-more integrated global system structured by austerity measures adopted by many countries.

We take from this historic literature the need to further explore the potential triggers whereby a material crisis translates into a political one. By doing this, we hope to better understand the way that our own future may unfold and to assess more fully the threats posed by high food prices, increasing urbanization and ecological crises. The food riots in Africa since 2007 present an ideal opportunity to explore and present these triggers.
**Overview of recent food riots in Africa**

Dozens of food riots have occurred around the world since food prices began spiking in 2007 with urban Africa being the stage of more of these disturbances than any other part of the globe (see Map 1 and Table 2). The effects of high food prices were hard on this region because many African countries are import-dependent. Furthermore, food subsidies fashioned for urban consumers that helped to prevent urban unrest were removed subsequent to the Berg Report recommendations from 1984 (Gibbon et al. 1993; Sneyd 2011: 187). Moreover, the lack of appropriate urban food security policies and interventions targeted at helping the urban poor imply that individual/households tended to cope with the incidence of food insecurity by assembling complex livelihood strategies (Maxwell 1999; Institute of Development Studies 2009; Crush and Frayne 2011). It well documented that the urban poor are particularly vulnerable because they spend a disproportionate amount of their income on foodstuffs (Moseley et al. 2010; Abbott and Borot de Battisti 2011). For example, in urban West Africa, where countries are highly dependent on rice imports and where rice prices rose by 100% between February 2007 and March 2008, peoples’ purchasing power collapsed, leaving them vulnerable to food insecurity (Moseley et al. 2010). These vulnerabilities suggest that the urban population has difficulty in absorbing rises in food prices consequent upon globalization.
Map 1. Instances of food riots across Africa in 2007-2008 and 2010-2011 (see Table 2 for a country by country overview from our data)

Food riots must also be set against a broad nutritional and economic background. According to the FAO and World Bank statistical data available from their respective websites, approximately 30% of the population in Sub-Saharan Africa is undernourished, while the World Bank notes that between 45 and 50% of the population in Sub-Saharan Africa lives below the poverty line. Taken together, these statistics mean that this region is one of the most vulnerable to food insecurity in the world. As Bohle et al. (1994) suggest, levels of food security are defined by the political, economic and institutional capacities of people in specific places and at specific times. These include: soil nutrient depletion, political and civil conflicts, the HIV/AIDS epidemic, the impacts of climate change and the lack of technology adoption and dissemination of agricultural knowledge (Bohle et al. 1994). These dynamics make Africa a major focus for food security research (Roetter and Van Keulen 2007; Pinstrup-Andersen 2010). Table 2 summarizes the countries, dates
and events of major food protests across Africa.

<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>January 2011</td>
<td>Rising food prices led to an outbreak of riots with unrest in several cities.</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>February 2008</td>
<td>As anger swelled over high food and basic commodity prices, protesters swept the streets of three cities: Bobo-Dioulasso, the second largest city in the country; Oudighouya, the third largest, hundreds of kilometers north of Bobo-Dioulasso, and Banfora and in the west of the country.</td>
</tr>
<tr>
<td>Cameroon</td>
<td>February 2008</td>
<td>Riots broke out while a joint mission of the International Monetary Fund (IMF), World Bank, and African Development Bank was in the country to discuss poverty alleviation. Riots paralyzed most major cities including Yaoundé and Douala.</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>March 2008</td>
<td>As food prices soared protesters took to the streets of Abidjan. At least a dozen protestors were reported wounded during several hours of clashes with police on March 31st as they demanded government action to curb food prices.</td>
</tr>
<tr>
<td>Egypt</td>
<td>April 2008</td>
<td>Protests against low wages and high food prices in the Nile Delta industrial city of Mahalla.</td>
</tr>
<tr>
<td>Guinea Conacry</td>
<td>January and February 2007</td>
<td>Guinean citizens went on a nationwide strike organized by Guinea’s most prominent trade unions to protest corruption, bad governance, and deteriorating economic conditions. There were reports of violent reprisals by government security forces.</td>
</tr>
<tr>
<td>Madagascar</td>
<td>May 2008</td>
<td>The country imposed a ban on food export, a decision that was aimed at preventing the uncess experienced in countries where rising food prices have impacted most severely on the most vulnerable and poor.</td>
</tr>
<tr>
<td>Mauritania</td>
<td>November 2007</td>
<td>Youthful demonstrators protested hikes in the price of food and staple goods in the capital city of N’Ziachott and other South Eastern towns.</td>
</tr>
<tr>
<td>Morocco</td>
<td>September 2007</td>
<td>The Moroccan government was forced to cancel a 30% hike in the rice of bread due to violent protests that left people injured in the town of Sefrou, and in Rabat.</td>
</tr>
<tr>
<td>Mozambique</td>
<td>September 2010</td>
<td>The capital Maputo was hit by riots as demonstrators blocked roads with burning tires and looted shops as a reaction to soaring bread prices.</td>
</tr>
<tr>
<td>Senegal</td>
<td>November 2007</td>
<td>Demonstrations led to citizens burning cars, throwing stones and pillaging the mayor’s office in the capital, Dakar. Poverty and the high cost of living were given as the main reasons for the unrest.</td>
</tr>
<tr>
<td>Somalia</td>
<td>May 2008</td>
<td>Thousands took to the street of the capital Mogadishu during food riots leading to violent confrontations with forces leaving several people dead.</td>
</tr>
<tr>
<td>Tunisia</td>
<td>April to June 2008</td>
<td>Increased wheat prices caused riots in Redayef and the Gafsa region. Unfortunately, very little has been reported about this compared to the more recent riots in 2011.</td>
</tr>
<tr>
<td>Uganda</td>
<td>April 2011</td>
<td>Increased food prices following a sharp increase in fuel prices caused riots in the capital, Kampala, and five other centers across the country.</td>
</tr>
</tbody>
</table>

Table 2. Overview of the instances of food riots in 14 African Countries from 2007 to 2011 (Integrated Regional Information Networks (IRIN); Patel and McMichael 2009; Berazneva and Lee 2011; and Minot 2011)

**Methods**

Our approach is based on a directed content analysis of web based print media in both English and French pertaining to the food riots in Africa between 2007 and 2011. In choosing this approach, we followed Wilkinson's (2009) claim that one of the best ways of researching food riots is to explore the media reporting of these events and use the media to investigate competing explanations for their occurrence and frequency. One of the criticisms that have been directed towards Wilkinson’s
work is that his selection of media sources was too dependent upon English language content providers. To mitigate such concerns our analysis focused on both English and French reporting on these events (explained below). Also, we were cautioned by arguments from media theory that claim the media can help to construct social and political problems through the ways they are represented (Hall 1997). Recognizing this possible construction is an important contribution to food riot methodology that relies on media sources. As new and more modern triggers of food protest are identified they should be critically evaluated against the measures that are adopted to mitigate the effects of food price volatility.

Therefore, this paper explores media accounts of the 14 African countries (see Map 1 and Table 2) where food riots occurred during recent periods when hikes in food prices occurred: 2007/2008 and 2010/2011. In countries where there were several episodes of food price related riots within the selected periods, we focused on the first incidence when the occurrence of high food prices led to violent protest. The countries and riots were identified using reports from Integrated Regional Information Networks (IRIN) and other sources such as Patel and McMichael (2009), Berazneva and Lee (2011), and Minot (2011). For our data set, we needed more than one search engine to capture the breadth and depth of the news stories from the continent and to search in several languages. We found using one search engine limited the results, especially the coverage of Africa. News databases and search engines such as Factiva, Google News with the addition of the allAfrica database were used to generate a list of online print news reports. We recognize that a major a limitation of this approach was that it does not include newspapers that are not online. While we were able to include content in both English and French, another limitation of the study was that we did not include news stories in Portuguese or Arabic or any other local African language.

We searched within these databases for the following terms: “food riot”; “food price rise”; “food riot [name of country]” and the following terms in French: «émeutes de la faim», «hausse des prix alimentaires»/«hausse des prix denrées alimentaires»
and «émeutes de la faim [nom du pays]». We restricted the years to 2007, 2008, 2009, 2010 and 2011. This yielded close to 2,000 news items including 765 French international media and 687 English international media stories reporting on food riots across Africa as well as 286 French local African news stories and 221 English African media stories emerging from specific country contexts.

We then conducted a directed content analysis to code the media reports on food crises to explore causes of the riots. In essence, this entailed reading the text and identifying wherever a quotation provided insight into the causal links between food price rises and food riots. This is a well-established approach in research that relies on print media for data collection (e.g. see: Greenberg and Hier 2009; Horner and Aoyama 2009; and Abdelmutti and Hoffman-Goetz 2009). In particular, content analysis is seen as a method that helps researchers deal with large quantities of text such as those from the mass media, enabling them to produce a comprehensive understanding of "trends, patterns, and absences" (Greenberg and Hier 2009: 466). As media scholars argue "we cannot with any degree of certainty assess the 'cultural skewedness' of discourse on the basis of one-off examples of misrepresentation (Winston 1009: 62). In lieu of this critique, content analysis is the "only available tool [for researchers] establishing maps, how-ever faulty, of [media] output" (Winston, 1990: 62). In the first instance, our analysis was informed by the review of the literature, summarized in section two of this manuscript.

The content analysis was done in several stages. All three authors initially read and coded the same 20 articles from both international and local media sources. Emerging trends were then discussed and the themes found to be the most recurrent were identified. We found that we had similar themes across all three authors (inter-coder agreement), and we proceeded to code the entire data set. We used HyperResearch a qualitative data analysis software tool to code the entire data set. Using HyperResearch enabled us to easily manage the large amount of data. Since we had decided on the codes, the process within HyperResearch mainly entailed going through the data to mechanically associate these codes to texts. The
validity was based on comparative analysis amongst the three authors and with the existing literature. We believe that another author who reads the same articles (relying on the sampling validity through the use of Factiva, Google News and allAfrica) will come up with more or less the same themes to explain the food riots. We remained largely in control of the analysis, since we determined what segments of texts were assigned specific codes. In addition to manifest content (or the visible surface content), we also coded the latent content (or the underlying meaning) of the communication. In all cases we read the entire news item to make an overall assessment of the passage. We used systematic coding of the agreed upon codes for both manifest and latent entries to assure the reliability and validity of the study.

To identify the themes in the media stories, we began with Homer-Dixon’s paper (1995) that outlines the challenges of operationalizing both statistical and controlled-comparison methods to understand causation in complex social systems. Hence, we followed his process of “path-tracing” to explore how different media articles constructed the chain of cause and effect that began with the rise in food prices and culminated in the riots. This allowed us to establish broad narrative descriptions of how food riots emerged in the data. To display this material, we followed the approach of Fraser et al. (2011), which establishes a systematic method to express the resulting narratives visually as dynamic systems diagrams or flow charts. This approach has been used in a number of different situations (e.g. see: Dougill et al. 2010; Fraser et al. 2011; Manez et al. 2011; Sendzimir et al. 2011). We recognize that it is conventional to include +/− to describe the relationship between two variables when using dynamic systems diagrams, especially for an ecology audience. However, for the purpose of this paper, we are hoping to extend this method to describe social processes, especially cause and effect relationships. We increased the text in the diagram to visually represent the dominant narrative within each theme. For those familiar with this method and literature we realize this is a novel approach.
Results

Results of the qualitative analysis show that the media depicted four key ways in which the rise in food prices triggered food riots. The first of these is that a rise in food price contributes to higher levels of poverty and hunger and this triggers riots. This narrative was mostly found in the international media. Second, we detected, in the African media, speculation that it is actually citizen dissatisfaction which causes riots and that food price rises are simply triggers. A third theme comes from the international media and suggests that anger over commodity speculation, land grabbing, and the shifting of food crops to bioenergy is creating a backlash which is manifest in riots. Finally, we found the African media presents us with a fourth theme that suggests food riots are triggered by local anger over merchants who profiteered from rising prices.

<table>
<thead>
<tr>
<th></th>
<th>Poverty and Hunger</th>
<th>Citizen Dissatisfaction</th>
<th>Global Profiteering</th>
<th>Local Merchant Profiteering</th>
</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>75</td>
<td>11</td>
<td>67</td>
<td>9</td>
</tr>
<tr>
<td>Local</td>
<td>20</td>
<td>45</td>
<td>21</td>
<td>51</td>
</tr>
</tbody>
</table>

Table 3. Statistical evidence of the predominant food riot narratives from the international and local African media

Then, we explored how these themes were represented differently amongst different kinds of media outlets. HyperResearch allowed us to quantify the number of quotes related to each theme (see Table 3), thus giving us some statistical evidence of what we describe as the predominant narratives within the international and local media. The 1959 articles included in the study had all discussed or reported on the food riots that were occurring at the time. However, many of these article only reported the events, the effects and impacts of the riots (i.e. number of deaths) and national as well as international reactions. While several
other themes occurred in the articles, these themes sought to explain the causes of high food prices without linking the narrative to food riots. For example, some discussions centred around climate change and its impacts on agricultural productivity, leading to high food prices. Thus the 299 quotes identified were those that suggested an explanation about the link between food price rises and food riots and in turn are the predominant themes that we discuss in the paper. The 299 codes tallied below represent the four themes that appeared with the most frequency over the 2007–08 and 2010–11 time periods. What follows is a description of each of these four themes.

Theme one: Poverty and hunger

The first narrative on food riots depicted the riots as being driven by a sense of desperation that was itself exacerbated by more expensive food. This depiction was particularly common in the international media that characterized the global food crisis as one of food shortages and high prices. For instance, when reporting on the riots in Egypt in 2008, Al Jazeera commented, “thousands of people have resorted to violence due to shortages of basic food commodities and rising food prices” (Al Jazeera 2008). The BBC picked up on this argument and pointed out that such shortages lead to instability: “There’s a risk, I wouldn’t say a huge risk, but some risk of higher energy prices and higher food prices being very destabilizing in some countries” (BBC 2011). The French newspaper Libération contextualized the situation with a direct quote from an Egyptian citizen who notes:

Je gagne 800 livres par mois (presque 100 euros), mais mon salaire est englouti avant la moitié du mois. Je vis à crédit, on rogne sur tout.” Pour donner de la viande à ses deux enfants, Abdallah s’est rabattu sur les abats, les bas morceaux.4

4 “I earn £E 800 per month (almost 100 euros), but my salary is consumed before half of the month. I live on credit, we eat anything.” To give meat to his two children, Abdallah fell back on offal, which is affordable (translation done by one of the authors).
Many of the western newspapers provided a similar depiction in that food prices created the conditions under which the poor and destitute became desperate and that their desperation drove the unrest. After a conversation with a man in Mauritania, the Associated Press painted a similar picture:

Though life is hard here, he, like others in the shantytown, say going back to their lives of trying to coax food from the arid earth in the country would be worse. He is here to stay, he said. “Of course I don’t want to go back to the village,” he said. “There, you can die of hunger without realizing it. You don’t even see food. Here at least you can see it, even though you can’t get it. It kind of gives you hope. You can see it in a car passing by” (Associated Press 2008).

We have summarized this narrative in Fig. 1, which shows a simple chain of cause and effect, whereby the rise in food prices trigger a rise in hunger, a rise in poverty and a rise in desperation that results in unrest. But the academic literature suggests that this is probably too simplistic and that, at best, food price rises are only triggers of more deeply embedded social problems (Bush 2010; McMichael and Schneider 2011). For instance, while there were riots in 2008, there was also a record global grain harvest in that year driven by Europe’s heavy wheat harvest (Piesse and Thirtle 2009: 122). Nevertheless, the numbers of hungry continued to grow (Bush 2010).
Theme two: Citizen dissatisfaction

This leads us to the second key theme, which was more prevalent in the African media, suggesting that the riots were triggered by multi-dimensional factors, including anger over unemployment, inflation and exclusion from government processes leading to citizen dissatisfaction and political uncertainties. This theme builds on Goldstone’s (1991) argument in which he claims that inflexible social, political and economic institutions fracture under the pressure of a growing population and limited available resources thus creating an opportunity for mass mobilization. For instance, a Namibian newspaper proclaimed, “Food prices will topple elite” (allAfrica 2011) suggesting that the core causes of food riots was not hunger but the corruptness of the elite. allAfrica noted this trend in 2008 and reported:

The fact that senior government officials and politicians are living in
opulence while ordinary citizens are trapped in grinding poverty is creating a huge divide between the masses and their leadership, which partly explains why members of the public were seen joining the soldiers in ransacking shops and beating up the police (allAfrica 2008).

In addition, allAfrica reports “this crisis [has been blamed on] on bad governance in developing countries, food shortages have been reported in most parts of the world” (allAfrica 2008). But the relationship between food price volatility, political corruption and food riots is extremely complex. According to some reports, citizen dissatisfaction stems from a lack of access to power created broadly by corruption, police abuse and lack of access to distinct social groups. Such feelings are also expressed in terms of a lack of employment opportunities for the relatively well-educated youth. For instance, the following quotation from allAfrica highlights these feelings:

Face à des régimes en place depuis les indépendances en 1960, les citoyens de ces pays avaient l'impression d'étouffer. Le coût de la vie s'élevait chaque jour un peu plus. Quand des jeunes (en majorité des élèves et des étudiants) choisirent la rue, la soldatesque se jeta sur eux et en écrasa quelques centaines (allAfrica 2008).

The youth in this case are understood to be the most volatile with their ability to mobilize through social networking websites and SMS texting. Access to telecommunication by the rioters was perceived to be the core motivation for many African governments to suspend service, was reported in Mozambique:

Independent news sheet Mediafax on Friday reported that Mozambique’s telecommunications regulator sent a letter to Vodacom Mozambique and state operator mCel last Monday ordering them to suspend SMSing facilities for clients. The order was sent after a widespread viral SMS campaign fuelled three days of food riots at the start of September which killed 13 (allAfrica 2010).

The African media presents this group as the individuals who are seeking justice,

5 Faced with regimes in place since independence in 1960, citizens of these countries felt suffocated. The cost of living was a little more each day. When young people (mostly students) chose the street, the soldiers fell upon them and crushed a few hundreds (translation done by one of the authors).
freedom and ultimately, security. This narrative was so widely expressed, the BBC even picked it up at one point in 2011 (though most of their coverage on this issue focused on the links between price rises, hunger, desperation and rioting):

The riots are widely seen as drawing on deep frustrations with the ruling elite and a lack of political freedom, as well as more immediate concerns about the cost of living, housing, and jobs (BBC 2011). Citizens find themselves completely disillusioned by lack of will and inability of the ruling class to initiate any political change. For example, in Cameroon the local media reports:

Aucune relance ne saurait se faire sans volonté politique. Je vous fais remarquer que la relance qui a été prescrite suite aux émeutes de la faim de février 2008 n’a jamais eu lieu, faute de volonté politique. Je parle d’une volonté politique agissante et non des promesses politiques (Le Quotidien Mutations 2010).\(^6\)

The complex interaction between factors is summarized in Fig. 2.

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\(^6\) No recovery can happen without political will. I want you to note that the stimulus that was prescribed following the riots of February 2008 never took place due to lack of political will. I speak of a political will to act and not political promises (translation done by one of the authors).
Figure 3. African media narrative: Citizen satisfaction

**Theme three: Global profiteering**

The third narrative, expressed by the international media, maintains that profiteering, driven by financial commodity speculation and the mounting power of multinational agricultural corporations caused food prices to rise in the period between 2007 and 2011, increasing the frequency of riots. This narrative first explains how food prices rise by citing land grabbing, commodity speculation, seed patenting, and the appropriation of land for biofuel production and export agriculture. The narrative then goes on to explain how these global factors in turn disrupt local food economies fueling the notion that there is a lack of local control over the local food system. Global Insight Daily Analysis reported on violent clashes in Mauritania and concluded that the problem was a reliance on international markets:
Mauritania and its southern Senegalese neighbour are both heavily reliant on international markets as opposed to domestic farming and although wheat is an integral component in local food, it is all imported. Wheat overtook other foods in Mauritania to become the staple because of its usually low price but now, with these high price increases, the populace may be forced to switch to the consumption of other cereals (Agyeman 2007).

Valeurs Actuelles makes an interesting observation, «L’absurdité du système commence à apparaître: des pays exportent alors qu’ils n’arrivent même pas à nourrir leur population» (Valeurs Actuelles 2010). The factors driving the importing of food products are similar to those driving production for exports and biofuels.

The increased use of grains to produce biofuels, first heralded as a way to cut greenhouse gases, has been blamed for contributing to rises in the cost of basic foods. A rising demand for food in emerging market economies has further contributed to grain shortages (al Jazeera 2008).

As a result, the focus in the international media began highlighting some global imbalances in the production and trade in food and the effects on local African food economies:

Avant de pousser les Africains à produire des légumes de contre-saison pour les marchés européens, avant de leur vendre des céréales produites chez nous ou aux États-Unis, il ne serait pas si mal de veiller à ce qu’ils soient en mesure de se nourrir eux-mêmes (Ouest France 2008).

While also drawing attention to a lack of food self-sufficiency, the international media sought to explain the relationships emerging from economic globalization, commodity market speculation and food riots across the African continent.

“A disturbing amount of price increases, I fear, is being driven by speculative activity,” Marcus Miller, a professor of international economics at the

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7 The absurdity of the system begins to emerge: countries export although they cannot even feed their people (translation done by one of the authors).

8 Before pushing Africans to produce vegetables out of season for European markets before selling their grain produced at home or in the United States, it would not be so bad to ensure that they are able to feed themselves (translation done by one of the authors).
University of Warwick, told Al Jazeera. “Bets [on future price rises or declines] can become self-fulfilling if you are big enough to affect the market.” (Al Jazeera 2011).

These explanations are often underpinned by feelings lack of control by citizens that result from a deepening dependency on food imports for many African countries and according to most reporting this impacts the middle classes:

Textile workers, teachers, doctors and accountants have all threatened to strike as many foods, such as meat, have become too expensive for ordinary citizens (Al Jazeera 2008).

Substantial evidence shows that production systems dominated by export markets can be weakened by erratic changes and price instability on international markets (IAASTD 2009; Moseley 2011). Local food systems and diets, known to sustain livelihoods at the micro level, are currently challenged by globalized food systems that are evolving to meet urban and even global demands (Moseley et al. 2010).

Au Sénégal, l’un des principaux importateurs mondiaux de riz avec le Nigeria et la Côte d’Ivoire, le plat traditionnel du midi, à base de riz, sera bientôt inaccessible pour les plus pauvres (Reuters France 2008).9

The mechanisms behind this narrative are summarized in Fig. 3. Focusing on the global factors underpinning a food price rise and subsequent riot misses some of the context specific dynamics that a local level of analysis can reveal and one that the final theme builds on.

9 In Senegal, one of the world’s largest importers of rice, with Nigeria and Côte d’Ivoire, the traditional rice-base lunch dish, will soon be unaffordable for the poorest (translation done by one of the authors).
Figure 4. International media narrative: Global profiteering

Theme four: Local merchant profiteering

Building on the global profiteering narrative above, profiteering is also described at the local scale in the African media. This narrative describes the link between high food prices and food riots to be that people are angry over local merchants stockpiling food and are profiting from the price rise and therefore riot. The perception is that merchants, in markets throughout the city, are benefiting from the increase in global prices and are compelling their customers to absorb the increasing costs: “There is clear evidence of criminal price-fixing in the bread and dairy sectors by greedy companies acting together to make even bigger profits at the expense of their consumers,” (allAfrica 2008). This narrative was very dominant in the African media. Agence France Presse, reported from their office in Dakar, Senegal, that government sources said that the “Senegalese ministry of commerce inspectors have fined over 800 rice sellers for profiteering amid rising food prices
over recent months,” (Agence France Presse 2008). Profiteering results in moral anger, as it is increasingly more difficult to purchase sufficient quantity and quality of food as prices escalate. Quotes from ‘ordinary’ citizens emerged in the media reporting:

it is unbelievable that ordinary Ugandans should be rioting, walking-to-work, hooting or blowing their vuvuzelas on the streets and elsewhere to protest against rising food arising from food shortage. When I was growing (mind you I am not old), food was the least my family thought about. But today, every one’s everyday prayer is about food! (Daily Monitor Uganda 2011).

Highlighting various coping strategies, allAfrica notes the precariousness now faced by most urban households:

Rice, oil, meat, milk and vegetables are already off the menu, and people are turning to wild roots and leaves to supplement their diets, leading aid agencies to fear malnutrition, particularly among children and pregnant women (2008).

Moreover, we found there was a gendered component to this analysis as women feel the effects of high food prices closest to home:

Les femmes continuent de souffrir, il n’y a rien qui est fait pour alléger leur tâche. Quand la femme est soulagée tout le monde l’est également (Sidwaya/allAfrica 2008). 10

These explanations are often underpinned by feelings lack of control by citizens that result from a deepening dependency on food imports for many African countries. Substantial evidence shows that production systems dominated by export markets can be weakened by erratic changes and price instability on international markets (IAASTD 2009; Moseley 2011). Although, allAfrica picked up a story that presented a different scenario:

High food prices are putting pressure on protectionist governments to free their trade or face angry mobs. The choice is obvious, lest a crisis turn into a tragedy (allAfrica 2008).

10 Women continue to suffer, there is nothing that is done to ease their burden. When the woman is relieved everyone is (translation done by one of the authors).
Local food systems and diets, known to sustain livelihoods at the micro level, are currently challenged by globalized food systems that are evolving to meet urban and even global demands (Moseley et al. 2010).

When leaving particular urban markets, women left with feelings of confusion and disbelief at the prices they paid for their family’s food: “Gbagbo, marché est cher”, “Gbagbo, on a fain”, clamaient lundi 31 mars des femmes d’Abidjan à l’adresse du président ivoirien» (allAfrica 2008). While this explanation is rooted in local context, this narrative appeared in all of the country cases we explored. In this case, Thompson’s (1971) hypothesis about scarcity and Oster’s (2004) findings for the need of a scapegoat when resources are scarce fuel the perceived notion that society is breaking down amongst dissatisfied citizens. Figure 4 illustrates the elements of the local profiteering narrative.

11 “Gbagbo the market is expensive”, “Gbagbo, we are hungry”, the women of Abidjan cried Monday, March 31 to the Ivorian President (translation done by one of the authors).
Discussion and conclusion

From this analysis, we draw a single overarching observation. When it comes to depicting the causes of the food riots, the international media assumes that the causes are based on the material availability and cost of food. Whether positing that international commodity speculators are driving the costs up, or whether there is an absolute food shortage, riots are acts of protesting hunger. The African media, however, seems to avoid such materialistic explanations and instead focus on the moral or ethical dimensions of profiteering along with a strong focus on the feelings of frustration by everyday Africans who are prevented from participating in the political and economic activities of their countries. In as much as the reporters who write for the African media are better grounded in the realities of life on this continent, we are inclined to think that their explanations are more accurate in terms of understanding the root causes of civil unrest. Moreover, in the case of autocratic regimes, it may be safer for the journalists to report on the profiteering shopkeeper than associate the government with local hunger. Nonetheless, the food riot continues to create a space for disenfranchised citizens to politically express their grievances about an unjust political economy whether it is driven by locally defined factors or international factors. Acknowledging these claims has direct policy implications.

Our media analysis revealed policy implications at the macro and micro scales. While there are limitations when adopting media analysis, this type of analysis does still provide important insights into the nature of policies prescribed. If the root causes of the African riots lie in the material realm at a global scale (e.g. riots are caused by scarcity and high food prices) then the most appropriate policy responses are to engage in measures to boost productivity and lower food prices. This is in line with proposals made within the Comprehensive Framework for Action (CFA) by the United Nations System High Level Task Force on the Global Food Security Crisis.
(HLTF), established post 2007–08. The CFA proposes that in order to improve national, regional and global access to food and increase food availability, immediate and long-term action needs to be taken in the following areas:

- Improving and enhancing the accessible emergency food assistance, nutrition interventions and safety nets
- Supporting smallholder farmer food production
- Adjusting trade and tax policies
- Managing macroeconomic implications
- Enhancing better-managed ecosystems for food and nutrition security
- Improving the performance of international food markets

The CFA action plan is largely the de facto paradigm that has guided food security policies and action for several decades (UN High Level Taskforce on the Global Food Security Crisis HLTF 2010). On the other hand, if the causes of the riots are based on local scale anger over structural problems (e.g. unemployment, a weak state, inequality, availability of food but a lack of accessibility) then the solutions should involve political reform, job creation, and measures to help ensure that local people are given control over local food systems. Indeed Demeke et al. (2009) note that the actual post food crisis response in terms of policies and strategies by several countries shows a shift in paradigm, with actions including:

- Attempting to isolate domestic prices from world prices (exporting countries)
- Moving from a food security based strategy to a food self sufficiency based strategy
- Shifting from “normal” international trade processes either by acquiring land abroad for securing food or by trying to engage in trade agreements at the regional level
- Showing distrust towards the private sector (price controls, anti-hoarding laws, government intervention in output and input markets)

It is hard to determine just yet if these policies and strategies are short-term actions to avoid human crises or if they will become the new approach to ensuring food security. However, the contrast in terms of the global and local interpretation of the root causes of food riot and the proposed solutions, is what makes the riots so compelling: they form “at the intersection of local grievances and national or even
international forces of economy and politics” (Walton and Seddon 1994: 35). As McMichael and Schneider (2011) maintain, when inflation occurs, the state, through nationally and culturally appropriate policies, has a responsibility to its citizens to manage the effects of the market to address injustice, access and ultimately, survival. This implies that, policy makers in Africa will need to develop hybrid policies from the different policy options outlined above, despite the fact that they emerge from conflicting philosophies (Africa Progress Panel 2012). Today’s rioters rely on a certain form of protest rooted in a long history that has reappeared under new conditions. The hypotheses researchers shaped to understand food riots in the medieval period (Oster 2004; Zhang et al. 2007; Fraser 2011), Early Modern Europe (Tilly 1971; Thompson 1971; Goldstone 1991), the 20th Century (Buhaug 2010), and the 1990s (Walton and Seddon 1994) are useful for an analysis of the riots that occurred from 2007 to 2011. However data on modern food riots are severely lacking. To date, the sole method for researching food protest is to study media representations of the triggers leading to a food riot (Wilkinson 2009). While this type of approach can reveal cause and effect relationships, it is essential for more nuance in food riot research. There is a great need for more empirical evidence at the country level on the particular triggers that lead to riots. While this paper aims for a multi-level, macro interpretation of the domestic and international drivers of food protest, asking questions at the city and country level, about the factors that lead citizens to the streets to protest food price inflation is a critical need. Additionally, an analysis on the impacts of implementing particular policies following a food riot is greatly needed.

Food price inflation and a population’s inability to access food are still with us today. But in how to deal with this, we detect a major tension. The same set of policies designed to promote productivity and lower prices through global trading agreements are exactly those policies that are sure to cause anger and injustice at the local level (Demeke et al. 2009; Holt- Giménez 2009; Abbott and Borot de Battisti 2011; UNDP United Nations Development Programme 2012). By contrast, policies designed to deal with the local level causes of food riots (namely people’s
justified grievances at not having access to jobs and opportunities) are exactly those policies that macro- economists warn will cause prices to rise further (Timmer 2010; Bigman 2011). The gap between how people experience the material economy within perceptions of the moral economy (Hossain 2009) is, nevertheless, a fundamental obstacle in food economics. This tension leads us to propose that we may need radically different, and even contradictory, policy at different scales. At the local scale, policies geared at boosting capability, reducing inequality, and ensuring welfare (Crush et al. 2011; Chang 2009; Pintrup-Andersen 2010) must coincide with global scale policies geared at addressing longstanding imbalances in international trade rules, food aid policies, corporate concentration and food price volatility (Clapp 2009; Clapp and Fuchs 2009; Torero and von Braun 2010).

Navigating such divergent policy agendas will be fraught with challenges.

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5. MANUSCRIPT TWO

The second co-authored manuscript under the riot theme compares two food riot cases from Haiti and Cameroon. In 2007-08, Haiti and Cameroon were two countries that experienced violent riot events that many analysts linked to the increase in food prices. The manuscript presents a framework for analyzing the preconditions, forms, agents, sites, strategies and outcomes of the unrest and mobilizations. This comparison revealed that the unrest had less to do with food and more to do with context specific, locally contingent factors. The government initiated relief measures in both cases changed diets in urban environments.

To meet the second research objective my research has benefited from the opportunity Dr. Evan Fraser’s research afforded me to do a comparative food riot study of the 2008 events in Haiti and in Cameroon. One of the challenges in understanding the links between food price rises and manifestations of social unrest is to balance a detailed and nuanced understanding of the local factors that led people into the streets with a more theoretically informed understanding of protests and riots. To attempt to strike this balance extensive interviews were conducted with people in markets in Cameroon to understand how the riots emerged in that particular context. But adding value to my analysis was the opportunity to pose similar questions with people in markets in Haiti. Hence, this manuscript introduces a comparative element to the study. Jennifer Vansteenkiste, a colleague and researcher who works on issues related to gender and food security in Haiti, collected interview data in Haiti on my behalf and also offered her preliminary analyses of this data. I thank Jenn and Evan for the support and for enabling a productive comparison that I would not otherwise have been able to make. The comparison in this manuscript has been integral to my efforts to present a deeper analysis of the impact of food price volatility and riots on poor countries than those offered up in the media by popular commentators after 2010, and previously by academics in collections on older riot events in the developing world or Global South.
In 2013 I presented a version of this comparative manuscript with Dr. Evan Fraser in the Politics and Ethics of Food Speaker Series organized by Dr. Monique Deveaux, CRC in global ethics at the University of Guelph.

The framework adopted in this manuscript was also presented at the Institute of Development Studies at the University of Sussex during the Food Riots and Food Rights findings workshop mentioned above. Dr. Naomi Hossain invited me to make this presentation so that it would stimulate participants in her workshop to discuss frameworks for understanding riots in comparative perspective. The analytical categories for comparison in the revised framework presented below include: preconditions, forms of resistance, agents of resistance, sites of resistance, strategies of resistance and outcome of the resistance. When published, this organizational strategy could make an important theoretical contribution to the literature on food riots.
FOOD RIOTS AND RESISTANCE IN HAITI AND CAMEROON: EMPIRICAL EVIDENCE AND ACCOUNTS FROM THE 2008 FOOD PROTESTS


Abstract: When food and fuel prices spiked in 2008, food riots erupted in many countries around the globe. Cameroon and Haiti were particularly hard hit. The events in these two countries in particular were not only volatile but for many, highlighted numerous emerging food security challenges. This paper empirically compares Cameroon and Haiti: two countries where particularly violent protests erupted in cities. The article presents results from 484 interviews with people affected by the riots in both countries and seeks to answer the following questions: (1) what are the conditions that led to food riots; (2) what are the similarities and differences between food riots in both countries; and (3) what was the impact of civil unrest on food traders and consumers? The article adopts Chin and Mittelman’s framework for studying resistance to describe the forms, sites, agents and strategies of resistance. We add preconditions and outcomes to this ontology. Findings suggest that the food riots in Haiti and Cameroon were a response to local norms and politics, and also that the commonly adopted policy measures are changing the adequacy of local diets in both countries.

Introduction

Nothing so limits the freedoms of the citizen as a total absence of money.
- John Kenneth Galbraith

Over the last 30 years, much of the world has become accustomed to cheap food, even if it was still too expensive for many of the poor to access it in developing
countries (Toye 2009; Timmer 2010). The perception that food will always be available in cities was altered for many in 2008, when the food prices quickly peaked and reached levels not seen since the 1970s (Timmer 2010). Between January 2005 and June 2008 international food prices rose 83% - maize nearly tripled, wheat rose by 127% and rice prices increased by 170% (Schutter, 2010). The world’s poor suffered the greatest blow as food prices rose to unattainable levels, rations decreased or disappeared, and longstanding political discontent led people to the streets. As a result, many researchers now argue that the 2007-2008 food crisis drew attention to the vulnerability of the world’s urban poor to food insecurity expressed during these years through social and political unrest, often termed food riots (Mason et al., 2011; Hossain and Green, 2011; Sneyd et al., 2013). Bohstedt (2010) defines food riots as crowd violence or coercion around food and the analysis in this manuscript supports this definition.

The literature on the food riots of 2007-2008 asserts the increasing uncertainties people faced around access to food (e.g. see: Bush, 2010; Messer and Cohen, 2011; Hossain, 2009). Current findings from the recent literature published on food riots also suggested that popular food protests are linked to food inaccessibility on the one hand, and inequality, poverty and citizen dissatisfaction on the other (Sneyd et al., 2013; Berazneva and Lee, 2013). Strikes, protests and political demonstrations from this time stressed the need for stronger democracy, more sound political institutions, better governance, and greater equality that will later be demonstrated through participants accounts (Hossain, 2009; Dia Kamgnia, 2011; Dimova and Gbakou, 2013).

Nonetheless, there is a growing consensus in the food security literature that suggests while rising food prices were the trigger for political unrest this is not a universal phenomenon. There are country and even city specific factors that mean the effect of rising food prices on political protest will be varied (Moseley et al., 2010; Riley and Legwegoh, 2013). More specifically, while multiple country comparisons show that elevated food prices are a key factor of food riots, these are
not the only factors (Goldstone 1993; Berazneva and Lee, 2013; Sneyd et al., 2013; Patel and McMichael, 2010). Some regions experience slow responses to food crises, and this may be attributed to fragile political and social institutions (International Crisis Group, 2010, 2013). In this context, high food prices present an ideal opportunity for disenfranchised populations to express their general discontent with government capacity to address a declining standard of living and the high cost of living (Sneyd et al., 2013). Calls from recent food riot research highlight a critical need for city and country level empirical investigation of the causes and impacts of food riots during times of price volatility (Sneyd et al., 2013; Hossain and Green, 2011).

Haiti and Cameroon are interesting cases to address this call as empirical comparisons of the 2008 food riot events are necessary. During this time, Haiti and Cameroon were on the list of countries that experienced food riots that many analysts linked to the increase in food prices (AlJazeera 2008; BBC News 2008; New York Times 2008). Geographically, these countries may be an ocean apart; however, some would argue that Haiti is historically, socially, culturally and demographically more similar to the African continent than the nearby Caribbean nations. While the colonization process was different in both countries this history has not been forgotten. French colonial rule in Haiti ended early when the leaders of the Haitian Revolution, in particular the African Toussaint Louverture, halted and later abolished the transatlantic slave trade, establishing Haiti as an early symbol of black independence (James 1963). Cameroon’s “chequered colonial history” that involved German, French and British interests largely shaped the country’s political and social structures (Fonchingong, 2005). Plantation agriculture remains today and features prominently in the economy and landscape of both countries – sugar plantations in Haiti and palm and rubber plantations in Cameroon. Alongside these important political and social connections, spiritual beliefs such as animism in Cameroon and Voodoo in Haiti speak to underlying cultural similarities of the two places. The food culture between these two places is comparable including saucy meaty stews complemented by plantains, taro or cassava and rice. Food security
indicators show that access to sufficient quantities of nutritious food remains an issue “for millions of Haitians or 38 percent of the population” (IFPRI 2014). Furthermore, Haiti is a food deficit country and imports 50% of the country's food requirements and that number has been rising with the rise in food prices (IFPRI 2014; Dobbs 2008; Quigley 2008). Cameroon also increasingly depends on food imports, importing 25% of total cereal needs (WFP 2011). In Cameroon more than 40% of the country's 20 million people live below the poverty line and Haiti's overall poverty rate is 77% of the population (UNDP 2012). Haiti ranks 162 and Cameroon 150 out of 186 on the 2012 UNDP Human Development Index. These indicators suggest that broadly there are similarities between the two countries when it comes to food security and poverty challenges but these indicators should be considered with caution.

The most important link for the purposes of this comparative manuscript is that both countries suffered dramatic and explosive food riots in 2008, thus making them an ideal pair of countries through which to empirically explore the causes and consequences of food riots. In both countries at this time, the food related unrest resulted in numerous deaths: over 100 in Cameroon and five in Haiti. Also compelling is that fact that both countries remained stable and did not experience another riot event when food prices rose again in 2010-2011.

To explore the phenomenon of food riots in both these countries, this research is driven by three questions:

1) What are the characteristics and conditions that led to the 2008 food riots in Haiti and Cameroon?
2) What are the similarities and differences between the 2008 food riots in Haiti and Cameroon?
3) What was the impact of civil unrest on food traders and consumers in the affected cities?
To answer these questions, we present case studies from the two countries that empirically cover the issue of food riots from the perspective of the people on the ground or those most affected by the unrest. The next section describes the methodology and framework for the study. This study was informed by a review of the relevant scholarly literature, NGO reports and media accounts and also primary survey data of Haitians and Cameroonianians about this event. The third section presents the results according to the organizational framework. The final section enters into a comparative discussion about the lessons learned and is organized around the questions posed above.

**Methods and interpretive framework**

**Methods**

This study employs mixed methods, including a review and analysis of media sources, reports and academic studies and in country fieldwork. Surveys on the 2008 unrest were conducted in Cameroon in June/July and November/December of 2012 and in Haiti in May 2013. Research on food riots tend to focus on the news media or historical documents for data instead of posing questions after the event in the places that experienced unrest (Sneyd et al., 2013; Tilly, 1971; Orlove, 1997; Rogers, 1987). Hossain and Kalita’s (2014) comparative study qualitatively analyzes experiences associated with the effects of food price spikes and demonstrates the merits of probing the effects of the urban unrest via contemporary participants’ accounts.

Because the riot events occurred in 2008, the survey work in 2012 and 2013 was designed to take account of the time that lapsed between the event and data collection. To understand how the crisis intersects with resistance, we asked survey participants to recall how they experienced the days or months around the event and also what they remembered about those days. By concentrating on the collective memory, this methodology allows informants to elicit individual and
community stories or collective histories from the affected cities. Additionally, through focusing on food as it relates to resistance, we were able to elicit direct impacts of the event on households’ food access and on the food supply at home.

Focusing on the social memory can be a powerful methodological tool to understand an event in the recent past to tease out patterns and trends in the way resistance surrounding an event manifested and the ensuing impacts. Cultural historians have found that questions focusing on the social memory involve “issues of temporality, mind, and... narrative” (Olick and Robbins 1998: 109). Though collective memory “does seem to take on a life of its own,” Halbwachs (1992) reminds us “it is only individuals who remember, even if they do much of this remembering together” (as cited in Olick and Robbins 1998: 111). Confino situates memory “as a process, not a thing,” and posits memory “works differently at different points in time” (Confino 1997: 122). Therefore, oral historians found that by focusing on the people who actually experienced a given event, asking questions about the past helps to draw conclusions about the social experience. For example, feminist historians have sought to recover the lost voices of ordinary women’s experience that have been left out of “official” histories (Olick and Robbins, 1998: 127). Specifically, our data collection concentrated on gaining insights into the shared memory of food and protest. The methodology accounted for the difficulties posing politically contentious questions and instead allowed informants to “elicit individual and community stories and collective histories” as they relate to food and diet (Finnis 2007: 350). A methodology that focuses on the collective memory and food provides a viewpoint that a conventional historical methodology often overlooks.

For data collection, the authors relied on semi-structured questionnaires changed only slightly for each country to reflect local market names and to address local cultural sensitivities. Examples of survey questions include: Do you remember the riots of 2008? Who were the rioters? Have you worried for your safety in food markets in the city? Have you seen anger in food markets? What do you think are some things that makes people mad in the market? Do you think there is a link
between social stability and food security in this city? What do you think makes food prices high? How has your diet changed over time? What foods do you need to feel food secure/happy?

The survey targeted food traders and consumers in open-air markets identified through purposive and intentional sampling. Markets in both countries were selected based on their size and turnover. Purposive sampling of food traders was done in the markets to include a diversity of participants from various socio-economic backgrounds. This approach was adopted to not only capture insights from people who may have been involved in the unrest but to also learn from the everyday lived experience of the effects of the unrest. The study included the principal markets in both capitals Yaoundé and Port-au-Prince and large markets in other cities (Map 2).

The authors relied on the capabilities of research assistants who were competent in Kreyòl (for interviews in Haiti), English and/or Pidgin (for interviews around Buea and Limbe, Cameroon) or French (for interviews in Yaoundé Cameroon’s capital). All surveys were conducted in the appropriate language and translated into English. The research assistants were hired in part to bridge the language divides, but also to reduce the power differential that exists between foreign researchers and native participants (Sylvain, 2005; Schuller, 2010). Once trained in the ethics and methods of qualitative interviews, the researchers set out to the designated markets to identify volunteer participants.

In Haiti a total of 113 participants were involved in the study. In Port-au-Prince 71 ti machann (market sellers) and market customers were interviewed in three urban markets, Marche Kwa de Bosal, the principal market and central distribution site that serves all the markets in the greater Port-au-Prince region, and secondary markets Mache Tèt Bèf and Mache Salomon, and at a fourth market, Kwa de Bouke, located in the peri-urban region 13 km to the northeast of Port-au-Prince. In Cap
Haitien, 42 people were interviewed in the iron market of Cap Haitien, in northern Haiti, officially called Mache Cluny but more commonly known as Mache Rue 9.

In Cameroon 371 participants were involved in the survey, which covered seventeen markets in three regions of Cameroon. In Yaoundé the country’s Francophone capital the markets surveyed were Mokolo, Mvog Mbi, and Knol Eton Mvog-Betsi, Elig-Edjon, Essos, Biyem-Assi and Huitieme. In the peri-urban region of Anglophone Cameroon, the markets surveyed were Limbe and Likumba markets and Muyuka, Soppo, Mile 4, Muea, and Mutengene and Mutengene 2 markets. In total, this study is based on interview survey data from 484 individuals (see Table 4). GIS (Global Information System) points were collected from each of the markets for Map 2.

<table>
<thead>
<tr>
<th>Country and City</th>
<th>Market Name</th>
<th># Interviews (n=484)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haiti</td>
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<tr>
<td>Port-au-Prince</td>
<td>Marche Kwa de Bosal</td>
<td>13</td>
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<tr>
<td></td>
<td>Kwa de Bouke</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Mache Salomon</td>
<td>14</td>
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<tr>
<td></td>
<td>Mache Têt Bèf</td>
<td>15</td>
</tr>
<tr>
<td>Cap Haitien</td>
<td>Mache Cluny</td>
<td>42</td>
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<tr>
<td>Cameroon</td>
<td></td>
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<tr>
<td>Buea, Southwest</td>
<td>Soppo/Buea</td>
<td>17</td>
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<td></td>
<td>Muea</td>
<td>11</td>
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<td></td>
<td>Ekona</td>
<td>6</td>
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<tr>
<td></td>
<td>Mile 4</td>
<td>13</td>
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<tr>
<td>Muyuka, Southwest</td>
<td>Muyuka (formerly Soppo)</td>
<td>16</td>
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<tr>
<td>Mutengene, Southwest</td>
<td>Mutengene</td>
<td>19</td>
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<tr>
<td>Limbe, Southwest</td>
<td>Mutengene 2</td>
<td>8</td>
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<tr>
<td></td>
<td>Limbe</td>
<td>32</td>
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<tr>
<td></td>
<td>Likumba</td>
<td>12</td>
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<tr>
<td>Yaoundé, Centre</td>
<td>Mokolo</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Mvog Mbi</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Knol Eton</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Mvog-Betsi</td>
<td>25</td>
</tr>
</tbody>
</table>
Table 4. Market and number of interviews in Haiti and Cameroon

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Elig-Edjon</td>
<td>29</td>
</tr>
<tr>
<td>Essos</td>
<td>37</td>
</tr>
<tr>
<td>Biyem-Assi</td>
<td>11</td>
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<tr>
<td>Huitieme</td>
<td>25</td>
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</table>

From the first round of surveys we learned that the food riots and strikes were best remembered by people who lived in the cities when the strikes and protests occurred. For example, while Yaoundé and Douala in Cameroon were the most volatile in 2008, it was difficult for residents in the smaller cities of Buea and Limbe to remember those days. Instead, the social memory focused more on the strikes of students from the 1990s when the cities were on fire. Research assistants were advised to take note of this difference and ask follow-up questions about the more recent wave of unrest. Notable from this interaction however, is how people from these smaller cities remembered the strikes of 2008 and the direct impacts on the food supply at home. While the actual burning of tires may have occurred elsewhere it was widely reported that the 2008 unrest stalled the transport of food to these smaller cities.

In Haiti, informants were adamant that people were not forgetting, and participants stressed the idea that many could not forget these days in 2008. However, in both countries, the political nature of the topic made some people hesitant to talk about the events. In Haiti this can be attributed to residual fear left over from Duvalier days as the memories of Duvalier still linger in the Haitian psyche. A delayed effect of the unrest during that time, through retribution and mob justice is still a real possibility - even though some say the country is calmer. Although, by concentrating on “the shared memory of food” the methodology accounted for this difficulty and allowed informants to also think about food. Questions that directly focused on food and food access seemed less politically risky and offered an opportunity for informants to reflect on the recent past.
The data from the survey were coded thematically based on the six categories of the framework presented below. Qualitative content analysis of open-ended interview questions were coded based on categories and themes (similarities and differences) deemed relevant during the course of data collection. Analysis of documents (country reports, NGO reports and media stories) and survey responses proceeded through both manifest (counts of actual words, sentences used) and latent (meaning of words, sentences) to establish the nuanced understanding of experiences and symbols embedded in people’s narratives and the printed documents. The quotes from individuals that appear in this document are not outliers but are representative of the theme under discussion.
Map 2. Maps of markets surveyed in Haiti and Cameroon
To help frame the analysis, Chin and Mittelman (2000; 1997) add value to our discussion by presenting a framework for analyzing resistance, focused on modes of resistance as it relates to globalization - something that is compelling for a study on the impacts of a global food price rise and subsequent food riots. Distilling their message, Chin and Mittelman (2000; 1997) suggest examining various modes of resistance that reflect three factors: 1) public protest against the state apparatus, 2) countermovement aimed at self-protection against market forces, and 3) counter discourses against public ideologies. Chin and Mittelman distill these three concepts down to an elegantly simple framework for studying resistance that is based on exploring: 1) forms of resistance, 2) the agents of resistance, 3) sites of resistance, and 4) strategies of resistance. They say “when contextualized, the elements of forms, agents, sites, and strategies may be viewed in terms of their interactions so as to delimit durable patterns” at different levels of analyses (2000: 40-44). These insights are especially useful for comparing two cases.

For our analysis, we added two additional categories to this framework that expands the historical timeline of the event and helps to inform the event being analyzed. To the front of the framework, we added socio-economic and cultural preconditions that led to the resistance. At the end of the framework we added a category to describe and analyze the outcomes or impacts of the resistance.

Together these six categories allow an analysis of the immediate impact of the resistance and enabled a presentation of some of the ways the four categories come together around food access before, during and after a food riot event. While exploring the six elements in the framework during data collection, we were attentive to any suggestion during the interviews that addressed issues related to motivation driving the unrest, if any. These categories and the way they were used to organize the data are summarized below in Table 5.
Framework for resistance | Key questions
---|---
Preconditions | What background socio-political factors contributed to the food riot?
Forms of resistance | What nature did the food riot take? Was it a strike, a protest over fuel prices, or a protest over food prices?
Agents of resistance | Who were the protestors in terms of their demographic, ethnic and economic background?
Sites of resistance | Where did the protests take place?
Strategies of resistance | What specific strategies did the protestors use?
Outcomes of resistance | What did the protest result in? Was there any meaningful change?

Table 5. Framework for studying resistance and key questions

Results

The results below are organized according to the framework presented above. The results from the two countries are presented for one category before moving onto the next (i.e. the preconditions are discussed in Haiti then in Cameroon before moving on to the forms in Haiti then in Cameroon). A review and analysis of the scholarly literature, relevant NGO reports and news items informs the preconditions and the outcomes of the framework, and the survey data which included data on diets informs the other four categories and the paper’s discussion.

Preconditions: Haiti

Haiti has a long history of public demonstration (James 1963). This has taken the form of both peaceful and violent action. In Haiti, peaceful public demonstration is a common occurrence and one of the few means available to the poor and middle classes to express political discontent.12 A notable event from Haiti’s past is the

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12 Some researchers argue that street protest and violence occur in response to the non-functioning judicial and democratic systems (Winters, 2008). As Winters notes: “the deep mistrust of the Haitian population for [the judicial] branch of state should not be underestimated” (2008: 292). Not only has
1986 public riot against lavi chè (the high cost of living) and the subsequent fall of the corrupt Duvalier government and removed from office President Aristide, the democratically elected president of the poor majority. This was the second attempt since 1991. Aristide managed a populist agenda, but had difficulty managing the competing agendas of powerful groups that influence Haitian policy namely, the domestic business elite and outside political pressure from the United States (Hallward, 2007). More recently, Haitians rioted in 2008 when food prices spiked.

Scholars note that President Preval and his government (in power from May 2006 to May 2011) contributed to the food crisis in Haiti by strengthening three decades of neo-liberal policies. Many argue that Preval and his government ensured political stability; however, his policies often advantaged the elite over the general population. These policies reduced Haiti’s national agricultural output so that only 43% of Haiti’s domestic food needs were met by domestic output (another 51% is met by food imports and 6% by food aid). By comparison, in 1981 Haiti imported 18% of local food needs (MARNDR, 2010; WFP, 2008). As noted in Haiti’s 2006 Interim Cooperation Framework, Preval’s policies included tariff and trade liberalization, increased agricultural production for export, and lowered tariffs for rice (Schuller, 2008). This was coupled with limited investment in health and education, and a lack of attention to land distribution for small farmers (Winters, 2008; Schuller, 2008). Discontent for the Preval government heightened in 2007 when the government teamed with US authorities to tighten the largely unchecked movement of goods through Haitian ports. This partnership had two objectives: first, to clamp down on the illegal movement of cocaine; and second, to capture some of some of the revenue lost, when unchecked containers moved through the port, tanks to bribes to port officials (Katz, 2008). These changes meant increased paperwork for the port authorities, so that NGOs and food importers complained that their food supplies rotted in the port (Katz, 2008). A 20-day strike in December

"the system of local, peace and appeal courts in Haiti always catered to the urban elite, providing little recourse for the majority...violence, graft and corruption complicate the legal framework" (Winters 2008: 293).
2007 revealed that Prime Minister Jacques-Édouard Alexis was the minister responsible.

With Haitian production unable to meet local food demands, Haiti was deeply affected by the 2008 global food price shock. During this time, the price of rice rose from $400 to $1000 US per metric tonne and wheat more than doubled from $200 to $450 US (Mazzeo, 2009). On April 7th 2008, Haitians poured onto the street as vocal, albeit peaceful protests against lavi chè and the government’s inattention to their “grumbling stomachs.” Two political issues arose during this time. First, Schuller (2008) contends that in Port-au-Prince, the interim Prime Minister Gérard Latortue (2004–06), a member of the political opposition, was “intentionally destabilizing the government” (2008: 6). Second, the business elite was upset with the slow movement of imported goods through the port. The bribes necessary to facilitate movement increased, and the custom duties instituted by the government also rose (Katz, 2008). In March 2008, at the height of the problem 40,000 pounds of beans were found rotting in the Cap Haitien port (Katz, 2008; Global Agenda, 2008; Al Jazeera, 2008c). The port authority claimed the forgotten container lacked the appropriate paper work, although an informant familiar with port procedures revealed that this is a highly unlikely scenario. In the end, the rotting food was a significant reminder of the prevailing political incompetence that in turn heightened public discontent.

It should also be noted that in Haiti powerful political and business elites do not miss an opportunity to capitalize on widespread restlessness. The food riots of 2008 enabled political opponents and elites to take advantage of the unrest. In this case, oppositional elites paid for loosely arranged students, gangs and organized chimères to escalate street protests through violence or as the locals say to “make the ground hot.” Chimères are informal political gangs that are not committed to an ideological position and instead switch their allegiance to the highest bidder (Winters, 2008; Dupuy, 2003; Fatton, 2002). This influential strategy heightens media attention and creates political disruptions with the intention to force change.
In early April protests turned violent and five people were killed (Al jazeera, 2008; 2008b; Global Agenda, 2008; Schuller, 2008). Gasoline stations, cars and cell phone stores were burnt, streetlights were smashed, and the Air France office was destroyed (Katz, 2008b). By April 12, the Senate dismissed Prime Minister Jacques-Édouard Alexis with a vote of non-confidence, with 10 members of his own party abstaining from the vote (Schuller, 2008). Meanwhile, Préval negotiated with local business leaders and international agencies to lower the price of foreign rice from $51 to $43 per 50 kg, to "satisfy the people" (Schuller, 2008:4). It was not only a shortage of food in the market but also the associated high cost of living that limited access to the (mostly) imported foodstuff. Hence, the global economic crisis and specifically the food price shocks amplified an already unbalanced food economy.

*Preconditions: Cameroon*

Cameroon’s English and French colonial process had divided the country along ideological lines since the time of independence (Fonchingong, 2005). Cameroon’s first president, Ahmadou Babatoura Ahidjo had faced the challenge of “creating a country, and developing a new national consciousness, among a group of peoples with different colonial experiences and political memories” (Fonchingong, 2005: 364). Political tensions were aggravated by president Paul Biya’s attempt to hang on to power. Biya had succeeded Ahidjo in November 1982 and became, with Eduardo dos Santos of Angola and Robert Mugabe of Zimbabwe, “one of the longest-reigning presidents in Africa” (Albaugh, 201). By 2008 the Biya regime had maintained control for over twenty five years of a country made up of at least 250 different tribes and languages, 130 political parties and an endowed natural resource base that includes a coast, tropical forests, grassfields, minerals and petroleum (Gros, 2003; Mbaku, 2005). Given this enormous ethnic and regional diversity, Cameroon has “managed a remarkable degree of stability” in the region (Fonchingong, 2005: 366).
However, the autocratic political structure in Cameroon has enabled and constrained various forms of resistance (Roitman, 2005). Cameroonian scholars characterize the country as one that endures a “crisis of democratic participation” (Yenshu Vubo, 2008: 2). This manifests as increasing voter apathy, a total lack of momentum of the opposition parties, patron-client relations in the operation of the state, and informalization of the economy. Throughout Cameroon’s recent political history, resistance events end in violent military intervention (Konings, 2011). In this milieu, active civil society and also civil participation is constrained by a monopoly of power that benefits some at the expense of many.13

In the Cameroon case, food was available in 2008, but not accessible. For example, an International Food Policy Research Institute (IFPRI) discussion paper calculated the change in food prices from June 2007 to June 2008 in food markets across Africa, including Cameroon. Minot’s research shows the “increase in domestic prices as a percentage of the increase in world prices” (2010: 15). In Yaoundé, the capital, the retail price for cassava increased by 16%, maize increased by 29%, the price for plantains increased by 14%, the price for red beans increased by 17%, rice by 36% and wheat flour by 51% (Minot 2010: 15). The simultaneous rise in fuel prices compounded the local effects of the food price rise. Not only was food more expensive, it was more expensive to move it around the country.

From 23-29 February 2008, people took to the streets in five regions of the country to demand more from their government. Urban transportation unions were on strike to protest the high costs of fuel. In particular the strikes and riots organized by the unions in Douala and Yaoundé halted the movement of food between cities. The strike on food and fuel prices had been organized for February after Biya and his ruling party tried to change the constitution on 31 December 2007. This change would extend Biya’s 26-years in power (Observatoire National des Droits de

L’homme, 2009; 2011; Reuters, 2008). In this context, some argue that the food riot events in Cameroon in 2008 created a launching pad to question the legitimacy of the political system and political power (Amin, 2012; Kamé, 2009). The cries recorded here (below) show the mixture of political and food price demands. These days in February are characterized below:

They were in the streets in the thousands in different cities demonstrating and marching, and while a recurring theme was Biya Must Go (Biya doit partir) other placards were equally revealing: Popol tu seras pendu avec ta constitution; on à fain, non à la vie chère; trop c’est trop; Do Not Touch The Constitution; Halt The Cost Of Living; We Need Jobs; Paul Biya, La jeunesse avant la constitution; Hungry Man Is Angry Man; No More Biya; No Constitutional Amendment; Down With France; Biya Is Old And Tired; Constitutional Change Only Over Our Dead Bodies; No Life President; End the Corruption; Non à la vie chère et à la vie clochardisation de Camerounais; Baisez le prix du tapioca sur le marché; Non à la fermeture des radios et télévisions privées (Amin, 2012: 28).

The protest that was initially organized by transportation unions after the fuel price rise impacted labour conditions and manifested as battles between the state and the protesting crowds (Amin, 2012; Observatoire National des Droits de L’homme, 2009; Friends of Cameroon, 2008). February 2008 in Cameroon has been analogous to the major socio-political demonstrations from April-November 1991 labeled « les villes mortes »


On 28 February, Biya issued a “stern warning to Cameroonians to stop the mayhem, vowing to prosecute to the fullest those “demons,” and “apprentice sorcerers,” who had “manipulated” Cameroon’s youths” (Amin, 2012: 33). After this warning was broadcast in Yaoundé, fires and smoke could be seen all across the city. To combat the protesting youth, Biya transferred to Yaoundé, Douala, and other cities in the country Cameroon’s elite forces and the Bataillon d’Intervention Rapide (BIR), a paramilitary force. This force had been created in 2001 to combat “armed groups and gangs known as coupéurs de routes along the nation’s borders with Chad,

14 For additional information on les villes mortes (the dead cities) see Takougang and Krieger (1998) and Ngayp (1999).
Nigeria, and the Central African Republic” (Amin, 2012: 24; IRIN, 2008). Firing indiscriminately into protesting crowds, this force was used to repress citizens in cities protesting what many international commentators called “a food riot” (New York Times, 2008). During this time, the death toll, particularly the crackdown on the Wouri bridge in Douala, is debatable (government estimates around 40 deaths whereas civil society groups in Cameroon suggest the number is well over 139. Also disputed is the number of arrests of over 1,600 individuals).

To mitigate these effects, President Biya initiated a programme to subsidize petrol, and to suspend customs import duties on fish, rice and cooking oil so as to lower their prices (Reuters, 2008b; 2008c). It has been documented that even though the president “moved to reduce prices on food and petroleum products, the protest didn’t stop. In fact, it moved into its most violent phase” (Amin, 2012: 22). Over time, Biya’s policy seems to have appeased the urban population in the short term, but some argue that another price spike could drain domestic savings and balance of payments (Galtier and Vindel, 2013).

Forms: Haiti

In Haiti respondents remember violent public demonstrations, noting, “the manifestations were very serious, five people were killed and over 200 injured.” Of the respondents, 28 recall that their participation was in response to “shared suffering,” and 63 described the riots as “...related to rising prices of food, we couldn’t eat; we were in trouble” (Mache Salomon, June 2013) Anxiety had set in and “people got scared, we thought that’s the end of life” (Mache Cluny, May 2013). In Haiti rioters first seized food and looted the MINUSTAH’s grain stores in Les Cayes. The 2008 period was specifically referred to grangou klorox (clorox hunger). The powerful metaphor refers to the burning one feels from a hungry stomach. It is a potent reminder that makes suffering salient and maintained a shared historical memory. Respondents also remembered that the suffering materialized as a national movement to push the government into action.
There were many people manifesting to stop hunger in the country. Most of people have put their voices together to let the government know by that time that they can’t live anymore [sic] in that situation (Mache Cluny, May 2013).

One informant who is a doctor by profession recounts, “we lack schools and clean water but we go to the streets because people love people” (KOSANBA Conference, October 2013). Haitians have a cultural tendency to make visible shared suffering. Historical events shape the collective memory and recollections from the past inform present day conditions. For example, the statue Neg Mawon (The Black Maroon) in Port-au-Prince represents Neg Mawon who defiantly calls Haitian slaves to revolt by blowing a conch shell. In Haiti, responding to a shared suffering is a moral obligation and something that participants in the study linked to self-liberation. Respondents felt an obligation to participate because the crisis was touching everyone’s lives. Yet, informants also remembered that participants in the riots had other agendas too:

There was panic in Port-au-Prince and in Cap-Haitian where people were being victims. Yet, sometimes people get outside for other reasons to manifest their interests (Mache Cluny, May 2013).

Participation by those with different political agendas brought violence to the demonstrations during this time. Respondents recall that “on this day they were burning tires, blockades, rocks being thrown, and traffic blocked” (Mache Salomon, June 2013) while another stated “we had a lot of bottles thrown, blockades and then big manifestations in all the big cities” (Mache Têt Bèf, June 2013).

Forms: Cameroon

In this case, the resistance started as a strike of transport unions that culminated in a riot. One trader explained: “I can’t remember why it started, but it is certain that it was not just about food” (Limbe, June 2012). The traders and buyers in Yaoundé, Limbe and Buea remember this time as the “Riots of 2008” or “Riots of February
2008” or “The Taximan strike.” These events were described as “a revolt of the population” (Yaoundé, June 2012), and “trouble in the city” (Elig-Edjon, July 2012) which resulted in “financial losses and loss of human life” (Mvog-Betsi, July 2012). It was also a time when “there were a lot of policemen on the street” Police were mentioned 60 times in the surveys. One woman in Buea remarked:

It was not a very good time for us. I almost got shot by a police officer in Mutengene. I was around an area where young boys were throwing stones at the police officers and one of them almost shot me (Likomba, July 2012).

The military was also mentioned, one trader explained,

We felt unsafe in this same market and we ran for safety. Can’t remember the cause, but the military came and people started running, boys burnt [things] and scattered. The young men were angry, some were arrested, some were beaten up (Mutegene, July 2012).

We asked the food vendors in Yaoundé markets if they often go on strike and why – seven of 35 people said yes “Yes, when we are tired of the bothering by the government’s delegate. We prove our discontent [sic] by stopping all sales” (Mokolo, July 2012). Those who said no said they were too scared, because “it creates a mess, it is bad for business” (Mvog Mbi, July 2012), others asked: “What is the point? I don’t have the power” (Mokolo, July 2012).

Agents: Haiti

Participants may be categorized into two groups with two different agendas, yet both groups aimed to pressure the government into responding to the crisis. First, there were those who demonstrated in solidarity against rising rates of hunger and suffering; and second those who used the unrest as a political opportunity to agitate students and pay chimères to increase violence for their own agenda - eventually unseating the government.
Most people participated in some form in the 2008 riots, either directly as participants, or indirectly by paying political agitators. Respondents reported, “we are the people who went out, we were hungry and reacted to the high food prices” (Mache Salomon, June 2013); “all people [participated] except those with money and food” (Mache, June 2013). As mentioned, the general masses in Haiti feel a sense of solidarity or a shared suffering. This in turn inspires participation in demonstrations as a means of expressing discontent with the government. Even those with less visible political voice were motivated to participate. From one ti machann:

I remember that I went to the demonstration as well, because of the expensive price of the food, but now [in 2013] it's more expensive. I risked my life for nothing (Kwa de Bouke, June 2013).

Many demonstrators were swept up in the movement, in part because of the rapid pace and scale of the price increase and also because of rising agitation by paid participants. Finally the protests escalated because of the regional and national media attention given to the event. Political overtones of the 2008 event were still fresh in people’s minds and although 34 respondents were unwilling to reveal who actually participated, others revealed that participants included regular market people, customers, paid gangsters, chimeras, unemployed, and students (See Table 7 for frequency). Follow up questions revealed that:

Students are people who make part of a politic organization called Baz (Base). Baz is a political structure that manifests inside of the population. Politicians use them to protest and to do whatever is needed. In creole they say, “nap desann nan baz” (we are going to meet our fanatics). They receive money sometimes, remember, the population is victim of manipulation of the leader. They protested but they didn’t know why exactly. Preval wanted to put Jacques E. Alexi out of the government (Mache Cluny, May 2013).
Agents: Cameroon

In Cameroon, the “rioters were Cameroonian citizens” (Mutegene, July 2012). This primarily involved the taxi drivers and drivers of mototaxis and other disaffected citizens, particularly the youth. In Buea and Limbe, most people in the market remembered this time as being the fault of the taxi (mentioned 46 times) and drivers (23 times) but the general population was also mentioned as part of the rioting crowd. The riots were remembered as the “taxi drivers and bus drivers were on strike on increasing fuel prices” (Limbe, July 2012). At this time the roads were closed outside Douala and food was not transported. Households in Limbe, a city outside of Douala, remembered “a limited quantity of food was brought to the market since buses were not moving” (Limbe, July 2012) and “drivers were not working because of high prices in fuels. Motobikes operate right in towns and most of them don’t pay taxes” (Likomba, July 2012). One customer in Buea remarked:

What I remember is that it made prices increase more. We bought very little food for so much money because cars were not allowed to run, the roads were blocked (Mutegene, July 2012).

However, this was different from those surveyed in the capital who did not mention the drivers and instead directed the reasons for protest toward the government and the president in particular. This could be attributed to the geographic distance of the smaller cities (Buea and Limbe) from the larger city of Douala where the protests were the most violent. In Yaoundé the country’s capital, the “rioters are more [sic] for political issues, not food” (Mokolo, July 2012). One trader said, “yes, we strike when we are not happy with certain decision taken by the government” (Mokolo, July 2012) and another participant in the study mentioned that the common reason to protest is “during periods when we are sick and tired of certain things. We express our discontent [sic] to the government authorities to deal with any problems we may have” (Mokolo, July 2012). This was also described as
a political misunderstanding. There was a change in government policy and an increase in fuel prices as well as kerosene. Slow down business, shortage of food and increase in prices for those who had in stock. People were angry and disturbed (Limbe, July 2012).

Overall, “this riot was because of a general [price] increase in commodities like fuel, rice and many other things” (Muea, July 2012). During this time, there was a rise in the cost of transportation that prevented most traders to buy food at wholesale to sell because “vehicles were not bringing food to the market” (Likumba, July 2012). In this case, “it affected a lot of businesses because markets were never open, traders were not coming. Customers from out of the country [such as Gabon] were not coming because of instability” (Limbe, July 2012). Another explained in more detail:

the riots really disturbed a lot of people. Everybody was complaining about rise in prices, especially sugar, flour and rice. It was such a bad experience. But I think the situation is the same now although we are now used to food prices being high (Mile 4, July 2012).

In this case, the actors were different in the cities fueling the unrest, but in both regions, people were not happy about the rising costs of fuel and food and the reality of negative reform.

_Sites: Haiti_

The food riots were located on the streets - “_son beton-an_” (on the ground protest). The unrest occurred mostly in public spaces in Haiti rather than in the marketplace. Interviews revealed little disruption to market activities, one woman explained that “the market is not known for closing, but sometimes a section could close. Then people would go shop at _Marche Salomon_ and _Marche Tet Bef_” (Kwa de Bosal, June 2013). Ti machann take great pride in the reliability of their services: “they are open 24/7,” “in Cap Haitien, the main market is like an hospital, it is always open for people. That’s a pride [sic] in Cap Haitien because the market is available everyday” (Mache Cluny, May 3013).
Prominent public places were the chosen sites for the demonstrations, for instance on Rue Champ de Mars and in front of the National Palace. The media attention at the time linked the different regional locations of the demonstration events, emphasizing the national nature of the protest. For those on the ground, the media attention gave the causes strength and greater meaning for people “in the street in the capital and in some cities in the provinces” (Mache Cluny, May 2013). As noted by a respondent:

The riots began in the town of Les Cayes April 4, 2008 then spread to Port-au-Prince, Cap Haitien and other cities. Public buildings and private institutions were destroyed, some even being burnt; you can still see the scars of the violent manifestations (Les Cayes, May 2013).

Main transportation routes were disrupted with burning tires during this time, which slowed commerce and the movement of food and consumers in the city: “the blocked streets prevented people from getting to the market” (Mache Cluny, May 2013). Despite the delays no respondent mentioned food shortages in the markets, rather it was the increasing cost of food that impacted consumers’ access directly.

Sites: Cameroon

The sites of the resistance during the riots of 2008 seemed to be common knowledge to those surveyed in Cameroon. During the interviews, participants did not talk about specific locations of the unrest, but did indicate major cities like Douala (mentioned 36 times) and Yaoundé (mentioned 14 times) where much of the unrest occurred. The discussion during the interviews focused on the direct

15 Cities in these regions were sites for protest, these include: in the Central region: Yaoundé; in the Littoral region: Douala, Nkongsamba Mbanga, Melong, Njombe and Penja Loum; in the North-West region: Bamenda, Kumbo, Santa Nkambé, Ndop, Bali, Boyo Division and Batibo; in the Western region: Bafoussam, Dschang, Bafang, Kekem, Mbouda and Foumbot; in the South West province: Buea, Limbe, Muyuka, Tiko Ekona, Muea, Ombe, Mutengene and Kumba (Observatoire National des Droits de L’homme 2009).
impacts that emerged from the particular sites in the cities of the resistance. The unrest primarily occurred in food markets in cities, as rioters barricaded roads and bridges leading into and out of cities. As a result, traders and officials closed markets (mentioned 61 times) in an attempt to maintain calm in Yaoundé and elsewhere. Traders mentioned how “markets stayed closed for a week which penalized both the food vendors and the clients” (Essos, November 2012). When there are riots in the market, different traders said, “we react violently” (Mokolo, July 2012) or “we flee the marketplace” (Mokolo, July 2012) and “we abandon the market until the calm returns” (Mokolo, July 2012). In Buea and Limbe, traders complained that there was a reduction of activities in the food market as the demonstration on the Wouri Bridge in Douala created temporary scarcity. In these instances “strikes send us into unemployment” (Muea, July 2012). People in these cities were “scared to go to the market, prices of the products rose higher and no food was coming in [sic]” (Biyem-Assi, November 2012).

Strategies: Haiti

Data collected indicated that two strategies drove the nature of the protest. There were those who gathered publically and peacefully to denounce the lack of action taken by the Preval government in addressing lavi chè. Then there were those who incited violence to increase the intensity of the riots, and whose actions ultimately made securing food more difficult. Unfortunately the mainstream media overlooked this distinction and mistakenly depicted Haitian society as violent (Schuller, 2008) while missing the nuances of a situation that political opponents capitalized on.

Chimères and gangsters heightened the otherwise peaceful protests but there were major riots in Les Cayes, while protesters in the capital battered on the Palace gates with dumpsters by blocking major transportation routes with rocks, debris, and burning tires. As well, they burned and destroyed cars, private businesses, and public property. The damage slowed commerce, and temporarily closed schools,
businesses and government offices. The demonstrations occurred in highly visual places to garner maximum Haitian and international media attention. To meet these ends locations such as main transportation routes, municipal buildings, parliament buildings and the National Palace were strategically selected. The theme was hunger and the objective was to question the legitimacy of the Preval government. In one such effort, protestors reacted to Preval’s public statement: “that if people started to protest, they should stop by the palace and pick him up” (Klarreich, 2008). Protestors responded by knocking down two palace gates before being stopped by MINUSTAH with rubber bullets and tear gas.

During the protest none of the markets ran out of food or ever completely closed, although blockades and burning tires set by chimères and gangsters were successful in slowing food shipments. The most direct impact on food security at home was that “the blocked streets prevented people from getting to the market” (Mache Cluny, May 2013). Due to this, 55 people interviewed mentioned that they altered their shopping patterns. Those who temporarily altered their shopping in other markets did so to avoid danger and 25 people stated they chose to shop at nearby neighbourhood boutiques. Boutiques in Haiti are known for their incrementally higher food prices and less diverse food choices. Overall respondents noted they ate less quantity and variety of foods, and generally more starchy foods - especially rice. Although food prices were high, the riot events exacerbate the problem by forcing people to value personal safety over the cost of food:

    The market doesn’t close, but if there is a strike people don’t go out. If I can I buy everything that I would need before the strike or I would take them in the grocery near my house (Mache Salomon, May 2013).

And that hording would aggravate shortages.


Strategies: Cameroon

The actual ways in which people responded to the crisis varied in Cameroon. In this case the objective of the rioters was to motivate the government to intervene and address the sudden price increases. At this time, the transporters strike and the subsequent halt in the movement of food had the greatest impact. Therefore, in Cameroon when the transportation networks were stalled artificial scarcity was created, fuelling further unrest. This strategy “paralyses the market and the food supply chain is altered” (Knol Eton, July 2012).

In Yaoundé, protesters were also awakened by Biya’s bid to extend his presidential term thus increasing the numbers of people on the street. In this city, protests “closed food markets until the calm returned” (Mokolo, November 2012). Affected traders tried to temporarily sell in other markets until their market re-opens: “We don’t sell anymore. I tried to find a place in Mvog Mbi but they hunted me down (on ma chassé)” (Mokolo, July 2012). There was also a boycott of food traders at this time not only because the markets were closed but also because many people in Yaoundé lament this strategy, one woman said:

If there is a riot and the market is closed I won’t have anything to eat. We run around trying to find food but cannot. We would be obliged to get our products elsewhere which incurs added expenses (Mvog Mbi, July 2012).

In Yaoundé one trader stated: “when people are calm it is very easy for people to feed themselves, when there is peace we can always find food” (Mokolo, July 2012). Similarly, another trader explained, “when we live in peace we eat very well and everyone is able to get by” (Knol Eton, July 2012). Peace or calm in the city was mentioned 71 times in the survey data. The word was used to describe the relationship between the lack of peace and the lack of food: “no peace, no food” (Essos, November 2012) and “when there is peace we can always find food” (Knol Eton, July 2012). One 70 year old women revealed: “we have a saying: un ventre affame n’a point d’oreille (a hungry belly has no ear)” (Mokolo, November 2012).
The primary protest goal of the taxi drivers was to draw attention to the price crisis by making access to food more difficult. Strategies adopted by the agents (taxi drivers and traders) and subsequently the anti-government protesters fuelled the unrest, created food scarcity and drove prices higher. One individual simply stated: “Yes, disorder doesn't bring us anywhere, it creates anarchy” (Knol Eton, July 2012).

Outcomes: Haiti

In Haiti the demonstrations and clashes with police and MINUSTAH forces resulted in five deaths (including one UN officer), 200 injured and extensive public and private property damage. The government reacted by dismissing Prime Minister Jacques-Édouard Alexis and negotiating with local business leaders and international agencies to lower the price of foreign rice from $51 to $43 per 50 kg bag. However little was done to address the dependency on food stocks most affected by volatile prices. Despite the notion that traders experience pride while providing a reliable food supply, the ti machann reported a dislike for selling imported goods: “I think [imported foods] are not good, they give a big belly and have no vitamins. I sell the imported foods because they are cheaper” (Kwa Bouke, June 2013). Responses from the survey centered on stories of resistance that involved imported foodstuffs: “imported foods are not the same as our food. I prefer foods that are from Haiti. Haitian foods have more vitamins; they are natural. The foods from my country are sweet,” (Mache Cluny, May 2013) and “Haiti is poor because people don’t buy foods from their country” (Mache Cluny, May 8, 2013). Respondents placed the blame on the inaction of the national government as the government, state, president or the political system was mentioned 66 times. “The lackness [sic] of responsibility of the government affects the country. We don't have any choice but to buy foods from the Dominican Republic” (Mache Cluny, May 2014).
Despite a dislike for imported food products, market vendors and customers continued to sell and buy the imported products due to structural constraints that shape their choices. These constraints include a lack of: 1) affordable national agricultural production; 2) prohibitive tariffs that limit subsidized imports into local markets; and 3) employment that enables Haitians to make preferred consumption choices. When considering the pre-existing agitation around a lack of food choices, the pace and scale of the food price rise quickly opened a space for a national popular movement and political opportunism to challenge the legitimacy of the state.

Outcomes: Cameroon

In these cities, the strikes are remembered as a time of low stocks in the markets and food shortages at home. When asked, what are the consequences of riots and the closure of the market on your activity/sales, many traders complain: “We don’t sell”, “When the market is closed I don’t work”, “If there is a riot, I don’t go to sell there is lower sales and it slows down activity.” The consequences of riots and the closure of markets are just as deeply felt by the buyers and consumers: “They complain because our market is the largest and least expensive. They are forced to walk very far to procure their products”, and “Consumers are forced to go without their products or are forced to go to other markets and the prices go up.” The consequences of these closures in Yaoundé “forces people to suffer” as “food is hard to find.” Closures in the market created temporary unemployment: “I am unemployed so I will invariably eat less than before.” One woman even mentioned, “I remember my children not being able to get to school because of the unrest.”

The data showed that hunger brought by disruption of the riots was significant. Traders in markets in Yaoundé mentioned famine (60 times in the survey), specifically in markets Elig-Edjon and Essos. This was linked to instability, fear, closure of markets, the violently enforced boycott and the stopping of all sales.
There was also an absence of supplies due to fires, burning of market structures and food; the destruction of perishable products and increases in food prices. This was described as “the beginning of famine” and crisis (mentioned 12 times), “when there is disorder the households suffer because we eat less” (Mokolo, July 2012). In Yaoundé, “food products are very expensive, to eat well we are forced to spend too much and this is an issue for impoverished families” (Mvog Mbi, November 2012). ‘Forcing’, ‘forced to change’ and ‘forced to spend’ in this case was mentioned 23 times. Many people indicated that when there is unrest, “our diet changes” (Elig-Edjon, November 2012). In this case, “you can see that the cause of the riots is hunger, when we eat well and we live well we can only live in peace” (Essos, November 2012). To this end, one trader stated: “food security leads to social stability which leads to peace. This chain of events must be respected” (Mokolo, November 2012)

Since the riot and subsequent government subsidies, many people say that imported food, especially rice subsidy “helps us survive.” It helps was an overarching theme (mentioned 62 times). The government continued to subsidize rice after 2012 making it available, accessible and cheap. However for similar reasons listed above for Haiti, it was perceived by those interviewed as being bad for the economy, bad for urban diets and also bad for health. The basket of subsidies prevented people from buying local, nutritious food that were not subsidized and continued to experience high prices. Some even said in Cameroon that cheap rice is “a good thing for the poor classes” (Essos, November 2012).

Discussion

In Table 6, the results from the study are synthesized by case with a statement that describes a prominent theme uncovered using the framework, accompanied by a quote from the interviews. Table 7 presents the themes and code frequency from the survey data analysis. Below, the common themes and differences found in the
cases are described. Overall, the framework was a useful tool for organizing the data to present a coherent story of the riot events. The framework allowed for a nuanced presentation of the data derived from focusing on the collective memory. Because of the consistency between participants in both cases, we argue that when combined Chin and Mittelman's framework and the collective memory are useful analytical tools for understanding food riot events.
Table 6. Characteristics of resistance during the 2008 food riots in Haiti and Cameroon

<table>
<thead>
<tr>
<th>Cases</th>
<th>Preconditions</th>
<th>Forms of resistance</th>
<th>Agents of resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haiti</td>
<td>Protracted mistrust of government; government manipulation of food crisis; high fuel prices; hunger</td>
<td>Riot and strike</td>
<td>Direct: Chimè, students, ti machann, unemployed</td>
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<td></td>
<td>We feel a shame when Haiti imports foods. Eating other foods is not good because we don’t encourage the local production.</td>
<td>I remember that time there was a lot of demonstrations, people were afraid to go out because of the tear gas launched by police.</td>
<td>Indirect: elite businessmen and politicians</td>
</tr>
<tr>
<td>Cameroon</td>
<td>Crisis of democratic participation; change constitution to extend Paul Biya’s mandate; history of military force to stop resistance; high food and fuel prices</td>
<td>Protest, manifestation and demonstration</td>
<td>Taxi Drivers; citizens</td>
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<td></td>
<td>Signs on placards read: Hungry Man Is Angry Man and No More Biya</td>
<td>Riots of February 2008 or The Taximan strike or A revolt of the population</td>
<td>Taxi drivers and bus drivers were on strike on increasing fuel prices. The rioters were Cameroonian citizens.</td>
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<table>
<thead>
<tr>
<th>Cases</th>
<th>Sites of resistance</th>
<th>Strategies of resistance</th>
<th>Impact of resistance</th>
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<tbody>
<tr>
<td>Haiti</td>
<td>Public, urban venues in major cities</td>
<td>Burning tires and buildings; blocking bridges; smashing car windows and street light; civil disobedience</td>
<td>Inspired national demonstration to push government into action; taxes not paid; school attendance fell; hospitals not receiving drugs; food supplies moved slowly</td>
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<td>Yes that caused a lot of rumors because imported product prices were raised. Rice, oil and other products. So the people went to the palace and tried to knock down the fence to get him.</td>
<td>When food increases I buy half of what I use to buy.</td>
<td>Short term: The people demonstrated in the street and the government worked to reduce the price of rice.</td>
</tr>
<tr>
<td>Cameroon</td>
<td>Urban centers; bridges and roads that lead out of town; food markets</td>
<td>The riots in Douala caused a lot of deaths and prevented a good number of households from having food.</td>
<td>Barricading roads, stopping the Douala port, lighting fires, looting, blocking bridges, and other civil disruptions</td>
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<tr>
<td>Cases</td>
<td>Preconditions</td>
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<td><strong>Haiti</strong></td>
<td>grangou (hunger) 63</td>
<td>Protest 86</td>
<td>Everyone/the people 55 times</td>
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<tr>
<td>Themes and # of codes from survey data</td>
<td>la vi chè (high cost of living) 27</td>
<td>Manifestation 49</td>
<td>Students 7</td>
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<td></td>
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<td>Demonstration 21</td>
<td>Ti machann 7</td>
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<td>Chimeres or gangsters 4</td>
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<td>Unemployed 3</td>
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<tr>
<td><strong>Cameroon</strong></td>
<td>Police 60</td>
<td>Riot 215</td>
<td>Taxi 46</td>
</tr>
<tr>
<td>Themes and # of codes from the survey data</td>
<td>Government 50</td>
<td>Strike 98</td>
<td>Drivers 23</td>
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<td></td>
<td>Intervention by</td>
<td>Protest 0</td>
<td>Transportation 22</td>
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<td>armed forces 15</td>
<td></td>
<td>Citizens 3</td>
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<td>Military 3</td>
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Table 7. Themes and code frequency from the food riot survey data
Common themes

The food security problem in both countries was exacerbated by the shared experience of structural political ineffectiveness on the one hand and corruption at all levels of society on the other. In fact, corruption, danger and violence have become normalized, leaving people accepting danger as part of daily life. This was especially apparent from the surveys. When asked do you worry about your safety in the market and do you see anger in the market, 100% of respondents in both cases said yes. People interviewed in both cases overwhelming said: “we are used to it.” In both countries, the preconditions for the protests of 2008 drew attention to the idea that elites hold power and inequality is great. By extension, the agricultural sector in both countries experienced government inattention to a large degree. Informant responses demonstrate the challenges facing marginalized citizens as agents of change in the context of overwhelming structural constraints.

As regards the form of the protest, in both Haiti and Cameroon, manifestations and strikes were an overarching theme. By extension, the agents of the resistance were marginalized citizens and people who were unhappy with their government. In both countries, the youth, students and even food traders participated. The sites of protest were similar in each country where the protesters primarily gathered in public places such as roads and prominent places in cities. Similar strategies of resistance included burning tires, and other material goods but resistance strategies primarily focused on slowing commerce and in some places, stopping commerce all together. The outcome of the resistance resulted in military intervention in both countries: MINUSTAH in Haiti and BIR in Cameroon. More specific to the household level, people reported eating less and changing their diets. In both cases, rice helped facilitate this change; however, frequent consumption of rice is a coping strategy and not a long-term solution. In both cases, people mentioned that food prices are the same or higher than before the protest and people surveyed often mentioned
that the protests did nothing to directly change their standard of living. Temporally, this is important, as four years after the food riots people say that nothing has changed.

*Differences*

The differences uncovered in both cases are especially interesting. In the case of Cameroon, the 26-year authoritarian rule created a crisis of democratic participation whereas Haiti’s history of resistance seemed to encourage strong public participation even though it is highly constrained in today’s environment. A principal example of public participation is the food rotting in Haiti’s port fueling public participation. The forms of the protest were also quite different. The strikes of taxi drivers in Cameroon motivated people to join the demonstration, as did Biya’s attempt to extend his presidential term, whereas in Haiti the protest was fuelled by massive public participation. This relates back to the agents of resistance. The robust participation of the general public in Haiti provided an opportunity for *chimeres* or paid protestors to take on a prominent role in the demonstrations. The sites of resistance in both countries were largely targeted to have the greatest impact. In Haiti, protestors gathered in places where they knew they could attract the attention of large media outlets. Whereas in Cameroon, the sites were chosen to initiate the greatest domestic disturbance such as, major transportation routes into and out of major cities and large city markets by inhibiting people to access food and squeezing out food supplies to bring pressure for them to receive better pay. These sites help to explain the major differences in the strategies adopted. In Haiti protestors sought out the attention of the international media to draw attention to the irony of food rotting in the port and their *“grangou klorox.”* In Cameroon strategies were adopted that create temporary domestic food scarcity, driving food and fuel prices higher to attract the attention of the government to intervene. Instead, markets closed, further compounding this strategy and instigating greater
unrest. Additionally, strategies were dynamic in Cameroon where the strike over high fuel and food prices in one city instigated massive public demonstration in other cities over the issue of presidential terms. When it comes to the major differences in the outcome of the unrest between the two cases, the resignation of Prime Minister Jacques-Édouard Alexis in order to disrupt the sitting government in Haiti stands out as a major feat compared to Cameroon’s case where politics have continued as usual (Ndoumbè, 2009; Al Jazeera, 2008b).

**Conclusion**

In answering the three questions presented above, this manuscript draws three main conclusions. Overall, the first conclusion of this paper is that the data presented here do not support the commonly held notion that rising food prices make people desperate and that this destabilizes economies and undermines governance. This also relates to Hossain and Kalita conclusion surrounding “the political possibilities of action: not all hungry people riot, and for many collective action is a risk” (2014: 14). However, as a form of resistance, the food riot is a legitimate response to changes in normal daily life, such as the high costs of living or a lack of access to public goods. This paper suggests that food riots are a response to a host of local level issues rooted in local norms and mores and a sense of outrage over a loss of sovereignty around food access and food production. The evidence presented in this paper showed that political disenfranchisement, anger, and outrage are the drivers of riots and are not solely understood locally to be desperation over the rising cost of food. The problem in Haiti and Cameroon was not a food availability problem it was an access problem.

However, and this relates to the second question, the comparison between Haiti and Cameroon demonstrated that the push and pull factors that fuelled the unrest were not just about food. The riots in both countries highlighted problems associated
with high levels of unemployment, urban poverty, and the high cost of living as protesters also called for greater political transparency. The urban rioters expressed discontent with locally and culturally defined structural issues with the hope of making radical changes in political power. Framing the current discussion as a food crisis simplifies this problem. These modern versions of food riot events targeted the state and the state’s inability to provide material items and services considered part of “collective consumption.” Overall, if policy makers in the future hope to avoid a repeat of food related unrest, the appropriate proactive measures should also address these issues.

Finally, what we learned from this analysis can be applied more broadly than to these two countries alone. A nuanced presentation of the causes stresses the inability to access food and showed how this strengthened resentment against elites and inspired calls for political change. Similarly, Bohstedt’s (2010; 1983) conclusion from food riot research in England from 1550-1850 showed that it was the “politics of provision” or “the interaction of food riots, repression, and relief” was the dominant pattern of the time. Through documenting the Golden Age of riots or over 700 food riots across England, Bohstedt argues that this three-part sequence enabled the restructuring of the political economy through actualizing publicly shared norms. In all of the cases this temporary relief resulted in the government providing relief to the rioting crowd. This sequence holds true today. In Haiti and in Cameroon, the relief measure - in the form of rice subsidies legislated with the hope that it will provide greater access to food - has led to an increase in rice consumption among the urban poor. In July 2014 the Government of Cameroon eliminated the $600 million dollar fuel subsidy that has been in place after the 2008 riot event despite calls by the taxi union to strike again. The government has not forgotten the 2008 response and has been stalling this removal despite calls made by the IMF (Aderibigbe 2014).
But that leads to a fourth, unanticipated conclusion: “More food” was always not beneficial. Food policy scholars have since 2008 insisted that nutrition, not just quantity of calories, must enter into assessments of world hunger, given the permanent effects of infant malnutrition on people and societies. Through focusing on the social memory and riot events, participants were not only given an opportunity to reflect on the unrest in the cities during the time in question but to also reflect on how their diet has changed during and after this time. By focusing on the 2008 riots at least four years after the event, provided an opportunity to also examine the cultural appropriateness and direct impacts of the relief measures adopted by both government during this time. For example, the foods heavily subsidized and imported in Cameroon were tomatoes (from China), fish (from Mauritania) and rice (from Thailand). Data collected on dietary change showed that a new (cheap) dish has emerged across the urban landscape that puts all of these items in the same pot. This dietary shift marks a turn away from the routine cuisine of a local starch (either cassava, cocoyam, or banana plantain) prepared with a saucy meaty stew (made with beef, local fish, green leafy vegetables and spices from the surrounding forest) toward this new subsidized, refined and cheap white rice dish. These impacts show how the relief measures from Bohstedt’s three-part sequence are enacted in daily life.

Evidence from both cases show that rice subsidies are changing diets as the locally available staple food options are less accessible than the cheaply available rice. Participants from cities in Haiti and Cameroon mentioned eating rice three to five times a week. Hence, low-cost subsidized rice plus rising food prices not only priced healthy local food options our of reach of most city dwellers, but also led them to substitute cheaper, less nutritious foods – white rice and imported fish and tomatoes – for healthier foods. These cases demonstrate the challenge of making foods available that people want to eat versus simply filling bellies.
References


6. MANUSCRIPT THREE

The project’s second theme explores Cameroon’s wild food system. On this theme, five research trips to Cameroon were made between 2010-2013. Manuscripts on this theme are informed primarily by survey and interview data. My research on this theme considers the impacts of the global food price crisis on urban food security, urban diets and the urban wild food trade.

Manuscript three adopted the framework advanced by Olivier de Schutter – the former UN special Rapporteur on the Right to Food – to explore the availability, accessibility and adequacy of wild forest food in cities across southern Cameroon. The paper considers and analyzes how the food price crisis pushed the government to subsidize staple food prices. The subsidy policy fueled a surge in staple food imports, and this move stimulated dietary change in the country insofar as wild food prices remained ungoverned, informal, freely floating and subject to inflationary pressures (see also manuscript four).

My interest in understanding how people can protect themselves from price volatility fueled research on this theme. Building on the literature that is reviewed below, at the outset I thought that one way of reducing the impact of food price volatility on food security beyond subsidies would be for people to increase the role of wild foods in their diets. I thought that a turn toward wild food might be a plausible strategy if and when these foods could be obtained locally and at little or no extra cost to households. In light of this initial thinking, for my third manuscript, I wanted to document the role and importance of wild foods and explore whether or not these foods had become more important following the 2008 food price crisis.

As this work proceeded in 2012 I benefited from engaging with Olivier De Schutter. Dr. De Schutter was on mission to Cameroon in July 2012, and he conducted several field visits. I was fortunate to join De Schutter and his team when they visited Kribi
(on the Kribi-Edea road) and the surrounding oil palm plantations. I subsequently elected to work with De Schutter’s framework for analyzing the availability, accessibility, and adequacy of wild food in urban Cameroon. I found his ‘right to food’ categories to be a compelling way to think about and consider food security and the sustainability of wild foods in urban Cameroon. The possible limitations of De Schutter’s approach are also discussed in the manuscript. This piece was published in an article in the open access journal *Sustainability* to maximize the impact of the research. A version of the article was a finalist for CASID’s (the Canadian Association of Studies in International Development) Kari Polanyi-Levitt prize at Brock University 28-30 May 2014. To date researchers have downloaded the full article over 1000 times from the *Sustainability* website and it has been cited several times (please see the *Sustainability* site for the current article metrics).

The analysis from manuscript three led to the collection of additional data (described in the Methodology) that focused on gathering the life histories of wild food traders. Thirty-eight of these histories were ultimately documented. These additional interviews honed in on the perceptions of ecological change and the impacts of these changes on wild food production and trade in Cameroon. I draw on this additional data in manuscript four. After this data was collected, I organized and hosted a paper-writing workshop with my research assistants in Limbe, Cameroon from 28-30 November 2013 on this topic. The paper from this workshop is in progress and will be submitted to the *Singapore Journal of Tropical Geography*. Prior to this workshop, I presented manuscript three at an event in Cameroon.
WILD FOOD, PRICES, DIETS AND DEVELOPMENT: SUSTAINABILITY AND FOOD SECURITY IN URBAN CAMEROON


**Abstract:** This article analyses wild food consumption in urban areas of Cameroon. Building upon findings from Cameroon's Comprehensive Food Security and Vulnerability Analysis (CFSVA) this case study presents empirical data collected from 371 household and market surveys in Cameroonian cities. It employs the UN Special Rapporteur on the Right to Food's framework for understanding challenges related to the availability, accessibility, and adequacy of food. The survey data suggest that many wild/traditional foods are physically available in Cameroonian cities most of the time, including fruits, vegetables, spices, and insects. Cameroonian spend considerable sums of their food budget on wild foods. However, low wages and the high cost of city living constrain the social and economic access most people have to these foods. The data also suggest that in the aftermath of the food price crisis, a government initiative to subsidize imports of non-traditional staple foods, such as low price rice, has increasingly priced potentially more nutritious or safe traditional local foods out of markets. These wild foods are governed informally and their prices have remained freely floating and subject to inflationary pressures. As a result, diets are changing in Cameroon as the resource-constrained population continues to resort to the coping strategy of eating cheaper imported foods such as refined rice or to eating less frequently. Cameroon's nutrition transition continues to be driven by need and not necessarily by the preferences of Cameroonian consumers. The implications of this reality for sustainability are troubling.
Introduction

To complement staples such as corn, wheat or rice, Cameroonians that live near forested areas typically collect wild plant roots and leaves, fruits and nuts from trees, and hunt wild animals, fish and insects (Grivetti and Ogle, 2000; Pimentel, et al. 1997). Foods hunted and gathered from forests contribute to food security through providing people with calories, animal and plant proteins, and essential minerals and micronutrients—especially iron and iodine, and also vitamins A, the Bs, C, D and E. These are essential micronutrients that not only create a more secure and varied diet, but also help to combat the effects of “hidden” hunger or micronutrient deficiencies (Herforth 2010; Pinstrup-Andersen 2010; Kuhnlein et al. 2007). While the economic value of “hidden” harvests can vary, these foods make significant and consistent contributions to Cameroonian livelihoods (Malleson et al., 2008; Oyono, Blaise, and Kombo, 2012; Scoones, and Pretty, 1992; Tieguhong et al., 2009). Also “hidden” at present are the contributions wild edible species make to national food balances (import-export sheets): the principal guides used to inform policies on food aid, trade and the domestic and international declaration of food crises (FAO 2001). With the routine “underestimation of wild foods comes the danger of neglecting the provisioning ecosystems and supportive local knowledge systems that sustain these food chains” (Bharucha and Pretty, 2010: 2913). When policies in forested countries obscure or neglect the routine consumption of highly nutritious edible local plant and animal products gathered from surrounding environments, they perpetuate the “hidden” status of these foods (Etkin, 1994; Kuhnlein, et al. 2009; Modi, et al. 2006).

Much of the food security literature describes wild food consumption as a coping mechanism or adaptive strategy for increased household security when times are bad (Compton, et al. 2010; Corbett, 1988; Institute of Development Studies, 2009). This common narrative depicts the gathering and consumption of wild foods as a reliable option when social or economic access to food at the market has been
compromised either by environmental or income shocks. This account of wild food seems more likely in rural areas where there is greater access to and reliance on the surrounding environment for gathering wild foods. Researchers have conducted numerous studies on wild food utilization in rural areas (Gbetsenkom, 2008; Hadjichambis et al., 2008; Pilgrim, et al. 2007). However, in urban Cameroon, wild foods make a significant contribution to diets and to dietary diversity. Cameroon’s food system is not only comprised of domestic agricultural (cultivated) products (including cassava, maize and plantain) and imported foods (such as rice and wheat), but also hunted and gathered forest foods (such as green leafy vegetables, spices, fruits, insects and forest meats). The engagements of city dwellers with wild foods are worthy of serious scholarly and food security attention.

Subsequent to the global food crisis of 2008 these so-called hidden foods have increasingly become foods that are only accessible to the wealthy or to the masses on special occasions. The prices of wild foods were not subsidized in the aftermath of the global crisis. They have remained largely informally governed and in this context locally produced and available wild foods have been pushed out of the reach of many average citizens. The latter now increasingly rely on subsidized imported foods, even though many average consumers consider it culturally appropriate and desirable to prepare and eat wild foods on a more consistent basis. This is not surprising considering the extent to which these foods contribute to the routine cuisine (Etkin 1994: 4). Since the crisis, average urban Cameroonians have had to turn away from local wild products they would prefer to eat out of necessity.

The shift away from wild products is disturbing given the limited state of knowledge about food in urban Africa. Crush and Frayne state that “nowhere is there any systematic attempt to... understand the dimensions and determinants of urban food security” across the African continent (Crush and Frayne, 2011: 532). They and others have identified a dearth of research on urban food security in sub-Saharan Africa (Crush and Frayne, 2011; Moseley, Carney, and Becker, 2010; Riley and
Legwegoh, 2013). In this research deficient context, even less is known about the contributions wild foods continue to make to the food baskets of urban dwellers.

To address calls for a more systematic analysis of urban food security in Africa this article is guided by a central research question: *what are the contributions of wild food products to food security in urban centers of Cameroon in the aftermath of the global food crisis?* To answer this question, the article draws upon the UN Special Rapporteur on the Right to Food’s understanding that food security challenges require a multidimensional approach (De Schutter 2010, 2012). While the framework advanced by Olivier De Schutter is not uncontroversial, it provides a coherent entry point for the assessment of wild food contributions. This approach emphasizes the physical availability of wild foods; the social, economic and physical access people have to wild foods; and the nutrition, safety and cultural appropriateness or adequacy of these foods in Cameroonian cities. This exercise consequently employs De Schutter’s analytical dimensions to further knowledge about a seriously under-studied food security challenge. It is a highly convenient approach vis-à-vis wild foods, despite the fact that it is still hotly contested (FAO 1996).

De Schutter has emphasized the over-arching consideration of sustainability in his work on each dimension of food security, and this emphasis is especially germane to this study. While some wild foods are now cultivated in urban areas, their hunting or gathering can have positive or negative impacts on the sustainability of forests, leading to their degradation, or alternatively, to their sustainable management (Brundtland 1987). Moreover, in urban Cameroon, the availability, accessibility, and adequacy of food can be enabled and compromised in unusual ways. Take for example a health scare linked to frozen imported chicken in the mid-2000s. As chicken consumers fell ill, civil society advocacy groups launched campaigns to highlight the food safety issues involved in the freezing and thawing of this “new” source of relatively cheap protein (ADCID 2007). Without a reliable cold storage
chain, this attempt to make frozen chicken parts *available* and *accessible* for a good price in cities raised questions about the safety and *adequacy* of this “cheap” meat. The rapporteur’s approach enables the comprehensive treatment of similarly “unique” issues.

In light of the lack of research attention on urban Africa and on food security challenges in Central Africa, this article aims to contribute to nascent conversations on the linkages between wild foods and food security in cities in the Congo Basin. After the 2008 global food crisis the Comprehensive Food Security and Vulnerability Analysis (CFSVA) tool was drafted by the World Food Programme (WFP) to identify and assess food security situations in countries where the WFP is active. The CFSVA process generates a document that describes the food security status of various segments of a population across various parts of a country or region (World Food Programme 2009). This article draws on the findings from Cameroon’s CFSVA baseline study supplemented with interview and survey data gathered during fieldwork in Cameroon from 2010–2012 for a case study assessment of wild food consumption in Southern Cameroon. Through working with De Schutter’s dimensions and applying them to the analysis of interview and survey data, it is clear that urbanites in Cameroon continue to rely upon wild foods, or at least continue to hope to rely on wild foods. Many spend more than 25 percent of their food budgets on wild products.

The next section reviews in more detail the literature underpinning the article’s focus on wild food and food security. In the third section the country context and research methods are described. Section four presents the results and provides preliminary answers to the central question outlined above. Section five concludes the paper with a summary of key findings.
Literature, Concepts and Themes

Getting Wild: The Continuum of Human-Plant Interaction

Through a literature review, Carolan notes numerous “turns” in agro-food studies that he describes as being less about “a specific theoretical framework as it is around a general way of doing agro-food scholarship” (Carolan 2013: 1). He engages with the notion of “wild” as being a part of the theoretical terrain of “wild” in food research and encourages researchers to “get wild” in the spirit of discovery (Carolan 2013: 15). Thus, rather than engaging in doing things “that tame...the future of agro-food research appears to lie increasingly in multiplication and of creating more entanglements not less” (Carolan 2013: 2). He states “...humans...are, “co-journeying” with food and agriculture across multiple spatial scales and institutional settings” (Carolan 2013: 5). This journey is continually remaking agricultural and food relations through the engagement with the natural environment and human culture (Tsing 2005). It is with this spirit that the article engages with the term “wild”.

Wild is not a simple concept, it can “evoke a sense of individualism and a bourgeois ethic of freedom,” and can imply something that needs to be tamed (Carolan 2013: 5). Similarly, environmental historians and geographers have found that “wilderness is not necessarily a fixed and objective concept” (Kliskey and Kearsley, 1993). Rather it is one that is formed on the basis of individual perceptions, expectations and cultural values. The environments in which wilderness might be found have an “objective ecological reality, and usually one that largely excludes obvious human modification” (Kliskey and Kearsley, 1993; Thoreau, 1995). What makes wilderness “wild” rests very much with the individual, and her or his emotions, values and experiences (Neumann, 1998; Stankey and Schreyer, 1987; Tsing, 2005). From this, a series of “wildernesses” can be identified. These “multiple perceptions of wilderness”, that are peculiar to particular groups can be collected,
organized and mapped (Kliskey and Kearsley, 1993: 204). Just like there are many types of “wildernesses”, there are many types of “wild”. Thus wilderness and wild have both an ecological and a human perceptual meaning.

For paleoanthropologists, ethno-botanists, and ecologists, the accumulation of plant-based knowledge follows from repeated observation of the effects certain plants have on the formation of human culture (Etkin 1994; Ndenecho 2011; Voeks 2007). The terms wild, cultivated, and domesticated actually represent points on a continuum of increasing interference with the natural ecosystem that defines the human-plant relationship. At one end of the continuum are the “entirely wild” which grow outside the man-disturbed habitat (Harris and Hillman, 1989). Thus the term wild often applies when a plant’s habitat does not include secondary (human disturbed) habitats such as open areas, thickets, roadside, old fields, edges of fields etc. (Logan and Dixon, 1994). At the other end of the continuum is noticeable human intervention such as selective harvesting, transplanting, and propagation by seed and graft (Etkin, 1994; Logan and Dixon, 1994). This explanatory framework has been around since the 1960s and emphasizes the continuities between foragers’ reliance on wild species for ‘food procurement’ and agriculturalists’ reliance on domesticated species for ‘food production’ (Etkin, 1994; Harris and Hillman, 1989; N. F. Miller, 1992). However, in tropical forest “even disturbed secondary rainforest might first appear to be pristine” (Vansina 1990; Cunningham 2001). Darrell Posey, for example, working with the Kayapo people of the Brazilian Amazon, has shown that certain ‘wild’ plants along paths through ‘pristine’ forest have been in fact planted by the Kayapo as a source of food, medicine and other resources. It was not until biologists began talking to local people, that they found they had been misled by their own definitions (Posey and Balick, 2006; Posey, 1985).

Foraging and farming across the world are “overlapping, interdependent, contemporaneous, coequal and complementary” (Bharucha and Pretty, 2010: 2914; Harris and Hillman, 1989). Within these systems there are no easy distinctions
between “wild” and “cultivated” foods. While food research and policy tends to consider these types separately, many local communities rarely make distinctions between foods from the forest or the field (Johns and Sthapit, 2004; Kuhnlein et al., 2007; Turner et al., 2011).

This complexity is the result of particular local knowledge that is then “encoded into norms, rules, institutions and stories, and this forms the basis for continued adaptive management” of food systems and environments over generations (Agrawal, 1995; Bharucha and Pretty, 2010: 2914; Scott, 1976; Turner et al., 2011). The continued availability of these plant foods depends on the maintenance of synergies between farming practices and wild biodiversity (IAASTD and Press, 2009; Thrupp, 2000). In turn, food agro-biodiversity is inextricably connected with cultural heritage (Frison, et al. 2006; Johns and Sthapit, 2004; Pieroni, et al., 2005). To focus on food and culture, as well as food and dishes always “reflect the regional identity of people, ethnic groups and communities, and the use of wild food plants is an example that exemplifies local knowledge or traditional ecological knowledge” (Doughty, 1979; Hadjichambis et al., 2008: 384; Kuhnlein et al., 2007). Empirical findings from the survey show that in southern Cameroon, these specific foods simply “come from the forest” or “come from the bush”. Cultivated foods “come from the fields.” Viewed in this way, it is the forest that provides the ‘wild foods’ and these include edibles that are not only plants (Turnbull 1962).

The role and value of forests to food security is grossly underestimated (Pimentel, McNair, Black, Pimentel, and Kamil 1997; Scoones, M., and Pretty 1992; Sunderlin et al. 2005). Some research suggests that forest-dependent people who live in or near forests tend to be politically weak and hold very little power in decision-making processes relating to the management of forests (Cerutti and Tacconi, 2008; Sunderlin et al., 2005: 1388). This is reinforced by forest-dependent people’s geographic distance from urban centers where political alliances that might favor forest conservation tend to be formed and maintained (Cerutti and Tacconi, 2008).
The Food and Agriculture Organization (FAO) estimates that globally, over one billion people continue to rely on wild foods to meet their food needs (Aberoumand 2009). Pimentel et al. has found that “healthy forest ecosystems are essential to world food security because they (i) directly provide food to large numbers of people; (ii) produce products and employment that enable people to purchase food; (iii) [and] protect the environment [in ways] that help...the productivity of forestry and agriculture” (Pimentel, McNair, Black, Pimentel, and Kamil 1997: 111).

In research on Cameroon the distinctions are further complicated by the concept of non-timber forest product (NTFP) or non-wood forest products (NWFP). NTFPs are “all biological materials other than timber, which are extracted from forests for human use” (Belcher 2003: 161). This literature has tended to emphasize this definition, however this definition includes non-edibles. When NTFPs are mentioned in the literature on Cameroon, the focus is often on quantifying yields sold in local markets (Ingram, et al. 2000; Ndoye, et al. 1997; Perez, et al., 2000; Shackleton et al. 2007; Tieguhong and Ndoye, 2007; Wiersum, et al. 2014) and measuring their economic importance through focusing on rural employment and income (Awono, et al. 2010; Brown and Lapuyade, 2001; Nkem et al., 2010; Perez, et al. 2002). Making the distinction between all materials and edibles is important for an urban food security study as urbanites are purchasing these foods for home consumption in markets. The past and current research lacks a critical element of the NTFP trade in Cameroon: their use by urban residents, the ways they feature in urban diets, and their contributions to food security in urban areas.

The global food crisis has sparked renewed attention to wild or “hidden” foods for food security (Hughes 2009; van Huis 2013; Vinceti et al. 2013). These foods are being recognized for their contributions to dietary diversity and nutritional security (Smith and Longvah, 2009; van Huis, 2013). It is encouraging to highlight international interest and renewed attention on biodiversity and the sustainable use of these significant crops across Africa (Afari-Sefa, et al. 2011; Hughes, 2009; Jones
and Sanyang, 2009; Tadele, 2009). It is well known that these forest foods make invaluable contributions to households’ food security (Bharucha and Pretty, 2010; Burchi, et al. 2011; Grivetti and Ogle, 2000; Johns and Sthapit, 2004; Johns, 2003; Kuhnlein et al., 2009; Modi et al., 2006). For example, turning back to the CFSVA for Cameroon the report describes higher levels of food security in the forested region of the country than in the Sudano-Sahelian north (WFP 2011). While this can also be attributed to changing weather and unrest in neighboring countries that border northern Cameroon, forested foods in the south help to compliment agricultural products and imported food. Similarly, findings from a study of the nutrient composition of “bush meals” from Cameroon’s northern regions stress the fundamental role of wild food for nutrition and their sustainable use for increased food security (Roger, et al. 2012).

Urbanization and the Availability, Accessibility and Adequacy of Wild Food

Increased urbanization (as a result of rural to urban migration) across the African continent is an important factor that expands the size of local, urban wild food markets (Crush and Frayne, 2011; Maxwell, 1999). This movement and the ensuing food trade creates a new type of consumer who, unlike rural inhabitants, has to buy wild products rather than gather them (Ndoye, Perez, and Eyebe 1997). Urban individuals (and households) are generally net food buyers who rely on their income for their food security, spend a large proportion of households’ budgets on food, and have little access to other safety nets like agriculture or land to ensure food access in times of crisis (Cohen and Garrett, 2010; Crush and Frayne, 2011; FAO, 2012). Consequently, the buying and use of wild foods in this environment becomes more about food choices, personal preference and household budgets than the wild “famine foods” touted in the literature (Hughes 2009). Globally, people purchasing food to meet their daily needs dominate the urban scene (Crush and Frayne, 2011). Poverty is no longer found only in rural areas but in urban areas as
well. That being said, food insecurity is probably higher among the urban poor than among the rural poor and this was demonstrated during the food price crises in 2008 (Compton, Wiggins, and Keats 2010; Institute of Development Studies 2009; De Schutter 2012).

More specifically, Cameroon is considered a highly urbanized country by sub-Saharan standards. A recent 2010 estimate from the United Nations World Urbanization Prospects suggests that Cameroon’s urban population is 58% of the total population (UN 2011). Despite strategies aimed toward reducing rural poverty, urban poverty is somewhat ignored (Cohen and Garrett, 2010; Crush and Frayne, 2011). Further, economic growth in Cameroon is not on target and the country is not on target for meeting the Millennium Development Goals (IMF 2010). Urban poverty in Cameroon is best described as poor access to adequate infrastructure, a lack of social services and income poverty. In the literature on urban Africa, it is often explained that the high costs associated with “urban shelter, transport, health and education undermine the ability of the chronically poor to access sufficient food” (Crush and Frayne, 2011: 536). All things considered, Toye predicts that the economic impact on development will be “hardest for low-income urban households in developing countries that are net importers of food” (Toye 2009: 761). The literature on food in urban Africa highlights factors beyond actual production and availability of food by drawing attention to the social and economic access to food and the realities of balancing household budgets in a deteriorating urban environment (Appel 2012).

The knock-on effects of the 2007-2008 food crisis “drew attention to the vulnerability of the world’s poor, especially the urban poor” (Mason, et al. 2011: 350). The perception that food will always be available in cities was altered for many in 2008, when the food prices peaked and reached levels not seen since the 1970s (Timmer 2010). The world’s poor suffered the greatest blow as food prices rose to unattainable levels, rations decreased or disappeared, and frustrated people
took to the streets in protest (Sneyd, et al. 2013). In particular, high global oil prices in 2008 sparked strikes and riots of taxi drivers in Douala and Yaoundé, Cameroon that halted the movement of food between cities (Amin 2012). Not only was food more expensive, it was more expensive to move it around the country. In these cities, the strikes are remembered as a time of low stocks in the markets and food shortages at home. The budget of low-income households is disproportionately skewed so that 50%–60% of household income is spent on food. However, the literature on food price shocks and volatile prices suggests that the food price crisis should not be seen as changes in people’s income alone. Volatile food prices are a common feature of low to middle income economies where local markets are not regulated to protect the poor (Cooksey 2011). Food prices remained volatile over the subsequent years and remained above 2009 prices. For example, the CFSVA for Cameroon notes that food prices have remained higher than before the price crisis of 2008 (WFP 2011). Compared with the last five-year average, prices for “maize and cassava increased by 18%, rice by 33% and plantain by 39%” (WFP 2011: 7). Governmental measures adopted after the food price crisis and subsequent food riots in major urban areas, “managed to bring food inflation down to an estimated 1.2% in 2010” (WFP 2011: 7). While these measures assist with accessing staple foods, prices for local vegetables and wild foods remained high. The literature on food crises features the intersections of the availability of food and accessibility of that food. While it is assumed that food will always be available in cities, the food riots made it clear that food will not always be accessible.

The food price spikes of 2007–2008 and 2010–2011 have had far reaching effects on urban residents generally and especially on food choices within households in urban areas. Evidence from Swan et al. suggest that vulnerability to high food prices is likely to be associated with the type of staple food consumed, the ability to substitute cheaper foods, trends in income and the degree to which households rely on the market for food (Swan, et al. 2010). When food prices increased in 2008, Swan et al. learned from the Central African Republic, that households adopted
damaging coping strategies. People in their study were reported purchasing less expensive foods with limited nutritional value, eating less preferred foods and reducing the diversity of their diets. Their findings suggest that food price shocks increase the risk of micronutrient deficiencies (Swan, Hadley, and Gichon 2010: 111). Many urban poor people have little room to maneuver as coping mechanisms decrease food security. When food prices rise, households can: buy less food; buy lower quality food; reduce portion sizes; reduce meal frequency and buy less variety of food. These coping strategies affect nutrition and health. Generally, these strategies involve a shift in diets from sorghum, millet, maize and root crops to rice and wheat, which are often highly processed, imported, subsidized and available cheaply (De Schutter 2010). Cereals such as rice, wheat and maize are the basis of the urban diet and because they are internationally traded they can leave the urban poor even more exposed to global price fluctuations (Dimova and Gbakou, 2013). A dietary transition most often occurs in cities where these “cheap” foods are most accessible and where high food prices exclude the poor from accessing healthier food options or traditional foods. The term “nutrition transition” was coined to describe the process that happened many decades ago in developed countries but is now occurring in developing countries (Popkin 1998). It marks a shift in diet from simple staples high in fiber to a greater intake of saturated fats, sugar and refined foods (Blouin, et al. 2010; Lang, 2010; Popkin, 1998). The transition accelerates the incidence of diet-related non-communicable diseases (Mennen et al., 2000; Steyn and McHiza, 2014).

As global food prices rise, this transition is more pronounced. In their 2007 study, Sharma et al. found that food composition data for Cameroon are severely limited (Mennen et al. 2000; Sharma et al. 2007). Their study provided, “for the first time, the calculated nutritional composition of composite dishes commonly consumed in the urban and rural areas of the Central Province of Cameroon” (Sharma et al. 2007: 476). Their findings suggest that rural Cameroonians eat a more diverse diet and engage in more physical activity than their urban counterparts. The “rural diet is
more or less based on the traditional staple foods, while the urban subjects incorporate more modern foods into their diet” (Mennen et al. 2000: 473). These include pasta and rice and beignets or deep fried balls of sweet dough made with wheat or cassava. The goal of these studies was to use these findings for “nutrition interventions aimed at modifying commonly consumed composite dishes to improve dietary intake” as nutritionists in Cameroon are noting alarming rates of obesity, diabetes and other diet related conditions (Mennen et al. 2000; Sharma et al. 2007; Satia 2010). Findings such as these are important because they demonstrate at the micro-scale of bodies the ways that the broader political economy impacts food choices, households' food security and ultimately public nutrition and health. The literature on coping strategies and nutrition transition relies on such dimensions as accessibility and adequacy. When the conditions are enabled that make food less accessible the adequacy of diets is compromised leaving households vulnerable to future dietary and health shocks (Satia 2010). What we can take from this body of literature is that “food security strategies of the urban poor, and how these are thwarted or enabled” are crucial for studies on urban food security (Crush and Frayne, 2011: 528). By using the three dimensions of food security outlined by De Schutter particular aspects of the literature stand out and drive this analysis forward. In light of neglected consideration of nutrient-rich foods in an urban environment and with this brief history and review in mind the methodology and results follow.

**Methodology**

Cameroon is an excellent territory for a case study of foods from the forest. Located in the equatorial and tropical regions of the Gulf of Guinea, the South and East regions of Cameroon are located in the humid forest zone (HFZ) of the Congo Basin, and the Southwest region of Cameroon has been labeled a biodiversity hotspot (UNEP 1999; Congo Basin Forest Partnership 2006). However, some researchers
have claimed that information on food provisioning systems in cities in Cameroon is “sparse and often too incidental for the purpose of advanced research”, an analysis of this “system needs to be built from the local level” (Guyer 1978; Ngoumou 2010: 189). Therefore, this case study draws on empirical evidence the author collected during four separate research trips to Cameroon from July 2010 to December 2012. This study builds on the findings from Cameroon’s CFSVA and the 2011 baseline survey of 6300 households from Cameroon’s ten regions. From this CFSVA study, households responded to a questionnaire about their food intake, their sources of income, livelihoods and expenses, assets and various practices associated with strategies for survival (PAM 2011). The findings from urban areas suggest that urban dwellers experience a greater level of food security than their rural counterparts. However their situation is greatly impacted by rising food prices, as urban residents have to purchase the food they consume. The survey also argues that in the capital city and regional capitals food insecurity is almost non-existent (PAM 2011). Building on these findings, the present case study documents urban food security through focusing on wild food consumption in three cities in Cameroon: Buea, Limbe and Yaoundé to highlight the voices and experiences of the people in these cities. All three cities are located in the HFZ in Cameroon’s Center and Southwest regions. These cities were chosen for in-depth qualitative research based on their locations within this zone where “foods from the forest” are primarily gathered and consumed. Etkin contends that diet surveys tend to ignore “wild plants” compared to dietary “staples”. This is attributed to a “lack of understanding regarding which plants should be included in the “wild” category and the extent to which they contribute to routine cuisine” (Etkin 1994: 4-5). But wherever the “consumption of wild foods has been accurately accessed, they emerge as regular and important elements of diet” (Dogan, 2012; Etkin, 1994; Hadjichambis et al., 2008; Ogle and Grivetti E., 1985; Somnasanc and Moreno-Black, 2000). When taken into consideration more nuance of the food security situation in these cities can be described and assessed through the inclusion of these “hidden” foods.
The research design focuses on the sellers and buyers of wild food products in urban areas. The maps below identify the markets and sites this study concentrates on in each location. Within each city, markets were selected based on criteria such as size, location, days of operation and identification of wild food sellers. Geographic Information Systems (GIS) points were collected to map the locations of the markets in each city. Map 3 charts the locations of eight markets and four restaurants in Yaoundé where wild foods are bought and sold. Map 4 identifies nine markets around Buea and Limbe where wild foods are bought and sold. Subsequently, these sites and the circles on each map indicate the proximity of households to markets that sell forest foods. While these points are not exhaustive, they mark the sites this study concentrates on.

Map 3. Map of households and markets, Yaoundé
Using these maps, data was collected via participant observation and semi-structured interview surveys in English and French in both markets and households (Baxter and Eyles, 1997; Cunningham, 2001; Edwards, Nebel, and Heinrich, 2005; Legwegoh and Hovorka, 2013; J. Miller and Deutsch, 2009; Robben and Sluka, 2007; Scheyvens and Storey, 2008). The surveys were conducted in both the wet and dry seasons. The author relied on the capabilities of research assistants who were competent in either English or Cameroonian Pidgin (for interviews in Buea and Limbe) or French (for interviews in Yaoundé the capital). Individuals were selected in the market and asked to participate in the study. These included food traders in the market and customers looking to fulfill their food needs and ensured diversity in the sample.

The households that were interviewed typically do their food shopping in the markets falling within a one to two kilometer radius from their home. Reasons given
for choosing certain markets were: diversity of products, proximity to their home and price. Some markets have a reputation for particular food products and in all cities individuals commonly frequent more than one market to locate certain products. One woman in Yaoundé mentioned: “Huitieme for tomato and green condiments, garlic, Mokolo for big items and Mvog-Ada for meat, smoked fish, plantain and fruits.” Designing the research in this way allowed for ethnographic insights into urban food markets, and also food purchasing patterns and trends of households (Clark 1994; Flynn 2005).

The survey was field tested in each city for reliability. The interviews were guided mostly by open-ended questions, including: where do you do your food shopping? What percentage of your monthly income do you spend on food? What do you do when you don’t have enough food, and don’t have enough money to buy food? What foods do you need to feel food secure? During these field tests the survey became participatory as additional questions were added or omitted based on preliminary responses and input from participants (Hayes-Conroy, 2010; Sultana, 2007; Verpoorten, et al. 2013). The questions deemed most sensitive were related directly to income and also to foods that were considered “rich” food or “poor” food. Questions about income were reduced to focus specifically on the portion of the household budget related to food. Framed in this way, participants were comfortable sharing portions of budgets without worry that a “tax man would come by.” In Yaoundé 106 food traders and 127 households and in Buea and Limbe 64 food traders and 70 households participated. In total, this study is based on interview survey data from 197 households, 170 food traders and four women who run open-air restaurants: 371 participants in total. When factoring in dependents and household size, the survey includes 2,111 individuals. Participant observation in the food markets and also shopping and cooking with some households also inform the study.
Special attention was given to the types of wild foods consumed, if any, and the impact of food prices on households' budgets. Data was stratified by gender (male and female headed households) and income level (low, middle, and high). Qualitative measurements of food security include indirect indicators (e.g., asset ownership, social support networks, household size, and immediate circumstances), food coping strategies (e.g., household attempts to deal with times of insecurity through dietary changes, rationing consumption, establishing credit, drawing on social networks, etc.) and perceptions of acceptability (e.g., symbolic role of food and cultural appropriateness within the household) (Maxwell and Caldwell, 2008). Table 8 characterizes the data by age, gender and reported class based on employment, income, and assets. The data predominately represents middle class (64.6%) females (85.5%) between the ages of 20–40 (53.7%).

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<td>Male</td>
<td>54</td>
<td>14.5</td>
<td>Poor</td>
<td>44</td>
<td>22.6</td>
</tr>
<tr>
<td>Age 20-40</td>
<td>197</td>
<td>53.7</td>
<td>Female</td>
<td>317</td>
<td>85.5</td>
<td>Middle</td>
<td>126</td>
<td>64.6</td>
</tr>
<tr>
<td>Age 40+</td>
<td>135</td>
<td>36.8</td>
<td></td>
<td></td>
<td></td>
<td>Rich</td>
<td>16</td>
<td>8.2</td>
</tr>
<tr>
<td>No answer</td>
<td>32</td>
<td>8.7</td>
<td></td>
<td></td>
<td></td>
<td>No answer</td>
<td>9</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Table 8. Characterization of survey data by age, gender, class.

A gender imbalance exists between men and women as regards the selling of food, food provisioning and cooking in households in the Congo Basin. This includes buying and cooking food, getting water from a public source in the city and also obtaining fuel (wood, gas, sawdust) to prepare food. From the survey, it was learned that women cook foods with their daughters, and sometimes sons, but their husbands do not assist in food preparation unless the wife is out of town or sick. Cooking at home is the predominant way of feeding the household as it is considered expensive to eat out. The households surveyed rely on domestic, public or community, together with stream and river sources for cooking and drinking.
water. Fuel sources for cooking range from firewood, gas, sawdust, coal and charcoal and while the cost of these items are factored separately into food budgets and because of the expense they are used frugally for cooking.

Survey data, transcripts and field notes from interviews and discussions were read and coded for emerging themes related to wild food consumption and relative levels of food security within and between households at different income levels. There was a particular focus on the perceived acceptability of these foods for meeting household needs. It uses textual and illustrative means to explain reasons for varying circumstances and experiences of engaging with wild food products. The author makes no claim from this case study that data are representative of the wider populations of these cities or quantitative rates of food insecurity in these cities. Instead, the data represents a snapshot into the lived and daily realities of food provisioning for residents of Yaoundé, Limbe and Buea.

**Results**

The results in this section seek to answer the central research outlined above in the introduction and speak to De Schutter’s (De Schutter 2010) three dimensions of food security: availability, accessibility and adequacy.

**Availability**

Data collected for this study show that 66 wild foods were named and available in city markets in southern Cameroon the most frequently named include: bush mango (Irvingia spp.), njansang (Ricinodendron heudoletii), Rondelle (Scorodophloeus zenkeri Olom) *Cola acuminata; Cola pachycarpa K; Cola nitida* (bitter kola, monkey kola, red kola), African cherry (*Prunus Africana*), country onion (*Afrostyrax kamerunensis/Afrostyrax lepidophyllus*), alligator pepper (*Afromomum melegueta*),
safou or bush plums (*Dacryodes edulis*), egusi melons (*Cucumeropsis edulis*), honey, leafy vegetables such as eru or okok (*Gnetum africanum*), and several species of bushmeat, mushrooms, termites, forest snails, and caterpillars (see Table 9 for a list of the most commonly identified foods and Table 10 for prices of those foods). These foods can be categorized as spices, condiments, proteins, aphrodisiacs, medicines, and vegetables.

In terms of availability, wild foods do not fit into De Schutter’s standard agricultural model. These foods do not necessarily require access to agricultural seeds, technological inputs, fertilizers or pesticides. The supply-side of wild food hinges on a different set of factors and production knowledge that influences availability such as seasonality, weather, harvesting or gathering and most importantly access to the forest. The climate in Cameroon’s forested southern region is described as “four seasons equatorial” (Koppert, et al. 1993). This includes a clearly defined major dry season (December–May), followed by a short rainy season (May–June). The short dry season lasts from July–October followed by a high rainfall wet season (October–November) (Yengoh, et al. 2010). What are noteworthy about the availability of wild food products are the seasonality of particular foods and the identification of peak periods of abundance and also scarcity. For example, due to seasonality, there are times when markets are full of *safou*. In June and July the deep purple fruit with avocado-colored insides are available by the piles in urban markets. In addition to being sold raw for home consumption, plums are also prepared on the roadside, by women fanning small fires, roasting the plum for a quick snack or meal on the go. *Safou* plums often replace maize roasted roadside as the seasons change.
<table>
<thead>
<tr>
<th>Wild food</th>
<th>Peak periods of abundance</th>
<th>Use and Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eru/okok (<em>Gnetum africanum</em>)</td>
<td>All year, but more in the rainy season</td>
<td>Sliced thinly and cooked in a stew with waterleaf, cow skin, dried fish and crayfish and palm oil and eaten with cassava <em>fufu</em></td>
</tr>
<tr>
<td>Bush mango (<em>Irvingia</em> spp.)</td>
<td>July and August and September and October</td>
<td>Fruit is popular for children; stone is dried and ground down and used as a soup thickener</td>
</tr>
<tr>
<td>African plums, <em>safou</em> (<em>Dacryodes edulis</em>)</td>
<td>April–October</td>
<td>Fruit is boiled or roasted before it is consumed</td>
</tr>
<tr>
<td>Kola (<em>Cola acuminata</em>; <em>Cola pachycarpa</em> K.; <em>Cola nitida</em>)</td>
<td>August–September</td>
<td>Chewed when drinking palm wine; stimulant</td>
</tr>
<tr>
<td>Njansang (<em>Ricinodendron heudoletii</em>)</td>
<td>May–September</td>
<td>Dried and prepared in a soup; can be substituted for groundnut in soups and stews</td>
</tr>
<tr>
<td>Bush onion or country onion (<em>Afrostyrax kamerunensis</em>/ <em>Afrostyrax lepidophyllus</em>)</td>
<td>May–September</td>
<td>Used in soups and stews as a condiment or spice, especially in <em>ekwang</em></td>
</tr>
<tr>
<td>Mbongo (<em>Aframomum citratum</em>)</td>
<td>May–September</td>
<td>Roasted until charred then ground and mixed with other spices usually for a fish soup (<em>mbongo tchobi</em>)</td>
</tr>
<tr>
<td>Rondelle (<em>Scorodophloeus zenkeri</em> Olom)</td>
<td>All year</td>
<td>Seeds and bark from the tree are eaten after simple drying. Pulped or ground, they have a flavor similar to garlic and are used as a spice in cooking</td>
</tr>
<tr>
<td>Alegata pepper (<em>Afromomum melegueta</em>)</td>
<td>n/a</td>
<td>Used in soups and stews and holds cultural significance to ward off evil spirits</td>
</tr>
<tr>
<td>Pebe (<em>Monodora myristica</em> (Graertm.) Dunal African nutmeg</td>
<td>n/a</td>
<td>Seeds from the tree are dried and sold whole or ground to be used in stews, soups, cakes and desserts</td>
</tr>
<tr>
<td>Quatre cote (<em>Tetrapleura tetraptera</em>)</td>
<td>n/a</td>
<td>Spice for stews</td>
</tr>
<tr>
<td>Caterpillars (<em>Rhynchophorus phoenicis</em>)</td>
<td>June–July</td>
<td>Roasted and or dried for soups and stews</td>
</tr>
<tr>
<td>Termites</td>
<td>March–September</td>
<td>Protein, dried and roasted</td>
</tr>
<tr>
<td>Mushrooms (several species)</td>
<td>Rainy season</td>
<td>Protein, prepared in a stew</td>
</tr>
</tbody>
</table>
Table 9. Wild foods most commonly identified and available in Cameroonian cities, peak periods of abundance, and uses.

<table>
<thead>
<tr>
<th>Forest Snails (several species)</th>
<th>Rainy Season</th>
<th>Protein, prepared in stews and also boiled and roasted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honey</td>
<td>All year</td>
<td>Medicine, food, gift</td>
</tr>
<tr>
<td>Bushmeat (various, including antelope, snake, cane rat (<em>Thryonomys</em>) and pangolin (<em>Manis tricuspis</em>)</td>
<td>All year</td>
<td>Protein, prepared from fresh, roasted or dried to be used in stews</td>
</tr>
</tbody>
</table>

When there is scarcity, food traders or *buyam-sellams* (in Pidgin) named various reasons for low stocks of wild food in the market. Some traders say: “It depends on the season. There are periods when there is little harvest from the forest. There could [also] be shortages because of the weather or a rise in prices.” Urban residents say the forest is too far away now so they do not go there as much as in the past to find food for their households and for sale. These same residents also suggest that the farm is more reliable than the forest for food harvests because the forest is changing. Other traders herald, “sometime the *buyam-sellam* don’t find the products in the forest and if they do the Forest and Fauna officers [can] stop or arrest the *buyam-sellam* on the road.” Interestingly, some traders mention that, “at times I hear that some people hide food to cause scarcity but this is difficult for perishable foods.” These *buyam-sellams* highlight the difficulties in maintaining a reliable stock for the urban demand for forested foods.

Due to large scale logging, the growth in cities, decaying roads and voracious officers from MINFOP (*Ministère des Forêts et de la Faune*) or the police, many wild food traders are finding it less profitable to travel to the forest to gather food for the cities. This impacts the availability of these products. I often heard complaints from traders that their biggest problems finding food for the market are because of threats of seizure of products by officers or the bothersome possibility of paying bribes to ensure the food arrives at the market. The possibility of a shake down is
most often an opportunity for corrupt officers to “chop” the earnings of gatherers and wholesalers, and not necessarily related to the traders going against a law. Efforts by the government to halt corruption are underway and may trickle down to roadside police.

The most notable wild foods found in urban markets are the spices (see Image 4). Cameroonian cuisine combines the different regional staples (such as rice, yams, cocoyams, plantains, potatoes, cassava, maize and millet) with vegetables, fruits, and animal and fish products into a soup or stew. The staples are usually roasted, boiled, fried or pounded in a mortar. The most common are plantain, cassava and cocoyam, which when pounded takes on a gelatinous consistency as the starch breaks down (McCann 2009). The resulting fufu accompanies one-pot dishes, such as ndole, eru or okok, achu vegetable, kwakoko with mbanga soup and mbombo djobi (or mbongo tchobi), among other local meat and fish dishes and are exceptionally popular (Ancho-Chi 2002: 139). Image 4 identifies most wild spices available in Yaoundé during the wet season. These spices include various parts of a plant such as the fruits, the stone or pit of fruits, the bark, the blossoms and leaves and bulbs. These parts are dried and often ground into a powder or a paste. For example, the pit of the bush mango when dried and ground to a crumbly paste is added to stews as a thickener. The ground pit creates a slimy consistency, similar to okra that facilitates eating the stew with the accompanying fufu, which is eaten by hand. While many edible wild plants and other food products are regularly included in local food purchases, wild spices make up a significant portion of the household food basket and are inextricably linked to the food culture. These spices are components of recipes that are a part of traditional meals and the daily diet. Often I heard the argument, “if we do not have food from the forest, we cannot make our traditional meals and they are my children’s favorite foods.” Cameroon is made up of over 250 ethnic groups and the cuisine differs not only by ethnic group, but also by region (Mbaku 2005). Foods from the forest are essential components for these dishes and the regional cuisine. They also provide important vitamins and minerals derived
from dietary diversity that help to keep households healthy. The spices pictured (in Image 4) are some of the spices, in various forms, that are available for these meals.

![Image 4. Image of wild spices collected from markets in Yaoundé.]

*Over-Exploitation*

Certain wild foods are in high demand and are considered threatened by organizations such as the International Union for the Conservation of Nature (IUCN) and the World Agroforestry Centre (ICRAF). To mitigate the effects of over-exploitation, some wild foods are undergoing cultivation, which is the process of growing and managing wild species through selection and adoption of desirable characteristics (Tchoundjeu et al. 2006). The cultivation initiatives, for *Gnetum*, bitter leaf, *njansang*, country onion, and cane rat (*Thryonomys*) and snails help to
ensure these foods are available in times of scarcity and inconvenience while also managing the damaging effects of overharvesting. These initiatives help to ensure their availability through sustainably managing the wild population to avoid over exploitation of the forest. One example is the wild leafy vegetable, *Gnetum africanum*, which is a climbing vine and can be successfully propagated. The leaves of the vine are edible and are sliced thinly, to help break down the tough leaves (Image 5). Bundles of *eru* are available in city markets and results from the survey show that *eru* with waterleaf and *fufu* was overwhelmingly named as the household’s most favorite dish. *Eru* or *okok* (as *Gnetum* is known in English and French Cameroun) was mentioned 914 times in the survey of 371 individuals. One woman confessed, “If I don’t eat eru I feel like I have not eaten”. While cultivation efforts ensure that harvests are not depleting wild populations of the food products, the health benefits derived from consuming these foods and consumer demand make endeavors such as these worthwhile (see the section on adequacy below).

Accessibility

There is a confluence of factors that impact food accessibility for urban households. According to De Schutter, accessibility “requires both physical and economic access: physical accessibility means that food should be accessible to all people... economic accessibility means that food must be affordable without compromising other basic needs such as education fees, medical care, or housing” (De Schutter 2010: 4). In terms of accessibility, the survey revealed that it is “not easy for the poor man in the city to eat.” In this case, the individual was speaking about himself, but this quote exemplifies the experience of most city residents. From the data gathered in Cameroonian cities, the majority of urban residents spend more than half of their income on food—about 50%–75%. This does not leave much room in a budget of “other basic needs” as highlighted by De Schutter. What is remarkable from this number, is that 25% of the household’s food budget is spent on wild foods. Figure 6 shows how food budgets are broken down by the total amount of income spent on food, and of the total percentage, the percentage of income that is devoted to wild food purchases. The seasonal variations suggest that more money is spent on wild foods during the dry season than the wet season. This can be attributed to a change in prices in the market, which is described below.

The prices listed below (Table 10) are based on measurements and quantities that vary between buyam-sellam and are difficult to estimate. These prices are directly out of the survey from households and traders, however, the quantities are difficult to compare across product, season and city. Prices and quantities are negotiated between the buyer and seller and can change remarkably from one sale to the next. This table is meant to provide some insight into wild food prices and is not definitive or exhaustive. What is notable from this price data is that there is a slight price difference between cities whereby Yaoundé is seemingly cheaper than Buea and Limbe for forest foods. Additionally, the quantities dramatically change between seasons and prices remain nearly the same.
Figure 6. Percentage of food budget spent on wild food

<table>
<thead>
<tr>
<th>Wet season price Yaoundé</th>
<th>Dry season price Yaoundé</th>
<th>Wet season price Buea and Limbe</th>
<th>Dry season price Buea and Limbe</th>
</tr>
</thead>
<tbody>
<tr>
<td>njansang/50–100 cup</td>
<td>njansang/50 smallest cup</td>
<td>njansang/250–400 cup</td>
<td>njansang/350 glass</td>
</tr>
<tr>
<td>bush mango/50 a cup</td>
<td>bush mango/100 a cup</td>
<td>bush mango/200–800 cup</td>
<td>bush mango/500 glass</td>
</tr>
<tr>
<td>okok/100 cup</td>
<td>okok/50 smallest cup</td>
<td>eru/1200 2 kg</td>
<td>eru/1200 3 kg bundle</td>
</tr>
<tr>
<td>rondelle/50–100 cup</td>
<td>rondelles/25 for two cloves (gousses)</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>mushrooms/100–200 cup</td>
<td>mushrooms/150 a head termites/25 the smallest box</td>
<td>mushroom/250 glass</td>
<td>n/a</td>
</tr>
<tr>
<td>mbongo 50–100/cup</td>
<td>mbongo/25 for 1–2 cloves bushmeat/7000</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>bushmeat/5000</td>
<td></td>
<td>wild game/3000 2kg</td>
<td>wild game/3000 1kg antelope</td>
</tr>
<tr>
<td>snails/100–200 cup</td>
<td>snails/75 for one</td>
<td>snails/500 for 1/4 kg</td>
<td>snails/700 1/4kg</td>
</tr>
</tbody>
</table>

Table 10. Examples of wild food prices in FCFA by city and season (1 FCFA = €0.0015).
When it is the wet season, food traders describe a change in the amount of wild food they sell. During the wet season in Yaoundé 94% of traders claim they sell more as compared to 78% of traders in the dry season claiming they sell less. Reasons given suggest various urban trends such as an increasing urban population because clients are increasing and creating a rise in demand. Traders report selling less in the dry season, suggesting that “there is competition, sales are declining, business is difficult” and “the clients complain about the financial crisis and they reduce the quantity and the frequency of purchases”. While all of these reasons are likely, one way to describe the fluctuations amongst sales between seasons is linked to physical availability: when there is scarcity or the perception of scarcity, some sellers raise their prices. When these foods are perceived to be abundant some traders lower their prices, making these foods more economically accessible. On the other hand, some traders in the context of abundance after the rainy season will leave prices unchanged. Instead, they will increase the quantity of foods they sell while keeping prices the same as dry season prices. The perishability of these foods often encourages traders to pursue this pan-seasonal pricing strategy.

In this context, when asked if eating habits change between seasons, all households said that “Yes they change. We adapt for each season. We eat what the vendors have that is least expensive and abundant in the market” and “During the dry season there are many shortages and we make do with what is least expensive. During the rainy seasons a lot of products are less expensive and are varied.” This change in quantity impacts consumers in various ways. Food buyers are forced to change their food provisioning patterns between seasons as people report buying and eating less food during the dry season. When consumers reduce the quantity and frequency of their purchases in the dry season, the buyam-sellam have already decreased the size of the quantity that would be sold from the season before. A fluctuation in food intake on this scale has an impact on diet and health. One trader in Yaoundé remarked, “I think that they [my clients] eat less. They just look to eat, not to have a balanced diet.” Seasonality is a major factor for food insecurity in urban areas across
Africa and compounded by climate change, the struggle for calories could be greater in the future.

When asked the question: do you buy and consume wild foods in your household in function with the level of your revenues? Most women answered with a resounding no. Women in Yaoundé, Buea and Limbe assert that these are products we buy because we like to eat them. Most women mentioned, “They are not expensive. They are accessible to all and we buy them because they are necessary in the preparation of our meals.” Taking this further, one women asserted, “we consume them only as a question of taste and want, (not need); these foods are a part of our culture it is only because of their flavor that we eat them.” One single-woman with four dependents said “certainly we don’t have enough money, but we eat more foods from the forest because we have adopted them in our eating habits.” Identifying these foods as something that contributes to and enables a more robust food culture, the purchase of wild foods means something more than just buying and eating these foods.

When asked if food stability in your household is disrupted when there is scarcity or increased prices for wild food products, many participants in the survey answered with a resounding yes. The most common answer being: “our favorite household dish uses forest foods as its base and we use it as the principal condiment in certain dishes.” Similarly, most women mentioned, “our eating habits revolve around these products.” Other women mentioned the need to substitute food items and to change planned meals. Often this means abandoning the established diet and incorporating more cheaply available and often imported foods: “I would be forced to eat other products because when there is a rarity of NTFPs I eat other things like sautéed pastas.” The effect a price rise of wild food has on diets does not go unnoticed, another woman revealed “I could no longer eat a balanced diet I will be forced to eat spaghettis [sic] and fried rice without my favorite condiments.” Still another woman claimed, “if some foods become rare we eat something else, they are important but we can do without them.” The ability to substitute foods and have flexible food
options are a feature of urban diets, but the frequency in which this needs to happen does have an effect on dietary diversity and health.

Before the 2007–2008 food crisis a common narrative from Cameroon was that imported products were generally more expensive than local foods and crops. These imported foods relied on more formalized trade networks than traditional organizations that managed production and distribution and were known to be cheaper (Ngoumou 2010: 189). When asked which imported food products are more available to you than local products, the greatest frequency in the response was rice, pasta, fish, and sardines. Households in Yaoundé described these products as being “available to everyone, they are less expensive than local products.” In cities in Cameroon the food price crisis has had a strong impact on households’ food security. In this case, there were also price fluctuations in the market for local food items and this can often influence and initiate an adjustment in food provisioning patterns.

A very revealing question from the survey highlighted a difference between cities as regards foods consumed in households in the last 12 months. As part of the survey, participants had four choices to choose from in their answer: we always have enough to eat and the kinds of foods we want; we have enough to eat but not always the kinds of foods we want; sometimes we don't have enough to eat; and often we don't have enough to eat. Results from this question show that households in Buea and Limbe have enough food to eat, but not the kinds of foods they want; whereas residents in Yaoundé say that sometimes we do not have enough to eat (Figure 7).
There are a few ways to interpret the responses in Figure 7. Linguistically, there is a divide in Cameroon between the English-speaking western region and the rest of the French speaking country. Residents from Yaoundé, the French capital may enjoy lower prices and greater access to foods than their Anglophone counterparts. While the Anglophone cities are closer to the Francophone city of Douala, the main port for the region, than the capital, responses such as these could stem from the “Anglophone Problem” in Cameroon (Nenge 2003). This problem is “fundamentally institutional and economic” and is best described through the ways that “state power is exercised in a fractured polity... and how that power is used to benefit one group at the detriment of another” (Nenge 2003: 61). This problem has been well documented, see for example: (Konings, 2011; Nenge, 2003; Takougang and Krieger, 1998). An investigation into price comparisons (Table 10) between cities and seasons showed that the prices for wild foods were slightly higher in Buea and Limbe than in Yaoundé. In this case, food substitution happens, but it is not always enjoyed. This has to do with the types of coping strategies adopted by many of these households. The differences found between coping strategies adopted in Francophone and Anglophone cities are explored in more detail below.
Strategies to Cope with Increasing Prices

The impacts of price shocks for commonly consumed foods initiated a host of coping strategies. When asked, what do you do when you do not have enough food and do not have enough money to buy food, women often say, “we are used to it...” The demand for local Cameroonian food is high; however, accessing that food when prices are elevated is a challenge. When households do not have enough food or enough money to buy food, the most commonly named strategies include:

- I manage with the little I have
- I am stricter about how much food I serve and other than the children we only eat one meal a day
- I make a cheap meal with rice and palm oil or garri (cassava) and water
- I reduce the quantity of food I eat
- I eat one or two meals a day
- I harvest from my farm
- I borrow from family, savings group, or merchant

Statements such as these demonstrate how urban residents adapt to an unrelenting food security situation. In both Anglophone (31%) and Francophone (25%) cities residents say they “manage with the little I have”. This can last for two days and happens often, at least once a month. The differences in strategies are apparent. In Francophone Cameroon some women mentioned eating cheaper foods more frequently such as fried rice, bread and braised fish by the roadside. They also talked about rationing food and buying and eating smaller quantities (20%). Reducing the number of meals eaten in a day was the most common answer for Yaoundé residents (28%). Reducing the number of meals was also mentioned in Buea and Limbe (23%). Whereas in Anglophone Cameroon, the two most common answers were: I borrow from family and relatives (20%) and I go to the farm to harvest food (20%). Borrowing from relatives was mentioned by only a few Francophones (9%) and harvesting from the farm was not mentioned. This can also
be attributed to differences in urban food geographies (Riley and Legwegoh, 2013). From these responses, it is safe to assume that most urban residents from the survey are living in a state of food insecurity as “secure access to enough food at all times” is not a statement that describes the current situation (Maxwell and Smith, 1993).

From these data, it can also be learned that eating less meals also means eating less at meals, eating lower quality foods, and eating cheaper options. Responses from the survey show that 54% of the individuals surveyed consumed only two meals a day (see Figure 8) and if these meals already include dishes that are of low quality and diversity, then nutrition is negatively impacted. This is in contrast to the findings from the CFSVA that show that 33% of individuals surveyed reduced the number of meals eaten a day (PAM 2011: 7). The figure below shows the percentages of the reported responses and the number of meals eaten in a day. Compared to the CFSVA, these percentages show greater food security challenges in cities than was initially reported.

When prices for foodstuffs are elevated, women mentioned buying in smaller quantities, changing their menu, and making food every two days, for the following two days, based on what is affordable. Without proper cold storage, this strategy is somewhat delicate. When it comes to food prices, those with dependents say, “We still buy particularly what the children like.” Other women noted that “I review my budget by not buying certain foods, we buy what is most important and we complain to the vendors so that they explain the situation.” These women are forced to adapt. Statements such as: “we still buy but this messes up our budgetary plan a bit. There is an instability that exists” suggest that the food situation in most households surveyed is tenuous at best.
When food prices have risen, the most commonly named foods to buy are: rice, dried beans, pasta, banana and tomato. When prices are low, foods commonly purchased include beef, pork chicken, bar fish, meat generally (and includes bush meat) and plantain. It is important to highlight the distinctions between these lists. The first list includes some foods that are imported and available cheaply, most often, these foods are not impacted by seasons. Having local foods such as banana featuring in this list is interesting because banana is a very ubiquitous tree crop throughout HFZ cities and is a cheaply available fruit. The latter list includes proteins (with the exception of dried beans), which are historically difficult to come by in forested regions (Isichei 1997). In cities in the forest zone, proteins are still relatively more expensive than the vegetables and staples that traditionally accompany them in dishes. The inclusion of plantains in this list illustrates barriers to access, as the cross-border trade in plantains with Gabon seems to be on the rise. Peppered throughout the market surveys from Yaoundé were stories about the Gabonese coming to the market to buy plantains, driving the prices up (3,000–7,000 FCFA for a bunch). Banana plantains are an integral part of home cooked meals.

Figure 8. Reported meals eaten in a day in Cameroonian cities
across the sub-region. On the one hand, Cameroonian households have experienced the price rise as a price shock, forcing them out of the market for a staple food they would prefer to eat. On the other hand, “sharing” the plantain harvest with more affluent Gabonese was a boon for the plantain trader’s business.

An increase in food prices is the main shock experienced by urban households, who buy more than 90% of the food they consume. Eating wild food is often touted as the mechanism to stave off hunger when food shortages are present; however, in cities where wild foods continue to be part of the routine cuisine, these foods can be substituted for less expensive foods with less cultural meaning and less satisfaction. It does not necessarily mean that wild foods are relatively more expensive, rather they are a component of a recipe that may be more expensive to prepare than boiling water for rice or pasta and adding tomato and fish. With this in mind, the discussion turns to the adequacy of food and wild food in cities in Cameroon.

Adequacy

According to De Schutter, adequacy “requires that foods satisfy dietary needs (factoring a person’s age, living conditions, health, occupation, sex etc.), be safe for human consumption, free of adverse substances and culturally acceptable” (De Schutter 2010: 4). From this list, food safety is a main concern for many urban residents. Many households surveyed in Yaoundé noted that “in the poissonneries the fish is not always fresh but the vendors do not shy away from selling it to the customers.” The vendors complain about perishability and mention that the food they sell rots quickly in the rainy season due to dampness, and dries out in the dry season under the sun. Customers are aware of these issues and note particular markets to avoid certain products at different times of the year. Other households disregard the health warning for sustenance. Going back to the frozen chicken scandal example in the introduction, food consumers have to be highly aware of the
foods they are buying and eating to avoid what is locally referred to as “running stomach,” caused by contaminated foods.

In terms of food satisfying dietary needs and being culturally acceptable, there is an “informal rule” in the Cameroonian cities studied: *the less money you have, the more imported rice you eat*. Remarkably, a study of the urban plantain sector in 2004 or pre-global food crisis showed that “imported products such as rice or wheat are... generally more expensive than local products” (Ngoumou 2010: 189). After the crisis consumer sovereignty has been “non-existent in markets where women have faced a “take it or leave it” choice of buying imported rice or nothing at all” (Sneyd, 2012). The new “preference” of urban Cameroonians post 2008 for “quick” and “easy” rice is rapidly changing diets. Now imported rice is a daily staple because it is available cheaply (Image 6). The rice that is imported is the milled white rice, which is devoid of the husk and bran. This often results in a version of rice that is quick to cook, but is low in fiber and vitamins. Cheap rice shifts purchasing patterns of urban households away from traditional, local foods (such as cassava, cocoyam, plantain, local rice and wild vegetables), which are nutritionally more beneficial and Cameroon has a comparative advantage in producing. Older women surveyed are shocked by the frequency at which their younger counterparts prepare and eat rice. To these older women, rice was a special occasion dish, often being served for the Sunday meal or for holidays with chicken.

When asked: how many times do you prepare rice per week, most women stated that they serve rice three to four times, some even claiming they eat rice up to five times a week. The role of rice in the alimentation of households was most commonly stated as being “primordial” as “it allows me to make ends meet in difficult times”. Other women used adjectives such as “important” and “profound.” Almost all households surveyed stated that rice serves “a big place in the household menu, because it is not very expensive, it is accessible and easy to cook, it is the most
consumed product in our household.” The origin of the rice most commonly consumed is Thailand where the heartier Cameroonian rice is reserved for holidays.

The second “informal rule” is that cultural and culinary history dictates that *rice is normally not an accompaniment to dishes made with HFZ wild foods*. In Cameroon rice was grown in the grasslands, outside the forest zone and takes on a different culinary history. Most wild foods available in markets throughout the country originate from the forest zone. For example, leafy green vegetables are “mainstays in the diets of rural and urban households across most of Africa” more generally, and are especially important in Central Africa (Abia, et al. 2007; Ali, et al. 2011; Gockowski, et al. 2003). Wild leafy vegetables may be the major source of micronutrients for the majority of resource-poor people throughout the region (Ali et al., 2011; Kamga, and Akyeampong, 2013; Modi et al., 2006; Smith and Longvah, 2009). Traditional leafy vegetables (in particular, *Amaranthus* spp., *Corchorus* spp., *Solanum* spp., *Manihot esculenta* and *Gnetum* spp.) on a per unit cost basis supply disproportionate shares of protein, minerals and vitamins (Gockowski, Mbazo’o, Mbah, and Moulende 2003). In particular, (*Gnetum* spp.) when cooked as a dish, is not only high in iron and zinc, it is also a rich source of protein and essential lipids. These greens are particularly important in the supply of iron and vitamin C, which may alleviate high levels of anemia in Central Africa exacerbated by high incidences of malaria. Initiatives are underway in East Africa to make African leafy vegetables (ALV) more accessible to the urban population (Gotor and Irungu, 2010; Smith and Eyzaguirre, 2007). Lessons learned from this initiative can be useful to places where the environment and diet are welcoming of these foods.
Ethnic group and regional ties do have a role to play in dish composition and accompaniments. *Eru* or *okok* (*Gnetum* spp.) is not served with rice; it goes with *miondo*, which is made from cassava/manioc, or *fufu*, which is also made from cassava. Fish *mbongo* goes with plantain. *Njansang* sauce with fish goes with plantain. In Cameroon, culture, ethnicity and region command what foods go with what. Agricultural products such as groundnuts and chicken go with rice but these dishes emerged from a different culinary history and one that is more similar to West Africa than Central Africa (McCann 2009). Cameroonian enjoy this cultural diversity in their meals and this “informal rule” helps in ensuring dietary diversity. While the nutrition transition has been slower to emerge in Cameroon as compared to other developing countries, the evidence for a nutrition transition in Cameroon is mounting as food prices are affecting the adequacy of diets.
Discussion and Conclusions

Cameroonian enjoy dietary diversity and the ability to prepare foods from the many regions and ethnic groups that make up the country and fortunately, in urban areas, people come into contact with many of these flavors and culinary histories. However, access to the foods that ensure this diversity is a major barrier and daily obstacle and is driving the nutrition transition. When asked what does it mean to be food secure in Cameroon, most women mentioned affordability and said: “if you have enough money, you will be food secure” and “it means at least the average person can afford for (sic) food.” Being food secure means “we can feed our families. But it is very difficult to have food all the time.” One woman said: “I think it means having enough to eat at all times and if possible varieties. But most of the time we eat what we have, not what we want.” Prices were mentioned in addition to income, “despite everything feeding ourselves remains a major problem, products are expensive and all the households cannot satisfy their hunger” and “life is very expensive in Yaoundé particularly for food; to eat well we are forced to spend too much.” Most interestingly, one woman said: “the food basket of each household is becoming more and more meager because life is expensive in our country in general and in the city of Yaoundé in particular.” When prompted to offer suggestions to fix this problem participants in the survey overwhelmingly and unanimously mentioned prices and access, and suggested “we need to learn to eat our own products and the Cameroonian state must watch and review the food prices and to act.” Finally, one woman responded: “I will end by saying that food products in Yaoundé are expensive, very expensive. A family of four cannot afford to eat manioc at 500/FCFA (USD$ 1) in one day while it is cultivated here on place.” A major theme that emerges from the responses of these women is that the food crisis and the government’s responses have priced locally available and nutritious foods out of reach and this impacts the sustainability of nutritious diets in this Central African nation.
This paper analyzed the ways that wild foods contribute to the food security of urban households in southern Cameroon. Regarding availability, the study found that at least 66 wild foods were named and sold in the food markets of Yaoundé, Buea and Limbe. The availability of these foods relies on seasons, weather, and access to the surrounding tropical forest. The availability of wild food and wild spices ensures the routine, traditional cuisine. As regards accessibility, the survey and interview data suggest that Cameroonian spend 50%–75% of income on food and that of that figure, 25% is spent on wild food. The data also found that more money is spent on food in the dry season and eating habits change between seasons. The study also found that many people continue to believe that the accessibility of wild foods is necessary for the preparation of routine meals. Additionally, the study found that the food price crisis has had a huge impact on the accessibility of wild foods and also local foods as these foods are increasingly (relatively) more expensive in the context of the government’s subsidy scheme as they were simply not a part of it. Interestingly, the coping strategies adopted in households differ between Anglophone and Francophone cities. More people in Buea and Limbe do not have access to the kinds of foods they want to eat and in Yaoundé people reported that they do not have enough to eat and eat less frequently. Finally, with respect to adequacy, the data indicate that the less money households have, the more imported rice is eaten (three to four times a week); however, rice is not an accompaniment to dishes made by HFZ wild food. Consequently, high prices are changing diets, as urban residents are part of a global trend towards a nutrition transition.

Through organizing and analyzing the data in light of De Schutter’s dimensions a new framework has been applied to understanding wild food, food security, and ultimately sustainability in Cameroon. As his approach is contested, De Schutter’s framework is not the only way of knowing about wild foods and food security in this country. That being said, it is an instructive one. Through this lens many uniformities and similarities with respect to the challenges of wild food were
identified with the notable exception of the different types of coping strategies that households adopt in the cities of research. Other approaches might yield different results, and further research in other cities on this topic in Cameroon and elsewhere in Africa is called for.

On his 2012 mission to Cameroon De Schutter concluded that the country had made little progress in eradicating poverty and hunger in the last ten years, despite the adoption of poverty reduction measures. He also found regional disparities to be particularly strong (De Schutter 2012). In his view, the sustainability of food chains and food choices has been greatly impacted by the government’s inattention to agriculture and food after the oil boom in the 1980s. This inattention was compounded by a series of structural adjustment programs in 1997 and the devaluation of the FCFA. In this environment, the 2007–2008 food crisis has had far reaching effects. Given his recommendations and my findings, it seems appropriate to call for more explicit language in the National Poverty Reduction Strategy Paper, Cameroon’s Vision 2025, the Rural Sector Development Plan, and Cameroon’s National Food Security Strategy regarding wild and traditional foods. As the government considers eliminating consumer subsidies introduced during the global crisis, Cameroonian consumers face the prospect of higher or more volatile food prices. The elimination of staple subsidies could force more urban dwellers to pursue coping strategies that push them away from relying on the wild traditional foods they would prefer to eat, and continue to facilitate a dietary transition away from a rich historic source of dietary adequacy. Alternatively, this eventuality could result in an unsustainable return to reliance on “foods from the forest”. Regardless of the fallout from subsidy reforms, new and ongoing research needs to be carried out in urban areas on the accessibility of diet rich foods to better understand their contributions to food security, environmental sustainability, nutrition, and public health.
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7. MANUSCRIPT FOUR

This manuscript analyzed the marketing and trade of Cameroon’s wild food. It proposed an approach to understanding scalar power and politics at the market level through employing and developing a concept from the geography literature: the ‘zone’. My approach to studying zones accounts for place-based identity and connections surrounding the trade of wild food. It also accounts for the strategies of negotiation, exploitation and adaptation that people employ at times of change in Cameroon’s humid forest zone.

This manuscript was inspired by Dr. Alice Hovorka’s core PhD course in Geography at the University of Guelph. Her focus in that course on concepts in geography such as place, scale, site and resilience assisted me in developing my thinking about geography as a discipline, and its intersection with international development studies. My paper in this course focused on ‘scale’ but subsequent conversations with Alice encouraged me to explore other geographical concepts, including the ‘zone’. After five research visits to Cameroon and many interesting interviews with high-level researchers and users of this term, in 2014 I was able to speak to what this concept offers an analysis of Cameroon’s urban wild food trade. The journal Geoforum has accepted this manuscript pending revisions. The version included below has been revised in light of the feedback I received from the three anonymous peer-reviewers that reviewed my initial Geoforum submission.
ZONING IN: THE CONTRIBUTIONS OF BUYAM-SELLAMS TO CONSTRUCTING CAMEROON'S WILD FOOD ZONE

Sneyd, Lauren Q. (accepted pending minor revisions) “Zoning In: The contributions of buyam-sellams to constructing Cameroon’s wild food zone” *Geoforum*.

Abstract: Studies of forests in Africa employ the term zone to denote a particular type of forested area. This limited usage speaks to a need for human geographers to pay more attention to elaborating and engaging with the concept of the zone. The article shows why human geography should pay the ‘zone’ more attention. Using Cameroon’s humid forest zone (HFZ) as a case study, the article focuses on how conceptual elaboration of the ‘zone’ can inform analyses of the food product trade in Cameroon. This trade is organized around various types of buyers and sellers (or buyam-sellam in pidgin), and offers a wide variety of wild products to Cameroon’s urban food consumers, including fruits and vegetables, game meat, condiments, medicinal plants, and fibers. Drawing on fieldwork surveys, interviews and focus groups in twenty-four markets of 203 buyam-sellams and 197 of their customers during the wet and dry seasons, this article analyzes narratives about Cameroon’s wild food zone. It ultimately shows what scholarly attention to the ‘zone’ offers in this case that other spatial concepts do not.

*Introduction*

It is not surprising that ‘zone’ as a concept in human geography is under-theorized. The word appears in numerous studies (Topa et al. 2009; Degrande et al. 2006; Brown and Ekoko 2001; Tieguhong and Ndoye 2007) but its utilization and construction as a concept is lacking the theoretical attention that has been devoted to other spatial concepts. Academics have focused their efforts on concepts such as ‘scale’ (Neumann 2008; Molnar et al. 2008; MacKinnon 2010), ‘place’ (Dusselier 2002), ‘space’ (Harvey 2006; Watts and Bohle 1993; Brown, Lyons, and Dankoco
The initial research objectives for this project focused on issues of scale and impacts of scalar dynamics to explain Cameroon’s wild food trade. I was working with a framework of scalar hierarchies to understand the marketization of wild forest food and what it means to be a *buyam-sellam* in the forests of Cameroon. In this Central African country, the trade in agricultural products and wild foods is organized around various types of buyers and sellers. In pidgin these traders are called *buy'am-sell'ams*. This is someone who buys something (*buyam*) then sells it (*sellam*) to make a profit (Ubanako 2011: 234). I soon realized that I was also working within networks and between sites as I traced how forest food was bought, traded, resold and consumed in urban Cameroon. This realization indicated to me that scale was a limiting frame for my forest and food research. After returning five times to Cameroon to conduct fieldwork between 2010-13 I realized that the humid forest zone (HFZ) offered a concept – the ‘zone’ – with potentially superior analytical applicability.

In fact, I came to believe and I ultimately argue below, that it matters more than ‘scale’. The zone has emerged as a useful concept for explaining the wild food trade in this Central African country after the 2007-08 global food price crisis. The zone is continually being constructed and reconstructed by various actors within the

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16 Most research on *buyam-sellams* of forest food in Cameroon is quantitative and was conducted before the food price crisis of 2007-2008 (Perez et al. 2002). This price crisis and the ensuing if smaller 2010-11 food price crisis have had numerous consequences for food security, foodways and food systems in Cameroon. In the aftermath of these challenges the country garnered the attention of the global media as violence linked to the price spike broke out (Sneyd, Legwegoh, and Fraser 2013). After the price spike and social unrest, the government moved to subsidize the prices of imported staple foods that had been subject to rapid price increases, including rice. Notwithstanding these subsidies, the prices of local foods, including wild forest foods, have remained relatively high (Sneyd 2013).
territory defined as the HFZ\textsuperscript{17}. Like zonal capitalism where economic actors construct a zone where the means of production are freed from state involvement (Appel 2012: 450), the forest and the people who rely on the forest for livelihoods, income and food, largely shape and construct a ‘wild food zone’\textsuperscript{18}. When I used ‘zone’ to expand the territory of analysis outwards, rather than scale to look at vertical hierarchies, the contributions of forest dwellers to changing and maintaining the HFZ as a social environment began to emerge (Diaw and Oyono 1998; Nguiffo 1998). References to ‘the zone’ are flush in the literature on Cameroon and Africa’s forest in particular, and I argue below that this concept merits a deeper explanation than the current cursory usage of the term across much of the literature. To build a more robust discussion of the contributions of the zone to human systems and market relationships, my research shifted to focus on how the ‘zone’ could be better conceptualized in this case.

To offer an initial approach to such a conceptualization, this article explores the urban wild food trade in Cameroon’s HFZ and asks what informs the process of being a buyam-sellam of wild foods in Cameroon’s urban humid forest zone?. Putting to the side any conceptual and theoretical predisposition, a survey of over 400 individuals was conducted in two regions of the HFZ related to the market and the wild food trade. The survey focused on traders and their customers and asked questions about wild food prices, space in the market, relationships in the market, regulations and administrative processes, and about wild food and their contributions to food security. The questions posed were not oriented to test a theory rather the survey sought to address the wild food/food security nexus in the African context. The

\footnote{17 Forests of the Congo Basin stretch west to east in a belt across Africa, from the Gulf of Guinea to the Albertine Rift. This zone cuts across southern Cameroon and Yaoundé, the political capital of Cameroon, the commercial capital Douala, and other major regional population centres are all located within this zone (see Figure 1). Cameroon’s forest zone contains some of Africa’s most diverse ecosystems and provides a wide range of locally available forest products.}

\footnote{18 For an in-depth conceptualization of wild foods in Cameroon’s forested zone, see Sneyd 2013.}
qualitative responses from the traders are used to inform an empirical analysis of the zone. In light of the responses I re-visited the literature for an analytical frame.

This article then is the result of an inductive study: a study that stepped back from the conceptual and theoretical literature in human geography to ask questions about the real relationships that animate the production and trade of wild foods in Cameroon. After the field research concluded, the first aim of the data analysis was to develop an appropriate organizational approach. Themes that emerged from surveys and a content analysis of scholarly and policy documents on the zone were then identified. Subsequently, concepts in human geography were reviewed to see if they could be used to enable the principal themes that emerged out of the data to be captured and effectively re-presented. As this work proceeded, it became clear that the lived experiences of people with wild foods could be captured and re-presented by relating these more fully to the ‘zone’ – the humid forest zone – in which those experiences take place. Through framing the data in relation to the zone, aspects of the marketization of wild foods that might have remained cloaked in darkness have been brought to light. A focus on the ‘zone’ in this case enables accounts of the physical and imagined territory of the market. The exercise of engaging with the zone contributes to the emerging literature on the geographies of marketization and to explorations of the spatialities “of uneven development” (Ouma, Boeckler, and Lindner 2013: 234). Attention to the zone also enabled a focus on the informal horizontal networks and interpersonal relations that govern the production of wild foods (Sheppard, Pectk, and Barnes 2012). Through presenting the themes that emerged from the data as ontological categories and using the zone to frame the presentation of material in those categories, the article situates Cameroon’s urban wild food markets within a zone of territorially rooted markets and networks (Berndt and Boeckler 2012).

While some might claim that this is simply a dubious exercise of conceptual stretching, the heart of the matter is that other geographical concepts such as ‘place’
and ‘scale’ were inadequate to the task of covering the totality of relationships that bear upon and construct the local market for forest foods in the HFZ. Scalar concepts would have directed the analysis upward to a higher level that could have potentially led to the discounting of local nuances at gathering and trading sites. Women’s lives in the HFZ are shaped through local *negotiation, contestation* and *adaptation* to construct the wild food zone in ways that could elude those predisposed to look to official, formally constituted higher levels or units of analysis. Place-based concepts, for their part, assisted in my thinking about *resources* and *identity*. However, they were limiting insofar as they discounted the importance of site to site *interactions* and *encounters* enabled through trade (Thrift 2009).

Empirically, similarities and differences between and within Cameroon’s food markets situated each market as a *site* for analysis. These sites are all linked to the tropical forest, and together constitute the humid forest zone.

Beyond offering an initial conceptual take on the zone informed by wet and dry season surveys conducted in twenty-four market sites and a content analysis, the article also focuses on a qualitatively significant topic: the urban trade of wild food in Cameroon (Kendo and Seppanen 2007; Ndoye, Perez, and Eyebe 1997; Crush and Frayne 2011). Down to the present the voices of food traders and their perspectives and experiences have largely been silenced in the policy literature on the HFZ: a gap that this paper seeks to correct. In the next section, I briefly offer the motivation for studying a particular zone as a case study. I present this material first because the study proceeded inductively, where research ‘in the zone’ eventually became research ‘on the zone’. This research formed part of a larger project on wild foods and food security in the country. That important case stands on its own. Here I detail insights gleaned from a review of the conceptual and theoretical literature after the field research concluded that indicated the benefits of ‘zoning in’ on this concept in this case. After recounting the motivation for the research, the paper then moves on to show how zones have been studied. That section then proposes a way of approaching zones in human geography through identifying the themes that
emerged from the data. Following an overview of the fieldwork and survey, I then use those themes to organize the presentation of the qualitative data. The article concludes with a discussion and insights for future research on the zone.

**Motivation for the Wild Food Market and Humid Forest Zone Case Study**

Southern Cameroon’s food system is comprised of local agricultural products, imported staples and wild, edible forest foods from the HFZ. The latter make up a significant portion of the household food basket.19 These are unlike the so called ‘famine foods’ touted in the food security literature (Hughes 2009). Culturally, these foods are understood to be a component of a recipe that makes up traditional meals and the daily diet, and also helps to maintain a particular level of food security (Sneyd 2013). The ingredients for these dishes are sold in local markets by traders who themselves use wild foods in their households. The selling of these foods make up a particular livelihood strategy that hinges on the seasonal fluctuations of the harvest calendar, access to forests for harvesting and the possibility of getting ‘a good price’ in a highly competitive market. Additionally, these traders are primarily women, and these women are involved in the sorting, grading and processing of wild foods and traditional agricultural products before sale. To participate in this trade, women in the HFZ are generally mobile, and often relocate within the zone due to the imperatives of their trade.

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19 Wild foods are not traded on international markets beyond the sub-region and are separate from traditional staple foods found in Africa. It should be added that staple African-origin foods – such as cassava, plantain, yams, millet, and sorghum in West and Central Africa, and white maize in southern and East Africa – are not internationally traded or traded very much outside of the regions concerned. Transportation costs are high in many of these countries and demand external to the regions where these foods are produced is relatively low. What this means is that many African countries do not rely on international trade for their traditional African-origin staples. Imports are consequently concentrated on staples such as wheat, maize or rice. Thus, for countries with low levels of economic development where local foods have limited tradability and where transportation infrastructure is poor, a focus on the informal trade of wild and traditional foods cannot be characterized as marginal or insignificant (Chang 2009; Cooksey 2011).
Studies on the local trade in goods from Cameroon’s forested region often use “the zone” or “humid forest zone” as the defined site and unit of analysis (Ndoye et al. 1998; FAO 2011). This literature has largely taken the ‘zone’ for granted. Zone is typically mentioned solely to pinpoint the geographic area under study for climatic and economic research (Bele, Tiani, Somorin, and Sonwa 2013; Tieguhong and Ndoye 2007; Ndoye and Kaimowitz 2000). For example, the FAO has long been engaged in research that focuses on the products and resources from Africa’s forest zones (Koppell 1990; FAO 2011, 2013). Often research interventions in this country are top-down studies of rural livelihoods that rely on forest products and market integration of these same products. Researchers in Central Africa more generally often assume that simply naming the zone is sufficient for a study of that zone (Brown and Lassoie 2010; Brown, Wolf, and Lassoie 2007). Consequently, zone is presently used by contributors to the literature in a way that offers an exceptionally limited frame of reference for the analysis of human systems.

Generally, the people under study in the HFZ do not conceptually understand or engage with the vertical arrangements or hierarchies that govern their lives. The data from the surveys showed that people in the markets are generally unaware of the policies and regulations that govern their conduct in the market or that aim to regulate the products that they sell. On the ground at the markets individuals involved in wild food production and trade lack basic knowledge of the legal and policy context that aims to govern urban markets and wild food production. Policy frameworks, such as the rural sector development strategy, and legal instruments, such as the forestry law, that bear upon wild food producers and traders are not generally well known (Sneyd 2014). Moreover, aspects of policy and legal frameworks of relevance to wild food producers and traders are often not implemented. In Cameroon’s authoritarian state, people at markets are simply unaware of the vertical layers of governance that aim to regulate their market conduct until police or gendarmes appear to enforce law and order. That said, these
hierarchies create problems and hassles that require the active management of those in the HFZ that are marginalized from government decision-making processes (Cerutti and Tacconi 2008). Instead of engaging with formally constituted or official power, many people in the HFZ have built horizontal networks that span across and through the zone. These networks arguably have a greater impact on the lives of local forest dwellers. For example, during an interview, when asked what was changing the business, two food traders in Yaoundé presented this scenario:

I buy and sell what is available and I remain quiet. I understand wild food will completely disappear with ongoing destruction of the forest by logging operations. This is the responsibility of our government. I don’t care. If our government wants us to live with any other source of income, then okay.

Mfoundi, F, 27

The only thing I know at my small level is that logging companies and ‘Big Men’ who open farms have destroyed the forest and, consequently, wild products are now rare and expensive. That is the situation we currently face.

Mokolo, F, 43

Reference only to vertical networks in this case is problematic insofar as it is paternalistic and prescriptive. The lived reality is that people in this zone understand their lack of power to influence elites at higher scales. Their horizontal networks inform how people recognize and choose to engage or disengage from official hierarchies, and to question their operation. In response to the same question, another women said that she had:

22 years in this business. I am specialized in andok [bush mango or Irvingia spp.]. Yes, I used to go very far when I was young. Now, I have my “contract persons” in villages (in the Ebolowa area) who come and sell andok to me. I buy and I come here to sell. I was told two years ago that a logging company has logged in the village of one of my “contract persons”, cutting down many bush mango trees, while opening paths in the forest. This is abnormal: they have nothing to do with bush mango trees, but they just destroy them for nothing. 8ths Market, Yaoundé, F, 56
In 2005, the Marston et al. (2005) scale debate called into question the usefulness of scale in human geography. These scholars problematized the use of scalar concepts and instead stressed the need for a ‘flat’ ontology. They argued that social interactions span across a multiplicity of social sites (Marston, Jones, and Woodward 2005; III, Woodward, and Marston 2007). By suggesting a horizontal model, instead of a vertical one, they asserted that more entry points across sites would be opened up, and that networked connections could be better explained. Geographers and anthropologists alike responded to their rejection of scale by offering new ways of bringing scale back into research and practice (Jonas 2006; Escobar 2007; Collinge 2006; Leitner 2007). But the ‘ontological turn’ was already underway and allowed for a re-consideration of a ‘site-based’ ontology. The debate enabled a consideration of “multiple sites of practices, relations, events and processes, which are both situated in place and extended through space (i.e. sites are connected to other sites)” (Jonas 2006: 399). Therefore, looking out across or through the zone, rather than looking up from within, reveals very real and important connections.

The products I sell come from the Center and South Regions [located in the HFZ]. It is a kind of chain: we have people in villages: we place wild food orders with them and they bring them to us. Sometimes, they just send. There is a mutual trust between us. I am doing this business because I have nothing to do. But my mother used to sell vegetables at Mfoundi. So, it is a sort of family tradition. We are very dependent on these products. 8ths Market, Yaoundé, F, 47

At present it is quite common for studies of the HFZ to neglect the very real kinship connections and place-based networks described by these women in Yaoundé. Greater attention to the zone could remedy this oversight. Zones are characterized by uniformity (in terms of landscape or crops etc. see section three below). This uniformity in turn generates competition for the limited resources of the zone. Networked horizontal informality in this zone contributes to the human organization of life in the zone itself. This aspect of the zone exists in tandem and in
response to the vertical exercise of power under the thirty-year plus regime of President Paul Biya. The President himself hails from the forest zone and his official “ethnic ensemble...has come to dominate the state” (Geschiere 1997: 240) in ways that have reinforced the horizontal linkages that now constitute life in the zone.

**Studying the Zone**

An attempt to analyze the zone in human geography is past due. The use and abuse of the zone concept demands greater conceptualization in human geography as the vast majority of outputs (Bele, Tiani, Somorin, and Sonwa 2013; Ndoye and Kaimowitz 2000; Sunderlin, Dewi, and Puntodewo 2007) mention the zone solely as a site to study. These references to the concept have shaped how research is done on the zone, but the discussions they have fostered have not led its conceptual development. Researchers on the HFZ have not stopped to ask what being ‘in the zone’ might mean for forest dwellers and traders of forest goods. The use of the word zone peaked in academic studies in the 1980s and its use is in decline, today. For example, every year since 1947 the FAO produces the State of Food and Agriculture Report. In 1979 ‘zone’ appeared 15 times in the report and in 2013 the word appeared only once. This term seems to be less fashionable; however, it can still be found in various recent academic outputs (Mccalla 1990; Jones 2007; Pak and Majd 2011; Sneyd 2011; Belcher, Ruíz-Pérez, and Achdiawan 2005) and sometimes ‘zone’ appears in just the title (Fold 2009). Essentially it is being used as a shorthand point of reference, full stop.

The literature on Cameroon in particular is especially guilty of failing to define this concept. Anecdotal personal communications at the country-level with users of this term in their research and writing revealed that they never really considered the meaning of the term outside of making use of it to name a territory. That said, research outputs on the Congo Basin forests, and forests in West and Central Africa,
are flush with the term ‘zone’, ‘forest zone’ or ‘humid forest zone’ (HFZ) to describe forested territory (Fairhead and Leach 1995; Clark and Sunderland 2004; Congo Basin Forest Partnership 2006). A recent article on changing rainfall patterns in Cameroon notes changes in food crop production in Cameroon’s significantly diverse agro-climatic or agro-ecological ‘zones’ (Yengoh et al. 2010). While this particular article presented important findings for ecological change, it neglected to take account of social systems or human agency in the zones studied. Another recent contribution from Chupezi et al. (2009) brought the ‘zone’ into an analysis of the humid forested territory, but failed to account for culture and human relations. Instead, this analysis of the zone emphasized economic and market integration for forest products and did not operationalize the concept. Revealingly, another piece of research stated that “farmers in the forest zone are amongst the poorest people in the country” (Degrande et al. 2006: 160). These authors describe Cameroon’s forest zone as “the poorest agro-ecological zone with 55% of people living below the poverty line” (Degrande et al. 2006: 159). Here the HFZ was essentially defined as a zone of poverty.

While Africa’s humid forest zone cannot physically be located north or south of the tropical belt, many people inside this zone negotiate or construct their positions in various ways with reference to this geographic area (Ndah et al. 2013; Nguiffo, Kenfack, and Mballa 2009; Oyono 2013; Brown and Lapuyade 2001). Geschiere’s (1997) analysis of witchcraft and politics in the forest zone, for example, details this negotiation by situating the practice of sorcery as a response to modern difficulties associated with crisis and change. His analysis links culture and politics to the day-to-day realities in the zone. This approach to bringing human experience in the zone into the analysis is an important contribution as it presents how people themselves construct the reality of ‘being’ in the forested zone, albeit in a way that is limited to the analysis of witchcraft. Another article has also unpacked this concept in a limited way in the HFZ through focusing on economic disparities. Through their spatial analysis, Ndoye, Ruiz Perez and Eyebe (1997) found that there were disparities
between the relatively more ‘developed’ or urban and peri-urban North of the HFZ, and the less developed primarily rural South and East. The authors found that these regions were unbalanced in terms of levels of taxation, infrastructure and seasonal bottlenecks, and that these problems increased competition between people and goods. Beyond these initial forays, little attention has been paid to the ‘zone’ as a human system. As such, greater conceptual engagement is required.

To inform an initial conceptualization of the zone as a human system a necessary first step is to borrow insights from disciplines that demarcate territory in ways that employ ‘zone’. For centuries, physical geography has taught that any region of the earth’s surface can be loosely divided into zones according to latitude and longitude and the prevailing climate (Houston 1888). Ecology teaches that this region or area can then be further distinguished from adjacent parts by a distinctive feature or characteristics such as distinct physical conditions or populations of certain kinds of organisms (Kuile 1987). Geology teaches that a zone is a region distinguished by composition or content (Boeglin, Ndam, and Braun 2003). These insights make it clear that climate and latitude define a region and that that same region can then be further demarcated by certain kinds of organisms (i.e. forest foods) and physical conditions. Human geographers need to engage more with these definitions in their analyses of demarcated territories that are constituted by human subjects that are commonly referred to in the literature as zones.

For human systems however, lines cannot be drawn so firmly, inflexibly, dogmatically, or confidently as has been the case in the physical sciences in the past. Humans move, and they also move things found within the territory. They not only move things, but also construct things (i.e. forest foods as commodities) (Kull and Rangan 2008). The practices, norms and culture found within the zone are equally as fluid (Mccalla 1990). To begin developing an approach to the zone this article borrows from an early attempt to define the zone. Griffin and Preston (1966) worked to define ‘transition zones’ and the ways that such zones are shaped

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through spatial variation and temporal change. While their analysis focused on historical developments in transition zones, they see the zone as a moving target in terms development and change. For them, definitions of the zone must account for fluid or shifting trends, as single broad interpretations are likely to be ineffective (1966: 349-350). Griffin and Preston challenged the propensity of researchers “to suggest an interpretation and schematic representation of the contemporary structure” of zones (1966: 340). This article takes up the challenge of thinking about the fluid and shifting constructions that are zones.

*Approaching the Forest Food Market Zone*

The approach below was informed by a directed content analysis of 500 social science journal articles that included the word ‘zone’, and also 140 research and policy documents and news stories gathered in Cameroon. These studies were collected from academic search engines and analyzed for their use of the term. The studies focused primarily on Africa’s forested zones, but other zones were included, such as coastal zones, conflict zones, buffer zones and free trade zones. The insights from these studies helped shape the approach, but none of the studies reviewed sought to conceptualize the zone as a human system.

The zone is a social environment. It can be thought of as a set of connections between sites like paths in a forest that itself is subject to constant change (Vansina 1990; Turnbull 1962; Fraser 2007). In Cameroon, the HFZ it is about seeing opportunity through the trees. As such, market practices and the governance of informal markets must be included in the analysis (Lauermann 2013). But the zone is constituted by much more than market practices. This approach aims ultimately to help analysts explain processes of interactions between sites that make up the broader forested zone.
Sites, in this approach, are considered to be the sites where food is gathered, traded, re-sold and consumed. The activities that take place at these sites are social processes whereby people interact to construct the forest zone. I employ these terms because conceptual frameworks that focus on scale or place (MacKinnon 2010; Neumann 2008; Hesse 2010; Freidberg 2001; Castree 2009; Herod 2009; Smit and Wandel 2006) inadequately captured the dynamics identified by people in the forest zone. For example, purely scalar frameworks would portray interactions as being distinct at different levels or units of analysis. The application of scale-only approach would miss key connections and encounters between sites in the forest zones that buyam-sellams engage in through their horizontal interactions at different sites. On the other hand, the application of a place-based framework might do a disservice to those whose interactions constitute the zone (Barry 2006). A focus solely on place-based, time-bound accounts would not capture the dynamic informal processes that compete with formally constituted power to govern these sites and produce the forest zone. This latter shortcoming is applicable to both scale and place. Both fall especially short with respect to the analysis of the materiality of the forest environment as seen by buyam-sellams themselves.

Consequently, it is necessary to borrow insights from multiple concepts in human geography when conceptually engaging with zones as social environments (Katz 2009). The analysis of human-environment interactions requires us to zone-in: it is simply a more encompassing term. That being said, scale and place are essential components of the zone in this conceptualization.

Conceptually ‘scale’ and ‘place’ offer geographers categories to consider when pursuing their empirical studies. When these categories are subsumed by or collapsed into the zone, a more comprehensive analysis is brought forth that can be used to build upon to the emerging literature on the geographies of marketization in Africa (Ouma, Boeckler, and Lindner 2013; Berndt and Boeckler 2012). Terms often associated with ‘scale’, for instance, draw attention to political economic forces or
factors that are important elements of life in the zone (Ecobar 2007), including negotiation (mediation and intervention), contestation (controversy and rivalry) and adaptation (or adjustment) to change. Consideration of ‘place’, on the other hand, emphasizes other core components of life in the zone, including connection (identity), interaction (reciprocal cooperation) and encounter (happened upon, concurrence). Considering terms associated with both scale and place together under the broader concept of the ‘zone’ enables attention to forests and forest products – of which wild foods are just a part – and how these are brought together on seasonal bases through processes of interaction across multiple sites (markets and other locations where buyam-sellams interact). This approach consequently situates human processes associated with each of scale and place at sites within the overarching environment of the zone. In subsuming scale, place and research sites under the zone, the zone is comprehensively constituted as a territory of human-environment interaction. So constituted the zone is put at the center of an encompassing analytical frame which in this case shows the spatiality of market practices. This frame remedies the shortcomings of scale and place by drawing out what each of those concepts can do best while foregrounding the environment in a climatically defined and demarcated territory. Applied to Cameroon’s HFZ, it introduces a comprehensive geographical approach to the study of informal markets in this zone; a territory that had previously been ceded to anthropologists who have not framed their analyses with reference to concepts such as scale or place (Roitman 1990).

Fieldwork and Surveys

The fieldwork underpinning the analysis that follows was conducted in urban food markets in Cameroon from 2010-2013. The author frequented markets to observe the buying and selling patterns of wild foods and also to learn about this trade from buyam-sellams themselves. Unlike Clark’s (1994) research, which focused on one market, the Kumasi central market in Ghana, this study offers a broader survey of
twenty-four market sites in urban areas of Cameroon’s forested zone. Each of the markets varies in size, in terms of the number of buyam-sellams and also in the quantity of products sold. GIS points were collected from the market sites included in Map 5. The map included in Map 5 also shows the extant of Cameroon’s forested zone.
Map 5. Cameroon’s Vegetation Map altered to include GIS points collected from markets surveyed in the zone study (Ministry of Forestry and Fauna and World Resources Institute 2007).

In total, 203 *buyam-sellams* and also 197 of their customers participated in this study. The data collection happened in multiple phases. First, 171 traders were surveyed in seventeen markets (Table 11) in two regions in the HFZ. The interviews were conducted in both the wet and dry seasons to capture views on seasonality and its impact on market patterns in the zone. After visiting the market, wild food vendors were identified based on the products they sold, word of mouth from other traders who knew where the products were coming from, and wholesalers who were connected to the smaller traders. Individuals selling one wild food product or a diversity of wild food products were asked to participate.

<table>
<thead>
<tr>
<th>Region</th>
<th>Market</th>
<th>Number of traders surveyed (n=171)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southwest</td>
<td>Soppo/Buea</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Muyuka (formerly Soppo)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Ekona</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mile 4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Muea</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Mutengene</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Mutengene 2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Limbe</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Likumba</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Mokolo</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Mvog Mbi</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Knol Eton</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Mvog-Betsi</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Elig-Edjon</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Essos</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Biyem-Assi</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Huitieme</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 11. Distribution of markets in the study and number of traders surveyed

The survey questions were tested in Knol Eton market in Yaoundé. The culturally and linguistically appropriate way to frame questions was determined at this site,
enabling Knol Eton’s buyam-sellams to participate in the research design. The author was fortunate to engage with the 'big boss' or 'grand chef' of this market, a position that Clark (1994) referred to as the 'market queen' in the Ghanaian context.\textsuperscript{20} The 'grand chef' and a predominant wild food seller led the author around the market on a numerous occasions to introduce me to women who sell food from the forest and women who were eager to participate in the study. Gaining access to this market through the 'big boss' was rewarding for the research. The interviews became participatory and inclusive as the issues the women found important (such as access to space and infrastructural improvements) were included and questions that were uncomfortable to answer were excluded or rephrased (such as what the government could do to make your business better).\textsuperscript{21} The buyam-sellams often talked about harassment from market officials and police and at times were skeptical of people asking questions for fear the information would be used to foster higher taxes and fuel corruption. Unfortunately, this made getting information on quantities bought and sold and on levels of income earned almost impossible. Otherwise sensitive questions were omitted because traders were likely to avoid answering questions on those topics directly.

The survey included mostly open-ended questions. The interviews were guided by general questions about: (i) the traders themselves (e.g. age, gender, number of children, type of vendor, how often they sold, how long they had been selling, membership in a njangi or tontine a microcredit organization); (ii) detailed information about the products being sold (e.g. where the products were from, procurement status, how perishability was managed, how products were

\textsuperscript{20} This particular market was in Yaoundé, the French speaking capital. Here the women in charge of the market are called le grand chef translated to the 'big boss.'

\textsuperscript{21} Roitman’s (2005) book \textit{Fiscal Disobedience: An Anthropology of Economic Regulation in Central Africa} documents the civil disobedience movement in Cameroon during the 1990s. The movement rose to counter the state’s fiscal authority after a failed coup attempt in 1984 kept President Paul Biya in power. As he tightened his grip on the country, practices and norms associated with fiscally undermining the state became the new political and economic arrangement as citizens and Biya’s authoritarian state apparatus struggled for power, money and authority.
transported and stored), (iii) the market and operations (e.g. cost of the market ticket, location in the market, advantages and disadvantages of that location, days of operation, how disputes were settled, how they made money, how they lost money and the things they thought might make their businesses better), and (iv) information about food accessibility (e.g. income spent on food, foods taken home to feed the household).

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of traders surveyed (n=171)</th>
<th>Number of traders interviewed (n=38)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>132</td>
<td>30</td>
</tr>
<tr>
<td>Male</td>
<td>38</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 12. Distribution of gender in traders included in the study

The second phase of the research was conducted one year later. At that time, 38 in-depth life histories of traders were recorded in eight additional markets in the Southwest (Bangabakundu, Mbaliangi, Kumba Fiango, Ediki and Mbaliangi) and Centre (Mfoundi, 8th's Market and Mokolo) regions. Focus group discussions in a village in the South region in the zone were also recorded. The conversations in these contexts focused on ecological and economic changes in the zone, and paid particular attention to personal life histories. Research assistants were hired and a translator was retained for French and Pidgin translations to English.

While many wild food traders and their customers were included in this research, I acknowledge a limitation to this preliminary study. Principally, producers or gatherers of wild food were not included. As such, this is primarily a study of urban sites in the zone.
Zoning in on the Marketization of Wild Foods in Cameroon’s HFZ

The quotes presented below were selected and organized to illustrate the themes and trends that emerged from the data. After the country-level research was complete, concepts from human geography were considered for their capacity to bring out these themes. Through this inductive process, it was determined that working with the ‘zone’ would enable the most comprehensive account of these themes in Cameroon’s humid forest zone. These quotes are identified in the text based on market locations where they were articulated. The gender and age of the participant are included with the quotes. All quotes included were not outliers, and represented the experiences of numerous traders involved in the urban food trade. The rich qualitative data from the surveys and interviews provided by the participants documents the experience of being a buyam-sellam of wild food in Cameroon’s urban, forested zone.

Sites, Products, Buyam-Sellams and Food Markets

The seventeen market locations can be spatially related to 161 localities of origin (original place of purchase of the wild food product), or buying sites. These locations most frequently fell in Cameroon’s HFZ. That said, some products did come from the broader yet still forested sub-region and from neighbouring Central African countries including Congo-Brazzaville, Gabon and Nigeria.

There were 66 wild foods identified in the markets surveyed. These included: forest snails (*Archachatina spp*), wild mushrooms, termites, caterpillars (*Rhynchophorus phoenicis*), honey and bushmeat, vegetables such as *eru* (*Gnetum africanum*), country onions (*Afromyrax kamerunensis/Afromyrax lepidophyllus*), spices such as *njansang*, *rondelle* (*Scorodophloeus zenkeri Olom*), various tree barks, and peppers (*Afromomum melegueta*), fruits such as bush plums or *safou* (*Dacryodes edulis*) and
bush mangos (Irvingia spp.) and nuts such as kola (Cola acuminata; Cola pachycarpa K.; Cola nitida).

All the traders surveyed and interviewed came from all of the forested regions in Cameroon (Central, South, Littoral, Southwest and West). In total, 171 traders participated in the first round of surveys - 38 were male and 132 were female. For the in-depth interviews completed in the second phase, eight traders were male and 30 were female (Table 2). The average age of buyam-sellams in the study was 40 years old. The youngest trader was 16 and the oldest trader was 67. Many of the sellers had been in the business for at least ten years and some for more than twenty years. One trader had been selling for only one month; however, the average amount of time that a participant was a buyam-sellam was 10 years and one trader had sold wild foods for 43 years.

Urban food markets in Cameroon carry a diversity of products displayed mostly in open-air contexts (Image 7). There was greater specialization in forest foods in the Southwest region, where 31 of 65 sold only one product. In Yaoundé, the buyams were more diversified. In this city, 13 of 107 interviewed were specialized. These buyams sold eru (Gnetum africanum) or snails, products requiring more work in terms of transformation (e.g., washing and slicing of the eru, and washing and keeping the snails alive) and perishability. The traders arrive at markets every day they are open. In larger cities such as Yaoundé where the markets are open nearly every day, the buyam-sellams stay in their market every day to sell. In the smaller cities where the markets are open only a few days of the week, the buyams sell in more than one market to move their stock and to earn enough money throughout the week.
The buyam-sellams often arrive at the markets at 5:00 AM and stay until 5:00 or 6:00 PM when the sun is down, at which time they return home to cook for their families.

“I leave the house as early as 5.00 am when I am going to the village markets, in such cases I am exposed to thieves” Kumba, F, 42

The experience of procuring product in the zone is full of hassles for women as they move from buying site to selling site.

*Connection (identity)*

Responses from the surveys and interviews made it very clear that the women want to sell foods from the forest. They like it, it is what they know and they can survive
doing it. Being a part of this trade instills a sense of identity in the zone. When asked how they made money, many traders simply stated: 'I am a buyam.' This sense of identity enriches the feeling of belonging to a community:

“The products I sell are from trees that grow in the bush, like the njansan, used in the preparation of meals. I am supplied from villages located a bit far from Yaoundé (about 150 kms). I go there with a friend who sells in the Mvog Mbi market. I was not interested in this business in the beginning. But I have found it interesting with time. In addition, when we go to villages, we bring back agricultural products for our families in addition to wild food. This business needs some intelligence: one has to learn from other sellers and also from buyers.” Mfoundi, F, 57

The connections forged with the forest through being a seller among other sellers are strong in the HFZ.
Image 8. An Eru (*Gnetum africanum*) slicer and seller in Yaoundé. She sells all the ingredients to make the national favourite dish made primarily with the *Gnetum africanum* leaf, palm oil and beef skin. In turn, there is a sense of empowerment associated with this kind of work. This is attributed to the flexible nature of employment. Many women can enter and leave at will and also retain the sense that they are contributing to their households. These contributions take the form of money, or of foods brought home to family when sales are bad or after their purchase on gathering missions. Trading enables women to send their children to school and prepare household meals:

“I like the snail business because the money I get from it, I could eat and keep up the other children in my house, although I cannot make savings.” Kumba, F, 42

Savings is an issue where and when returns to labour are only the food itself:

“If the price of other products go up then I eat my own products” Mvog Mbi, F, 38

At those times, the reality is that there is less access to cash, but more access to food for the household. The reliability of this strategy is nonetheless questionable when the buyam does not have access to credit and/or cash to buy more products to sell, and when they have eaten all they have to sell.

Connections are strong in the zone and this type of employment largely shapes the identity of these women. To determine if the buyams wanted to stay in this business, the survey asked: if you won money would you continue to sell? Women surveyed in the Southwest said they would stay in the business and invest the winnings into the business either through buying stock or building a more permanent structure (87%). These buyams aspire to offering a greater diversity of products and selling more:
“I will continue to do business. Maybe I will buy a big land to be able to plant plantains. With this I think I will make more profits. I will always diversify what I am selling, different food products” Mile 4, F, 35
“I will continue selling forest products but in a larger scale. I really like forest products because I have been doing it for long” Likomba, F, 34

Whereas traders in Yaoundé were equally divided between continuing to sell and embarking on a new business with the supposed winnings, the majority of these women thought that selling cooked food was a better option. This can be attributed to a sense that there are more options in the capital city than in the region where Cameroon’s ‘Anglophone problem’ can be found (Ngenge 2003; Konings 2011).

There are also strong connections to seasons in the zone. The dry season brings a change in the market with lesser quantities linked to the growing season and higher prices due to this scarcity:

“I have noticed these seasonal changes that affect availability, so I decided that during the less available months I do not go to the villages on non-market days. I will go only on market days when I do not see snails; I will buy some other products such as plantains, njansang or eru, just to make up for my transport. Sometimes because of the scarcity, it become very expensive, so I buy very small quantities.” Kumba, F, 42

Connections between the buyams-sellams, to their trade and to their procurement sites and the seasons are revealing of the interaction that is necessary in the zone.

*Interaction (reciprocal cooperation)*

The buyams were mostly taught how to sell things from their parents, mothers, aunties, siblings and friends, and a few sellers were taught the trade by their husband’s family:

“I am in the business since childhood. When I was going to school, I used to stop at the market on my way back to our home, in order to help my mother
who was a seller here until she became old and tired. I grew up in the market, so I have a gift for the market. Mfondi, F, 23

“I inherited this market desk from my aunt, who passed away 10 years ago. My aunt has trained me for this business.” Mfondi, F, 41

Kinship ties through inherited knowledge and space are important in the market. These ties also include fictive kinship or relations built on mutual respect – the common practice of calling a woman ‘auntie’ is apparent in these spaces where women of many ages interact. Customers in the market also practice this fictive kinship connection and engage with buyam-sellams by calling them ‘auntie food seller’. These aunties sell the food and share recipes for meal preparation. This interaction in the market occurs between people from many places in Cameroon as food culture differs by region, custom, religion and available foodstuffs.

The benefits of being connected to other buyam-sellams are apparent. There is an internal organization of vendors called a *tontine* (in the Southwest region) or *njangi* (in the Centre region). This organization operates as a micro-credit service where women can borrow cash:

“We deal with the subscriptions and help each other in case of conflict or problems” Mokolo, F, 32
“We pay our weekly membership fees which helps us in our projects” Mvog Mbi, F, 38

This organization also works closely with buyers in the forest:

“We collect and buy as a group in the forest, we even rent vehicles together” Knol Eton, M, 50

*Encounter (happened upon, concurrence)*

In addition to family ties, the buyam-sellams make connections with other villages and sites in the zone where they purchase their product to sell in the city. One buyam explains how he started his business and made a decision to sell forest products, a type of experience that is common amongst buyams:

“After school, I was a hawker selling small household provisions. During this time I met someone who was selling pepper (chilli). I then decided to go into this business, because this man told me that he makes good profit.... I started by collecting from someone who also bought from the farmers. I sell and make profit and give his money and collect again, gradually I was introduced to one of the villages where I can buy much. I started going there, after having some money. I decided to add some forest products to the chilli business. Just like the friend who introduced me to the chilli business, I started adding forest items; each time I visit the market to buy I see more things to add.” BangaBakundu, M, 42

Urban centres are sites where these encounters also enable the sharing of recipes and food practices. Traders associate particular foods and dishes with certain people and regions. The traders notice changes in buying patterns of people in cities where urban encounters expand the pallet and knowledge of particular forest foods:
“Eru is the traditional meal of the Manyu people, of recent waterfufu and eru has become a national or international meal which is eaten by a wider population. It tastes good and nutritive value is the best as compared to most other dishes in Cameroon.” Limbe, household, F, 25

“Snails which were mostly eaten in the South West region are eaten by people from areas that usually look at snails like taboos like the North West. I sell snails and all my family eats snails. Now snails can be done for snail pepper soup, snail soya, snail meat for eru. Bushfellers carry dry ones over seas.” Limbe, F, 40

The buyams also rely on forest encounters and conceptualize the forest as a provider of goods and foods. In their view, the forest provides for the rich and poor alike:

“The forest produces these wild fruits which most of them are medicinal. This products help to cure both royal and people who live in towns.” Soppo, F, 67

The experience of being in the forest zone is shaped by the connections, interactions and encounters between sites.

Negotiation (mediation, intervention and prices)

The market is muddy in the rainy season and dusty in the dry season. When walking into and through the market, open sewers are navigated by dusty boards, and large dumpster bins collect the perished and rotten vegetables and fruits not sold. Women describe a situation whereby they pay taxes to sit in a dirty, muddy, unserviced market space to realize little to no changes made to the space by local authorities, who are often men. In these markets, each seller is required to pay 100FCFA (equivalent to 0.15€ in December 2013) each day to obtain a ticket to sell in that market. This fee can change based on quantity of goods sold and through negotiation. In this context, the women view their position in this arrangement to be undermined by local authorities:
"Most times these ticket people seize our products if we do not pay for the tickets" Likomba, F
"Sometimes the local council makes me mad. They tell us to leave our sheds that we have constructed and ask us to move to other areas and this really destabilizes our business." Mutengene, F, 27

Some buyams mentioned the common practice of ‘gift’ giving to ensure their selling place in the market and a ticket to sell their goods:

"To get your papers in line to foresee what you must "give" them in case of an infraction (prévoir quoi les "donner" en cas d'infraction). Always have a little money to gloss over these problems (toujours avoir un peu d'argent pour pailler ces problèmes).” Mokolo, M, 44
"To conform to the regulations, we have to foresee what to bribe them with” Nkol Eton, F, 44

Traders, many from the Southwest, mentioned that they paid taxes and realized nothing from their daily payments. For example, in many markets there are no toilets or running water and the women say they work in unsanitary conditions:

"Yes, there are no toilets kept by the council to send out waste when you have running stomach. There is no potable water in the market and the issue of cholera is killing a lot of people in Buea.” Soppo, F, 67
"Yes, the market is dirty. How is [sic] health and the food we sell here safe?” Soppo, F, 42
"No potable water and toilet in the market but council want to collect money; market is not swept and we construct our sheds by ourselves but money is still asked for.” Soppo, F, 55
"My customers are sick of walking through mud to get to my stall!” Essos, F, 51

In addition to a lack of sanitary services, the women describe other infrastructural challenges they face. Fires are common in these markets because of over-subscribed electrical poles and dangling wires that come close to puddles left over from heavy rains:

"The high tension rope that passes in the market. The burning transformer caused a lot of panicking in the market.” Buea, F
"Yes, no watch night in the market to carter [sic] for goods. Stalls are made of wood which is not strong.” Soppo, M, 32
Traders described a lack of access to sufficient and reliable transportation to collect their goods from the forest to sell in the city and to bring food to the market daily:

“When the roads are more accessible and when the Buyams aren’t disturbed too much on the road my business is better” Mokolo, F, 51
“Sales don’t vary too much except during the rainy season when the roads are poor and cars get stuck.” Mvog Mbi, F, 50

From her study among market women in Ghana, Clark stated that power is evident in a marketplace system where there are large stocks of accumulated goods. Storage in this view is the most straightforward way that traders can control the overall level of supplies of a commodity, an essential factor in manipulating prices (1994: 157). In Cameroon in these markets there is a lack of access to facilities and infrastructure where perishability and transformation of food can be managed. The physical facilities of the markets put direct limits on traders’ ability to store goods:

“We don't have enough space to stock our products. We pay stocking fees but the products often stay outside and go to waste” Mokolo, M, 44

This was especially troubling for the women who sell in more than one market. They resorted to carrying their goods to each market and back home because they could not store goods on site. When asked what would make their businesses better the answer was:

“Having a permanent stall to store items than moving from market to market” Buea, F, 52

While many traders commented on an increase in demand for the food products they sold, the consequences of higher food prices were perceived to have changed the trade. Many traders mentioned that customers complained about high prices. They reduced the quantity of the products they sold, choosing to buy less than they did before the price spike. This resulted in constant price negotiations forwards and backwards:
“When people argue with my prices I really do not like it because they do not have an idea how much I struggle to get the product.” Muea, F, 28
“The eternal problem of coming to a consensus on the price of products, some vendors sell for more or less expensive, there is no standard price.” Mokolo, M, 39
“The sale price creates tensions, mostly when there are variations. We discuss for a long time.” Mokolo, M, 42
“We don’t have the time to discuss, if they are alright with the price they buy the item, if not they leave.” Mokolo, F, 46
“We don’t have time to discuss, we sell” Knol Eton, F, 46

Vendors in Yaoundé noted that there were times when the prices for their goods flared. The causes of the price spike included:

“When products are scarce” Mokolo, M, 42 and Knol Eton, F, 45
“When I have to spend more I have to raise my prices” Mokolo, M, 44
“Period of non-productivity in the forest” Mokolo, M, 42
“During periods where nothing leaves the forest” Mvog Mbi, F, 42
“During the rainy season the roads are bad” Knol Eton, M, 50
“When the products become scarce and people stock up to sell later” Knol Eton, F, 39
“When foreigners (from Gabon, Nigeria, Equatorial Guinea) come to stock their supply” Mokolo, F, 49

There are many other reasons for price changes in contexts where traders had a lot of control over the price of the goods they sold:

“The Buyams [decide]” Knol Eton, F, 58
“Based on the fixed prices determined by the wholesaler” Mokolo, F, 44
“Based on the offer” Mokolo, F, 49 and Mvog Mbi, F, 42
“It depends on when we go to the bush and the sale prices are high” Mokolo, M, 38
“It depends on the expenses incurred on the road” Mvog Mbi, F, 50
“Based on the expenses made in the forest and in the road” Knol Eton, F, 44
“Depends on the purchase price in the bush” Knol Eton, F, 42
“I don’t really know but I sell like the others” Knol Eton, F, 46
“Us the resellers, determine the change in price” Knol Eton, F, 32

Determining the consumer price included various additional factors:

“The sale prices are a function of the price of acquisition along with my expenses” Mokolo, F, 36
“I try to revise my prices to enjoy a bit more profits” Mvog Mbi, F, 42
“It is a function of the price I buy it for so I adjust it to gain a bit more” Mvog Mbi, F
“I do like the others, I juggle” Mvog Mbi, F, 41

In the dry seasons, price changes were perceived to have different roots. During the dry price change was based on the decisions of the cultivators (producers) and the wholesalers (suppliers) and the buyams. Prices then were also determined by reducing quantities:

“They sell expensive to me and I try to play with the prices at the level of the cups [quantity] or the recipients” Knol Eton, F, 39
“It throws me off balance. It is disruptive at the level of the household budget. People buy less, even me” Knol Eton, F, 39

Every participant noted that increasing prices had an effect on the food supply at home. In places such as Kenya when new people come into power at the level of the state they talk about it being “our turn to eat” (Wrong 2010). In the HFZ zone, however, when people are disempowered by the state, they literally talk about eating their business:

“I eat my own products” Mvog Mbo, F, 46
“It is difficult, everyone is fighting to have something to eat.” Knol Eton, F, 46

Contestation (controversy and rivalry)

The congestion evident in these markets is in part due to the variety of sellers in the markets on site. This mélange includes permanent and temporary traders, street hawkers, mobile sellers (via their heads or off of carts) and whole sellers. Jam ups also result from customers and regulatory authorities. The diversity, crowds and governance issues create an environment where many vendors, often selling the same products, desperately compete for product and for customers:

“The scarcity usually causes buyers to quarrel and sometimes fight over the products. To avoid this buyers give money to the village collectors to keep, and also to buy from other villagers and keep for them before they come. This does not solve the problem because there are also cases of dishonest
collectors who will collect money from one buyer but sell to another one - or collect money from more than one buyer and could not have enough snails to supply both buyers. There have been cases where buyers quarrel and even fight because of such issues, there is a particular case where the quarrel ended in court." Fiango, F, 66

Most tellingly, many buyams complain of a lack of access or of no access to space to sell products in over-crowded markets:

“My business can be better if I have my permanent stall in this market. In that way my customers will always know where to find me.” Muea, F, 38

“Market space, traders usually complain and fight a lot on space to sell in the Limbe market. Who came first and place his goods or items and other person came after and said the space is his.” Buea, F, 42

“I sometimes get mad when people encroach into my market space. I don’t like it and so I make sure I push them out of it.” Buea, F, 38

“The government officials bother us a lot and our stalls are very small as you can see” Mokolo, F, 51

Jealousy, fierce competition and disputes, even gossip becomes a day-to-day reality fueling a lack of trust in the markets. Many women are not willing to share how much they earn and how much they sell and how much of the product they have on site. Buyams are known to hide food under their table to assist with the price negotiation with customers, and also to help negotiate the price of their ticket with the ticket master:

“The market is in essence competition and jealousy is inevitable.” Mvog Mbi, F, 42

“I have seen anger. It did not go on well. It all started when a vendor called for a customer who was already pricing the goods of another vendor. So vendor whose goods were being priced got very angry and started a fight. I did not feel good about it. The fight was separated and they both went their ways.” Buea, F, 38

“‘customership’ who owns the customers?” Buea, F

“As long as they leave me some clients” Yaoundé, Mvog Mbi, F, 58

The traders are especially wary of new traders entering the scene. Many habituated traders often talk about a tax for those that encroach on their space. This often results in “jealousy, verbal altercations” Mvog Mbi, F, 42
“In situations where a new vendor comes and does not want to pay what is called ‘new man’s tax’ the old vendors are very angry and [the situation] will usually end at the market master as usual.” Buea, F, 35

These issues are closely related to slow turnover of products, lack of access to credit and debt incurred with whole seller and customers who frequently borrow from the *buyam-sellam*.

“Customers take on borrow, and some do not pay, others pay in bits and pieces” Soppo, M

Culturally there is belief in practices associated with juju and the food trade:

“[There are] certain invisible practices. Sometimes we find weird things on the comptoirs. There are certain malaises that are inexplicable and death threats” Huitieme, F, 48

“When I started here, I was making money – something like CFA 30 000 (45.73€ in December 2013) benefits per month. But, I understand some women here are now using “mystical things” to block others and prevent them from selling and making profits. Is it true? I don’t know: but what is sure is that I am not making money like before. Anyway, my father, who is a Christian, says that mystical effects – if there are - do not last.” Mfoundi, F, 41

At the same time, Christian beliefs and mentions of God do help many traders explain inconsistencies in selling and changes they face in the market:

“I sell a variety of wild food. God is now punishing us. We, men and women, are so individualistic that God has become angry, due to our behaviors toward the forest and land that he gave use for free.” Mfoundi, F, 48

*Adaptation (or adjustment to change)*

Many *buyam-sellams* are unaware of regulations surrounding the products they sell. Simultaneously, many households often blame *buyams* for not respecting the regulations. This is quite troubling as many of these women state that they are uninformed on the regulations and administrative services and ministries associated with this trade (including the Ministry of Forest and Fauna):
“At the market no one talks to us about these things, I have never seen these people [from the ministry]” Knol Eton, F, 40

“They [police and people who work for the ministry] stop my products en route and confiscate my bags” Mvog Mbi, M, 42

In turn, the buyams are unable to change or influence policy, which makes it increasingly difficult to find solutions to the constraints experienced in the market.

The buyam-sellams in both regions of the zone experienced changes that went beyond their adaptation to the price spike of 2007-08 and 2010-11. For example, they have had to adapt to ecological change in the forest:

“Now since you want to know about change in the forest and wild food availability, I am a bit young to explain. But I draw what I will tell you now from my mother, based on what she observes in our village and in the neighboring villages (75 kms from Yaoundé). She says that seasons are no longer fixed like before. There are too many variations. Now, dry seasons are longer. So according to her, wild food availability is determined by: (a) the changing seasonal variations; (b) the exhaustion of all the trees whose barks are daily extracted by wild foods gatherers; (c) shifting cultivation for the extension of crop farms, for mainly commercial purposes; (d) the creation and multiplication, since 10 years, of medium scale palm oil plantations by the village elite. There would be 10 of these plantations in our village and in the neighborhood.” Mfoundi, F, 23

“Yes, it makes more work for those who collect and forces them to go deeper into the forest” Knol Eton, F, 39

These changes are very closely linked to the foods that are available in these sites:

“In our villages now, we have fufu, plantain, cassava but there is no compliment like fish and meat to prepare the soup. The rivers do not have fish as before; the forest there are no animals again. In the past a man comes back from the farm, takes his fishing net, within one hour he will be back with some fish or goes to check his trap and comes back with bushmeat.” Limbe, F, 35

“My eru comes from Suza forest after Douala. Sometimes I go into the forest after mile 6 and look for eru myself or into the black bush. I sometimes spend the whole working day looking for eru, especially when eru prices are high. I get a reasonable quantity e.g. a small bag full. But it has been long that I went to the forest around here to fetch. Likomba, F, 32
The adaptation strategy in this business is to shift the type of goods sold – in this case from forest foods to agricultural crops:

“Wild food is becoming rare in these villages. We are commercially suffering from all these effects. If I don’t find new sellers coming from other areas, I will change and start selling crops.” Mfouri, F, 41

“Yes, in general the products from the forest that I sell are becoming more and more rare because we do not cultivate them” Mvog Mbi, F, 42

While this might be a good strategy, many sellers prefer selling forest products to products from the farm because “I was trained in selling forest products.” Likomba, F, 34.

Discussion and Preliminary Conclusions

The harsh realities of day-to-day life in the humid forest zone detailed above have not been well captured by economists, conservationists or climate researchers. Many policy-oriented researchers tend to neglect the reality of power and politics associated with being in the zone and surviving in the zone. This omission actually reinforces the idea that Cameroon’s HFZ is territory alone, and obscures the human systems and the large population center that is based in the zone. The dearth of attempts to theorize zone in human geography, and its use by powerful researchers as a simple appellation, have silenced local power struggles in this place and limited analyses of the exercise of control over life the zone. The potential for analyses of Cameroon’s forest zone that do not engage with this concept to commit other oversights linked to power and the politics of everyday life in this zone is real and troubling.

Even those who do engage with the ‘zone’ might not offer appropriate insights in this case. Take for example Walters (2011) portrayal of zones as spaces of standardization, harmonization and regulation. The case of Cameroon’s HFZ can
absolutely not be characterized as a zone of standardized conduct, harmonized products or effective regulation. Instead, the HFZ is a zone comprised of bottom up, ad hoc informal regulation amongst market participants involved in the production and trade of wild foods. Moreover, the zone lacks effectively implemented policies and laws: a reality that leads life on the ground to bear no relation to the ordered life in zones where robust legal and policy frameworks are in operation. In the HFZ informal regulation dominates. The same can obviously not be said about the Schengen zone. Horizontal governance flourishes in the absence of legal and policy implementation in the HFZ. Top-down governance only emerges when police or gendarmes appear at the market to impose their own forms of order in ways that might depart from the spirit or letter of the rural sector strategy or the forest law.

Also pertinent to the HFZ case, Easterling (2012) shows that zones enable attention to be paid to the sorting and manipulation of goods. Wild foods can be considered part of the core basket of goods that draws people across the HFZ together in relations of production and exchange. Additionally, Neilson and Rossiter (2014) portrayal of zones speaks to the nature of uneven development in the HFZ case. In their view zones are instruments of market rationality subject to irrational proliferation (Neilson and Rossiter 2014). Their view that authoritarian capitalism conjures zones as spaces where dispossession meets exploitation is more than applicable to Cameroon’s wild food zone, where the insecurity of informal market participants is in plain view day in and day out.

The zone approach proposed above enables an analysis that takes account of scalar power and politics at the market level, and that also accounts for place-based identity and connections that are often missing in research on Cameroon’s HFZ. It underscores not only kinship networks and spiritual beliefs, but also site-to-site connections necessary for the wild food trade. The approach also considers the ways that women manage their work in the context of crisis and change in the zone.
At the same time the approach also accounts for the strategies of negotiation, exploitation and adaptation that are employed at times of change.

For this study the author stayed within the zone and researched cities within the zone on five research trips over a four-year period. This reality raises questions about where the zone starts and stops, and what it means to leave the zone or to be inside or outside of the zone. Attempts to engage with these considerations might be useful for future analyzes of the zones and the roles of those who study them. Other potential questions that are worthy of an attempt to ‘zone in’ could include a comparison between countries within the zone (i.e. Gabon and Cameroon), and case studies that compare cities inside and outside the zone within the same country or between countries. The boundary also needs to be probed: to what extent is wild food traded and consumed outside of the forest zone? How does proximate ecology factor into diets and food choices or in other words, how does the forest zone inform diets in the grassfields and vice-versa? More broadly, how might this framework or any enhanced future framework inform research in other African food markets? I encourage future researchers to embark on this exploration through getting into the zone.

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8. PRACTICAL IMPLICATIONS: WAYS FORWARD FOR CAMEROON'S WILD FOOD ECONOMY

The manuscript on the zone later inspired another paper that focused on a more gendered analysis of the wild food trade with the intention to present and analyze recommendations from the buyam-sellams themselves for improving the trade. I presented that paper – a forthcoming chapter on gender and the wild food trade – at the University of Alberta and the International Development Research Centre (IDRC) ‘International Food Security Dialogue’ in Edmonton, Alberta from 30 April-2 May 2014. I then attended a write workshop in Banff, Alberta from 3 May-7 May 2014 as a contributor to an edited collection, tentatively titled “Towards a Transformative Approach to Gender and Food Security in Low-Income Countries.” In the present chapter I present an excerpt from this work that imparts the practical implications of my analysis. The conclusion of the dissertation is presented in the next chapter. I have included this additional section in the dissertation as I believe that it helps to draw specific attention to gender across my themes and objectives. I believe that women could potentially reap significant gains from efforts to develop wild food production and transformation capacities in urban areas, and that such future efforts would be realistic and contribute to development and food security strategies. In 2014 I wrote a piece for Think Africa Press that raised concerns regarding the entry of large food retail and its implications for food traders, including wild food vendors (please see Appendix 1). The article draws attention to large retailers potentially competing with and pushing out the buyam-sellams. This prospect would undermine the entrepreneurial activities of many women food traders and the opportunities for them to realize socio-economic advancement. The ways forward discussed in this chapter should be considered in this context.

My work to draw out the implications of my research for development and social change is ongoing. As such, below I present a preliminary list of recommendations drawn from quotes and data collected from buyam-sellams in Cameroon. During
data collection, the women surveyed were asked to focus on ways of improving their business, expanding their trade and improving food safety. The ways forward outlined here may seem like lofty expectations, but the proposed strategies may even add more stability and security to the local food system, create employment opportunities and in turn may help to mitigate unrest around food.

The international development research community in Cameroon including the UN Food and Agriculture Organization (FAO), the Centre for International Forestry Research (CIFOR), and the World Agroforestry Centre approached Cameroon’s forest food economy using the concept of non-timber forest products (NTFPs). The limitations of this concept were recounted above in manuscripts three and four. The NTFP perspective drives a quantitative analysis of the rural gathering of these products and promotes them primarily as a means to achieve forest conservation objectives and to improve rural livelihoods (Belcher 2003; Wiersum et al. 2014). As a result, the efforts of these organizations to characterize Cameroon’s forest economy as being about forest products have missed the mark when it comes to an analysis of these foods for improved food security outcomes, particularly in urban sites. The persistence of this top-down intervention and the silencing of food in the development literature on NTFPs are troubling. It has been well established that more Africans are living in cities across the continent, and that more people need access to cash in these places to buy their food (Cohen and Garrett, 2010; Tacoli, Budoor, and Fisher, 2013).

So, while the research material the development organizations produced on Cameroon is of high quality, the focus on rural livelihoods misses: 1) the perceptions and needs (demand) of the people in local cities; 2) perspectives of the local urban traders; and 3) the contributions wild foods make to local food security outcomes. Moreover, the bulk of the research conducted by these international development organizations was done before the food price crises of 2007-2008 and 2010-2011 (Perez et al. 2002). The present study aimed to correct these problems and silences
through including the voice of individual food traders and her perspectives and experiences. Future pathways to gender equity and also improvements to local food security can be found in the promotion and transformation of forested foods for sustainable local consumption.

According to the survey data, there are more challenges presently associated with this trade than opportunities (see manuscript four). Traders indicate that bribery and corruption in public institutions have consistently impeded development of small-business sectors in Cameroon. They believe that these practices create a problematic business climate. To push back against this reality, in Cameroon, the buyam-sellams of various products have in the past developed their own norms by sometimes engaging in what has been termed “fiscal disobedience” (Roitman 2005). Other challenges traders seek to overcome include the deterioration of infrastructure and the capacity of the government to deliver services. While the informal wild food trading system can support growing urban populations, the state’s abandonment of policy implementation in this sector has raised many barriers. The research from the twenty-four markets indicated that the challenges experienced in this trade in the absence of effective forest and food policy are similar across all of the markets surveyed. Nonetheless, this sector continues to afford many women sellers with the opportunities to get by and even advance themselves economically.

Crush and Frayne (2011) argue that “to fully understand the complexity of urban food insecurity” we need to know much more about urban food supply and distribution systems, both formal and informal (and about the ways they interact).

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22 Roitman’s (2005) book Fiscal Disobedience: An Anthropology of Economic Regulation in Central Africa documents the civil disobedience movement in Cameroon during the 1990s. The movement rose to counter the state’s fiscal authority after a failed coup attempt in 1984 kept President Paul Biya in power. As he tightened his grip on the country, practices and norms associated with fiscally undermining the state became the new political and economic arrangement as citizens and the state struggled for power, money and authority. These trends continue today as the buyam-sellams often talked about harassment from market officials and police and at times were skeptical of people asking questions for fear the information will be used to foster higher taxes and fuel corruption.
According to these researchers, the informal economy is a key determinant of food access for the urban poor and “needs to be better supported and less pilloried in policy” (Crush and Frayne 2011:540). The interventions discussed below could improve the marketing, trade and governance of Cameroon’s largely informal forest product trade, and also enhance food security outcomes in urban areas.

The international development community should not overlook possible ways to making healthy and nutritious local foods more available and accessible to urban populations. In my view, it is simply not acceptable in a place with wild food bounty for local populations to have to continuously adopt coping strategies that move them farther and farther from the foods they have for generations enjoyed. Especially when there is evidence that many Cameroonian youth continue to express a desire to eat local forest foods that they love (see manuscript three).

*Ways forward for improving the forest food trade*

Certain wild foods that are in high demand are undergoing domestication. The domestication process brings wild species under cultivation through the selection and adoption of desirable characteristics (Tchoundjeu et al., 2006). Ongoing domestication initiatives in Cameroon for *Gnetum*, bitter leaf, *njansang*, cane rat and snails could help to ensure these foods are more available during times of scarcity and inconvenience. These initiatives seek to sustainably manage wild populations through avoiding the over-exploitation of forests. At present initiatives in this area are small and embryonic. There is still a vast potential for the scaling up and promotion of domestication efforts in urban areas, and of small and medium enterprise capacity development in production and distribution.

A study on CIFOR’s training and capacity building programmes in the NTFP sector in Cameroon from 2000-2006 showed that several innovations could improve trader's
incomes and promote local gender empowerment. Improvements that help to “reduce the constraints generally faced by women traders by providing marketing information, accounting tools and helping them to develop processing and storage technology” were strongly encouraged (Awono et al. 2010:161). Improved training in these areas and also greater access to processing and storage of these foods have the potential to make a positive impact on women’s lives - as these same improvements could also contribute to higher incomes and the attainment of greater food security. These findings were congruent with a Pan-African review of gender and agroforestry. That study found that women contribute to this sector as actively as men, but their contributions are constrained by cultural norms and a lack of access to resources (Kiptot et al. 2014). Recommendations for scaled up interventions in the food sector include “capacity building in business skills, group dynamics and assessing market trends, product specialization, processing, collective action, [and] provision of improved storage methods” (Kiptot et al. 2014:106).

Through focusing on particular food sources such as honey, bushmeat, snails and mushrooms, researchers have identified many small-scale reforms (Hardouin et al. 2003). Best practices and lessons learned from these studies can translate to related forest food sub-sectors. For example, credit and technical support for entrepreneurs in apiary and honey harvests greatly enhanced forest-based beekeeping in Northern Cameroon (Ingram & Njikeu, 2011). Similar initiatives for honey in the south should not be overlooked. These authors and others have made strident calls for efforts to scale up the availability and accessibility of alternative sources of protein (Nasi et al. 2011:363). Their call is especially important in places where protein remains difficult to access and where food cultures are welcoming of somewhat ‘un-conventional’ food sources (FAO 2013). And ‘alternative’ protein in this context does not simply mean bushmeat, and can include legumes, nuts and insects.

The bushmeat trade nonetheless matters. A study of this trade in Yaoundé found that the railway was the most important carrier of these meats into the city. Most
fresh bushmeat ends up in eating-places in the city, whereas older smoked meat is most often found in the urban markets (Edderai and Dame 2006). Knowing more about this transport and value chain is important for the control and regulation of protected species. Simply put, "a decline in one wild resource tends to drive up unsustainable exploitation of the other" (Nasi et al. 2011:360). Therefore, achieving sustainable harvest of bushmeat through the "banning and strictly enforcing the sale of endangered or at risk species in urban markets", and ensuring greater transparency would be a good approach to policy.

But the alternative, non-bushmeat proteins do matter and are worthy of serious reinvestment. My household data from Yaoundé indicated that 20% of households interviewed reported eating caterpillars as a type of wild food bought and prepared in their home (among many other proteins derived from the forest including termites, large forest snails and pangolin). These families even reported that seasonal caterpillars were their children's favourite meal. The quote below from a household in Yaoundé indicates that demands for these foods remain high:

   In our house here, we eat the caterpillars of palm oil once a week. My husband loves these insects. It is very expensive but we can afford [them]. In addition, we also eat bushmeat (the porcupine or pangolin) once a week too. One pangolin costs 12,000FCFA (about 18€ in August 2014) in market Mvog Mbi (Nlongkak Yaoundé 2012).

Another source of protein, forests snails are very popular in southern Cameroon (see Image 10). Ngenwi et al. (2010) found that climate change and the use of agrochemicals had negatively impacted backyard rearing and wild collection of snails. New policies are needed to correct these challenges and enable the replications of numerable successes. On the latter, a woman in the West region of Cameroon known as the 'snail mama' is a local success story for the rearing and transformation of snails. Her snails and their shells are transformed into 'healing foods' by crushing the snails into a powder that can be added to fortify baby foods and foods for sick patients. This non-conventional form of heliciculture creates a reliable source of protein - something that is difficult to access on a consistent basis.
in Africa’s forest food systems. Because of this simple transformation, she has won awards and has been able to diversify her business into rearing hedgehogs, porcupines, cane rats and quail (Fomo, 2013). Entrepreneurs in this sector could benefit from the dissemination of accessible insights about her evolving business.


Mushrooms have similar potential as they are known locally as a substitute for meat or fish. Mushroom cultivation is a gendered activity as women and their daughters are typically involved with production, harvesting and sales. However, the cultural notion that ‘mushrooms are the meat of the poor’ might inhibit widespread cultivation of mushrooms. This perception could be countered, as evidence suggests that the potential for raising mushrooms on a small scale is great (van Dijk et al. 2003:23). Consequently, scaled up small-scale cultivation of mushrooms in urban areas may not only generate employment, but also make this food more available in cities as a food option when budgets are tight.
In terms of transformation of fruit and vegetable products, Image 11 below (taken at an elite Yaoundé food store) is only one of many examples of this approach. The foods portrayed in this image are dry fruits and are mostly agricultural products. Policy oriented researchers in Cameroon recognize the great potential for this transformation strategy to be extended to Cameroon’s forest foods and cultivated wild foods. Currently, the amount of foods dried for this project is small and these products are sold in high-end supermarkets (see Appendix 1).

Image 11. Dried mango, coconut, banana and cassava chips for sale in a supermarket in Yaoundé

Taken together, the application of my findings to ongoing forest and food policy debates could contribute to efforts to enhance the sustainability of the forest food sector. The imperative is to raising incomes, awareness and access to these culturally significant foods. With improved access to training, services, transformation, credit and storage, greater food security outcomes in the city studied could be realized. The recommended improvements outlined in Table 13 are also a positive for urban consumers in Cameroon generally as the improvements
target the availability of nutrient dense foods and could enable more reliable access to these foods.

**Ways forward: challenges and opportunities**

Research and development interventions in Cameroon need to target sectors of the local food system that have the potential to make positive impacts to dietary adequacy and nutrition (Pinstrup-Andersen 2010; Vinceti et al. 2013). Focusing on the challenges and opportunities of women involved in the food system and on identifying their recommendations for improving the sector, their specific objectives and subsequently tailoring projects and programs to improve food security outcomes will be key. Through engaging with and describing the wild food sector during a time of crisis and change, my study identified women’s own views on potential ways to improve the gendered dimensions of Cameroon’s wild food economy. From the household data, one woman in Yaoundé stated:

> I prefer our forest fruits compared to Asian products. It’s a bit expensive but I managed to feed my family with products like okok or wild mango. It is also known as ‘consume Cameroon’ (Yaoundé, November 2012).

Considering ways of contributing to the ‘consume Cameroon’ mandate, this brief section revisits the data with the specific intention to use the *voice* of the food trader herself and her *perspectives and experiences* procuring and selling forest food to identify specific areas development interventions could target. The major themes identified have to do with: quantity and seasonality, perishability and transformation, credit, capital, regulations, storage and training.
**Quantity and seasonality**

During the wet season, in the Southwest region 80 percent of *buyam-sellams* noticed an increase in their sales of wild foods. Many thought this was linked to more people knowing about the products, more people eating these foods, and generally, more demand. The sellers, who remarked they sell less, attributed this decline to a change in the quantity of foods available for harvest, and also to more competition in the business with more people selling. These trends are closely linked to seasonality. Sellers in the dry season noted a decrease in sales, and in the wet season, they noted that demand increased to meet the uptick in supply.

In Yaoundé during the wet season 94 percent of vendors noted they sold more than in the past. All of the *buyam-sellams* interviewed mentioned that they notice an increase in the population of buyers, noting that there are more clients, larger neighborhoods, more foreigners (from Nigeria, Gabon and Equatorial Guinea) and a general increase in demand for wild foods. The minority who noticed a scarcity of products claimed that the scarcity occurred because the quantity was smaller leaving the forest. Occasional scarcities can be attributed to the actions of forest and fauna officers to confiscate, stop or arresting the *buyam* on the road. While women traders that belong to established organizations and associations are able to lump their money together and purchase in bulk from rural village buying sites (see also manuscript four), this does not preclude officers from exacting ‘taxes’ from the trade. Another factor associated with scarcity has to do with the cross-border trade in forest products. In this case, traders from Cameroon and neighbouring countries trade and sell products from Cameroon in Nigeria, Gabon and Equatorial Guinea where higher prices are realized. Scarcity in the dry season is remembered through to the wet season. Understanding quantities and seasonality of the products under question is important as these factors impact the foods available in the market to sell, their changing prices and also wastage of the product. In this case, many *buyam-sellams* reported that they throw unsold food away due to lack of storage and also
perishability. All of the factors that compound scarcity recounted above are worthy of renewed policy attention and action.

*Perishability, storage and transformation*

The perishability of forest foods is absolutely a concern for all of the traders and sellers, regardless of their gender. It is also a key area for food security policy innovation. Perishability is managed informally in markets in the Southwest through a variety of strategies. The most common is smoking the product in a fire (i.e. prepared snails, mushrooms, bushmeat and bush mango pits). Wild foods such as *eru* (*Gnetum africanum*) are kept cool and dry. This is a difficult task during the wet season when green leafy vegetables are harvested and sold in large quantities; a lack of access to cold storage, which is expensive, is not reliable or always possible.

On the subject of foods in Yaoundé there is a problem of conservation and conditioning. Most of the foods from rural areas are exposed to the elements and poorly conserved [sic]. In periods of abundance, we can see the leaves of vegetables, condiments, tomato etc. in decomposition because they simply have not been sold in time. This leads to a lack of return for the vendor, leading to social and economic losses. A good policy of conservation and transportation of the food products could resolve this problem (Interview, Yaoundé, November 2013).

Many of the market stalls in both regions are temporary and are without storage capacity. Studies on urban African food markets suggest power is demonstrated in the marketplace through storage capability as traders can control their level of supplies and most importantly, their prices (Clark 1994: 157). The limited physical infrastructure/facilities of the twenty-five markets put direct limits on traders’ ability to store goods in the markets and worked against the potential for them to engage profitably in this trade. Typically, the lack of infrastructure in the Southwest region created a situation where women had to sell in more than one market, often
carrying goods to each market and back home as it was not possible to store goods on site.

If I had a shed for myself, then that would really help me because I will not suffer to [sic] carry this big umbrella every market day and instead carry a bit more kola (Interview, Likomba market November 2012).

Having a permanent stall to store items than moving from market to market [would help my business] (Interview, Muea Market, July 2012).

We don’t have enough space to stock our products. We pay stocking fees but the products often stay outside and go to waste (Interview, Mokolo Market Yaoundé, July 2012).

Greater access to storage allows vendors to increase their stock and potentially their earnings. Men are mostly the whole sellers (in Yaoundé) and are more likely to have more stock and permanent market space. With greater earnings, many of the female buyam-sellams said they would want to invest their profits back into their business.

Overall, without access to the facilities and infrastructure where perishability and transformation of food could be better managed, many traders experienced losses and wastage of the foods they had procured for their business. This had negative implications for incomes earned from their trade. This case shows that the empowerment opportunities from the trade are limited on the business side. When asked what might make their businesses better, many traders identified a variety of strategies based on the product that they specialized in:

Doing a lot [with my] snail products (dry snails, snail soya, snail meat) especially if I have capital. Having a cage to keep live snails to move freely and sell the next market day if not bought (Interview, Limbe, July 2012).

Get a preservation facility like a fridge to store remains and re-sell. Buy quality vegetables and sell at better prices (Interview, Limbe, July 2012).

Better means of preserving the meat; high capital to purchase variety; reduce conflict between forest guard and business person (Interview, Mutengene, July 2012).
One buyam-sellam said that her strategy (and others) is to sell her products to vendors who make and sell prepared dishes on the roadside and in turn-a-dos or informal restaurants in the city where ‘big’ or powerful people turn their backs to the road so that they are not seen eating street food. This strategy is adopted on non-market days with the hopes of earning a profit from the unsold vegetables the buyam has already invested in.

Credit, capital and market regulations

Access to more capital was overwhelmingly identified as a way to improve the wild food sector (mentioned 100 times in the survey). With greater capital women told me they planned to increase stock and invest in their businesses: “if I can stop eating my capital [I can] use it for other things” (Mile 4, November 2012). While this trend of ‘eating the business’ or eating un-sold foods improves food security at home, over time this strategy decreases savings, as the only returns to labor are food itself.

Many traders belong to a tontine or njangi, a small micro-credit institution that helps to organize the women and some men, but many view these organizations as a way “to help us out financially in case of economic problems” (Yaoundé, November 2012). Overall the lack of access to more formalized credit (mentioned only 13 times) means that many small traders (mostly women) go into debt with whole sellers (mostly men) while at the same time customers go into debt with the buyam-sellam. This cycle creates much frustration for the buyams especially when they have to constantly negotiate the setting of prices – individually and collectively:

The eternal problem of coming to a consensus on the price of products [impacts my business]. Sometimes some vendors sell for more or less expensive, there is no standard price (Yaoundé, Mokolo, July 2012).
After the food price crisis in Cameroon the prices rose “every day. Customers complain[ed] a lot and the business...[was] slow” (Limbe, November 2012). The setting of prices continues to be determined on individual bases, as prices are not regulated throughout the market or across markets in the city, and little price discovery or transparency is possible.

Many buyam-sellams also largely remain unaware of the regulations covering the products that they sell:

[I am] anxious to know the right document needed to trade in eru, they [local officers] are willing to process and acquire the document (Buea July 2012).

And many others simply say they do not know about “matters of the state” but “they [administrators] should also realize the economic and social context of the vendors” (Yaoundé November 2012). This lack of awareness means that in order “to conform to the regulations, we have to foresee what to bribe them [the officers] with” (Yaoundé November 2012). Many buyams mention these bribes as a drain on their savings and investments. The women and also the men surveyed describe a situation whereby they pay taxes to sit in a dirty, muddy, un-serviced market space to realize little to no changes made to the space by local authorities, who are often men. In these markets, each seller is required to pay 100FCFA (equivalent to 0.15€ in December 2013) each day to obtain a ticket to sell in that market. This fee can change based on the quantity of goods the buyam has at their stall and through negotiation. In this context, the women view their position in this arrangement to be undermined by the local authorities.

*Training*

Improved training was mentioned in the survey although there seemed to be more of a ‘survival’ orientation associated with the trade rather than longer-term
thinking. Many women indicated that they were “trained in selling forest products” (Likomba, November 2012). However, others mentioned that “some training will help me to lead a better life” (Yaoundé, November 2012). Insightfully, one woman said that “this business needs some intelligence: one has to learn from other sellers and also from buyers” (Yaoundé, November 2013). The buyams were taught how to sell things from their parents, mothers, aunties, siblings and friends and a few sellers were taught the trade by their husband’s family. Men in Yaoundé stated that they learned how to sell in food markets from their grandmothers, mothers and wives. The men in the study who sold shrimp and crayfish, or who were diversified meat sellers (more valuable products are often sold by men in the markets), learned how to sell from their grandfathers or uncles. While the opportunity to learn from family and peers is a realistic default business education strategy, a more formally designed educational avenue could be explored in the future. The survey data found that many participants – especially women – exhibited willingness to find ways to improve their businesses.

Greater gender empowerment can come from the creation of linkages to organizations where improved training and access to credit are enabled and encouraged. Collective organizations have the potential to not only improve the urban trade in food but also food security outcomes throughout the city. Owing to established micro-credit organizations and associations, some women are able to lump their money together and purchase in bulk from rural village buying sites. Focusing these organizations more directly on the food security challenges traders face – i.e. not eating their capital – could be a quick win. It may be possible that umbrella organizations could enable women with shared interests and goals to better advocate for development in the sector as a group (i.e. advocating on behalf of themselves and other women such that buyams of snails need cages, eru buyams need access to cold storage, spice buyams need a drying facility). Cooperatives or a union of buyam-sellams are not yet a reality, but the roots are there. Already in larger markets the women are organized by product sold. Most women sellers
continue to aspire to sell a greater diversity of products, and to achieve the ability to transform products and capture more sales.

***

Overall then, research-based development interventions should target sectors of the local food system that have the potential to make positive impacts on meeting nutritional needs (Pinstrup-Andersen 2010; Vinceti et al. 2013). From this case, five areas for policy innovation could be targeted:

1) The regulation of food markets and food prices, especially between seasons;
2) African urban food markets are heavily reliant on food arriving in the city fresh from harvest and moving it quickly to ensure its quality. The turn over of this food is not always predictable and food sellers often mention food wastage and perishability is a great concern. Better storage, value added or transformation (drying, smoking, freezing) is required;
3) Green leafy vegetables and also sources of proteins should be readily available and more affordable to ensure good levels of nutrition. Initiatives are underway in East Africa to make African leafy vegetables (ALV) more accessible to the urban population (Gotor and Irungu, 2010; Smith and Eyzaguirre, 2007) and lessons learned from this initiative can be useful in Cameroon: a place where the environment and diet is welcoming of these foods;
4) Investments in urban food infrastructure with a focus on market structure and better sanitation. This is especially important for food safety;
5) Re-direct of budgetary allocations to subsidies for imported foods or safety nets etc. to investments that would assist local producers and local production. Additionally, improving food storage, and food transformation
through adding value to food can help to create urban employment opportunities.

These targets are empirically grounded in my research. Beyond these, women’s enterprises, including local credit and producers institutions involved in this trade, could be slated for reinvestment and growth. Development initiatives could also further target the domestication of a more diverse array of wild food products for which there is high demand (i.e. cane rat and forest snails). Ultimately, any investment in improved training and resources for the drying, preservation and transformation of forest products for safe consumption would yield massive returns, and reduce incidences of food borne illness (see also Table 13).

<table>
<thead>
<tr>
<th>Wild Food</th>
<th>Barrier</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eru/Okok (Gnetum africanum)</td>
<td>Decreasing stock; limited access to forest for gathering</td>
<td>Increase domestication initiatives; improved training</td>
</tr>
<tr>
<td>Snail (Archachatina archachatina and Archachatina marginata species)</td>
<td>Lack of infrastructure for heliciculture; changing climate</td>
<td>Create industry for cages and snail rearing; improved training</td>
</tr>
<tr>
<td>Njansang (Rocinodendron heudelotti)</td>
<td>Drying and storage</td>
<td>Drying, transformation and storage</td>
</tr>
<tr>
<td>Caterpillar (Rhynchophorus phoenicus)</td>
<td>Decreasing stock; high prices</td>
<td>Drying and transformation</td>
</tr>
<tr>
<td>Wild mango (Irvingia gabonensis)</td>
<td>Drying and storage</td>
<td>Drying and transformation</td>
</tr>
<tr>
<td>Honey</td>
<td>Less available to harvest</td>
<td>Beekeeping/Apiary</td>
</tr>
<tr>
<td>Bushmeat</td>
<td>Over harvest</td>
<td>Conservation, sustainable harvest and stronger regulations also promote small animal husbandry (cane rat, porcupine and quail)</td>
</tr>
</tbody>
</table>

Table 13. Recommendations for improving the wild food business and trade
These recommendations should only be considered in the context of the serious environmental challenges that intersect with the country’s wild food economy, including deforestation, increased logging activities for the local market and for export, and also in the context of ecological and seasonal changes. Overall, the recommendations identified aim to enhance the sustainability of the forest food sector while raising incomes, awareness and access to these culturally significant foods (Vinceti et al. 2013). With improved access to training, services, transformation, credit and storage, Cameroonian cities could realize enhanced food security outcomes.
9. CONCLUSION

Perhaps a tale of two bats is in order. On the first, in West Africa in early 2014, outbreaks of the Ebola virus were reported in countries that had not previously experienced cases of the most deadly virus known to humans (Al Jazeera 2014). Doctors and epidemiologists subsequently found that Ebola cases were rooted in an interaction with or even the consumption of an unhealthy wild fruit bat from an under-regulated forest (Samb and Toweh 2014; Kamins et al. 2011). As the number of reported Ebola cases rose in 2014, forest food markets in Conakry, the capital of Guinea, were emptied of customers and also of forest foods (Ward 2014). When the virus jumped borders to Liberia, Liberian musicians, D12, Shadow et Kuzzy of 2 Kings wrote a popular pop song titled *Ebola in Town*. The lyrics of this song were intended to raise awareness of the disease and to discourage the consumption of baboon and “chauve-souris” (bat) (Jeune Afrique 2014).

This outbreak obviously had serious food security ramifications, and it would of course be easy to blame the bats for the present misfortunes in West Africa. But it would also be erroneous. Poverty, ignorance and bad governance were at the root of Ebola, not the bats or a wild food economy that delivers nutritional rich foods and contributes to dietary adequacy in some of the world’s poorest economies.

Turning to the second tale, in another part of the world, the global food industry's drive to provide cheap food for the masses was recently the brunt of a cringe-worthy popular joke. In the movie the *Anchorman 2*, a character who had recently started a fast food restaurant had – unbeknownst to his customers – made his money from frying up and serving bat to the masses, or as he termed it: “chicken of the cave” (McKay 2013).

These dissimilar examples of the consumption of bat speak to the divergent food security challenges faced around the globe in the early part of the 21st Century. On
the former, the consumption of bushmeat highlights food security challenges in forest food systems, as protein is difficult to come by. On the latter, the serving up of “chicken of the cave” highlights the industry’s ongoing commitment to down market cheap food, apparently at any cost to the consumer or to society.

This thesis underscores the tension between traditional food cultures and the common assumption that ‘cheap food is a good thing’ (see manuscript three). The global rise in food prices from 2007-2011 and the wave of riots during that time reminded many food researchers and consumers of this competing tension. The push by global food corporations to keep food prices low can provide cheap food to more people, but can also compete directly with local food economies and can be disruptive to local diets and health. Today in urban Cameroon it takes more money to feel food secure or to enjoy the foods traditionally or culturally associated with food security. Efforts to keep food prices low simply do not have a unidirectional positive effect in all places at all times. In the cases reviewed here, they have compounded preexisting food system challenges, and detracted from access to nutritious and safe food. The sections that follow highlight the main findings and theoretical contributions from my research that support this claim.

Main findings and theoretical contributions: food riots

The first contribution of the manuscripts in theme one is primarily academic - it is not a stretch to assert that they enhance our scholarly understandings of modern riots at times of food price stress. Taken together, these manuscripts show that riots at times of price stress are not simply a response to hunger. They are also opportunities for people to create new spaces for political dialogue or action.

The second contribution in this area falls at the level of development and food security policy. The first two manuscripts show that there is a mismatch or incoherence between policies that were proposed in the aftermath of riots at the
local level, and those that were actually implemented by governments at the national level. This disjuncture and its implications are explained in more detail below.

The hypotheses in the literature on high food prices reviewed in manuscript one sought to explain how and why people riot. Knowing why people riot is a key ingredient in knowing more about the prospects for relief measures (or policies) put in place after a riot episode to avoid stimulating further unrest (Bohstedt 2010). My research shows that the ‘why riot’ question remains important, but it is not the only relevant question.

The first manuscript was a multi-level, macro interpretation of the domestic and international drivers of protests at times of food stress across Africa from 2007-2011. We analyzed both English and French and international and local African media reporting of the food riot events during that time. Broadly, we found that the riot “continues to create a space for disenfranchised citizens to politically express their grievances about an unjust political economy whether it is driven by locally defined factors or international factors” (Sneyd et al. 2013: 494; manuscript one).

Beyond theory, this finding is important for policy because it suggests that policy makers in Africa will need to devise hybrid policies that address both the food system and the local political economy that had a hand in stimulating unrest. Through our analysis in this manuscript we learned that “the same set of policies designed to promote productivity and lower prices through global trading agreements are exactly those policies that are sure to cause anger and injustice at the local level” (Sneyd, et al. 2013: 495). By contrast, policies designed to deal with the “local level causes of food riots (namely people’s justified grievances at not having access to jobs and opportunities) are exactly those policies that macro-economists warn will cause prices to rise further” (Sneyd et al. 2013: 495).
Turning back to theory, there is evidently a gap between “how people experience the material economy within perceptions of the moral economy” (Sneyd, et al. 2013: 495; Hossain and Kalita 2014). Future writing on this gap could contribute to the debates in the riot literature, and builds on Thompson’s (1971) analysis of the moral economy and Bohstedt’s (2010) analysis of the politics of provisions after riots. Our initial, preliminary effort to bring together the moral and the material dimensions that envelope food access can hopefully provide researchers in this area with a fruitful future entry point. Our analysis of the cause and effect relationships across 14 African countries suggests that more in-depth empirical evidence at the country level on the particular triggers that lead to riots is necessary. Manuscript two of this thesis addresses this theoretical gap.

According to John Bohstedt, rioters in the 1550 through 1850 periods were “not protesting to preserve a customary local economy,” as E.P. Thompson once claimed. Rather, they were instead “activating a realistic and efficacious politics of provisions” (Bohstedt 2010: 266). Contrary to Thompson’s ideas, which seemed limited to the behaviours of the crowd, Bohstedt’s work on riots has factored in the response and the policies of the rulers (or state). My work on manuscript two on modern riots engaged with state responses and consequently brings Bohstedt’s work into an analysis of the present.

Over the period studied by Bohstedt, bargaining by riot was deemed most successful and took the form of a three-part sequence: “riot-repression-relief.” This sequence brought about changes to the food system under stress. Bohstedt’s ‘politics of provisions’ concept brings to the fore the dimensions of this struggle and the subsequent bargaining that ensued between the crowd (horizontal linkages) and their rulers (vertical linkages). In his view, food riots throughout history “succeeded, not only by seizing shipments, but also by wringing relief from the well-to-do” (Bohstedt 2010: 265). In his conceptualization, the politics of provisions delivered a successful outcome for rulers and rioters – “order in exchange for relief” (Bohstedt
The relief in the case of the 2007-2011 riots was more access to rice through the imposition of rice, fuel and other subsidies.

Bohstedt’s (2010) insights are reflected in our comparative analysis of Haiti and Cameroon’s food riot events of 2008 and the relief measures adopted in both places. In a sense, my conclusion that food needs to be decentered from the analysis of modern riots in Africa at times of price stress resonates with Bohstedt’s understanding that governance conditions and a push for redistribution in the face of exploitation have historically been key ingredients in riots and their aftermath. Greater attention must be drawn to the broader domestic politics fueling riots in the present day.

Our main finding from manuscript two does not support the commonly held notion that rising food prices make people desperate, and that higher prices destabilize local economies and undermine local governance. Instead, this manuscript suggests that food riots are a response to a host of local level political “issues rooted in local norms and mores that include political disenfranchise and a sense of outrage over a loss of sovereignty” and a loss of control over local food access (manuscript two). This in-depth country level analysis built on the findings from the broad African continent wide level of analysis contained in manuscript one, and showed the disconnect between the mainstream depiction of the modern food riot and our survey data. Most importantly, we learned that modern food riots were “more of a structural problem than a Malthusian response to overconsumption, or a production problem where countries ran out of food” (manuscript two). This is especially important because it is counter to the argument in the food security literature that suggests we need to produce more food globally and make this food more available in developing countries. In light of my research, this view seems misguided at best. If implemented, it could potentially damage local food systems and food access and undermine healthy diets. To reiterate, our study reveals that many riots at this time of price stress were never simply about food. The rioting crowd presented a much
more encompassing list of grievances where high food prices were just one factor amongst a much broader range of concerns surrounding their survival. The resultant relief measures adopted by both governments have changed diets amongst the urban poor in both cases.

From the two riot manuscripts it can be learned that these episodes of contentious politics used food as a platform to challenge the state (Sneyd et al. 2013; O’Brien 2012). These findings speak to the food security literature and the broader literature on human security as modern riots at times of food stress tend to disrupt and challenge social and political structures. Consequently, our papers contribute to the debate through showing that issues around access to food should be seen as manifestations of insecurities that are much broader than food (see O’Brien 2012). In Haiti and Cameroon the rioting crowds saw in opportunity to take action against the state – and seized it. Our findings ultimately contribute to efforts to expand discussions of ‘security’ “from a focus solely on survival (of states) to both survival and dignity (of human beings)” (Khagram, et al. 2003: 292).

While the focus of the research was not on human security as it was conceptualized or conducted, survival and the human security levels needed to do so emerged as a common thread throughout our data. Survival itself is also a core aspect of the findings and contributions associated with the second principal theme of the research. The survival of particular foods and their associated food cultures continues to be at stake in Cameroon. My research on wild foods documents several aspects of this survival struggle.

**Main findings and theoretical contributions: wild food**

The technical interest in and professional support for the top international staple food crops, markets and exports in the research and literature on African food security “inform[s] nearly all activities in African agriculture” (National Research
This focus is especially apparent in the literature on food riots as staple foods – notably rice, wheat and maize – are often used as a relief measure in post-riot policy and development interventions. Sadly, this focus has gone hand-in-hand with inattention to “Africa’s untamed food resources” (National Research Council 2008: 187). Other researchers have argued that decision makers “should open their eyes to the African bounty” that nourished people, long before the drive to produce more of the same staple food crops (National Research Council 2008: 187; Grivetti and Ogle 2000; Doughty 1979; Herforth 2010). It is here where my research on wild foods makes its first contribution.

The first manuscript in the wild food collection analyzed the ways that wild foods contribute to the food security of urban households in southern Cameroon. This case study documented food consumption patterns in Cameroon after a riot event and the implementation of a rice subsidy policy. This article highlighted the hidden status of wild foods in the discourse around food and nutrition security in that country. The research showed the importance of wild foods in Cameroonian food culture and also the ways in which these understudied foods contribute to greater levels of dietary diversity and to the routine, expected and normal day-to-day culinary life of the country.

Interview and survey data gathered during fieldwork in Cameroon from 2010–2012 built on the findings from the Comprehensive Food Security and Vulnerability Analysis (CFSVA) tool drafted by the World Food Programme (2009; 2011). The article focused on analyzing the consumption of wild food through the use of Olivier de Schutter’s (2010, 2012) framework for analyzing food security. Through applying his approach in a wild food study, I was able to emphasize the physical availability of wild foods; the social, economic and physical access people have to wild foods; and the nutrition, safety and cultural appropriateness or adequacy of these foods in Cameroonian cities.
Theoretically, this article conceptualizes and works to define wild foods in Cameroon in a different way than the commonly held notion of these products are best characterized as NTFPs (Ndoye, et al. 1997; Ingram et al. 2014). Diverting the ontological focus away from NTFPs and situating these products as wild foods, the study was able to show how and why these foods are important to Cameroon's urban food culture today. While many food researchers could argue that these foods are a relic of the past or the desire or an older generation or outdated cultural norms, the survey participants suggested otherwise. These participants instead explained the importance of these foods in the lives and diets of their children and also in the ways in which they buy, prepare and cook foods for their households.

The third manuscript in the thesis draws on the literature that focuses on the human-plant continuum and also the anthropological literature on forest food systems. It shows how local populations perceive the foods they have become accustomed to over time. To reiterate, the survey work here suggests that many in Cameroon are experiencing a nutrition transition out of necessity. The survey and interview data suggest that Cameroonians spend 50%–75% of income on food and that of that figure, 25% is spent on wild food. In the context of higher and more volatile wild food prices that were not subject to government subsidy, many people in the two regions surveyed have adopted coping strategies that do a disservice to their dietary adequacy. High prices and the government’s response to subsidize only staple foods have prevented many from being able to consistently access the kinds of wild foods they want to eat, notably local and wild forest fruits, green leafy vegetables, cocoyams, spices and proteins. Many people surveyed reported that they did not have enough to eat (notably cassava, rice and beef) and that they ate less frequently (about two meals a day) since the price crisis and the government response. The data indicated that the less money households have, the more imported rice is eaten (three to four times a week). However, it is noteworthy that rice is not traditionally seen to be a quality accompaniment to dishes made with wild foods in the HFZ. This reality means that many urban Cameroonians can no
longer afford to eat the foods they have always eaten – and do still want to eat. The empirical evidence suggests that dishes made with wild foods are now eaten primarily on special occasions.

Turning to the paper on wild foods in the humid forest zone, the principal contribution of this work is to inform efforts to better conceptualize the ‘zone’ in human geography. From my research I found that many geographers prioritize the concept of scale in their analyses of space as a means to differentiate between levels or units of analysis. While scale seemed to be useful when working through the riot data, it lacked conceptual robustness vis-à-vis an analysis of the multiple dimensions of wild food marketing and the wild food trade in Cameroon. The zone enables researchers to capture site-to-site networks of locally connected individuals in an already demarcated territories, such as Cameroon’s humid forest zone (Ndoye and Kaimowitz 2000; Perez, et al. 2000; Congo Basin Forest Partnership 2006). The conceptual framework that emerged from a content analysis of scholarly journal articles and also the survey data sought to bring in factors that considered local market practices and also cultural notions associated with this trade.

The proposed conceptual framework for analyses of the zone selected borrows insights from the ways that scale, place and site have been operationalized in human geography. Each of these concepts could be applied to Cameroon’s HFZ. However, attention to the zone as a master concept enables an analysis that takes account of scalar power and politics at the market level, and that also accounts for place-based identity and connections that are often missing in research driven by other concepts on Cameroon’s HFZ. ‘Zoning in’ underscores not only kinship networks and spiritual beliefs, but also the numerous site-to-site connections necessary for the urban wild food trade. My zone framework also considers the ways that women manage their work in the context of crisis and change in the zone. At the same time, the framework accounts for the strategies of negotiation, exploitation and adaptation that are employed during times of crisis and change. The harsh realities many
buyam-sellams face on day-to-day bases in order to make a living from this type of work are exemplified through the voices of the women gathered from the survey data and life history data. While every buyam-sellam draws from their own experience, the similarities of the experience across over 400 individuals (market women and their customers) speaks to the neglect by the state in this system and also the informality of the sector. This manuscript ultimately shows what scholarly attention to the ‘zone’ offers in this case that other spatial concepts do not.

Taken together, the four papers presented in this dissertation draw attention to the need to decenter food from our analysis of riots at times of price stress, and to bring food more fully into discussions of forest products and the social relations and economies linked to forest products. Riots and wild foods have largely escaped the attention of empirical researchers working on Africa’s food security challenges. It is hoped that this dissertation contributes in its own small way to the correction of these silences and oversights. There is still much case study work to be done on both topics in the African context, and it is hoped that some of the contents of this document can help to inform future efforts to make Africa’s food systems work better for Africans and the food preferences and cultural needs they express.

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APPENDIX 1 OUTPUTS IN BLOGS AND THE POPULAR PRESS FROM THIS ANALYSIS (NON PEER-REVIEWED)

A Fieldwork Riot
Lauren Sneyd
19 November 2012
https://feedingninebillion.com/fieldwork-riot

Image 12. The market boss, Yaoundé 2012

I returned to Cameroon in June 2012 to conduct fieldwork for my PhD research on wild food and food security, and also for related research on food riots in Africa. The trade in agricultural products and wild foods in the country is organized around various types of buyers and sellers. In Cameroon pidgin these traders are called buyam-sellams. This is someone who buys something (buyam) and then sells it (sellam) to make a profit. I was spending a lot of time in food markets with my
research assistants talking to women food traders about their businesses: how they make money, how they lose money and the things they think might make their businesses better. In recent years the markets where these women earn their livelihoods have also hosted numerous protests.

On that front, in 2008 and 2011, reports on the food riots that occurred in Africa and throughout the world drew attention to increases in the prices of imported foods and fuel. As food prices rose in 2008, riots in Cameroonian markets paralyzed most major cities including Yaoundé and Douala. Research suggests that the urban poor in Cameroon are particularly vulnerable to food price increases because they spend a disproportionate amount of their income on foodstuffs, usually from 40-75%. The lack of appropriate policies and interventions targeted to helping the urban poor imply that individuals and households tend to cope with the incidence of food insecurity by assembling complex livelihood strategies. Often found in the informal sector, these strategies can involve the buying and selling of food and other household goods, and this 'grey' sector is growing exponentially.

While conducting my fieldwork in June of this year a further outbreak of unrest occurred in one of the largest markets in Yaoundé. Needless to say, I was worried for my own safety, and the safety of my research assistants. Weeks before my arrival, two girls in Mokolo market had been stripped naked and robbed by thieves. The robbers took advantage of the overcrowded market space to rid the girls of their valuable belongings. The same market attracted newspaper attention earlier in the year in March when the Cameroon Tribune published a new 'guide' for the market. The market was described in this publication as a village in miniature. Urban citizens reported to the paper their confusion in trying to navigate their markets, which they considered to have become an increasingly congested and overcrowded space. Viewing this as a further instance of urban disorder, the government subsequently engaged in renewed efforts to clean up the informality that marks commercial activity in Cameroon’s urban areas.
In June while I was conducting my research a large riot took place in Yaoundé that was not related to a rise in food prices. Rather, it was related to the access many vendors did not have to ‘official’ market space to sell their goods. In the largest food market, Mokolo, street hawkers and traders typically overflow out of the structured or regulated market space and consequently, block traffic and sidewalks and create a very chaotic buying and selling environment. A committee backed by the local government had been struck to ‘fight against urban disorder’, and at the time of the riot was attempting to control day-to-day chaos by removing the most marginalized traders from the market: the street hawkers, mobile sellers and day traders. These groups generally do not have formal stalls were they can house their goods, and instead, rely on carrying their goods to the market each day to earn a living. This new committee, with the help of the police, worked to demolish informal stalls and selling spaces with caterpillars, trucks and water cannons and also confiscated the goods that were sold. The confiscated goods were brought to prisons, orphanages or social centres in Yaoundé, or dumped and burned in the city’s refuse site. Many small informal traders had invested their savings in these goods, and were not compensated for their losses.

The Fight Against Urban Disorder had been ongoing since 25 May 2012. As demolitions progressed many people on the street became incensed as regular people’s livelihoods and businesses were greatly impacted – especially those without the means to become ‘formal’ or ‘authorized’ traders. The anger on the streets came to a head on 21 June and resulted in a riot involving teargas and at least one death. Afterwards, the market was closed for a week. The temporary closure of the market was not easy for the traders as they either stayed home waiting for the market to reopen, or out of necessity they moved to other markets to sell their goods. This temporary relocation put pressure on space in other markets of the city. There were even rumors of 'Mokolo Deux' popping up in a different
location of the city with cab drivers knowing exactly where to go and to get around in the ‘new’ Mokolo.

The committee’s ‘solution’ to this disorder was to elect heads of various sections of the market in the hope that greater organization amongst the traders would bring a greater level of civil order to the market. The market re-opened on 29 June, and it is far from certain whether this new organizational structure will bring about positive change. In July, as the new structure of the market was launched, the city council learned not only of the number of hawkers without space (over 1,200), but also their determination to continue in their line of work. Months later in October, the Cameroon Tribune reports that street hawkers (now estimated to number 10,000 city-wide) are still waiting for their new selling locations. Marred by allegations of corruption, the new system seems to be enabling formal (well-connected and well-off) traders to occupy spaces that have been devoted to informal sellers.

It was a real opportunity to experience the riot and its aftermath at close range, and I now feel some responsibility to impart this story. Issues of space and access to markets in cities do have an impact on food security. In this case, food was available and prices remained unchanged but social unrest occurred and the spillover effects impacted other food markets in the city. From my conversations with heads of households and also buyam-sellams I learned that events such as these temporarily increase food insecurity. The unrest in one market impacted sales in all markets as fewer people were visiting markets to buy food. As one female trader told me “I suffer to find food” and another asked, “When I don’t sell, what am I going to eat?”

When space and access issues remain unaddressed, livelihoods can be disrupted, incomes can drop and people have to make extra efforts to safely secure foodstuffs. This might mean walking great distances to other neighbourhood markets or simply not buying food and relying on whatever they can find at home. This case is interesting as it exposes additional factors beyond price and food availability that impact the realization of food security in urban environments. I will return to
Cameroon in December 2012 to gather more data on wild foods and food riots during the dry season. I am looking forward to re-visiting these markets and talking to friends and buyam-sellams about any changes, positive or negative they have experienced in the last few months.

Image 13. The big boss, Lauren Sneyd and a prominent wild food seller, Yaoundé 2012
**Edible Insects and Food Security**

Lauren Sneyd  
17 May 2013


16 May 2013 was a big news day for my research on wild food and food security in the forest zone of Cameroon. It marked the launch of the FAO's *Edible Insects: Future Prospects for Food and Feed Security* report and the close of the International Conference on Forests for Food Security and Nutrition at the FAO headquarters in Rome. I was not there; instead I was digesting the North-South Institute's Conference on Governing Natural Resources in Africa held in Ottawa a few days before. These conferences are drawing our attention to the significance of the Earth's resources in our lives – whether they are as small as an insect or as large as a mining deposit. Africa's role in this narrative is paramount. For example, the Congo Basin is the world's second largest tropical forest after the Amazon. The demand for natural resources are high as the region holds wood, oil and minerals such as diamonds, gold and coltan.

From my research I could tell many stories about this demand. But as I am sitting here reading over *Edible Insects*, I can think of one that is the most relevant. First I suggest you watch this [BBC news clip](https://www.bbc.com). I am most excited about this clip because it actually focuses on wild foods and wild food vending in Cameroon, which are at the core of my research. The caterpillars (*Rhynchophorus phoenicis*) that you see in this clip made it on to my plate one night for dinner last year (pictured below). In terms of taste, the head of the caterpillar is crunchy and satisfying as you munch and chew through the body. My caterpillar meal was one of my fondest food memories in Cameroon. That night I listened to many stories about food from the forest, and about the comedies associated with ordering *trois insectes* pizza in Gabon.

The caterpillars in the video and pictured below grow and mature in the top of palm fronds where they are harvested. They are then sold by street vendors such as the
one interviewed in the BBC clip and in city markets. Some Cameroonians will not eat
them because of 'the way they look in the palm'. Others buy and prepare these grubs
often for their families. From my survey on households during the wet season in
Yaoundé, 20% of households interviewed reported eating caterpillars as a type of
wild food bought and prepared in their home (among many other wild foods
including termites and large forest snails). A few families even reported that
caterpillars were their children's favourite meal. As we are nearing the harvest of
les chenilles during the short dry season from July-August, the markets around
Yaoundé will begin offering these seasonal delicacies again.

The FAO's *Edible Insect* report and conference on Forests for Food Security and
Nutrition has been a long time coming. The last time food and forests headlined a
major multilateral gathering was in April 1985 as part of the overall theme for what
was then the international *Year of the Forest*. Forestry has been a core focus of the
FAO's work, although the bulk of this has honed in on sustainable forest
management and livelihoods and not on wild food. Renewed attention to the
contributions forests make to food security is not misguided. As global food prices
remain volatile, relying on the world market for national food security may not be a
stable priority for forested countries that rely on food imports. It is refreshing to see
the food security dialogue opening up to include edibles beyond 'staple' foods.
Learning about and promoting the traditional foods that people have relied on in
good times and in bad is paramount to understanding experiences of food security
and insecurity. Often times, those same foods compliment staple foods in more ways
than we can imagine.
Will it be Famine or Feast for Africa as Big Food Retailers Look to the Continent?

Multinationals such as Walmart and Carrefour could easily deal a blow to smaller traders and markets in Africa. But if they choose to work with local firms, they could be a blessing.

With Africa’s middle-classes growing and its urban populations expanding, it is little wonder more and more international retailers are looking to the continent in the hope of finding new markets, new consumers, and new profits. One of the latest – and potentially most significant – new frontiers in this burgeoning trend is food. The race to control the future of food consumption in Africa is well and truly on. In 2011, Walmart led the charge as it acquired the South African-based Massmart. And last year, French hypermarket multinational Carrefour revealed its own intentions for the continent when it inked a joint venture with CFAO, a well-established international goods distributor which specialises in Africa.

Furthermore, last month, the London-based equity firm Actis revealed that it had set aside over $500 million for property development in Ghana and Nigeria, much of it specifically for Western-style malls which would almost certainly contain food supermarkets. Meanwhile many other investors – such as AfricInvest, Agora, Cauris Management and Helios – have expressed an interest in financing African food retailers as they try to respond to new competition.

In assessing what this wave of interest could mean for Africa, it’s worth looking to the experience of the US, as painstakingly detailed by John Kenneth Galbraith.
his point of view, the move to larger retail formats in the US was fundamentally rooted in an effort to 'countervail' or counteract the pricing power of manufacturers. By growing into large chains and buying in bulk, Galbraith noted that food retailers were able to challenge the market power of their suppliers. This meant that food prices for consumers dropped, but in the process, smaller 'mom and pop' stores and public food markets were largely condemned to the dustbin of history.

Now with big food retailers looking to repeat their successes as they expand into Africa, the local entrepreneurs and small and medium enterprises (SMEs) currently at the heart of African food retailing could be similarly under threat. But, thankfully, this fate is not written in stone. In fact, new entrants to the African food market today have an unprecedented opportunity to reinforce the capacity of local players. While they cannot be expected to save Africa’s farmers markets, big food sellers could transform food distribution in ways that buttress employment generation and Africa’s food cultures. But to do so they will need to treat the mass market as a genuine source of both demand and supply.

**In the market**
African traders who get food to the masses in big cities often have to navigate a treacherous road, both literally and figuratively. Market infrastructure, for example, tends to be exceedingly poor. Rickety stalls, cramped quarters and deficiencies in the provision of cold storage, maintenance, power, sanitation and water services complicate life for food traders. Where and when these poor conditions predominate, food safety is a major concern.

Another set of challenges derives from the fact that many food suppliers remain small-scale and tend to be unregistered or informal. As such, they typically lack access to the level of credit necessary to re-invest in their businesses or to correct market failures. For example, few have access to the funds necessary to combat the perishability of fresh produce through investing in processing and preservation. The
informality of these markets also works against the expansion of the tax base, which means those charged with governing markets have few incentives to devote resources to improve food market infrastructure.

At the same time, however, it is important to stress that public markets can also be sources of empowerment and belonging, as we found in our research in Cameroon. They are sites of cultural interaction where recipes based on locally-sourced products are shared and social support networks are built. Women in particular have reaped significant economic benefits from the massive growth of market-based entrepreneurship opportunities. Many in Cameroon chose to become so-called buyam-sellams out of necessity but now wish to build their quick and flexible money-making strategies into long-term businesses.

**Which way will the cookie crumble?**

There is little doubt that the entry of big food retailers risks dousing these sparks of entrepreneurial desire.

If big retailers become powerful enough, they could choose to stock shelves with cheaper foreign products than those made locally. Employment generation and industrial development would necessarily suffer. Similarly, if market landscapes came to be dominated by individual retail giants, those firms could employ their power to control the prices they charged. A singular drive for profit could contribute to food price inflation, while if competition persisted, these firms could easily use discount strategies to undercut public markets.

The power that retailers could exercise over their suppliers could be equally problematic. Insisting producers apply universal quality standards could make local businesses unviable. And if at the same time, big retailers used their control over consumer choice to push their customers to buy cheap foreign snacks, the diversity of diets and food cultures could suffer.
Fortunately though, these dystopian outcomes are not foreordained. By contrast, food retailing could be a powerful generator of African development. The scaled up provision of finance could build the capacity of SMEs to help them provide consumers with the local products they demand. Funds to establish new facilities for the drying, freezing, processing or packaging of foods such as wild greens, spices and mangos so they meet global standards could create jobs. Investments in animal domestication and husbandry for popular sources of protein, including cane rats, caterpillars and snails, could similarly yield enhanced sustainability. And moves by grocery chains to consistently stock these products could be a source of stability and dynamism for local suppliers.

In the West, nobody stopped to ask if retailers should be organise and expand to fight the power of the manufacturers. By contrast in Africa, we can be glad that nobody is going to stop civil society and NGOs from asking pointed questions about the continent’s increasing reliance on big retail and what it will mean for local enterprises.

As occurred in Canada, the biggest players in this industry might eventually come to be some of the continent's biggest formal employers. If or when they do, the key will be to ensure that they generate a net positive impact on locally-oriented businesses and on the availability and accessibility of the foods that African families currently love to eat.
APPENDIX 2 SURVEYS USED IN THE STUDY

Market Wet Season: French Survey

Wild Food and Food Security Project

Questionnaire 1 Cibles: Vendeur (ses)

Date de l’enquête……………………Nom de l’enquêteur………………………………………
Nombre d’années dans la profession de vendeur (se)………………………………………………
Nom du marché……………………Localisation géographique…………………………………………
Justification du choix de ce marché par le vendeur………………………………………………
……………………………………………………………………………………………………………………
Journées d’ouverture du marché…………………………………………………………………………
……………………………………………………………………………………………………………………
Questionnaire No…………………………………………………………………………………………

1. Identification et Caractéristiques Individuelles
Nom…………………………………………..Sexe : femme……..homme……………….
Age……Statut Matrimonial : marié(e)…célibataire…..région
d’origine………………..
Localisation du comptoir : entrée……centre…….périphérie……
Qualité : vendeur permanent……..vendeur occasionnel… vendeur mobile……
Justification de la
Qualité……………………………………………………………………………………………………
………………………………………………………………………………………………………………
Statut corporatiste : (a) spécialisé(e) dans un seul produit………
(b) spécialisé (e) dans plusieurs produits……
Si (a) : lequel ? ………………………………………………………………

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**Si (b):** lesquels ?

1 ................................................... 2 ................................................... 3 ................................................... 

4 ................................................... 5 ................................................... 6 ...................................................

3. **Information Ecologique et Economique**

**Type de produits:** herbes……plantes sauvages……lianes……écailles……

produits fauniques……tiges d’arbustes……racines……

graines……amandes……autres……………………………………

**Noms locaux (L) et communs (C)**

1. (L) .............................................................................................
   (C) .............................................................................................

2. (L) ............................................................................................. (C) .............................................................................................

3. (L) .............................................................................................
   (C) .............................................................................................

4. (L) ............................................................................................. (C) .............................................................................................

5. (L) ............................................................................................. (C) .............................................................................................

6. (L) ............................................................................................. (C) .............................................................................................

**Origine géographique des produits**

*Région* ………*département* ………*village* ………

**Stratégie d’approvisionnement:** sur site… à travers les *buyam-sellam* (grossistes)….

les deux….autre……………………………………

**Statut du produit**

Sauvage……domestique……cultivé……

**Utilisation**

Aliment de base……condiment……médecine……esthétique……aphrodisiaque…
Autre……………………

Stratégie de conditionnement
Vendu à l’état naturel……...
Vendu transformé.........
Vendu frais...................
Autre......................

Période de disponibilité du (des) produit(s)
Produit 1: J…F…M…A….M…Jn…Jl…A…S….O…N…D….
Produit 2: J…F…M…A….M…Jn…Jl…A…S….O…N…D….
Produit 3: J…F…M…A….M…Jn…Jl…A…S….O…N…D….
Produit 4: J…F…M…A….M…Jn…Jl…A…S….O…N…D….
Produit 5: J…F…M…A….M…Jn…Jl…A…S….O…N…D….
Produit 6: J…F…M…A….M…Jn…Jl…A…S….O…N…D….
En cas de raréfaction, dire
pourquoi?.................................................................
........................................................................
........................................................................
Prix d'achat (CFA)
Unité (kilogramme ; par mesurette (sac, seau, assiette, bol, verre, cuillerée ...);
par poignée ; par quantité numérique).
Produit 1. unité.........................prix...........
Produit 2 : unité.........................prix...........
Produit 3 : unité.........................prix...........
Produit 4 : unité.........................prix...........
Produit 5 : unité.........................prix...........

Produit 6 : unité…………………….prix…………

**Prix de vente (CFA)**

*Unité (kilogramme ; par mesurette (sac, seau, assiette, bol, verre, cuillerée ...) ; par poignée ; par quantité numérique).*

Produit 1 : unité…………………….prix…………
Produit 2 : unité…………………….prix…………
Produit 3 : unité…………………….prix…………
Produit 4 : unité…………………….prix…………
Produit 5 : unité…………………….prix…………
Produit 6 : unité…………………….prix…………

**Profitabilité**

Combien gagner vous ?

Par jour………
Par semaine…..

Vous vendez : toute la semaine...... quelques jours de la semaine......

Vendez vous plus que par le passé ? oui.....non......

Pourquoi ?................................................................................................................
................................................................................................................
................................................................................................................
................................................................................................................

4. **Aspects Administratifs et Réglementaires**

Connaisssez-vous une réglementation sur le (s) produit (s) que vous vendez ?

Oui......non......

Si oui, que dit-elle ?...........................................................................................................
Si non, pourquoi ?

Quels sont les services administratifs qui contrôlent votre activité et les produits ?

1. Domaine de compétences

Problèmes de collaboration
i)
ii)
iii)

Solutions préconisées
i)
ii)
iii)

2. Domaine de compétences
Problèmes de collaboration
i)
ii)
iii)
Solutions préconisées
i)
ii)
iii)

3

Domaine de compétences

5. Questions Ouvertes (Additionnelles)
Quels sont les grands problèmes que vous rencontrez au marché ?

A. Avec les administrations publiques
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
3……………………………………………………………………………………………………
Discutez-vous de ces problèmes avec ces administrations ? oui...non......
Trouvez-vous des solutions ? oui...non....
Etes-vous satisfait de ces solutions ? oui...non....
Si non, que préconisez-vous comme solutions ?
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
B. Avec les autres vendeurs (ses)
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
3……………………………………………………………………………………………………
Discutez-vous de ces problèmes entre vous ? oui...non......
Trouvez-vous des solutions ? oui...non....
Etes-vous satisfaite(s) de ces solutions ? oui...non....
Si non, que préconisez-vous comme solutions ?
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
C. Avec les clients (es)
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
3……………………………………………………………………………………………………
Discutez-vous de ces problèmes avec elles? oui....non......
Trouvez-vous des solutions ? oui...non....
Etes-vous satisfaite(s) de ces solutions ? oui... non....

Si non, que préconisez-vous comme solutions ?

1. ..............................................................................................................................................

2. ..............................................................................................................................................

Y a-t-il des périodes/mois de l’année où vous faites plus de bénéfices ?

oui... non....

Pourquoi ?

..............................................................................................................................................

..............................................................................................................................................

Est-ce qu’il y des périodes où les consommateurs/clientes se plaignent des pénuries des produits à usage alimentaire ?

Oui... non....

Quel type de personnes se ravitaille dans votre comptoir /marché?

Les riches... les gens moyens... les pauvres....

Par quoi les reconnaîssez-vous ?

1. ..............................................................................................................................................

2. ..............................................................................................................................................

Que payent les riches comme produits alimentaires ? ........................................................................

..............................................................................................................................................

Que payent les gens moyens ? ........................................................................................................

..............................................................................................................................................

Que payent les pauvres ? .............................................................................................................
Au cas où vous vendez des produits à utilisation alimentaire, pensez-vous que ces produits assurent bien de ravitaillement des ménages en nourriture ?
Oui... non...

Est-ce que les besoins en alimentation de la population sont satisfaits par votre marché ? oui... non....

Pourquoi ?........................................................................................................................................

.................................................................

Est-ce que il y a des périodes où il y a une flambée des prix ? oui... non....

Pourquoi la flambée des prix ?...........................................................................................................

.................................................................

Qui décide du changement des prix ?.............................................................................................

Vous arrive-t-il de faire des pertes dans votre activité ? oui... non......

Y a-t-il des marchés où on vend plus que dans le vôtre ? oui... non......

Si oui, lesquels....................................................................................................................................

Pourquoi ?........................................................................................................................................

Y a-t-il des périodes où les prix sont élevés là où vous vous approvisionnez ?
Oui.... non....

Si oui,
pourquoi ?........................................................................................................................................

.................................................................

Que faites vous dans ce cas ?.............................................................................................................

.................................................................

Comment les consommateurs réagissent-ils face à la hausse des prix ?
Est-ce que la hausse des prix de vos produits sur le marché a des conséquences sur la ration alimentaire chez vous à la maison ? oui... non...
Si oui, lesquelles
1............................
2.............................
Consommez-vous vos produits dans votre alimentation à la maison ?
oui... non...
Si oui, lesquels ?
1.............................
2.............................
3.............................
4.............................
5.............................
Si non,
pourquoi ?..............................................................
..............................................................
..............................................................
Comment réagissez-vous lorsqu’il y a pénurie des produits que vous consommez à la maison ?
..............................................................
Est-ce que les produits que vous vendez sont autant essentiels pour votre alimentation que les autres produits de marché (riz, plantain, manioc,...) ?
oui... non...
Pourquoi ?................................................................................................................
................................................................................................................
................................................................................................................
Quelles sont les conséquences de la hausse des prix de ces produits ci-dessus dans votre ménage ?................................................................................................................
................................................................................................................
................................................................................................................
Quelles sont les conséquences de la hausse des prix de ces produits ci-dessus sur vos propres produits ?................................................................................................................
................................................................................................................
................................................................................................................
Est-ce que la commercialisation de vos produits a des effets sur l’état de la forêt ?
Oui…… non……
Si oui, lesquelles ?
1..............................
2..............................

7. Sociologie et Politique de la commercialisation des produits
Est-ce que vous avez une organisation interne pour les vendeuses ?
Oui... non…
Si oui, quel type d’organisation ?
Un syndicat... une coopérative... une association reconnue... une association non reconnue... un groupe d’initiative commune... une tontine….
Quel est le but de cette organisation ?

Est-ce que vous décidez souvent de grever ? oui... non...

Pourquoi ?

Si oui, comment est prise la décision ?

Est-ce que les grèves des vendeuses des autres produits affectent votre activité ?

Oui... non.....

Y a-t-il déjà eu une émeute ici ou une intervention des forces de l’ordre ?

Oui... non.....

Si oui, comment a réagi votre groupe de vendeuses ?

Quelles sont les conséquences des émeutes et de la fermeture du marché sur votre activité ?

Quelles sont les conséquences des émeutes et de la fermeture du marché sur les consommateurs ?
Quelles sont les conséquences des émeutes et de la fermeture du marché sur l'alimentation chez vous?

Est-ce que vous vendez les PFNL en fonction du niveau de vos revenus ?
oui... non....

Pourquoi ?

Pourquoi dit-on qu'il y a des nourritures de « riches » et des nourritures de « pauvres » ?

Quelles sont, selon vous, les nourritures des « riches » dans votre marché ?
1. 
2. 
3. 
4.
Quelles sont, selon vous, les nourritures des « pauvres » dans votre marché ?

1. 
2. 
3. 
4. 
5. 
6. 

Pourquoi achetez-vous vos produits alimentaires dans tel ou tel marché ?

1. 
2. 
3. 
4. 
5. 
6. 

Quels sont les produits alimentaires qui vous permettent de dire que vous avez la sécurité alimentaire ?

1. 
2. 
3. 
4. 
5. 

Les émeutes dans les marchés influencent-elles votre ravitaillement en produits alimentaires ? oui… non…

Pourquoi ?
Que pensez-vous des tracasseries administratives et policières dont se plaignent les vendeuses ?

Pensez-vous que les PFNL que vous payez pour votre alimentation sont capables d'assurer la sécurité alimentaires dans votre ménage ? oui... non.....

Pourquoi?

Que pensez-vous des produits alimentaires importés ?

Ces produits menacent-ils votre activité ? oui... non....

Pourquoi?

Lesquels de ces produits sont plus accessibles financièrement (pour vous) que les produits locaux ?

1. ..............................................

2. ..............................................
3………………………………………
Pensez-vous que les produits alimentaires importés peuvent assurer la sécurité alimentaire dans la majorité des ménages de la ville de Yaoundé?
oui...non....
Pourquoi?
..................................................................................................................................................
..................................................................................................................................................
..................................................................................................................................................
..................................................................................................................................................
Y a-t-il un lien entre la stabilité sociale et la sécurité alimentaire dans les ménages de la ville de Yaoundé? oui... non....
Pourquoi?
..................................................................................................................................................
..................................................................................................................................................
..................................................................................................................................................
..................................................................................................................................................
Prenez un exemple dans l’histoire récente où les problèmes de sécurité urbaine ont agi négativement sur la sécurité alimentaire dans les ménages?
..................................................................................................................................................
..................................................................................................................................................
Quelles ont été les conséquences?
1..................................................................................................................................................
..................................................................................................................................................
2..................................................................................................................................................
..................................................................................................................................................

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Avez-vous un champ pour assurer la sécurité alimentaire chez vous ?

oui....non....

Pourquoi ?

............................................................................................................................
............................................................................................................................
............................................................................................................................

Si oui, quelles cultures y trouve-t-on ?

1. ......................................................

2. ......................................................

3. ......................................................

4. ......................................................

5. ......................................................

6. ......................................................
Household Wet Season: French Survey

Wild Food and Food Security Project

Questionnaire 2 Cibles: Acheteuses (res)

Date de l’enquête…………………………...Nom de
l’enquêteur………………………………………..
Quartier de l’Enquêtée……………………………………………….
Nom du marché/des marchés
fréquentés…………………………………………………………
………………………………………………………………………………
……………………
Justification du choix de ce(s) marché
(s)…………………………………………………………..
………………………………………………………………………………
……………..Questionnaire
No……………………Date…………………Enquêteur…………………..

1. Information Sociale

Sexe : Homme... Femme...……Tranche d’âge...........
Occupation...............Estimation de la classe sociale :
riche...moyen......pauvre......
Taille ménage... enfants de sexe masculin... enfants de sexe
féminin... dépendants ....
2. Information Economique

Type de PFLN achetés
1..................................................2..................................................3..................................................4..................................................5..................................................6..................................................

PNFL consommés comme aliments
1..................................................2..................................................3..................................................

Achetez-vous toujours chez la même personne? oui….non...

Pourquoi ?................................................................................................................
................................................................................................................
................................................................................................................

Quel est le pourcentage de vos revenus mensuels investi dans la nourriture ?

Plus de la moitié... la moitié... le tiers... le quart... le cinquième...

Quel est le pourcentage de cette somme qui est investi dans les PNFL à usage alimentaire? 

Plus de la moitié... la moitié... le tiers... le quart... le cinquième...

Quels plats préparez-vous avec les PFNL ?

1...........................................................................................................

2...........................................................................................................

3...........................................................................................................

4...........................................................................................................

5...........................................................................................................

6...........................................................................................................

Qui s’occupe de la préparation des repas dans votre ménage ?
Quels sont les plats préférés de votre ménage ?
1 .................................................................
2 .................................................................
3 .................................................................
4 .................................................................
5 .................................................................
6 .................................................................
Lesquels de ces plats sont à base des PFNL ?
1 .................................................................
2 .................................................................
3 .................................................................
4 .................................................................
Combien vous coûte la préparation de votre plat préféré à base de PNFL ?
..............................................................................................................
Combien de fois le mangez vous par semaine ? .... par mois ? .......
Comment le préparez-vous (techniques et ingrédients) ?
..............................................................................................................
..............................................................................................................
..............................................................................................................
..............................................................................................................
..............................................................................................................
Quels plats à base de PNFL mangez-vous le plus fréquement ?
1 ................................................................. Coût .........................................
2………………………………………………. Coût…………………………
3………………………………………………. Coût…………………………
Combien de repas (à base de toute sorte de produits) sont en général pris dans votre ménage par jour? Un....deux....trois.....
L’équilibre alimentaire de votre ménage est-il rompu lorsqu’il y a rareté des PNFL à usage alimentaire ? oui... non....
Pourquoi ?.................................................................................
................................................................................................................
................................................................................................................
................................................................................................................
................................................................................................................
Quels sont les plats préférés de vos enfants ?
1.................................
2.................................
3.................................
4.................................
5.................................
Vos revenus vous permettent-ils de les leur procurer ? oui.... non....
Quelles sont les sources d’énergie ? le gaz... le pétrole... le bois de feu... le charbon....
Combien dépensez vous pour l’énergie par jour......... semaine.........mois............... 
Provenance de l’eau de cuisson ? eau domestique... source publique... puits.... rivière...
Vos revenus vous permettent-ils d’assurer l’alimentation de votre ménage ? oui... non...
Vos relations familiales vous soutiennent-elles pour l’alimentation de votre ménage ?
Oui…… non…..parfois……

Si oui ou si parfois, quelle est la périodicité ? chaque semaine… trois fois par mois… deux fois par mois….une fois par mois…..
Soutenez-vous vos relations familiales dans l’alimentation de leurs ménages ?
Oui…… non….parfois….

Quelle périodicité ? chaque semaine… trois fois par mois… deux fois par mois….une fois par mois…..

Quels produits/plats recevez-vous de vos relations ?
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
3……………………………………………………………………………………………………
4……………………………………………………………………………………………………

Quels produits/plats donnez-vous à vos relations ?
1……………………………………………………………………………………………………
2……………………………………………………………………………………………………
3……………………………………………………………………………………………………
4……………………………………………………………………………………………………

Avez-vous des interdits alimentaires? oui….non…. 
Si oui, lesquels ?
1…………………………………………………..
2…………………………………………………..
3…………………………………………………..
Que faites vous lorsque vos revenus ne vous permettent pas d’acheter les produits de base de votre alimentation ou les produits de vos plats préférés ?

Que faites vous lorsque les prix de vos produits préférés sont en hausse ?

Quels sont les produits alimentaires qui vous prennent le plus d’argent ?

Quels sont les produits alimentaires qui vous prennent le moins d’argent ?
1……………………………………………………………………. Coût…………………………
2……………………………………………………………………. Coût…………………………
3……………………………………………………………………. Coût…………………………
4……………………………………………………………………. Coût…………………………
5……………………………………………………………………. Coût…………………………

Qu’achetez-vous lorsque les prix sont haussés ?
1……………………………………………………………………. Coût…………………………
2……………………………………………………………………. Coût…………………………
3……………………………………………………………………. Coût…………………………
4……………………………………………………………………. Coût…………………………
5……………………………………………………………………. Coût…………………………

Qu’achetez-vous lorsque les prix sont bas ?
1……………………………………………………………………. Coût…………………………
2……………………………………………………………………. Coût…………………………
3……………………………………………………………………. Coût…………………………
4……………………………………………………………………. Coût…………………………
5……………………………………………………………………. Coût…………………………

Combien vous coûte la préparation des plats les plus chers consommés dans votre maison ?

........................
De quoi est-il composé ?

1……………………………………….

2……………………………………….

3……………………………………….

4……………………………………….

Combien de fois le mangez vous par semaine ? …… par semaine ?..........par mois........

Combien vous coûte la préparation des plats les plus moins consommés dans votre maison

1……………………………………….

2……………………………………….

3……………………………………….

4……………………………………….

Combien de fois le mangez vous par semaine ? …… par semaine ?..........par mois........

3.

**Sociologie et Politique de la Consommation**

Est-ce vous vous achetez et consommez et PFNL dans votre ménage en fonction du niveau de vos revenus ? oui...non....

Pourquoi ?................................................................................................................................................

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Pourquoi dit-on qu’il y a des nourritures de « riches » et des nourritures de « pauvres »?
Quelles sont, selon vous, les nourritures des « riches » dans votre marché ?
1………………………………………………….
2…………………………………………………
3…………………………………………………
4…………………………………………………
5…………………………………………………
6…………………………………………………

Quelles sont, selon vous, les nourritures des « pauvres » dans votre marché ?
1………………………………………………….
2…………………………………………………
3…………………………………………………
4…………………………………………………
5…………………………………………………
6…………………………………………………

Pourquoi achetez-vous vos produits alimentaires dans tel ou tel marché ?

Quels sont les produits alimentaires qui vous permettent de dire que vous avez la sécurité alimentaire ?
1………………………………………………….
Les émeutes dans les marchés influencent-elles votre ravitaillement en produits alimentaires ? oui... non....

Pourquoi ?.........................................................................................................................
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Que pensez-vous des tracasseries administratives et policières dont se plaignent les vendeuses ?
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Pensez-vous que les PFNL que vous payez pour votre alimentation sont capables d’assurer la sécurité alimentaires dans votre ménage ? oui... non.....

Pourquoi ?
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........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Que pensez-vous des produits alimentaires importés ?
Lesquels de ces produits consommez vous régulièrement ?
1……………………………………..
2…………………………………….
3……………………………………
4……………………………………
5……………………………………
6……………………………………

Lesquels de ces produits sont plus accessibles financièrement (pour vous) que les produits locaux ?
1………………………………………..
2……………………………………….
3………………………………………

Pensez vous que les produits alimentaires importés peuvent assurer la sécurité alimentaire dans la majorité des ménages de la ville de Yaoundé ? oui....non....

Pourquoi ?

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……………………………………………………………………………………
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Y a-t-il un lien entre la stabilité sociale et la sécurité alimentaire dans les ménages de la ville de Yaoundé? oui... non...

Pourquoi ?


Prenez un exemple dans l'histoire récente où les problèmes de sécurité urbaine ont agi négativement sur la sécurité alimentaire dans les ménages ?


Quelles ont été les conséquences ?

1. 


Avez-vous un champ pour assurer la sécurité alimentaire chez vous ?

oui... non...

Pourquoi ?


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Si oui, quelles cultures y trouve-t-on ?
1
2
3
4
5
6

Le repas préparé le plus? ________________________________ Servi avec ________________ Combien cela coût d'un repas?
_______________________________ CFA
Combien de fois mangez-vous? ________ Par jour; ________ une semaine; ________ un mois, ou une année ________ Comment avez-vous apprendre à le faire? __________________________________________

Qu'est-ce que repas préféré de votre famille?
_______________________________ Servi avec ____________________________
Combien cela coût d'un repas? _____________________________ CFA
Combien de fois mangez-vous? ________ Par jour; ________ une semaine; ________ un mois, ou une année ________ Comment avez-vous apprendre à le faire? __________________________________________
Le moins cher repas? _______________________________ Servi avec _______________________________
Combien cela coût d'un repas? _____________________ CFA
Combien de fois mangez-vous? _______ Par jour; _______ une semaine; _______ un mois, ou une année _______. Comment avez-vous apprendre à le faire? _______________________________________
Comment faites-vous préparer? Décrire la technique et les ingrédients.
Le repas le plus cher? _______________________________ Servi avec _______________________________
Combien cela coût d'un repas? ______________________ CFA
Combien de fois mangez-vous? _______ Par jour; _______ une semaine; _______ un mois, ou une année _______. Comment avez-vous apprendre à le faire? _______________________________________
Comment faites-vous préparer? Décrire la technique et les ingrédients.
Market Wet Season: English Survey

Wild Food and Food Security

Location of marketplace: ___________________________ Days of operation: __________

Researcher: __________________________ Collection number: __________ Date: __________

1. INFORMATION ON THE VENDOR

Name: __________________________ Location in market: __________________________

Type of vendor: Permanent Stall Temporary Stall Mobile

Village of Vendor: _________________ Gender: Male Female Estimated

Age: _____

How often do you sell here? _________________ In other markets? _________________

How long have you been selling? _____ years Who taught you to sell things? _________________

# of species for sale: single or a COMBINATION of _______ plants ______ products

What is currently sold:
__________________________________________________________

Sold in dry season:
__________________________________________________________

(Note: If vendor sells more than one NTFP, please fill in section below for each product)

2. INFORMATION ON A FOOD PRODUCT FROM THE FOREST FOR SALE

Local name: __________________________ Any other name:

________________________________

Type: __________________________ Where is it from?

________________________________

Cultivation status: cultivated managed wild other:

________________________________ 365
How is it transported? ______________

Is it? food medicine condiment

Marketing status: gathered by vendor resold other: 

____________________

Condition of plant/product: fresh dried preserved in

____________________

What do you do to this product before selling it?

______________________________

Price CFA/unit ________________ How much is sold?

______________________________

How much is earned? ______________ CFA in: a week a day or a month

Brought to market: daily weekly on occasion

Estimated quantity: vendor ______________ whole market

______________________________

Available: jan feb mar apr may jun jul aug sep oct nov dec

How much sold now compared to the past? more same less

Why? less available for harvest less demand by buyers other:

______________________________

Use/preparation:

______________________________

Part used:

______________________________

Names of other ingredients:

______________________________

How is perishability managed?

______________________________

Storage?

______________________________
3. OPEN-ENDED QUESTIONS
1) What are your biggest problems in the market?

2) How do you make money?

3) How do you lose money?

4) What might make your business better?

5) When prices are high, what do you do?

6) When prices are high, what do your customers do?

7) If you won money, what would you do? (Would you continue to sell?)

Comments on the forest:
__________________________________________
Household Wet Season: English Survey

Wild Food and Food Security

Location of household: ____________________________
Contacted how: ____________________________
Researcher: ____________________________ Collection number: ____________
Date: ____________

INFORMATION ON THE INDIVIDUAL AND HOUSEHOLD

Gender: Male   Female   Estimated Age: _____   Where they are from: ____________________________

Employment: _______   Edu: _______   Family assets: ____________________________

Size of household: _______ # Children _______ #Males _______ #Females _______

What market do you do your food shopping?
________________________________________

Why?
________________________________________________________________________________________

Do you buy your foods from the same person/same stall? Yes   No

Why?

How much of your income do you spend on food? _________% OR _________ amount

Who cooks for your family? ____________________________ How often?

Where do you get the water to prepare and cook the food for your family?

Type of fuel used to cook: _______ Where do you get it? _______ Price:

How many meals eaten in a day? _______ Other family members: more   less   same
Do members of your family give you or your family food? Yes  No  Sometimes
Do you give member of your family food? Yes  No  Sometimes
What foods are commonly exchanged?
____________________________________________________________
What foods are commonly shared
____________________________________________________________
What foods do your children like to eat?
____________________________________________________________
Dietary restrictions: _________________________________ Taboos:
_______________________________________________________
What do you do when you don’t have enough food, and don’t have enough money to buy food?
____________________________________________________________
What do you do when food prices are high?

What food do you spend the most on?
____________________________________________________________
The least on?
____________________________________________________________
Do you buy more or less vegetables when prices are high?  More  Less
  Same
Do you buy more or less meat when prices are high?  More  Less
  Same
Do you buy more or less fish when prices are high?  More  Less  Same
How often do you cook at home? ___ times a day; _____ a week; _____ a month; or _____ a year
How often do you eat out? ___ times a day; _____ a week; _____ a month; or _____ a year
Does your family grow food? Yes  No  What foods?
_____________________________________________

INFORMATION ON MEALS
What is your family’s favourite meal? _______________ Served with
_________________
How much does this meal cost? ______________ CFA
How often do you eat it? _____ times a day; _____ a week; _____ a month; or _____ a year
How did you learn how to make it? ________________________________
How do you prepare it? Describe techniques and ingredients.

The meal prepared the most? ____________________________ Served with
_______________
How much does this meal cost? ______________ CFA
How often do you eat it? _____ a day; _____ a week; _____ a month; or _____ a year
How did you learn how to make it? ________________________________
How do you prepare it? Describe technique and ingredients.

The cheapest meal? ________________________________ Served with
_______________
How much does this meal cost? ______________ CFA
How often do you eat it? _____ a day; _____ a week; _____ a month; or _____ a year
How did you learn how to make it? ________________________________
How do you prepare it? Describe technique and ingredients.
The most expensive meal? __________________________ Served with

How much does this meal cost? ________________ CFA

How often do you eat it? ______ a day; ______ a week; ______ a month; or ______ a year How did you learn how to make it? _______________________________

How do you prepare it? Describe technique and ingredients.

What foods do you consider to be wild/from the bush?

________________________________________

What foods do you consider to be cultivated or planted?

________________________________________

Which does your family prefer?

________________________________________
Market Dry Season: French Survey

Aliments Sauvages et de Sécurité Alimentaire (Saison Sèche)

Questionnaire 1 Cibles: Vendeur (ses)

Date de l’enquête…………………………Nom de
l’enquêteur……………………………………

Questionnaire
No…………………………………………………………………………..

Nom du marché…………………………… Localisation
géographique……………………………

Justification du choix de ce marché par le
vendeur…………………………………………………………………………..

…………………………………………………………………………..

Journées d’ouverture du
marché…………………………………………………………………..

Vous vendez : toute la semaine…… quelques jours de la semaine……

2.   Identification et Caractéristiques Individuelles

Sexe : femme………… homme…………… Age: ……..

Statut Matrimonial : marié(e)... célibataire…. Région
d’origine…………………. 

Localisation du comptoir : entrée… centre…… périphérie……

Nombre d’années dans la profession de vendeur
(se)…………………………………………

Qui vous a appris à vendre? ………………………………………………

Qualité : vendeur permanent…… vendeur occasionnel… vendeur
mobile……
Justification de la
Qualité.................................................................
........................................................................
Statut corporatiste : (a) spécialisé(e) dans un seul produit........
(b) spécialisé (e) dans plusieurs produits......
Si (a) : lequel ? .................................................................
Si (b) : lesquels ?
1. ........................................................................
2. ........................................................................
6. .................................................................
7. .................................................................
8. .................................................................
9. .................................................................

Origine géographique des produits
Région.............. départememt.........................
village........

Stratégie d’approvisionnement : sur site...... à travers les buyam-sellam
(grossistes)...... les deux...... autre.................................

Comment sont vos marchandises transportées?

Avez-vous des problèmes de transport de cette nourriture sur le marché?

Statut du produit : Sauvage......domestique...... cultivé........
En cas de raréfaction, dire
pourquoi? ........................................................................................................... 
.............................................................................................................................
.............................................................................................................................

Stratégie de conditionnement Vendu à l’état naturel…… Vendu transformé……….. 
Vendu frais………….. Autre…………………..

2. Profitabilité

Combien gagner vous ?
Par jour………..
Par semaine…..
Vous arrive-t-il de faire des pertes dans votre activité ? oui……non……
Pourquoi? ............................................................................................................
.............................................................................................................................
.............................................................................................................................
.............................................................................................................................

Vendez vous plus que par le passé ? oui…….non……
Pourquoi?
.............................................................................................................................
.............................................................................................................................
.............................................................................................................................
.............................................................................................................................

Y a-t-il des périodes/mois de l’année où vous faites plus de bénéfices ?
oui…….non…
Pourquoi?
.............................................................................................................................
.............................................................................................................................
Si vous avez gagné de l'argent voulez-vous continuer à vendre de cette entreprise?
Oui...non...

Qu'aimeriez-vous faire à la place?

3. Questions Alimentaire

Est-ce qu’il y des périodes où les consommateurs/clientes se plaignent des pénuries des produits à usage alimentaire? Oui...non...

Au cas où vous vendez des produits à utilisation alimentaire, pensez-vous que ces produits assurent bien de ravitaillement des ménages en nourriture? Oui...non...

Croyez-vous que vous aidez à nourrir les Camerounais avec votre entreprise

Consommez-vous vos produits dans votre alimentation à la maison?
oui... non...

Pourquoi?

Si oui, lesquels?
1.................................
2……………………………
3……………………………
4……………………………
5……………………………
Si non,
pourquoi?..........................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
Quel pourcentage de votre revenu consacrez-vous acheter de la
nourriture? ..........%
Préférez-vous vendre des produits ..... de la forêt ou ..... de la ferme?
Pourquoi?
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
Vendez-vous des aliments à travers la frontière ou connaissance sur ce
commerce?
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
.............................................................................................................
4. L'organisation et l'espace
Aimez-vous votre place dans le marché? ….. oui ….. non

Pourquoi?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

Comment ça emplacement sur votre entreprise?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

Où est le meilleur endroit pour vendre?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

Le pire endroit pour vendre?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

Pourquoi?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

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……………………………………………………………………………………………………

Comment pourrait-espace dans le marché de mieux gérer organiser?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

……………………………………………………………………………………………………

5. Contraintes et opportunités

Quels sont vos plus grands problèmes dans le marché?
Comment pouvez-vous faire de l'argent dans cette entreprise?

Y a-t-il une stratégie pour réussir? Pour des profits élevés?

Comment pouvez-vous perdre de l'argent dans cette entreprise?

Ce qui pourrait faire mieux votre entreprise?

Combien de fois avez-vous jeté des produits à la poubelle?

Combien est jeté?
6. La Saison
Quels sont les avantages et les inconvénients de la vente pendant la saison sèche? Avantages :

Inconvénients :

Quels sont les avantages et les inconvénients de la vente de la saison des pluies?
Avantages :

Inconvénients :

7. Les Prix
Est-ce que il y a des périodes où il y a une flambée des prix ? oui... non....
Pourquoi la flambée des prix ?.................................................................
Qui décide du changement des prix ?

Lorsque les prix sont élevés, que faites-vous?

Lorsque les prix sont élevés, qu'est-ce que vos clients faire?

Pensez-vous que les clients mangent moins quand les prix sont élevés?

Est-ce que la hausse des prix de vos produits sur le marché a des conséquences sur la ration alimentaire chez vous à la maison ?

oui...non...

Si oui, lesquelles

1..............................................

2..............................................

Comment réagissez-vous lorsqu'il y a pénurie des produits que vous consommez à la maison ?.................................
Quelles sont les conséquences de la hausse des prix de ces produits ci-dessus dans votre ménage ?

Quelles sont les conséquences de la hausse des prix de ces produits ci-dessus sur vos propres produits?

8. Sociologie et Politique de la commercialisation des produits

Est-ce que vous avez une organisation interne pour les vendeuses ?
Oui... non...

Si oui, quel type d’organisation ?
Un syndicat... une coopérative... une association reconnue... une association non reconnue... un groupe d’initiative commune... une tontine...

Quel est le but de cette organisation ?
Pouvez-vous expliquer comment le billet sur ce marché fonctionne?

Combien? .......... CFA Combien de temps?

Qu’est-ce que l’argent utilisé?
Pensez-vous que le conseil est bon pour vous cette entreprise? Que pouvaient-ils faire mieux?

Est-ce que les grèves des vendeuses des autres produits affectent votre activité?
Oui... non....

Y a-t-il déjà eu une émeute ici ou une intervention des forces de l'ordre?
Oui... non....

Si oui, comment a réagi votre groupe de vendeuses?
..................................................................................

Quelles sont les conséquences des émeutes et de la fermeture du marché sur votre activité?
..................................................................................

Quelles sont les conséquences des émeutes et de la fermeture du marché sur les consommateurs?
..................................................................................

Quelles sont les conséquences des émeutes et de la fermeture du marché sur l'alimentation chez vous?
..................................................................................

9. Produits Alimentaires

Pourquoi achetez-vous vos produits alimentaires dans tel ou tel marché?
Quels sont les produits alimentaires qui vous permettent de dire que vous avez la sécurité alimentaire ?
1
2
3
4
5
Les émeutes dans les marchés influencent-elles votre ravitaillement en produits alimentaires ? oui... non....
Pourquoi ?
Que pensez-vous des tracasseries administratives et policières dont se plaignent les vendeuses ?
Pensez-vous que les aliments sauvages (nourriture dans la forêt) que vous payez pour votre alimentation sont capables d’assurer la sécurité alimentaires dans votre ménage ? oui… non…..

Pourquoi ?

…………………………………………………………………………………………………………………………

…………………………………………………………………………………………………………………………

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Que pensez-vous des produits alimentaires importés ?

…………………………………………………………………………………………………………………………

…………………………………………………………………………………………………………………………

…………………………………………………………………………………………………………………………

…………………………………………………………………………………………………………………………

Ces produits menacent-ils votre activité ? oui… non…..

Pourquoi ?

…………………………………………………………………………………………………………………………

…………………………………………………………………………………………………………………………

Lesquels de ces produits sont plus accessibles financièrement (pour vous) que les produits locaux ?

1…………………………………………………………

2…………………………………………………………

3…………………………………………………………
Pensez-vous que les produits alimentaires importés peuvent assurer la sécurité alimentaire dans la majorité des ménages de la ville de Yaoundé ? oui... non....
Pourquoi?
...........................................................
...........................................................
...........................................................
...........................................................
...........................................................

Y a-t-il un lien entre la stabilité sociale et la sécurité alimentaire dans les ménages de la ville de Yaoundé ? oui... non....
Pourquoi?
...........................................................
...........................................................
...........................................................
...........................................................
...........................................................

Prenez un exemple dans l’histoire récente où les problèmes de sécurité urbaine ont agi négativement sur la sécurité alimentaire dans les ménages ?
...........................................................
...........................................................
...........................................................

Quelles ont été les conséquences ?
1............................................................
............................................................
............................................................
............................................................
2............................................................
............................................................
............................................................
............................................................
Avez-vous un champ pour assurer la sécurité alimentaire chez vous ?
oui….non…
Pourquoi ?
………………………………………………………………………………………….
………………………………………………………………………………………….
………………………………………………………………………………………….
Si oui, quelles cultures y trouve-t-on ?
………………………………………………………………………………………….
………………………………………………………………………………………….
**Household Dry Season: French Survey**

**Wild Food and Food Security Project (Saison Sèche)**

**Questionnaire 2 Cibles: Acheteuses (res)**

Date de l’enquête……………………..Nom de l’enquêteur……………………………..

Quartier de l’Enquêtée………………………………………………..

Questionnaire No……………………Date…………………Enquêteur…………………………..

4. **Information Sociale**

Sexe : Homme... Femme... Tranche d’âge............

Occupation............. Estimation de la classe sociale :
  riche... moyen...... pauvre.....

Taille ménage : enfants de sexe masculin... enfants de sexe féminin... dépendants ...

Où êtes-vous?

Nom du marché/des marchés fréquentés…………………………………………………….

Justification du choix de ce(s) marché(s)………………………………………………..

Pourquoi achetez-vous vos produits alimentaires dans tel ou tel marché ?

…………………………………………………………………………………………….
Achetez-vous toujours chez la même personne? oui... non....
Pourquoi? ..............................................................................................................................
........................................................................................................................................
........................................................................................................................................

5. Information Economique
Quel est le pourcentage de vos revenus mensuels investi dans la nourriture ?
Plus de la moitié... la moitié... le tiers... le quart... le cinquième...

Quel est le pourcentage de cette somme qui est investi dans les PNFL à usage alimentaire?
Plus de la moitié... la moitié... le tiers... le quart... le cinquième...

Combien de repas mangez-vous par jour? ...........
Les membres de votre famille? Plus Moins Même

Qui s’occupe de la préparation des repas dans votre ménage ?
.................................
.................................

Quelles sont les sources d’énergie ? le gaz... le pétrole... le bois de feu... le charbon....
Combien dépensez vous pour l’énergie par jour......... semaine............... mois............... 
Provenance de l’eau de cuisson ? eau domestique... source publique... puits... rivière...
Vos revenus vous permettent-ils d’assurer l’alimentation de votre ménage ?
oui... non...

3. Les repas

Quels sont les plats préférés de votre ménage ?
1…………………………………………………………………………
2…………………………………………………………………………
3…………………………………………………………………………
4…………………………………………………………………………
5…………………………………………………………………………
6…………………………………………………………………………

Combien vous coûte la préparation de votre plat préféré?
…………………………………………………………………………

Combien de fois le mangez vous par semaine ? …… par mois ?........

Comment le préparez-vous (techniques et ingrédients) ?
…………………………………………………………………………
…………………………………………………………………………
…………………………………………………………………………
…………………………………………………………………………

Quels plats mangez-vous le plus fréquemment ?
1…………………………………………. Coût..........................
2…………………………………………. Coût..........................
3…………………………………………. Coût..........................

Combien de repas (à base de toute sorte de produits) sont en général pris dans votre ménage par jour? Un....deux....trois.....
L’équilibre alimentaire de votre ménage est-il rompu lorsqu’il y a rareté des PNFL à usage alimentaire ? oui... non...

Pourquoi ?...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................

Quels sont les plats préférés de vos enfants ?
1........................................
2........................................
3........................................
4........................................
5........................................

Vos revenus vous permettent-ils de les leur procurer ? oui... non...

Avez-vous des interdits alimentaires ? oui... non...

Si oui, lesquels ?
1........................................
2........................................
3........................................
4........................................
5........................................

4. Alimentaire et les revenus

Laquelle de ces affirmations décrit le mieux les aliments consommés dans votre ménage au cours des 12 derniers mois:

1) nous avons toujours assez à manger et le type de nourriture que nous voulons;
2) nous avons assez à manger mais pas toujours les types de nourriture que nous voulons;
3) parfois nous n'avons pas assez à manger;
4) souvent nous n'avons pas assez à manger

Que faites-vous quand vous n'avez pas assez de nourriture, et n'ont pas assez d'argent pour acheter de la nourriture?

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Que faites-vous lorsque les prix des denrées alimentaires sont élevés?

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Pensez-vous acheter des légumes plus ou moins lorsque les prix sont élevés?

Plus Moins Même

Avez-vous acheté de la viande plus ou moins quand les prix sont élevés?

Plus Moins Même

Avez-vous acheté du poulet plus ou moins lorsque les prix sont élevés?

Plus Moins Même
Est-ce un ensemble de poulets vivants ou les morceaux de poulet?

Avez-vous acheté du poisson plus ou moins quand les prix sont élevés?
Plus    Moins    Même

Pensez-vous acheter des grains plus ou moins lorsque les prix sont élevés?
Plus    Moins    Même

Vous achetez et mangez la viande de brousse?  Oui  Non

Si oui, pouvez-vous acheter la viande de brousse plus ou moins quand les prix sont élevés?  Plus    Moins    Même

Que faites vous lorsque vos revenus ne vous permettent pas d’acheter les produits de base de votre alimentation ou les produits de vos plats préférés ?
..............................................................................................................................................................................
..............................................................................................................................................................................
..............................................................................................................................................................................
Que faites vous lorsque les prix de vos produits préférés sont en hausse ?
..............................................................................................................................................................................
..............................................................................................................................................................................
..............................................................................................................................................................................
..............................................................................................................................................................................
Quels sont les produits alimentaires qui vous prennent le plus d’argent ?
1. ..............................................................
   Coût...........................................

2. ..............................................................
   Coût.............................................
3………………………………………………………………………
Coût…………………………
4………………………………………………………………………
Coût…………………………
5………………………………………………………………………
Coût…………………………
Quels sont les produits alimentaires qui vous prennent le moins d’argent ?
1………………………………………………………………………
Coût…………………………
2………………………………………………………………………
Coût…………………………
3………………………………………………………………………
Coût…………………………
4………………………………………………………………………
Coût…………………………
5………………………………………………………………………
Coût…………………………
Qu'achetez-vous lorsque les prix sont haussés ?
1………………………………………………………………………
2………………………………………………………………………
3………………………………………………………………………
4………………………………………………………………………
5………………………………………………………………………
Qu'achetez-vous lorsque les prix sont bas ?
1………………………………………………………………………
2………………………………………………………………………
3………………………………………………………………………
Combien vous coûte la préparation des plats les plus chers consommés dans votre maison ? 

De quoi est-il composé ?

Combien de fois le mangez-vous par semaine ?......par semaine ?........par mois........

Combien vous coûte la préparation des plats les plus moins consommés dans votre maison

Est-ce que votre changement de régime alimentaire pendant la saison sèche?

......Oui ou ...... Non

Comment le changer?

..........................

..........................................

..........................................

..........................................

..........................................
5. Sociologie et Politique de la Consommation

Est-ce vous vous achetez et consommez et PFNL dans votre ménage en fonction du niveau de vos revenus ? oui... non....

Pourquoi ?........................................................................................................................................................................
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........................................................................................................................................................................

Quels sont les produits alimentaires qui vous permettent de dire que vous avez la sécurité alimentaire ?
1................................................................................
2................................................................................
3................................................................................
4................................................................................
5................................................................................

Les émeutes dans les marchés influencent-elles votre ravitaillement en produits alimentaires ? oui... non....

Pourquoi ?........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................

Que pensez-vous des tracasseries administratives et policières dont se plaignent les vendeuses ?
........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................
........................................................................................................................................................................

Que pensez-vous des produits alimentaires importés ?
Lesquels de ces produits consommez vous régulièrement ?
1..............................................
2..............................................
3..............................................
4..............................................
5..............................................
6..............................................

Lesquels de ces produits sont plus accessibles financièrement (pour vous) que les produits locaux ?
1..............................................
2..............................................
3..............................................

Pensez vous que les produits alimentaires importés peuvent assurer la sécurité alimentaire dans la majorité des ménages de la ville de Yaoundé ?
oui.....non.....

Pourquoi ?

Y a-t-il un lien entre la stabilité sociale et la sécurité alimentaire dans les ménages de la ville de Yaoundé ? oui... non....

Pourquoi ?
Prenez un exemple dans l’histoire récente où les problèmes de sécurité urbaine ont agi négativement sur la sécurité alimentaire dans les ménages ?

Quelles ont été les conséquences ?
1.
2.

Avez-vous un champ pour assurer la sécurité alimentaire chez vous ?
oui... non...

Pourquoi ?

Si oui, quelles cultures y trouve-t-on ?

Vendez-vous l’excès de nourriture de votre champ ? Oui  Non

Pourquoi ?

Avez-vous d’autres histoires au sujet des aliments que vous aimeriez dire?
**Market Dry Season: English Survey**

Name of market: ______________________ Days of operation: ____________________

Researcher: __________________________ Collection number: ________________

Date: ______________

1. INFORMATION ON THE VENDOR

Location in market:
………………………………………………………………………………………………………………

Type of vendor: ...... Permanent Stall ...... Temporary Stall ...... Mobile

Why?
………………………………………………………………………………………………………………

Region of origin:
………………………………………………………………………………………………………………

Gender: ...... Male ...... Female  Marital Status: .........

Children: .........

Age: ......... How long have you been selling? ......... years

Do you belong to a njangi (savings group)? ...... Yes ...... No

What is your level of education?
………………………………………………………………………………………………………………

How often do you sell here?
………………………………………………………………………………………………………………

Why do you sell here?
………………………………………………………………………………………………………………

Do you sell in other markets?
………………………………………………………………………………………………………………
Who taught you to sell things?

2. INFORMATION ON FOOD PRODUCTS FOR SALE

What is currently sold (dry season)?

Sold in wet season:

Why do you sell (insert name of good here)?

How did you start selling (insert name of good here)?

Where are your products from?

Cultivation status: cultivated managed wild other:

Marketing status: gathered by vendor resold other:

Procurement status: on site through buyam-sellam both

How much do you earn? CFA a day CFA a month

How much sold now compared to the past?
more ... same ... less

Why?

What do you do to your products before selling them?

How is perishability managed?

How do you store the product?

How often do you throw away products?

How much is thrown away?

Why?

3. TRANSPORTATION

How are your goods transported?

Brought to market: ...... daily ...... weekly ...... sometimes
Do you have any problems bringing this food to the market? 
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
Can you describe a typical working day for you? 
........................................................................................................................................
........................................................................................................................................
Has that changed? 
........................................................................................................................................
........................................................................................................................................
How? 
........................................................................................................................................
........................................................................................................................................

4. FOOD SECURITY

Do you believe you are helping to feed Cameroonians with your business? 
Yes ...... No  Please explain: 
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........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
........................................................................................................................................

Do you bring home the products you sell home to feed your household? 
...... Yes ...... No ...... Sometimes 
If yes or sometimes, what products?
What percentage of your income do you spend buying food? .......%  
Do you prefer selling products from the forest or the farm? Why?  

5. SEASONALITY  
How does selling in the dry season affect your business?  

What are the benefits and drawbacks of selling in the DRY season?  
**BENEFITS:**
What are the benefits and drawbacks of selling in the **WET season**?

**BENEFITS:**

- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………

**DRAWBACKS:**

- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………

**6. SPACE**

Does location affect your business? .... Yes .... No....

How does it affect your business?

- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………

Do you like your location in this market? ... Yes or .... No

Why?

- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………

What is the best location in the market?

- ………………………………………………………………………………………………………
- ………………………………………………………………………………………………………
What is the worst location in the market?

How could space in the market be better managed or organized?

7. VENDORS AND REGULATIONS

What are your biggest problems in the market?

Is there an internal organization of vendors? ...... Yes ...... No

How are vendors organized?

Can you explain how the ticket in this market works?

How much is paid? ...............CFA

How often? .................................

What is the money used for?
What good does the council do?

........................................................................................................................................................
........................................................................................................................................................

Do you think the council is good for this business?

.....Yes ..... No ..... Other feelings:

........................................................................................................................................................

What could they do better?

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8. INFORMATION ON BUYING AND SELLING

How do you make money in this business?

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........................................................................................................................................................
........................................................................................................................................................
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Is there a strategy for success? For high profits? ..... Yes ..... No

What is it?

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How do you lose money in this business?

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........................................................................................................................................................
What might make your business better?

Do you sell foods across the border or know about this trade?

Describe this trade.

When prices are high, what do you do?

When prices are high, what do your customers do?

Do you think customers eat less when prices are high?...... Yes ...... No

Why?
How often is there a shortage of food at home?

How do you react when there is a shortage of food at home?

If you won money, what would you do? (Would you continue to sell?)

9. ADDITIONAL

Do you prefer selling/eating foods that are from Cameroon or imported?

What do you think about Cameroon selling food to neighbouring countries?
Do you think Cameroonians are hungry?

Do you remember the riots/strikes in Yaoundé and Douala? Can you tell me what you remember about those days?

Do riots and strikes in the markets influence your household supply of food?

Have you ever worried for your safety in the market? What was happening?
Have you seen anger in the market?
What was happening?
How did you feel?
How was it resolved?

What foods do you need to feel secure/satisfied/happy/content?

What do you do when prices for those foods are high? How do you feel? What do you think makes those prices high?

Are you eating food now that was different from the past?

Do you have any stories about food that you would like to share? (ex. with family, parents, cooking, sharing, politically, growing, prices...).
Household Dry Season: English Survey

Neighbourhood of household: __________________________________________
Researcher: ___________________ Collection number: _____________
Date: ___________

INFORMATION ON THE INDIVIDUAL AND HOUSEHOLD

Gender: Male...... Female ...... Estimated Age: .......
Region of origin: ........................................... Marital status: .............................................
Estimation of social class: rich medium poor
Employment: .......................................................... Edu:............................................................
Do you or member of your household belong to a njangi? YES NO
Size of household: ........ # Children ....... #Dependents
What market do you do your food shopping?
Why?
Do you buy any particular food from the same person or stall? Yes No
Why?
What percentage of your monthly revenue do you spend on food? ...............%
Who takes care of the preparation of meals for the family?
………………………………………………………………………………………………………………
Do men cook?
………………………………………………………………………………………………………………
………………………………………………………………………………………………………………
………………………………………………………………………………………………………………
Where do you get the water to prepare and cook the food for your family?

domestic water source....... public source ....... well ....... river .......
Type of fuel used to cook: gas ....... oil ....... firewood ....... coal..... saw dust.......
Price per month ........... CFA

How many meals eaten in a day? ........
Other family members: more less same
Do members of your family give you or your family food?
Yes No Sometimes
Do you give members of your family food?
Yes No Sometimes
What foods do your children like to eat?
………………………………………………………………………………………………………………
………………………………………………………………………………………………………………
………………………………………………………………………………………………………………
………………………………………………………………………………………………………………
Do your revenues allow you to provide this for them?
Yes No
Which of these statements best describes the food eaten in your household in the last year:
1) we always have enough to eat and the kinds of food we want;
2) we have enough to eat but not always the kinds of food we want;
3) sometimes we don't have enough to eat;
4) often we don't have enough to eat

What do you do when you don’t have enough food, and don’t have enough money to buy food?

How long does this last?

How often does this happen? Times .... a month; .... a year

What do you do when food prices are high?

What are the food products that cost the most amount of money?

1) ................................................................. Price: ...............CFA
2) ................................................................. Price: ...............CFA
3) ................................................................. Price: ...............CFA
What are the food products that cost the least amount of money?
1)................................................................. Price: ...............CFA
2)................................................................. Price: ...............CFA
3)................................................................. Price: ...............CFA
4)................................................................. Price: ...............CFA
5)................................................................. Price: ...............CFA

What do you buy when prices have risen?

What do you buy when prices are low?

What food is a special occasion food in your house?
1)................................................................. Price: ...............CFA
2)................................................................. Price: ...............CFA
3)................................................................. Price: ...............CFA

Do you buy more or less vegetables when prices are high?
More       Less       Same

Do you buy more or less meat when prices are high?
More       Less       Same
Do you buy more or less chicken when prices are high?
More  Less  Same

Is it a whole, live chicken or chicken pieces?

Do you buy more or less fish when prices are high?
More  Less  Same

Do you buy more or less beans when prices are high?
More  Less  Same

Do you buy or hunt and eat bushmeat?  Yes  No

If yes, do you buy more or less bushmeat when prices are high?
More  Less  Same

How often do you cook at home?
...... times a day; ....... a week; ...... a month
Why?

How often do you eat out?
...... times a day; ....... a week; ...... a month; ...... never
Why?
Do you have a field to ensure your own food security? Yes  No
What foods do you grow there?
Do you sell the excess food you grow? Yes  No
Why?
Does your family harvest food from the forest?
Does your diet change during the dry season? Yes  No
How does it change?

INFORMATION ON MEALS
What are your family’s favourite meals?
1. ................................................................. Price ........................................ CFA
How often do you eat it? ...... times a day; ....... a week; ...... a month;
2. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;
3. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;

What are the meals **prepared the most**?
1. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;
2. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;
3. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;

What are the **cheapest** meals?
1. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;
2. .......................................................... Price
       .........CFA
How often do you eat it? ...... times a day; ...... a week; ...... a month;
3. ………………………………………………………………………………. Price  
………………CFA
How often do you eat it? …… times a day; ……. a week; ….. a month;

What are **most expensive** meals?
1. ………………………………………………………………………………. Price  
………………CFA
How often do you eat it? …… times a day; ……. a week; ….. a month;
2. ………………………………………………………………………………. Price  
………………CFA
How often do you eat it? …… times a day; ……. a week; ….. a month;
3. ………………………………………………………………………………. Price  
………………CFA
How often do you eat it? …… times a day; ……. a week; ….. a month;

What does it mean to be food secure in Cameroon?

…...…………………………………………………………………………………
…………………………………………………………………………………
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…………………………………………………………………………………
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Are you eating food now that was different from the past?

…...…………………………………………………………………………………
…………………………………………………………………………………
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…………………………………………………………………………………
…………………………………………………………………………………
……………………………………………………………………………………
ADDITIONAL

What do you think about imported foods? What do you think about Cameroon foods? ........................................................................................................................................
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........................................................................................................................................
........................................................................................................................................
What do you think about Cameroon selling food to neighbouring countries?
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........................................................................................................................................
Do you think Cameroonians are hungry?
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........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
Do you remember the riots/strikes in Yaoundé and Douala? Can you tell me what you remember about those days?
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........................................................................................................................................
........................................................................................................................................
........................................................................................................................................
Do riots and strikes in the markets influence your household supply of food?

Have you ever worried for your safety in the market? What was happening?

Have you seen anger in the market? How did you feel? How was it resolved?

What foods do you need to feel secure/satisfied/happy/content?

What do you do when prices for those foods are high? How do you feel?
What do you think makes those prices high?

Do you have any stories about food that you would like to share? (ex. with family, parents, cooking, sharing, politically, growing, prices...).
**In-depth Life History Interview Questions**

Focus on answering the following research question:

The interview questions below compliment the survey data gathered in 2012. These interviews are not meant to be a survey. Rather, these interviews are more in-depth than before. They would be a little more formal in that the purpose of the interview is to stimulate a conversation on the life history of the buyam-sellam.

The absolute goal of these interviews would be to ask the questions listed below and then proceed to ask follow up questions to encourage participants to offer additional information. **DO NOT ONLY STICK TO THE QUESTION SCRIPT.**

To follow up the research questions listed below, follow-up questions such as: Can you explain that? How do you think...? What do you mean by...? Will be useful and required. Try to guide the conversation to encourage the buyam-sellam to describe or frame their responses on a timeline of events that lead the present. (Ex: when I was a young girl I would watch my mother sell... when I was older I was not interested in this trade, so I moved to the city to find work or go to school...but when I got married...etc.)

The goal is to think of this process as the gathering of narrative, very much like an anthropologist. The interview questions would be a guide, but are not the complete script.

**CRUCIALLY – FOR THIS COURSE OF INTERVIEWS – WE MUST VALUE** the buyam-sellam’s perspective. **WE MUST CONSIDER THEM TO BE THE EXPERT. WE WANT TO PROBE THEIR PERSPECTIVES.** We hope to gather insights into values, concerns and impressions of the future. This process should focus on of their line of work, the availability of forest products for urban markets and how changes in the
environment may influence their work and even the diets of urban consumers. The objective is to record this interview and document it as a 'story.'

Possible in-depth interview questions could include the following considerations:

Draft in-depth interview questions:
Name:
Age:
Gender:
Marital status:
Level of education:
List of dependents:
Market(s) where you work:

How long have you been a buyam-sellam?

Why are you a buyam-sellam? (Try to guide the conversation to encourage the buyam to describe this as a timeline of events that lead the present.)

How did you get into this line of work?

How did you learn to do this type of work?

Can describe the supply chain of the products you sell?

Can you describe the how the availability of forest products may be changing?

How have changes in the forest affected your trade? Over the last 5 years? 10 years?

How has access to the forest affected your trade? Over the last 5 years? 10 years?
How have you adapted to these changes?

What changes to the weather and the environment have you experienced over the last 5 years? 10 years?

Does the weather or climate impact your work? If so, in what ways?

If the weather is changing, how has a changing climate/weather/seasons affected your trade? Over the last 5 years? 10 years?

What are your goals for the future?
Interview Questions for Expert Interviews

Wild Food and Food Security in Cameroon:

1) I know there is the FAO definition of food security - but what do you think the definition of food security or food insecurity is in Cameroon?

2) What is your understanding of the factors that have constrained the realization of food security in Cameroon?

3) What sorts of relationships do you perceive there to be between NTFP production and food security/livelihoods/income? Could you explain the country-level regulatory regime or legal framework for vegetable production and trade AND/OR wild food production and trade?

4) What sorts of relationships do you perceive there to be between NTFPs and urban consumers? How might this relationship be different from rural areas?
5) Would it be possible for you to describe any changes that you have noticed in the structure and/or functioning of the NTFP trade over the past few years? Could you please explain any knowledge that you might have of any new wild, non-wood forest product or vegetable production systems or initiatives that are operative in Cameroon’s food sector?

6) Could you please explain any knowledge that you might have of any new NTFP initiatives that are operating in Cameroon’s food sector? OR Could you please describe any private or nongovernmental initiatives at the global or regional level that you think might bear upon stakeholders in Cameroon moving forward? OR Can you impart your knowledge of the various nongovernmental/development-oriented or state-led activities in the timber zone and in the city that relate to food security and in particular the livelihoods of people that depend on food from the forest and/or NTPFs?

7) Could you explain the country-level regulatory regime or legal framework for NTFP production and trade? OR What sorts of relationships (if any) do you perceive there to be between timber extraction and food security/poverty?

What sorts of relationships (if any) do you perceive there to be between wild food/green leafy vegetable production and food security/livelihoods/income?
8) Can you please explain regional trade of NTFPs – either between countries in the Congo Basin or between regions within countries?

9) Could you offer an empirical analysis of the kinds of reforms that might be necessary to improve the economic, social and ecological performance of the sector?

10) In the literature on forests in Cameroon, the word zone is often used to describe this region/ecological system. Can you talk a bit about that word and explain some of the meanings associated with it here?

11) Is there any information you might have related to this research that I might not have asked, but you would like to talk about and share?
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