LIVELIHOOD ZONING AND PROFILING REPORT: BURKINA FASO

A SPECIAL REPORT BY
THE FAMINE EARLY WARNING SYSTEMS NETWORK

January 2010

This publication was prepared by Sam Dixon and Julius Holt of FEG Consulting under the United States Agency for International Development Famine Early Warning Systems Network (FEWS NET) Indefinite Quantity Contract, AFP-I-00-05-00027-00.
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The author’s views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.
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Introduction

The livelihood profiles that follow document how rural populations live in Burkina Faso. A livelihood is the sum of ways in which households obtain the bare necessities, how they make ends meet from year to year, and how they survive (or fail to survive) through difficult times.

There is increasing interest in using livelihoods analysis as the “lens” through which to view a number of problems. These problems range from emergency response to disaster mitigation to longer-term development. This interest rests upon two basic observations:

1) Information about a given area or community can only be properly interpreted if it is put into the context of how people live.
2) Interventions can only be designed in ways appropriate to local circumstances if the planner knows about local livelihoods and whether or not a proposed intervention will build upon or undermine existing strategies.

Two main products are offered here:

<table>
<thead>
<tr>
<th>National Livelihood Zone Map</th>
<th>The map shows the division of the country into homogenous zones defined according to a livelihoods framework.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livelihood Zone Profiles</td>
<td>The profile describes the major characteristics of each zone, including a brief differentiation of different wealth groups. There is some emphasis on hazards and the relative capacity of different types of households in different places to withstand them.</td>
</tr>
</tbody>
</table>

In compiling these profiles, a balance has been struck between accessibility and level of detail. The aim has been to present sufficient information to allow a rounded and balanced view of livelihoods nationally. The profiles provide a rapid introduction to livelihoods in the country; they do not offer localized detail.

This document is divided into three main sections:

1. **Introduction** — includes four sub-sections:
   - **Uses of the Profiles**— describes three main ways the profiles can be used.
   - **Key Concepts**— defines the key concepts used in livelihoods-based analysis and briefly presents the analytical framework that helped define the key information to be included in these profiles.
   - **What is in a Livelihood Profile**— describes the layout and content of each profile.
   - **Methodology**— describes the methods used to develop the map and profiles.

2. **National Overview** — National livelihood zone map, together with a national overview of livelihoods in Burkina Faso.

3. **Livelihood Zone Profiles** — Profiles for each zone.

**Uses of the Profiles**

The livelihood zoning and profiles presented here offer an analysis of rural livelihoods and food security based on a geographical basis. The country is divided into homogenous zones according to a livelihoods framework. A brief description of each zone is provided, including an analysis of
the position of different wealth groups within the zone. It is envisaged that this product will be useful on three levels, as follows:

1. **An Introductory Guide to Livelihoods and Food Security in the Country**

The profiles pack considerable information and analysis into a few pages of presentation. They should therefore form a useful briefing for a newcomer who needs to get a quick grasp of the livelihoods and food security conditions around the country. The geographical divisions are relatively large - as far as this is consistent with ground realities - so that the reader can take in the general pattern and the basic differences between areas and populations without being overwhelmed by too much detail.

Development planners can also benefit from using the livelihood profiles. One objective of development is to reduce people’s vulnerability to hazard and to increase their capacity to cope. An important first step is to understand who is vulnerable, to which hazards, and why. Likewise, efforts to reduce poverty require an understanding of how the poorest households survive in different areas of the country and the reasons for their poverty.

2. **Early Warning and Response Planning**

Local food security is often incorrectly equated with agricultural production outcomes compared to the food needs of the local population. Hence, a chronic or temporary production deficit against local food requirement is immediately translated as chronic or temporary food insecurity. Consequently, most early warning and food security monitoring systems draw heavily from two information sources: (i) crop and/or livestock production data, and (ii) market price information.

This is almost never the whole story. A full account of the “food economy” addresses both food availability— that is, what food people produce - and food access - what cash people earn to purchase food. Data on casual employment, wild foods, charity from relatives or the sale of handicrafts may be equally important to the livelihood story as data on crop or livestock production, and knowledge of the relative importance of these can guide the design of more appropriate monitoring systems and better rapid emergency assessments.

Using a livelihoods framework, we can inquire into household capacity to cope with stress, especially failed crop or livestock production; and we can appreciate household activities at different periods in the yearly cycle. All of which feeds directly into our analysis of need, helping to answer key questions, such as: which areas and what types of household are likely to cope should a hazard strike, and which will need assistance? What types of intervention will be most appropriate, and when and for how long should they be implemented?

Thus for instance one could point to the position of poor households in a given geographical area who are highly dependent on urban employment. If urban employment declines, their labor will be less in demand; can they find alternative income elsewhere - and will they be competing with people from other zones in these activities?

National officers working within their national early warning system have an immense knowledge of their countries. The livelihoods approach helps to provide a framework for the full use of that knowledge, as well as adding a new level of information to it.

3. **Policy Development**

Disaster management has been the main impetus to the spread of early warning systems. The rationale in early warning is to improve the efficiency in the scale and timing of emergency food aid. However, increasingly planners are looking at alternatives to food aid in early emergency
intervention – and this often requires changes in policy and practice. A case in point is the stabilization of market prices for basic foods. Livelihoods analysis can expose the likely effects of such interventions on different households’ capacity to survive a crisis. The analysis can also recommend the optimum timing for the intervention.

Livelihood analysis can also be applied to other policy changes. For example, if the government taxes on kerosene were reduced, or charges made for government veterinary drugs, what would be the impact on households? More generally, a livelihood analysis offers a more secure footing for poverty alleviation measures – and represents a movement from a response to symptoms of food insecurity to a treatment of the causes. It allows one to look at the story which lies behind national statistics.

**Key Concepts**

The terms **risk**, **hazard**, **vulnerability**, and **need** are frequently used in ways that can be confusing in the context of food security. Their established meaning for the purposes of disaster management – and the sense in which they are used here – is perhaps best explained with an example (see below).

**Defining Risk, Hazard, Vulnerability and Need**

- Drought is a major **hazard** affecting crop and livestock production in many countries.
- Poor households are more **vulnerable** to (less able to cope with) drought than better-off households; they have fewer reserves of food or cash to fall back on and fewer options for generating additional income.
- Poor households living in drought-prone areas of the country are more **at risk** than other households because they are both exposed to and vulnerable to the drought hazard.
- Once a drought strikes, the poor are the most **in need** of assistance.

To be at risk of food insecurity, you must both be exposed to a hazard as well as be vulnerable to that hazard, as in the case of poor households in the drought-prone areas of the country in the above example. Because vulnerability is so closely linked to hazard, it follows that there is no general state of vulnerability. People can only be vulnerable to something. For example, farmers cultivating along a river margin may be vulnerable to flood (which is likely to wash away their crops) but may not be vulnerable to drought (since they can irrigate their crops using water from the river).

Once a hazard has struck, it no longer makes sense to talk about vulnerable groups. Put simply, people are **vulnerable before the event**, (since this refers to their ability to cope should a hazard strike). They are **in need after the event** (i.e., once they have been affected by and have been unable to cope with the hazard). Going back to the drought example, the poor are vulnerable to drought before the rains fail, but once they have lost their crops or livestock, they are in need of assistance.

One of the most widely used livelihoods-based approaches for analyzing food security is the **food or household economy** approach, first developed by Save the Children UK in the 1990s¹. The basic principle underlying the approach states that:

An analysis of local livelihoods is essential for a proper understanding of the impact – at household level – of hazards such as drought, conflict or market dislocation.

Total crop failure may, for example, leave one group of households destitute because the failed crop is their only source of staple food. Another group, by contrast, may be able to cope because they have alternative food and income sources. These alternative sources — such as livestock to sell or relatives elsewhere who can assist — can make up the production shortfall. Thus, effective hazard impact assessments must be based upon a livelihood analysis. The food economy analytical framework sets out the type of analysis required to understand the impact of a hazard on food security and local livelihoods, and has been used to help define the key information to be included in the profiles.

The objective of a food economy analysis is to investigate the effects of a hazard on future access to food and income so that decisions can be taken about the most appropriate types of intervention to implement. The rationale behind the approach is that a good understanding of how people have survived in the past provides a sound basis for projecting into the future. Three types of information are combined: (i) information on baseline access to food/cash income, (ii) information on hazard (i.e., events affecting access to food/cash income, such as drought, conflict or market dislocation), and (iii) information on household-level response strategies (i.e., the sources of food and income that people turn to when exposed to a hazard). The approach can be summarized as follows:

**The Livelihood Zone Map:** Patterns of livelihood clearly vary from one area to another, which is why the preparation of a livelihood zone map can be a useful first step for many types of livelihoods-based analysis. Local factors such as climate, soil, access to markets, etc. all influence livelihood patterns. For example, people living in a fertile highland area generally have very different options from those living in a semi-arid lowland area. In highland areas, people can generally pursue an agricultural pattern of livelihood, while in the lowlands, they can grow few crops and will be either pastoralists or agro-pastoralists. Those living in a coastal or lakeside zone will follow a livelihood based upon fishing or combining fishing with other activities, and so on.

Agro-ecology is only one aspect of geography which determines patterns of livelihood, however. Another is market access, since this affects the ability of people to sell their production (crops, livestock, or other items) and the price obtained for it. Since patterns of livelihood depend so much upon geography, it makes sense to divide a country or a region into a number of livelihood zones. These we can define as areas within which people share broadly the same pattern of livelihood (i.e., broadly the same production system - agriculture or pastoralism, for example - as well as broadly the same patterns of trade/exchange).

Livelihood zone boundaries do not always follow administrative boundaries. It is, for example, quite common to find different patterns of livelihood within a single administrative unit (e.g. pastoralists living alongside agriculturalists, or agro-pastoralists alongside fishing communities). However, because resource allocation and service provision decisions are made on the basis of administrative areas, not livelihood zones, it is important that livelihood zone boundaries should wherever possible follow lower level administrative boundaries.

**The Wealth Breakdown:** Geography is clearly not the only thing that determines the pattern of livelihood. Geography tends to define the different livelihood options, but the extent to which people exploit these options depends upon a number of factors, of which wealth is generally the most important. It is obvious, for example, that better-off households owning larger farms will in general produce more crops and be more food secure than their poorer neighbors. Land is just one aspect of wealth, however, and wealth groups are typically defined in terms of their land holdings, livestock holdings, capital, education, skill, labor availability and/or social capital. Defining the different wealth groups in each zone is the second step in a food economy analysis, the output from which is a wealth breakdown.
**The Food Economy Baseline**: Having grouped households according to where they live and their wealth, the next step is to generate food economy baseline information for typical households in each group for a defined reference or baseline year. This involves investigating the different sources of food and cash income and their relative contribution to the household budget over the year as a whole. It also involves developing a seasonal calendar of activities to see how access to food and cash income varies throughout the year. These types of information are critical in terms of understanding how households living at different levels of wealth and in different zones will be affected by a particular hazard. It follows, for example, that households that depend heavily upon local livestock production will be affected quite differently by drought compared to those that have relatives living and working in the capital city from whom they receive regularly assistance or remittances.

**Hazard**: Food economy baseline data provide a starting point for investigating the effect that a hazard will have on livelihoods and household food security. Hazards may either be natural (e.g. drought or flood) or man-made (e.g. conflict or market dislocation). The consequences of a hazard will vary according to the hazard itself and according to the local pattern of livelihood. A drought may result in a loss of crop and livestock production, loss of crop and livestock sales income, loss of farm-based employment, etc., posing a threat to households that are heavily dependent upon crop or livestock production or upon local agricultural labor. Insecurity, on the other hand, may be associated with the theft of crops or livestock, reduced access to certain areas (markets, wells, grazing areas or fields) and disruptions to trade and transportation, all of which will pose a threat to groups living in, moving through or trading with the insecure area.

**Response**: When exposed to a hazard, most households will do their utmost to try and deal with its effects. If the hazard tends to reduce their access to certain sources of food and/or cash income, they may try and expand other sources, or they may turn to new or little-used sources. Common response strategies in certain settings might include an increase in the collection of wild foods, an increase in the sale of livestock, or temporary out-migrating in search of employment. Where these strategies are effective, they can significantly reduce vulnerability to a range of hazards. It has to be borne in mind, however, that response strategies may have long-term as well as short-term effects, some of which may ultimately undermine local livelihoods, e.g. the sale of productive assets, the unsustainable sale of livestock, in increase in the sale of firewood where this has negative environmental effects, and so on.

**What is in a Livelihood Profile?**

The profiles are divided into a number of sections:

**Main Conclusions and Implications** summarizes the main findings from the zone. This section also provides insights that will inform the planning of various types of intervention, including emergency response, disaster mitigation and development programming.

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2 Note that the information provided in the profiles does not constitute a full food economy baseline. A full baseline provides quantitative information on the amount of food accessed and the amounts of cash income generated from different sources for at least three main wealth groups within a livelihood zone. The livelihood profiles, in contrast, include information on the proportional contribution of different sources of food and cash income to the whole. Put simply, the unit of measurement for a livelihood profile is percentage of total. The national livelihood zone map and livelihood profiles are designed as a stand-alone product (see section on Uses of the Profiles), but they are also intended as an intermediate step towards the development of a full food economy baseline.

3 The term “response strategy” is preferred to “coping strategy” for two reasons. Firstly, the term “coping strategy” is often used to refer to regular components of everyday livelihood (e.g. firewood sale), which, strictly speaking, are only coping strategies when intensified in response to a hazard. Secondly, “coping” can be taken to imply that the strategy in question is cost-free, which is not always the case.
Zone Description offers a general description of local livelihood patterns (crop production, livestock rearing, off-farm income generation, etc.).

Markets contains basic information on the marketing of local production and on any importation of staple food into the zone.

Seasonal Calendar sets out the timing of key activities during the year. This is useful in a variety of ways, e.g. to judge the likely impact of a hazard according to its timing during the year, or to assess whether a particular activity is being undertaken at the normal time in the current year.

This is followed by five sections that provide the core information on the “food economy” of the zone (see preceding section):

The Wealth Breakdown section describes three main wealth groups (“poor,” “middle” and “better-off”), explaining the differences between these groups and how this affects potential access to food and cash income.

The Sources of Food and Sources of Cash sections examine patterns of food and cash income at each level of wealth, relating those to the characteristics of each group.

The section on Hazards provides information on the different types of hazard that affect the zone, differentiated by wealth group where this is appropriate.

Response Strategies describes the various strategies available to different types of household in the zone, together with a judgment of the likely effectiveness of these.

Early warning involves identifying and interpreting key events that indicate that a severe food shortage or famine may be developing. The final section, Indicators of Imminent Crisis, draws upon the classification of early warning indicators proposed by Fred Cuny.

It is important to bear in mind for this analysis that we are thinking of wealth in relative (and local) terms. Statistical data may indicate that 80% or even 90% of the population in a particular area lives below the national poverty line, but this is measuring poverty on a national, absolute scale. In a livelihoods analysis, we are interested in understanding some of the differences between different groups within the community and the reasons for these – in which case it is not particularly useful to lump 80% or 90% of the population together into one group.

Fred Cuny identified two types of early warning indicators, those that provide advance warning of a famine (indicators of imminent crisis) and those that confirm the existence of famine (indicators of famine). The latter group includes indicators such as distress sales of productive assets (e.g. plough oxen), consumption of seeds, increased malnutrition and increased mortality. Indicators of famine are not generally context-specific (i.e., a single list could be prepared that would apply to all livelihood zones). They are also of little use in predicting or preventing severe food shortage or famine. For these reasons, they have not been included in the livelihood profiles.
Methodology

The livelihood zone map presented here is a revised version of the Argo-economy zone map produced in 2003. This new version contains important changes and was the result of a zoning workshop which was held in Ouagadougou in June 2009. The livelihood zone map was verified and revised through a series of interviews held at the regional level.

The fieldwork for the profiles was done in June and July 2009. In order to collect information for the profiles, three teams held interviews at the department level, with communities and with focus groups representing each of the different wealth groups. The collected information indicated cyclical consumption and expenditure patterns for households at different wealth levels within each of the livelihood zones. This helps to determine which households would be impacted by shock, and where they live, but not the degree of the impact nor if the shock would lead to a situation of food insecurity.

Finally, a household was defined as a group of people who live, produce and consume together. Income is held in common and managed by one designated person from the household (i.e. the “head of household”). People outside the immediate family who have been living in the household for at least six months are considered to be part of the household.
Introduction

Rainfall is by far the dominant element determining differences between livelihood zones. It helps to explain both the uses to which arable land is put, the degree of dependence on livestock herding and the nature of other non-agricultural sources of income. Thus it is possible to allocate more land to cash crops in the south than it is in the drier north, which is dominated by millet and sorghum, with intercropped nièbé (cowpeas). Livestock herding on the other hand assumes more importance in the north, as do income sources, such as gold-mining and labor migration, for those households too poor to own substantial herds. The lush forests in the south mean that the poor do not need to migrate in search of work, but can sell firewood and collect wild foods.

However, this is not the full story; there are other factors to be put in play. Geomorphology and relief affect local soil composition and productive potential. Zones with rivers present better opportunities for irrigated agriculture, such as in the rice-producing Sourou basin and Kou Valley. The presence in some zones of a large number of bas-fonds – small depressions that retain moisture after the end of the rains – allows for the cultivation of cash crops in the dry season. In other zones, conditions favor cotton as a major cash crop, or the investment in fruit production.

Cultural and historical factors may also be important. These help to explain why the central plateau that makes up much of zone 5 is the most densely populated part of the country, despite its mediocre soils. The soil quality and small-landholdings mean that households have had to diversify their income sources to survive. Elsewhere, strong cultural and familial ties between zone 4 and Côte d’Ivoire are one reason for the importance of remittances in this livelihood zone. An international frontier also makes a difference. Zone 9 has a long border with Ghana, Niger, Togo and Benin and is influenced by the dynamics of cross-border trade. In contrast, the peri-urban zone (6) is influenced by both the market demand and employment opportunities of Ouagadougou and has become a distinct livelihood zone with the city’s expansion, geared towards providing it with a variety of agricultural, livestock and forestry products.

Differences do not just occur between zones; within each there are sharp distinctions between households at varying levels of wealth, although they share the same livelihood context of ecology and geography. These differences are important in determining a household’s food security as well as its ability to respond to a shock, and the way in which it will do so. Wealth can be determined by several factors, which are to some extent dependent on the nature of the zone. In the sahelian zones, it is quality of land rather than land availability that counts; this is less so in the more crowded zones 5 and 6 on the central plateau. The number of able-bodied household members – bras valides – is also important, since those with more people to work land have a higher productive capacity. Wealthier households also have larger livestock holdings, which are a significant source of income, a way of saving and investing and a safeguard against a bad year.

The country’s landlocked position makes trade very important. In particular, livestock are traded from Burkina Faso to Côte d’Ivoire, Ghana, Nigeria and Benin. Political crisis in Côte d’Ivoire
in 2002 caused a reduction in livestock trade, although it soon picked up again as other countries increased their purchases of Burkina’s animals. This underlines another point; food security in these zones can be affected by external events. A decrease in the price of cotton on the international market, for example, would particularly affect the southern cotton-growing areas. This itself is dependent on the level of US state subsidies to its cotton farmers, which have a tendency to drive the international price down.

It should be noted that the livelihood zones in Burkina Faso are not discrete entities, but interact with each other and neighboring countries dynamically. Householders in one zone may travel outside the zone, particularly to towns, in search of work, both permanent and seasonal. This includes migrants to gold mining sites where the poor constitute the principal source of laborers, and middle and better-off householders sometimes employ poorer people from other zones as agricultural laborers. There is also a lot of trade between livelihood zones, as well as the seasonal movement of livestock across the country in search of grazing (in zone 9 for example). Further afield, labor migration (exode) outside the country is important. Money is then remitted to the householders remaining in the zone via money-transfer company, or sent more informally with friends or relatives. These informal channels, although hard to measure, are extremely important and any border closure, for example with Côte d’Ivoire would negatively affect food security in some zones. More generally, being both landlocked and small, Burkina Faso’s international frontiers are important, for the country depends on cross-border trade in both directions.

Geography and Climate

The geography and climate of Burkina Faso vary acutely from north to south. Rainfall can be as low as 300 mm per year in the far north and as high as 1100 mm per year in the south. Consequently, the vegetation in semi-arid north consists of bushes and shrubs; it is typically sahelian. The low and unreliable rainfall means that agriculture alone is a risky business and households with substantial livestock have an agro-pastoral livelihood, while others must migrate in search of work. Vegetation in the south is much denser due to the plentiful rainfall; this is where the majority of the country’s forests are to be found. The south of the country is also home to the largest bodies of water in the country including the Mouhoun and Volta rivers and dams such as Kompienga, Bagré and Ziga.

Burkina Faso is endowed with significant mineral resources, especially gold. The majority of gold sites are in the northern half of the country, but they are also to be found in other zones.

Soil erosion and increasing pressure on the country’s natural resources are everywhere a problem, not least because of the continued growth in the rural population. Land clearance for farming increasingly threatens forest resources. In the south this is added to by a returning population from countries such as Côte d’Ivoire.

Sources of Food

A main finding is the degree to which households in all zones rely on the market for their food needs. This is expected in the northern sahelian zones (7 & 8), where rainfall is low, unreliable and often poorly distributed. Crop production in these zones is so limited by rainfall amount and distribution that in most years that even the better-off cannot satisfy more than two thirds of their foods need from their own harvest. This is particularly the case for the transhumant livestock zone (8) whereas in the minority of really good rainfall years, zone 7 can even produce a substantial food surplus, so that a shift from deficit to abundance is seen from one year to the next.

The reliance on the market for staple food purchase is more remarkable in the southern surplus-producing zones that are the bread-basket of the country. For middle and better-off households
who do not produce a significant surplus this often reflects a choice to plough more resources into cash crops, and also to sell some of their sorghum and maize to purchase more expensive staples. However, the very poor and poor wealth groups do not have this choice and must use their cash income, often from labor and forest product sales, to purchase their food needs. This illustrates the extent to which the food surplus that these zones produce comes from the fields of the middle and better-off; their poorer neighbors are in food deficit.

The graphic below summarizes the differing sources of food by wealth group in all livelihood zones. As can be seen zones 7 and 8 are the most reliant on the market in a normal year. They are also two of the most isolated zones in the country in terms of market access and consequently are relatively food insecure. Because of its poor soils and high population density zone 5 is also food insecure, but has better access to markets than the two northern zones (7 and 8). The southern zones (1, 2, 3 and 9) are food secure, surplus-producing areas and overall rely less on the market.

In most zones the very poor and poor rely to varying extents on payment-in-kind for work (usually grain), food loans and gifts. Food loans are often taken in the lean months running up to the harvest and paid back directly afterwards. Thus the repayment effectively reduces the extent to which the poorer groups can rely on their own harvest stocks for the coming year. It is noticeable that in some zones the poor take a greater proportion of their requirement in food loans than do the very poor, whilst in other zones the opposite was found to be true. This may be reflective of the relative wealth of very poor households in different areas: in zones where the very poor are less likely to be able to repay a substantial loan, given also climatic risks for the next harvest, creditors may be reluctant to comply with requests.

In the northern livestock zones milk provides roughly 5% of food requirement of the wealthier groups. Although this is more than elsewhere in the country, and significantly improves the quality of their diet, we might expect milk to make a larger contribution to basic food needs, i.e. in terms of
calories. But it should be remembered that to obtain a more milk-based diet throughout the year for upwards of twenty people in a family would require large numbers of cows in milk, more than can be expected in the average herd sizes of middle and better-off households. The longer term story in these former pastoral areas is of a burgeoning population becoming increasingly dependent on agriculture. Even amongst today's pure pastoralists in the West African Sahel in general, it tends to be only a minority who are able to gain more than 50% of their food-calories from milk, so that purchased grain in exchange for marketed livestock is actually the basis of the food economy.

**Cash Sources**

In broad terms the two poorest wealth groups earn their money from working for others and a kind of self-employment, involving the sale of forest products, wood and charcoal. Contrariwise, the two upper wealth groups receive their income from their own production (whether crops or livestock) and trade. In some zones this contrast is stark, in others more finely gradated. Notice in zone 8 how ownership of livestock and income from livestock sales sets the middle and better-off apart from the very poor and poor. Notice also in zone 3 that the high costs associated with cotton production mostly exclude the very poor and poor who perform more paid labor than their counterparts in other zones. On the other hand, in zones 1 and 9 there is a smoother transition across wealth groups.

In many zones, although the very poor and poor are unable to grow enough cereals to cover their annual food requirement, they nevertheless sell some of their harvest to meet other immediate needs and perhaps to pay back loans taken during the lean hunger months. This is not a profitable activity, since they are obliged to sell when prices are lowest directly after the harvest. The cash crops they grow are also not the most lucrative; such households may intercrop niébé with cereals, but are unable to afford the inputs needed for market gardening or cotton cultivation. These poorest groups also sell some livestock – poultry –, but they do so at a young age and thus receive a low price; as one informant put it, ‘le coq du pauvre ne chante pas’.

Moving from broad brush to finer detail, there are differences between zones not only in the differing importance of differing sources of income, but also in the differing types of income. In the lush southern zones the abundance of forest products and wild foods (PFNL) ensures that their sale is important. In the dryer, more barren sahelian zones (7 & 8) poorer households migrate for work, sometimes to Côte d’Ivoire, sometimes to gold-mining sites. Such is the climate in these two zones that in a normal year, the upper two wealth groups sell little of their harvest, if they sell at all. Livestock is more significant there than further south. Zone 4 stands as an interesting case, where remittances contribute more than twenty percent of revenue for all wealth groups, not just due to the zone’s poor soil, but also because of strong cultural ties with Côte d’Ivoire.
Sources of Cash

1. South tubers and cereals
2. Southwest fruits, cotton and cereals
3. West cotton and cereals
4. West cereals and remittances
5. Central plateau cereals and market gardening
6. Per-Ubar
7. North and east livestock and cereals
8. North transhumant livestock rearing and millet
Zone 9: Cereals/Wildlife

Very Poor

Poor

Middle

Better-Off

Livestock sales
Poultry sales
Market gardening
Local agricultural labor
PFNL sales
Labor migration
Milk sales
Other temporary local labor
Other (traction)
Other (plantations/orchards)
Other (candy sales)
Cereal sales
Petty trade/trade
Gold mining
Cash crop sales
Wood/charcoal/fodder sales
Other (bricks/handicrafts)
Main Conclusions and Implications

This is a food secure zone that depends on rainfed agriculture and livestock rearing. The cultivation of tubers, especially yams is one of its distinctive features. Also notable is the lack of specialization; all wealth groups have diversified sources of income, relying on livestock, crops, PFNL (forest products and wild foods), fruits, wood and trade. This may, in part, be due to the zone’s considerable natural resources in terms of forests, PFNL and fruits.

In a normal year very poor households are only able to feed themselves for 3 to 4 months, and rely solely on the market for the rest. Market access in the zone is, however, good. In a bad year, very poor households depend on the market for more of their food needs and increase their sales of firewood, PFNL and charcoal and the amount of paid labor they perform in order to purchase cereals.

Zone Description

This is a zone of rainfed agriculture and livestock rearing, which receives from 900-1000 mm of rainfall per annum. It covers parts of the South-West and Centre West regions as well as one département in Cascades region - Ouo. It is relatively sparsely populated.

The cereals sorghum, millet and maize are the most commonly consumed crops followed by rice and yams. However, it is the cultivation of tubers that helps to make this zone distinctive; indeed, in terms of cash earnings, yams are the most important crop sold, followed by groundnuts and rice. Rice production in bas-
fonds has expanded in recent years, but, overall, these localized depressions, which retain moisture into the dry season, are under-exploited. Cashew nuts, coco-grass, cotton and niébé are also important products of this zone in terms of the cash they bring in.

In 2009, it is possible that yam production may be reduced, because a number of fields, which were in protected forest areas, have been destroyed by the Ministry of the Environment, which has banned cultivation there. This negatively affects those who live and cultivate yams in the forests. The large area covered by protected areas is also a constraint to extending crop production. The zone is rich in natural resources, including a large variety of wild foods (PFNL), such as amandes de karité, néré, liane and raisins sauvages; but these may be negatively affected by the land-demands of an increasing population. Indeed, much land in the zone is already over-cultivated and the poor soil fertility is a structural cause of the reduction in yields over time.

The main livestock are pigs, sheep, goats and poultry, although the better-off also have fairly large cattle herds. The Christian population in the zone helps to account for the relatively high number of pigs. For a primarily agricultural zone, it is notable that livestock are very important, particularly in terms of cash earnings. In addition, there are other income-earning opportunities, such as tourism and hunting. Several gold mining sites are also found in the zone; these are exploited by entrepreneurs and workers who mostly come from the central zone 5.

### Markets

The road network in this zone is relatively good. There are some exceptions to this, for example the road from Ouo to Sidéradougou (zone 2) which is in poor condition. The tables below show some of the main trade routes for agricultural and livestock exports from the zone as well as cereals imported into the zone when this is necessary. These are not exhaustive.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tubers</td>
<td>Midebdo, Batié, Bouroum-Bouroum, Gaoua → Ouagadougou, Bobo Dioullasso</td>
</tr>
<tr>
<td>Cereals</td>
<td>Djigoué, Nako, Kpuere, Boussoukoula, Legmoin → Gaoua → Banfora, Bobo Dioullasso, Ouagadougou, Ghana, Côte d’Ivoire.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of livestock exported</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, Sheep, Goats</td>
<td>Village markets → Nako, Malba, Djigoué, Kampti → Ghana, Côte d’Ivoire (Doroko) Ouo → Banfora, Niangoloko → Côte d’Ivoire (Ouangolodougou)</td>
</tr>
<tr>
<td>Poultry</td>
<td>Villages → Regional markets → Ouagadougou, Côte d’Ivoire</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main cereals imported into the zone</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize, Millet</td>
<td>Cascades, Haut-Bassins → Gaoua → Main departmental markets</td>
</tr>
<tr>
<td>Rice</td>
<td>Ouagadougou → Gaoua → Main departmental markets</td>
</tr>
</tbody>
</table>
The number of crops on the seasonal calendar reflects to some extent the lack of specialization in the zone. The agricultural cycle runs from May–June (sowing) through July–September (weeding etc.) to October–January (harvesting) – a far longer cycle than in the north and centre of the country. Pig sales are high around December, when Christmas and New Year celebrations cause demand to increase. Rice production is currently on the rise and takes place primarily in bas-fonds. Notice also that PFNL sales are at their height from April to September; this helps poorer households to get through the hunger season, when the prevalence of malaria may also mean spending money on medicine.
### Wealth Breakdown

Half of all households in this zone fall into the upper two wealth groups and in absolute terms make up a majority of the population. Household size, land area cultivated and livestock holding are also lower in this zone than in zone 2 - in particular land-holdings of the middle and better off are far lower. However, in common with this neighboring zone the middle and better-off own ploughs and orchards and can afford agricultural inputs and organic fertilizers, which the very poor and poor cannot. Some households own beehives for honey production.

In the countryside, as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.

<table>
<thead>
<tr>
<th>Wealth Groups Characteristics</th>
<th>HH size</th>
<th>Land area cultivated</th>
<th>Livestock holdings</th>
<th>Other assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>3-5</td>
<td>0.5-1.5 ha</td>
<td>6-10 hens</td>
<td>none</td>
</tr>
<tr>
<td>Poor</td>
<td>8-12</td>
<td>2.5-4.5 ha</td>
<td>2-4 goats, 2-4 sheep, 10-20 hens, 3-5 pigs</td>
<td>none</td>
</tr>
<tr>
<td>Middle</td>
<td>8-12</td>
<td>5.5-7.5 ha</td>
<td>6-10 cattle, 5-7 goats, 10-14 sheep, 20-30 hens, 6-10 pigs, 0-2 donkeys</td>
<td>0-2 ploughs, fruit trees/orchard</td>
</tr>
<tr>
<td>Better-off</td>
<td>12-18</td>
<td>8-10 ha</td>
<td>15-30 cattle, 10-20 goats, 25-35 sheep, 70-90 hens, 15-25 pigs</td>
<td>1-3 ploughs, fruit trees, orchard</td>
</tr>
<tr>
<td>% of households</td>
<td>0%</td>
<td>20%</td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>
Sources of Food

Food comes in widely varying proportions from households' own crops and the market. At one end of the spectrum the very poor can only consume their own harvest for 4 months and purchase the rest of their food; at the other, the better-off can feed themselves for the whole year. Both gifts and food loans are untypical; the very poor and poor are able to earn enough to pay for their food throughout the year, relying particularly on the zone’s natural resources (see sources of cash below).

Sources of Cash

The pattern of income sources in this zone is unusual in that the middle and better-off have more diversified income sources than the poor and very poor. This underlines the economic heterogeneity of the zone and the lack of specialization mentioned above. The middle and better-off also receive income from activities usually associated with the poorer groups, such as PFNL sales. (The women in wealthier households collect PFNL that grow naturally on their land.) Middle households sell wood too, but this is on a more commercial scale than their poorer neighbors. Furthermore, even though this is considered as a primarily agricultural zone, livestock (and poultry) sales are crucial for the middle and better-off, contributing more income than cereal and cash crop sales combined. ‘Other’ income for the better-off represents what they earn from selling fruit, most often cashew nuts, grown in their orchards. For the very poor and poor groups, the contributions of PFNL and firewood sales are completely dominant, whilst poultry earnings are also notable. On the other hand both local and migrant paid labor income is slight.
Hazards

Key informants were asked to classify each year in the last 10 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an acceptable year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but nonetheless helps to underline the relatively good food security of the zone, despite two recent poor years.

Chronic Hazards

Livestock diseases (these generally occur from December to February for poultry and from January-April for other livestock).

Periodic Hazards

Poor rains leading to some degree of crop damage.

Wild and protected animals destroying crops.

Conflict/ Raids (particularly cows).

Late starting/ early ending of rains (May-June and August).

Lack of rain at the flowering stage (August-September).

Excessive rains (most common in August).

Anthrax.
Response Strategies

A household’s wealth determines the strategies it can employ to make up for a bad year. The very poor and poor try to maximize their income in a number of ways. Livestock (mostly poultry) sales are a limited option given the small holding of these households. Other strategies include:

- Increased wood, PFNL and charcoal sales.
- Increased agricultural paid labor and other temporary local work.
- Engaging in petty trade.

These wealth groups reduce their consumption of other non-staple food items, and supplement their diet with edible nutritious wild leaves, which are mixed with staple foods to increase their bulk.

Middle group households may take loans to cover difficult periods. Both the middle and the better-off increase their livestock sales, income from remittances and trading activities.

All wealth groups adjust their expenditure patterns in a bad year, increasing the proportion on staple foods and reducing that on non-essential foods and household items. The graph below illustrates the decisions a very poor household makes with regard to their expenditure in a bad year.
Burkina Faso Livelihood Profiles

Zone 2: South-west fruits, cotton and cereals

Main Conclusions and Implications

This is a food secure zone, dependent on rainfed cultivation. It produces large volumes of cereals (notably maize) as well as cotton and fruits (especially cashew nuts and mangoes), whose sale helps to make the zone relatively wealthy. Cotton is the crop which brings in most cash to households, but to an increasing extent, fruits, such as mangoes are being processed in the zone - either dried or made into fruit juices. The dependence on cash crops makes households susceptible to changes in price on international markets.

The abundance of PFNL (forest products and wild foods) provides an important income source for the poorer wealth groups. Given this fact, deforestation, pressure on land and an increasing population may all pose problems for the future.

Zone Description

This zone receives 900-1100 mm of rainfall per annum and spans two regions - Cascades and Haut-Bassins. Burkina Faso’s second town, Bobo Dioulasso lies within the geographical area of this zone. However, the town’s influence is not strong enough to have created a distinct peri-urban zone, as around Ouagadougou. Only the Bama department has been influenced by Bobo in this way.

The zone is primarily characterized by rainfed cultivation, particularly of cotton and fruits, such as cashew nuts and mangoes. Cotton is the main crop sold, although it is less dominant than in zone 3 further north. Cotton production in this zone is mediated by the company that sells cotton from this zone - la Société des Fibres Textiles (SOFITEX) - and farmers’ incomes are dependent on the price set in consultation between the cotton companies and l’Union Nationale des Producteurs de Coton du Burkina (UNPCB). Farmers also rely
on SOFITEX to supply them with credit in the form of agricultural inputs; this credit is repaid when cotton production is sold to SOFITEX. Maize and fruits follow cotton in terms of their contribution to cash income. Rice is also an important cash crop. The zone is moderately densely populated (the population is densest in the départements in Houet and Kenedougou provinces). However, migration into the zone and the returning population from Côte d’Ivoire are putting an increasing pressure on forests (deforestation is common), on already fragile soils and on animals, especially elephants and hippopotamuses.

The main crops consumed are maize, sorghum, millet, rice and niébé although it is generally only middle and better-off households who can afford to eat more expensive staples like rice. Agricultural production is in some cases mechanized and some better-off households own tractors. As well as depending on rainfed agriculture, middle and better-off households have fairly substantial livestock holdings and all wealth groups rely to some extent on poultry, sheep, goats and cattle.

There are several other features of the zone, which, although not typical of households in all areas, are nonetheless significant. Market gardening has become more important over recent years and the creation of village irrigation schemes has been supported both by the state and NGOs. Furthermore, there are a number of bas-fonds in the zone—localized depressions that retain moisture into the dry season. The soil in bas-fonds is suited to the cultivation of market gardening crops; these crops are irrigated using water from wells (and from dams if there is one nearby). Tubers, groundnuts and souchet are also important crops in this zone, but are not widespread. Souchet producers recently began benefiting from technical assistance in order to increase production and diversify income sources.

The processing of agricultural products, by companies such as DAFANI, is another expanding activity. The DAFANI factory in Orodara, for example, processes mangoes and other tropical fruits to make fruit juice. The zone is also home to SOSUCO (Société Sucrière de la Comoé) which farms its own sugar cane plantations in order to produce sugar. The company is the country’s sole sugar producer and employs nearly 4,000 permanent and seasonal workers. Alongside these trends has been the increase in the number of ‘modern’ farms, producing eggs and dairy products as well as fattening livestock for sale. Other characteristics include fishing in lakes and rivers, the production of honey, and tourism. Visitors come for such attractions as the Grande Mosquée in Bobo and the waterfalls at Banfora.

However, another such company - La Société des Grands moulins de Burkina (GMB) - currently faces enormous difficulties and may eventually close.
**Markets**

Market access is generally good, although the state of some secondary roads is poor. This includes the roads from Ou to Sidéréadougou, Kankalaba to Weléni, Banfora to Sindou and roads in Mangodara département. The three tables below show some of the trade routes for agricultural and livestock exports from the zone and cereal imports. (However, given that the zone is generally in food surplus, staple imports are less common.) The tables are not exhaustive.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize, millet, sorghum, fruits, vegetables</td>
<td>Niangoloko, Mangodara, Banfora etc. → Bobo Dioulasso, Côte d’Ivoire, Ouagadougou, Niger, Mali.</td>
</tr>
<tr>
<td></td>
<td>Sindo → Bobo Dioulasso, Houndé → Ouagadougou (Zone 6), the north of the country, Mali, Niger, Côte d’Ivoire.</td>
</tr>
<tr>
<td></td>
<td>Dolo → Gaoua (Zone 1) → Banfora, Bobo Dioulasso, Ouagadougou, Ghana, Côte d’Ivoire.</td>
</tr>
<tr>
<td>Cotton</td>
<td>SOFITEX - local collection</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of livestock exported</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, Sheep, Goats</td>
<td>Sidéréadougou, Douna, Mangodara, Niankorodougou → Banfora, Niangoloko → Côte d’Ivoire (Ouangolodougou)</td>
</tr>
<tr>
<td>Poultry</td>
<td>Villages → Banfora</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main staples imported into the zone</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>Ghana → Houndé → Bobo Dioulasso, Ghana, Côte d’Ivoire → Banfora</td>
</tr>
<tr>
<td>Rice</td>
<td>Taiwan, Pakistan → Ouagadougou → Bobo Dioulasso → Banfora</td>
</tr>
</tbody>
</table>
The agricultural cycle runs from May-July (sowing) through August-September, to October-December (harvesting). Collected forest products (PFNL) of different types are sold year round, including: néré (Parkia biglobosa), karité (Vitellaria paradoxa), tamarin (Tamarindus indica), liane (Saba senegalensis) and raisin sauvage (Lannea microcarpa). Such forest products are found both on communal land and in the fields of some households. This category is distinct on the seasonal calendar from the sale of fruits, which are primarily cashew nuts, mangoes and citrus fruits. These are also sold year round, although the type of fruit depends on what is in season.

Memorial feasts for the deceased are held seasonally in this zone from January to March. They are obviously not an expense for all households every year, but when they do take place they require a major financial outlay.
In terms of livestock, there is less skewing of wealth towards the better-off in this zone than in zone 3, even though a lower proportion of households falls into the upper two wealth groups. The huge overall landholdings of the wealthier groups, particularly in comparison with zone 5, should also be noted. In terms of absolute numbers of people, the two upper wealth groups with only 35% of all the households actually form the majority of the overall population, given the size of their households. Nevertheless their livestock holdings and the land area they cultivate per capita are much greater than those of the poorer 65% of households. This difference between the two richer and two poorer groups suggests that upward economic mobility is difficult. It is also worth noting that the number of 'bras valides' -householders capable of working- is far higher in middle and better-off households than in the households of the very poor and poor.

Middle and better-off households own ploughs as well as being able to purchase agricultural inputs to improve their yields; they also maintain orchards. The richest households own tractors. In some areas the poor also have orchards, but they generally cannot afford to maintain them. In comparison to zone 3, where labor-intensive cotton cultivation is more dominant, the proportion of plough oxen in the herds of the middle and better-off is lower.

In the countryside, as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
Sources of Food

Very poor households in this zone can live off their own harvest for around 5 months of the year. After this they rely on the market and to a large extent on gifts; it is possible that these are more important in this zone than in zone 3 due to the larger Muslim population who pay zakat (alms given annually) to the poorest. The poorest households also take food loans in the more difficult months before the harvest; these are repaid in one way or another afterwards. In contrast, middle and better-off households could potentially live off their fields for the whole year. However, they sell some cereals, put money and land into cash crops and prefer to buy more expensive staples, such as rice and spaghetti. Since they maintain cattle herds these wealth groups are also able to consume milk, offering a small part of their calorie consumption but a significant improvement in the quality of their diet.

Sources of Cash

Income sources in this zone are much less diversified than in neighboring zone 1; cash crop sales, in particular, are more important here for middle and better-off households. The very poor and poor also depend more on paid agricultural work in this zone. However they are less of a laboring class than their counterparts in zone 3, where the greater dominance of cotton production demands more labor. Unlike in many other zones, here households in the two poorest groups receive a small amount of money from petty trade, which is usually done by women. The trade of the wealthier groups is on a larger scale and involves buying and reselling crops for a profit or retailing manufactured goods such as soap and sugar. There is also a difference in terms of livestock sales between wealth groups; the very poor and poor are often forced to sell their livestock at a young age, whereas the middle and better-off can afford to wait until maturity when the price will be higher. As one informant put it: ‘Le coq du pauvre ne chante pas’.
Hazards

Key informants were asked to classify each year in the last 10 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an acceptable year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but the histogram below does show the consistent food security of this zone and the rarity of a bad year.

Chronic Hazards

Late payment for cotton by SOFITEX.

Periodic Hazards

Livestock diseases (4-7 years in every 10, most common from December to June). Trypanosomiasis is a risk in this zone. Linked to livestock disease, proscribed veterinary products are common and farmers may medicate their animals themselves.

Crop pests, particularly those affecting fruits (4-7 years in every 10). Locusts’ attacks are also a hazard.

Parasite attacks (most common from December to June).

Slump in cashew nut sales (4-7 years in every 10).

Reduction in cotton prices.

Lack of water (most often from January to May).

Wild and protected animals destroying crops (elephants and hippopotamuses).

Lack of access to agricultural inputs (most problematic from June-August).

Temporary floods (the floods are temporary without often little damage to crops).

Poor rains leading to some degree of crop damage.

Poor distribution of rainfall.
Response Strategies

In a bad year, the very poor and poor try to bolster their income in a number of ways. They: undertake more local agricultural labor (e.g. clearing the fields of the middle and better-off); manufacture and sell bricks and handicrafts; increase their wood, fodder and poultry sales; and migrate for work, especially to gold mining sites. Other options include taking loans with the better-off and soliciting gifts of food.

The middle and better-off generally increase their livestock sales and their trading activity. In 2008, however, in some parts of the zone these wealth groups stopped selling livestock due to livestock disease. Middle households also increase their fruit sales and may sell PFNL, such as honey which they do not typically do in a normal year.

All wealth groups change their expenditure patterns in a bad year, spending a greater proportion of their total cash on staple foods, as they are more dependent on the market for their food requirement.
Burkina Faso Livelihood Profiles

Zone 3: West cotton and cereals

Main Conclusions and Implications

This is a wealthy and food secure zone in which 50% of households fall into the middle and better-off groups; but there is an unusually big wealth gap between the middle and better off. It depends fundamentally on rainfed cultivation and produces a large amount of cereals, as well as cotton – the major cash crop. Livestock are an important asset for those who can afford them – not just to sell, but, in the case of oxen, to plough the land. Cotton production in this zone is monopolized by the state producer SOFITEX, and farmers’ incomes are dependent on the price set in consultation between the cotton companies and the Union Nationale des Producteurs de Coton du Burkina (UNPCB). Subsidies for cotton farmers in the United States, which drive down prices on the international market, may also have a negative effect on those who produce cotton in this zone.

In a normal year, the very poor and poor cannot produce enough food to feed themselves and rely heavily both on paid work for others and gathering and selling the zone’s natural resources. It is possible that an increasing population, continuing land degradation and a lack of reforestation may threaten the very poor and poor’s ability to depend on PFNL and wood sales. In a bad year very poor and poor households try to bolster their income from labor and PFNL/wood sales; however, they may also migrate for work, something which they do not normally do.

Zone Description

This zone is primarily characterized by rainfed agriculture, particularly the cultivation of cotton and to a lesser extent other cash crops, such as sesame and groundnuts. Livestock rearing – cattle, goat, sheep, pigs and poultry - plays an important, but lesser role. The zone is moderately densely populated and covers a
large part of Boucle du Mouboun and Haut-Bassins as well as small parts of Center West and South West regions. There is, on average, 700-900 mm of precipitation per year and floods are not uncommon.

The main crops consumed are maize, sorghum, millet and rice; though it is generally only middle and better-off households who can afford to eat more expensive staples like rice. Cotton, maize and sorghum are the most important crops sold. Agricultural production is to some extent mechanized and some better-off households own tractors.

The zone has several other features, which, although not typical, are nonetheless significant. Market gardening has become more important over recent years; water for this activity often comes from wells and ponds (puisards). However, the expenditure on agricultural inputs which market gardening demands means that this is generally the preserve of middle and better-off households. On the other hand, it is mainly poor and very poor households who fish in the zone's rivers. The banks of the Mouboun river also provide opportunities for irrigated agriculture. Moreover, the zone contains a number of bas-fonds—localized depressions which are suitable for dry season production—whose potential remains under-exploited. The processing of agricultural products is another expanding activity in this zone.

Despite its wealth the zone still suffers from several constraints. Continuing land degradation and pressure on resources are problematic. Although the zone is home to protected forests, such as Téré and Maro, the overall trend has been the expansion of cultivated land, sometimes into protected areas, with little or no reforesting. Access to drinking water for humans has improved in recent years, but remains a problem. Informants also talked about the lack of dams (retenues d’eau) in the zone. Migrants also come to zone 3 from the heavily populated central plateau.

### Markets

Access to markets in this zone is generally good, and overall the road network in the zone has improved in recent years. However, the state of roads does deteriorate during the rainy season, many becoming impassable. In particular, this affects all those départements in Boucle-du-Mouhoun and those to the north of Kenedougou, N’Dorola and Béréba in Hauts-Bassins.

Cereals (and some fruits and vegetables) are exported from this zone. The table below shows examples of the trade routes, but is not exhaustive. Cotton is bought by SOFITEX, which is the cotton company operating in the area. Livestock (including poultry) are also exported from the zone from markets such as Ouessa to Bobo Dioulasso, Ouagadougou, Côte d’Ivoire and Ghana. When necessary, staple foods are imported into the zone; imported rice comes from Taiwan and Pakistan while maize typically comes from Ghana via Houndé and from the Côte d’Ivoire via Banfora. In poor production years maize imports from Ghana and from the Côte d’Ivoire increase considerably.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize, millet, sorghum, fruits, vegetables</td>
<td>Village markets→Kourouma, N’Dorola, Koti, Koumbia, Béréba → Bobo Dioulasso (zone 2), Houndé → Ouagadougou (zone 6), the north of the country, Mali, Niger, Côte d’Ivoire.</td>
</tr>
</tbody>
</table>
The agricultural cycle runs from June-July (sowing) through August (weeding etc.) to September-December (harvesting). The rains end in September/early October. Staple food purchase is at its peak during hunger season, but very poor households will start purchasing from around December, having already consumed their own harvest. Notice also that local agricultural paid employment is most common from May to July, while land is being prepared and sown.

Forest products and wild foods (PFNL) of different types are sold year round, including amandes de karité and néré. Memorial feasts for the deceased occur seasonally in this zone from January to March. They are obviously not an expense for all households every year; however, when they do take place they require a major financial outlay. Malaria incidence peaks in two seasons and may incur increased expenditure on medication.
## Wealth Breakdown

<table>
<thead>
<tr>
<th>Wealth Groups Characteristics</th>
<th>HH size</th>
<th>Land area cultivated</th>
<th>Livestock holdings</th>
<th>Other assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>3-5</td>
<td>1-2 ha</td>
<td>8-12 hens</td>
<td>none</td>
</tr>
<tr>
<td>Poor</td>
<td>9-11</td>
<td>2.5-3.5 ha</td>
<td>2-4 goats, 18-23 hens, 1-3 pigs, 0-2 donkeys</td>
<td>none</td>
</tr>
<tr>
<td>Middle</td>
<td>18-22</td>
<td>8-12 ha</td>
<td>3-5 cattle, 8-12 goats, 4-6 sheep, 25-35 hens, 4-6 pigs, 0-2 donkeys</td>
<td>Plough(s)</td>
</tr>
<tr>
<td>Better-off</td>
<td>30-40</td>
<td>22.5-27.5 ha</td>
<td>35-45 cattle, 18-22 goats, 30-40 sheep, 35-45 hens, 8-12 pigs, 2 donkeys</td>
<td>Plough(s)</td>
</tr>
<tr>
<td>% of households</td>
<td>0%</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Around 50% of all households in this relatively wealthy zone fall into the middle and better-off groups; this is in contrast to the more food insecure zone 4 to the north where almost 80% of households make up the very poor and poor categories. Between the middle and better-off groups, however, there is a sharp skewing of wealth in cultivated land and livestock terms towards the better-off, which make up only a small minority of all households (this is seen in neighboring zone 4 too). At the poorer end there is also a very considerable difference between the very poor that own only some poultry and cultivate little land, and the poor, who own distinctly more livestock (although not cattle) and cultivate upwards of twice as much land per capita.

With a larger household size, middle and better-off households have more able-bodied members, as well as the cash to employ the very poor and poor as casual laborers. These groups also own both oxen and ploughs to prepare the land, which the poorer groups do not. Indeed, due to the labor-intensive nature of cotton cultivation, the cattle herds of the middle and better-off wealth groups have a higher proportion of plough oxen and a lower proportion of productive females than herds in other zones. Some better-off households may also own tractors.

Land area cultivated is a much more important determinant of wealth than land area owned. Very poor households who have been in the zone for a long time may own considerably more land than households in the same group who have recently migrated to the zone. However, both types of household will only be able to cultivate 1-2 hectares of their land, regardless of the area they own. The land owned by middle and better-off households is more fertile; greater to access to agricultural inputs also helps to ensure better yields.

In the countryside, as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
In some parts of the zone, very poor and poor households own beehives and middle and better-off households own orchards and tree plantations. The wood from these plantations is sold both for construction and for firewood.

**Sources of Food**

Only around a quarter of the very poor’s annual food requirement comes from their own harvest. They survive by working for others and purchasing food or receiving payment-in-kind. Gifts also provide a substantial proportion of their food needs. Poor households rely to a similar extent on the market, in that they purchase the same proportion of their food as the very poor. However, they are more productive and receive over half their needs from their fields; they therefore depend less on gifts, payment-in-kind and food loans. Middle and better-off households could rely entirely on their own production; however, they put their resources into cash crops and sell some of their cereals, preferring to purchase more expensive foods such as rice.

**Sources of Cash**

The better-off receive a small amount of their income from renting out traction to households in other wealth groups. Better-off households have a large number of plough oxen, ploughs and perhaps even a tractor with which to do this. They are also able to put more of their resources into cultivating cash crops (primarily cotton); consequently, more of their income comes from cash crop sales than for any other wealth group. These differences aside, however, the middle and better-off wealth groups have similar structures of income. The majority comes from crop sales while trade and livestock sales account for most of the rest. Contrast this with the incomes of the very poor and poor who rely heavily on labor and the sale of naturally-occurring products such as wood and wild foods. The importance of labor here, in comparison with neighboring zones, is at least partly a result of the dominance and labor-intensiveness of cotton. Because they cannot afford to cultivate much cotton, the poor grow and sell other cash crops, such as sesame and peanuts. The very poor are themselves distinct, since they do not earn money from the sale of their own crops.
### Hazards

Key informants were asked to classify each year in the last 10 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an acceptable year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but nonetheless helps to demonstrate the level of food security in this zone. As can be seen, only 1 year in the last 10 was judged as poor and most years were judged as good. The agricultural year 2004-05 was rated as poor, due to a late start and early end to the rains.

<table>
<thead>
<tr>
<th>Year</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-99</td>
<td>4</td>
</tr>
<tr>
<td>1999-00</td>
<td>4</td>
</tr>
<tr>
<td>2000-01</td>
<td>4</td>
</tr>
<tr>
<td>2001-02</td>
<td>4</td>
</tr>
<tr>
<td>2002-03</td>
<td>4</td>
</tr>
<tr>
<td>2003-04</td>
<td>4</td>
</tr>
<tr>
<td>2004-05</td>
<td>2</td>
</tr>
<tr>
<td>2005-06</td>
<td>4</td>
</tr>
<tr>
<td>2006-07</td>
<td>4</td>
</tr>
<tr>
<td>2007-08</td>
<td>4</td>
</tr>
<tr>
<td>2008-09</td>
<td>4</td>
</tr>
</tbody>
</table>

### Chronic

- Wild and protected animals destroying crops (especially elephants)
- Crop pests and insects (e.g. caterpillars attacking cotton). July to September are the months to monitor.
- Strong winds (mostly in June)

### Periodic

- Payment for cotton by SOFITEX is later than expected, as happened in 2008-9. This puts pressure on households not only for purchasing basic food and other essentials, but also for repayment of credit from the last season and possibly the consequent loss of trust for loans for the coming season.
- Increases in the price of food/ agricultural inputs/ fuel etc.
- Livestock disease outbreaks (1-3 years in 10). These occur mostly from March to June.
- Floods (mostly occurring in July/August). These can destroy infrastructure such as bridges, as they did in 1998-1999. Bas-fonds are also prone to flooding, as happened in 2008-2009.
- Poor rains leading to some degree of crop damage.
- Late starting/ early ending of rains, as happened in 2004-2005.
- Lack of rain when the crops are flowering (September/ October).
Response Strategies

In a bad year, the very poor and poor wealth groups pursue a variety of strategies to augment their income. Locally, this may involve increased agricultural labor, increased brick and handicraft manufacturing/sales and PFNL sales. However, both these groups also migrate in search of work, something they do not do in a normal year. In terms of consumption, the poorer groups gather types of edible leaves “to fill the stomach” in difficult periods. Furthermore, fishing is also an expandable food and income source in this zone where it is possible.

The middle and better-off increase their trading activities and their livestock sales as far as the sustainability of their herd allows. The middle may take out loans.

All wealth groups change their expenditure patterns in a bad year, spending a greater proportion of their cash on staple foods and less on more ‘luxury’ foods and non-essential household items. As mentioned above, maize is imported from Ghana in a bad year. However, since this is a wealthy agricultural zone, middle and better-off households allocate only a small proportion of their expenditure to staple foods in a bad year.
**Burkina Faso Livelihood Profiles**

**Zone 4: West cereals and remittances**

**Main Conclusions and Implications**

Zone 4 is poorer and less food secure than zone 3 just to the south. This is important to keep in mind when thinking about food security on a regional level. Boucle du Mouhoun, for example, is split by these two zones; in other words livelihoods in the south of that region (zone 3) differ significantly from livelihoods in the north (zone 4). One of the main problems in this zone is the poor soil quality.

This zone is dependent on the rainfed cultivation of cereals (millet and sorghum) and cash crops (e.g. niébé and groundnuts) and sedentary livestock rearing. There is also some local variation, for example the cultivation of irrigated rice in the Sourou valley and rainfed rice cultivation in some departments like Dydir and villages like Pouni-Nord. However, the most important source of income for all wealth groups is remittances from those owning and working on cocoa and coffee plantations in Côte d’Ivoire. Anything affecting this remittance economy would have severe repercussions in the zone.

**Zone Description**

This zone is characterized by rainfed agriculture and sedentary livestock rearing. It spans the northern parts of Boucle du Mouhoun and Center West regions. Rainfall per annum ranges from 600-800 mm. Land degradation and pressure on the available agricultural land are serious problems. The overall population density is relatively high, although there is variation within the zone from sparsely populated Sissili to densely-populated Boulkiemdé. The most important crops grown for consumption are sorghum, millet and niébé. Sorghum and niébé are also the most commonly sold crops, along with peanuts. Maize, sesame and fonio are grown too, but less typically and in smaller quantities. Rice is not typical of the zone as a whole, but there are around 4,000 hectares in the Sourou valley devoted to its cultivation. The main types of livestock are poultry, pigs, goats and sheep, the large cattle holdings of the better-off notwithstanding.
Over recent years the zone has undergone several changes. The number of larger, modern farms for agribusiness has increased and the road network has improved, as has access to drinking water, although this remains problematic. (Water for both humans and animals comes mainly from wells, boreholes and dams). Market gardening has expanded; it is practiced primarily around wells and pools (puisards), because, with the exception of the Sourou valley, the zone lacks established infrastructure for irrigation. There are opportunities for irrigated agriculture along the Mouhoun river as well as a large number of bas-fonds—localized depressions which retain moisture into the dry season—whose potential has not been developed. Additionally, the zone produces honey for export and has natural resources in gold, zinc and copper.

Households have strong links with Côte d’Ivoire, making remittances, from those owning or working on cocoa and coffee plantations there, the single most important source of income with a smaller amount of seasonal migrant work earnings in the same area. This is partly because the zone’s land degradation makes it necessary for some to find work elsewhere. Money can be remitted in several ways: through Western Union, via postal order, or informally, carried by a parent or friend who is returning to the zone. This last is the most difficult to quantify, yet it is undoubtedly important and would be the most affected if the Burkina Faso - Côte d’Ivoire border were to close.

Migrants also came to zone 4 from the heavily populated central plateau.

**Markets**

Access to markets in this zone is generally good, and overall the road network in the zone has improved in recent years. However, the state of roads does deteriorate during the rainy season, many becoming impassable; this affects all the included départements of Boucle-du-Mouhoun. Specifically, the department of Kayao in Center South region has poor, non-asphalt roads.

The table below provides examples of trade routes for goods exported from the zone; it is not exhaustive. Maize, sorghum, tubers and rice are also imported into the zone. The maize comes mostly from Ghana, the tubers from zone 1 and Ghana and the imported rice originates in Taiwan and Pakistan.

<table>
<thead>
<tr>
<th>Good</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals (sorghum, millet)</td>
<td>Djibasso, Bomborokuy, Sono, Barani, Kombori, Di, Gassan, Toeni, Tougan, Toma → Nouna → Ouahigouya (Zone 5), Koudougou, Ouagadougou, Bobo Dioulasso, Mali, Niger</td>
</tr>
<tr>
<td>Cattle, goats, sheep</td>
<td>Local markets → Nouna → Bobo Dioulasso, Ouagadougou, Côte d’Ivoire, Ghana</td>
</tr>
<tr>
<td>Poultry</td>
<td>Regional markets → Ouagadougou, Côte d’Ivoire</td>
</tr>
<tr>
<td>Pigs</td>
<td>Local markets → Sanguie → Koudougou → Ouagadougou</td>
</tr>
</tbody>
</table>
The agricultural cycle runs from May-June (sowing) through July-September (weeding etc.) to October-December (harvesting). Because of financial pressures, including debt repayment, very poor and poor households sell cereals as soon as they are harvested, unable to wait until prices rise in later months. For these households, the most difficult time of the year – the hunger period or soudure when household grain stocks are long finished and market prices are high - coincides with the months when paid agricultural employment is most common. In those parts of the zone where rice is cultivated there are two harvests per year, one from May to October and the other from November to April.

Memorial feasts for the deceased take place seasonally in this zone from January to April. They are obviously not an expense for all households every year; however, when they do take place they require a major financial outlay.
**Wealth Breakdown**

<table>
<thead>
<tr>
<th>Wealth Group</th>
<th>HH size</th>
<th>Land area</th>
<th>Livestock holdings</th>
<th>Other assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>3-5</td>
<td>1-2 ha</td>
<td>1-3 goats, 2-4 hens</td>
<td>none</td>
</tr>
<tr>
<td>Poor</td>
<td>5-7</td>
<td>2-4 ha</td>
<td>3-5 goats, 9-11 hens, 0-2 pigs</td>
<td>none</td>
</tr>
<tr>
<td>Middle</td>
<td>13-17</td>
<td>6-10 ha</td>
<td>4-6 cattle, 9-11 goats, 4-6 sheep, 23-28 hens, 2-4 pigs, 0-2 donkeys</td>
<td>Plough/ Cart</td>
</tr>
<tr>
<td>Better-off</td>
<td>28-33</td>
<td>10-20 ha</td>
<td>35-45 cattle, 25-35 goats, 13-18 sheep, 45-55 hens, 4-6 pigs, 2-4 donkeys</td>
<td>Plough/ Cart</td>
</tr>
</tbody>
</table>

There is a large proportion (68%) of very poor and poor households, especially when compared to the neighboring and richer zones 1 and 3. Wealth is also heavily skewed towards the small proportion of households that fall in the better-off group; notice, for example, the large jump in livestock holding between the middle and better-off. (However, it is worth remarking that better-off households are much larger in size than those of any other wealth group).

It is the upper two wealth groups who can afford to buy agricultural inputs to increase their yields from the poor soil in the zone. Market gardening is only open to middle and better-off households who can afford to invest in it and is not typical of the zone. In addition, in some parts of the zone the better-off own orchards.

In the countryside as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
Sources of Food

Middle and better-off households receive almost all their annual food requirement from their own harvest. Most better-off and some middle households could potentially be self-sufficient or produce a surplus. However, they invest land and money in cash crops, and they sell some of their cereals, preferring to purchase more expensive staples. There is a sharp distinction between this situation and that of the very poor that can live off their fields for only two months. Even though they receive large quantities of food in gifts and payment-in-kind for local agricultural work, the very poor still depend on the market for food almost twice as much as the poor. The poor do, however, depend more on food loans than the very poor; in this relatively poor zone food loans are harder for very poor households to pay back - or be trusted to do so.

Sources of Cash

By far, the most striking thing in sources of cash is the high dependence on remittances among all wealth groups. This is the zone with the strongest familial ties to plantation owners in Côte d’Ivoire. Also interesting is the significant contribution of livestock sales in a supposedly agricultural zone. These are more important than cash crop sales for all wealth groups. However, for the very poor and poor the majority of their income comes from remittances and wood sales; these activities contribute more than livestock sales, crop sales and labor combined. Although very poor and poor households cannot cover all their food needs from their own production, they nevertheless sell a small amount of cereals in the months following the harvest. The income from this may be used to pay back food loans. Other temporary local labor for the poorest groups primarily involves the manufacture and sale of bricks.

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8 In some areas of the zone the poorest groups can live off their own harvest for more months.
Hazards

**Chronic Hazards**

Birds eating standing grain (this is more of a problem in the north of the zone).

**Periodic Hazards**

Poor rains leading to some degree of crop damage. The months of May, June and September are the most important to monitor.

Floods (1-3 years in every 10, occurring most commonly in July and August).

Livestock diseases (particularly of pigs and poultry).

Damage to crops by protected animals (e.g. elephants).

Increases in the price of food/ agricultural inputs/ fuel etc.

Late starting/ early ending of rains.

Lack of rain when the crops are flowering.

Response Strategies

In a bad year, **all wealth groups** try to augment their income from remittances. They also increase their livestock sales, although, given their small holding, the poorer groups have limited capacity to do this. All households change their expenditure patterns, shifting a greater proportion of cash away from non-essential items to purchasing staple food.

The **very poor** and **poor** also pursue a combination of the following strategies to make up for a bad year:

- Undertaking more local agricultural paid labor.
- Engaging in more domestic work for richer households.
- Manufacturing and selling more handicrafts and bricks.
- Gathering and eating wild leaves.
- Soliciting gifts from wealthier groups. Even **middle** households sometimes seek help from the better-off.
Main Conclusions and Implications

This zone is one of the most food insecure in the country and is structurally in food deficit. Population density, pressure on land and land degradation mean that crop yields are poor and landholdings small. However, rainfall is more plentiful and reliable than further north in zone 8 and parts of zone 7. The central position of the zone and the large markets within it (e.g. Ouahigouya and Pouytenga) ensure that this zone is less isolated than those further north. This helps to add value to some of the diverse income activities prompted by land constraints, notably market gardening, poultry-keeping and gold-mining. Despite good market access and availability, the zone is still sensitive to increases in the price of cereals; indeed the food price rises of 2007 had a significant impact on households’ food security. However, in a bad year it is not uncommon for the state and its partners to subsidize cereals or to distribute seed, both for rainfed and dry-season market gardening crops. Animal feed (cotton cakes) may also be subsidized.

Zone Description

This sudano-sahelian central zone essentially comprises the Mossi Plateau, covering parts of six regions: North, Center, Center-North, Plateau Central, Center-South and Center-West. It is characterized by rainfed agriculture (especially market gardening) and livestock rearing. There is around 600-700 mm of rainfall per annum, a higher precipitation than much of zone 7 and all of zone 8 to the north. In comparison with zones 3 and 4, rain failures are less severe as well as less frequent, although still serious in some years. Population density, however, is high and there is considerable pressure on the land. The land itself is poor, over cultivated and suffers from soil erosion.

Sorghum, millet, rice and nièbé are the most important crops in terms of consumption, while nièbé, crops from market gardening, millet and voandzou (‘pois de terre’, Bambara groundnut, Vigna subterranea L.)
Verdc., Fabaceae) bring in the most revenue. Rice cultivation is very localized to the areas around dams and bas-fonds—depressions that retain moisture into the dry season. Maize is also commonly consumed and sold in some parts of the zone. Market gardening is well developed in Bam province, where French beans are cultivated around Lake Bam and then exported to Europe.

The practice of market gardening has grown in recent years and is relatively well-developed in the zone. This expansion is partly a result of severe land degradation that has forced households to adapt. Indeed in order to market garden some of the young people in the zone have moved towards bas-fonds. Market gardening remains, however, the preserve of the middle and better-off, because of the investment in agricultural inputs it demands. The principal crops grown include: green beans, tomatoes, onions, cabbages and potatoes. Livestock are less important than in the zones further north; nonetheless, they still generate important income, particularly sales of small ruminants and poultry. (Hens are sold by the women in the household). There are several constraints to livestock rearing in the zone. First, the availability of water for livestock is poor during the dry season, despite the number of dams in the zone (e.g. the Ziga and Zitenga dams). Second, there is generally a lack of pasture. Finally, the rise in price of agro-industrial by-products used to feed livestock has negatively affected the practice of fattening animals for sale – which is generally done by women.

Gold mining (both locally and in other zones) is an important source of income for all wealth groups. For the very poor and poor households, this involves the labor of prospecting using traditional methods. The middle and better-off fall more in the category of entrepreneurs, employing those from poorer groups and providing them with food and tools. It is interesting that the wealthier groups in other zones (e.g. 7 & 8) do not do the same; it is the middle and better-off from zone 5 who also employ the poor of other zones to prospect for gold. Finally, there is also some fishing in the zone.
Markets

Both access to markets and the road network in this zone are good. There are, however, some exceptions – départements where the roads are poor and badly maintained, for example in Béré, Pilimpikou, Samba, Latodin and Kalsaka. Some départements also become inaccessible during the rainy season: Ouindigui, Tougo, Bassi and Leba are examples. The three tables below show some of the trade routes for agricultural and livestock exports from the zone and cereal imports. Lastly, over recent years the infrastructure for stocking cereals has improved in the zone.

<table>
<thead>
<tr>
<th>Main agricultural products exported</th>
<th>Trade route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals (sorghum, millet, rice)</td>
<td>Villages → Ouahigouya → Ouagadougou, Ghana, Togo, Bénin, Mali&lt;br&gt;Villages → Towns (Ziniare, Korsimoro, Zorgho...) → Ouagadougou, Ghana, Togo, Bénin&lt;br&gt;Villages → Saponé → Ouagadougou&lt;br&gt;Villages → Mali</td>
</tr>
<tr>
<td>Cash crops (niébé etc.)</td>
<td>Villages → Ouahigouya → Ouagadougou, Ghana, Togo, Bénin, Mali, Europe (sesame)&lt;br&gt;Villages → Main departmental markets → Ouagadougou, Ghana, Togo, Bénin&lt;br&gt;Villages → Mali</td>
</tr>
<tr>
<td>Market gardening</td>
<td>Villages → Main departmental markets → Ouahigouya → Mali (Koro)&lt;br&gt;Villages → Main departmental markets → Ouagadougou, Ghana, Togo, Bénin, Côte d’Ivoire&lt;br&gt;Villages → Mali</td>
</tr>
<tr>
<td>Sweet potatoes</td>
<td>Villages → Ouahigouya → Mali</td>
</tr>
<tr>
<td>Green beans</td>
<td>Fieldgate → Ouagadougou → France, Italy (contract between farmers and exporters)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of livestock exported</th>
<th>Trade route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, goats, sheep</td>
<td>Villages → Kaya, Pissila, Moggédo, Ouahigouya (Youba) → Ouagadougou, Pouytenga → Ghana, Côte d’Ivoire, Nigeria</td>
</tr>
<tr>
<td>Poultry</td>
<td>Villages → Kaya, Ouagadougou</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main staple foods imported into the zone</th>
<th>Trade route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>Bobo, Léo, Ghana → Kaya, Other major provincial markets → villages Hauts Bassins, Boucle du Mouhoun, Ghana → Ouahigouya, Other major provincial markets → Villages</td>
</tr>
<tr>
<td>Millet and sorghum</td>
<td>Sahel, Ouagadougou → Kaya, Other major provincial markets → villages Hauts Bassins, Boucle du Mouhoun, Ghana → Ouahigouya, Other major provincial markets → Villages</td>
</tr>
<tr>
<td>Yam</td>
<td>Sissili (Léo) (Zone 1) → Ouahigouya</td>
</tr>
</tbody>
</table>
The agricultural cycle runs from June (planting) through July-September (weeding) to October-November (harvesting). The very poor and poor sell the majority of their crops following the harvest in November and December, when prices are lowest. In contrast, the middle and better-off can afford to wait and sell when prices are high; they may also buy the cereals of the poorer groups to re-sell them at a profit the following year.

Notice that several activities coincide with the hunger period. The main period of agricultural labor – a time of hard physical exertion- starts in June and continues after the harvest through to March. Furthermore, malaria is at its peak during the hunger season and the very poor and poor consume and sell forest products and wild foods (PFNL).

Market gardening takes place in the fields just after the main harvest through to March. The water needed for irrigation comes from pools (puisards) or dams; middle and better-off households own or have access to pumps, which allow them to use the water.

Memorial feasts for the deceased occur seasonally in this zone but are obviously not an expense for all households every year. However, when they do take place they require a major financial outlay. It is
interesting that in a good year the number of memorial feasts and marriages in this zone increases; in zones 7 & 8 the number of marriages increases, but not the number of memorial feasts.

**Wealth Breakdown**

<table>
<thead>
<tr>
<th>Wealth Groups Characteristics</th>
<th>HH size</th>
<th>Land area cultivated</th>
<th>Livestock holding</th>
<th>Other assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>4-6</td>
<td>0.5-1.5 ha</td>
<td>0-5 hens</td>
<td>none</td>
</tr>
<tr>
<td>Poor</td>
<td>8-12</td>
<td>2-4 ha</td>
<td>1-3 goats, 1-3 sheep, 18-22 hens, 1 donkey</td>
<td>none</td>
</tr>
<tr>
<td>Middle</td>
<td>12-18</td>
<td>4-6 ha</td>
<td>4-6 cattle, 8-12 goats, 1-3 sheep, 45-55 hens, 1-3 donkeys</td>
<td>Plough/Cart/ Motorized Pump</td>
</tr>
<tr>
<td>Better-off</td>
<td>18-22</td>
<td>7-11 ha</td>
<td>15-25 cattle, 15-20 goats, 13-17 sheep, 60-80 hens, 4-6 donkeys</td>
<td>Plough/Cart/ Motorized Pump</td>
</tr>
</tbody>
</table>

Livestock holdings in this zone are considerably smaller than zones 7 and 8 further north and the majority of households do not own cattle. Poultry, however, are much more numerous in this zone and constitute an important source of income, mainly destined for urban markets and export south. In line with the high population density, the land area cultivated is lower than in zone 7. In zone 5 itself, middle and better-off households cultivate more in absolute terms and more hectares per household member than the very poor and poor. The wealthier groups also have access to land with better quality soil, pits for the production of organic fertilizers and better quality manure, seeds and other agricultural inputs. However, it is the very poor who are at most disadvantage; poor households may own a hoe and do typically have one donkey, which can be used for land preparation.

In the countryside as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
Sources of Food

Despite the smaller landholdings in this zone the very poor and poor are able to cover more of their food needs with their own harvest than their counter-parts in zone 7; this is, in part, due to more plentiful and reliable rains. Both these groups take food loans, which they repay after the harvest to remain credit-worthy for the following year. The better-off and the middle can cover all/almost all of their food requirement from their own harvest, and can also afford to buy more expensive, preferred staples (especially rice) as well as non-staple food to substitute for/supplement their own production. The smaller cattle holdings in this zone compared to further north mean that milk is less important for the middle and better off, and hardly consumed at all by poorer households.

Sources of Cash

The very diversified sources of income for all wealth groups in this zone are striking. This diversification is a response to the high population density and severe land degradation in the zone. It is noticeable that livestock and poultry sales for the middle and better-off are more important in revenue terms than their total crop sales. These groups get a relatively small portion of their income from cereal sales, because they tend to stock them both to provide a buffer against a bad year, but also to sell what they do sell when prices are high. (A certain amount of cereal sales have also been captured under income from trade, due to difficulties of classification.)

Indeed, trade is the second largest income source for the middle and better-off. This is in part due to the proximity of Ouagadougou and other major markets as well as the zone's central position in the country, which ensures that large volumes of goods pass through it. Trade is a broad category that includes both trade in cereals and in manufactured goods such as cigarettes.
As mentioned above, this zone is different from others in which gold mining takes place, because all wealth groups, not simply the poor and very poor, receive income from it. Remittances, which form a small portion of income for the middle and better-off, generally come from relatives in Ouagadougou and Côte d’Ivoire.

**Hazards**

Key informants were asked to classify each year over the last 10 years according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an acceptable year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but the histogram below does help to demonstrate the food insecurity of this zone, with five of the past 10 years in the past decade ranked as below average.

![Histogram showing food security from 1998-99 to 2008-09](image)

**Chronic Hazards**

Poultry Disease – (October to January are the crucial months).

**Periodic Hazards**

Poor or irregular rainfall (3 years in every 10).

Rain failure.

Floods; the most recent were in 2008 (these mostly occur in September and October at the end of the rainy season).

Hesitant early rains leading to substantial re-seeding in June, July and sometimes in August.

Lack of rain when crops are flowering – the critical months are August and September.

Early ending of rains (occurs mostly in October).

Livestock disease – (May and June are crucial months).

Crop pests, such as birds and parasites (most common in July-August and October-November).

Increases in the price of cereals.
Response Strategies

The very poor and poor have neither the stocks nor the savings (in livestock or in cash) to make up for a bad year. Their main option lies in bolstering their income through more paid labor. Locally this may involve the construction of bricks, increased sales of wood and of PFNL, or finding domestic employment with another household in a nearby town. However, both these groups also migrate in search of work, something they do not do in a normal year. Other options include pawning items of value with the better-off, taking loans from the better-off and soliciting gifts of food. The poorer groups also gather types of edible leaves in difficult periods.

Middle households have different options; they increase their livestock sales and, if possible, the income they receive from remittances. Like the poorer groups, however, they also migrate in search of work.

The better-off are able to protect themselves in most bad years, in comparison with the same wealth group in zones 7 and 8. They: destock their cereals which they both consume and sell at high prices; import staple foods into the zone to sell at a profit; buy livestock cheaply from owners under most pressure to sell, fatten them and sell them on at a higher price; give food and/or cash loans to the poor, which are later repaid with interest (often double); act as pawnbrokers for the poorer groups; export animals to urban centers or to neighboring countries; and employ cheap agricultural labor.

All wealth groups change their expenditure patterns in a bad year, spending a greater proportion of their cash on staple foods and less on more ‘luxury’ foods and non-essential household items.
Burkina Faso Livelihood Profiles

Zone 6: Peri-Urban of Ouagadougou

Main Conclusions and Implications

This is the smallest zone in the country; situated on the central plateau, it covers the Central region, of which Ouagadougou is the capital. It is influenced by both the market demand and employment opportunities of the capital and has become a distinct livelihood zone with the city’s expansion, geared towards providing it with a variety of agricultural, livestock and forestry products. The zone is well connected in terms of markets but suffers from poor soil quality and small landholdings - a consequence of high population density. In a bad year, labor migration to Ouagadougou increases, as do remittances sent by relatives living in the capital city.

Zone Description

This is the smallest zone in the country in terms of its area; it surrounds Ouagadougou, covering the small Center region and one department—Loumbila—in Plateau Central region. The zone is defined by the influence of the capital and is geared towards supplying it with a variety of agricultural, livestock and forestry (mainly wood and PFNL) products. It receives around 700 mm of rainfall per annum and is characterized by rainfed agriculture, market gardening and intensive/semi-intensive livestock rearing. The main crops grown for consumption are sorghum, millet, niébé and maize, while sorghum, millet, niébé and peanuts are the most important crops sold. Market gardening is practiced in all départements in the zone, primarily by middle households who can afford the inputs it requires. Less typically, but significantly, zone 6 has also seen the development of larger-scale farming enterprises (agri-businesses).

In general, soil quality in the zone is poor. The land area cultivated by individual households is small in comparison with the surrounding zone 5. This is the most densely-populated zone in the country and pressure on land is high. One of the consequences of this has been an increase in the migration of young
people into Ouagadougou city and to gold-mining sites in search of work. The main livestock reared are poultry, sheep, goats, pigs and cattle; in addition to providing revenue, livestock are an important source of investment and long-term savings for households. The zone has also seen an increase in the number of so-called modern, larger-scale farms devoted to the production of chickens, eggs, milk, small ruminants and pigs to be sold in Ouagadougou.

Water for humans, animals and irrigated crops comes from a combination of wells, standpipes, dams and lakes. There are also a number of bas-fonds in the zone—small depressions that retain moisture into the dry season; however, their potential remains under-developed.

**Markets**

Because of its proximity to the capital Ouagadougou, the road network in this zone is good, with easy access to markets. However, non-asphalt roads that do not lead to the capital are of poor quality and badly maintained during the rainy season. In contrast to other zones, the main roads used for trading in this zone are "commune"-level roads that lead to the capital; these provide Ouagadougou with agricultural and livestock products from the zone.

<table>
<thead>
<tr>
<th>Main agricultural products exported</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals (sorghum, millet, rice)</td>
<td>Villages → Ouagadougou, Ghana, Togo, Bénin, Mali</td>
</tr>
<tr>
<td></td>
<td>Villages → Towns (Ziniaré, Korsimoro, Zorgho, etc.) OUAGADougou → Ghana, Niger, Togo, Bénin</td>
</tr>
<tr>
<td>Cash crops</td>
<td>Villages → OUAGADougou, Ghana, Togo, Bénin, Mali</td>
</tr>
<tr>
<td></td>
<td>Villages → large departmental markets → OUAGADougou, Ghana, Togo, Bénin</td>
</tr>
<tr>
<td></td>
<td>Villages → Mali</td>
</tr>
<tr>
<td>Market gardening products</td>
<td>Villages → large departmental markets → OUAGADougou, Ghana, Togo, Bénin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of livestock exported</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, goats, sheep</td>
<td>Villages → OUAGADougou → Ghana, Côte d'Ivoire, Nigeria</td>
</tr>
<tr>
<td>Poultry</td>
<td>Villages → Kaya, OUAGADougou</td>
</tr>
<tr>
<td></td>
<td>Villages → large departmental markets → OUAGADougou</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main staple food imported into the zone</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maize</td>
<td>Bobo, Léo, Ghana → OUAGADougou, departmental markets → Villages</td>
</tr>
<tr>
<td>Millet and sorghum</td>
<td>Hauts Bassins, Boucle du Mouhoun, → OUAGADougou, other large provincial markets → departmental markets → Villages</td>
</tr>
<tr>
<td>Yam</td>
<td>Nahouri, Sissili, Poni, Ghana → OUAGADougou, other large provincial markets → departmental markets → Villages</td>
</tr>
</tbody>
</table>
The agricultural cycle runs from June (sowing) through July-August (weeding etc.) to September-November (harvesting). Land preparation for maize, peanuts and voandzou (‘pois de terre’, Vigna subterranea L. Verdc., Fabaceae) takes place in June, the same month as sowing.

Peak staple food purchase is from June-August, the last three months of the hunger season. In September, when the first crops are harvested purchase is much reduced and from October through to January households purchase very few staple foods. The poorest households start to purchase staples again in February as their harvest runs out. The very poor and poor also sell some of their crops just after the harvest to pay off their debts.

Memorial feasts for the deceased occur seasonally in this zone from February to March. They are obviously not an expense for all households every year; however, when they do take place they require a major financial outlay.

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9 The calendar shows on the period of peak wild food (PFNL) sales; however, wild foods are available throughout the year.
Wealth Breakdown

Over half of all households in this zone fall into the upper two wealth groups and in absolute terms make up the majority of the population. The large middle group is particularly striking and it is typically these households that engage in market gardening. It is only middle and better-off households that can afford agricultural inputs and who commonly own ploughs. Note also the small land area cultivated, particularly in comparison to zone 5 which surrounds this zone. This is largely a result of high population density in the peri-urban zone. Middle and better-off households also have smaller livestock holdings than their counterparts in zone 5. Their livestock are often shepherded by the Peulh. Households in the two wealthier groups are also more likely to own carts, which are used to transport products such as wood and manure.

In the countryside, as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
Sources of Food

Only around a third of the very poor’s annual food requirement comes from their own harvest. They survive mainly by purchasing food on the market; the rest of their food needs come from payment in kind and gifts, received from wealthier households. Poor households are more productive and receive a greater proportion of their food requirement from their own production. They are consequently less reliant on the market than the very poor. However, the most striking difference is between the two upper and two lower wealth groups. Middle and better-off households rely almost entirely on their own production.

Sources of Cash

The very poor, in contrast to the other three wealth groups, rely on labor and the zone’s natural resources for almost their entire cash income. Ouagadougou provides the demand for PFNL, wood and sand sales. Local labor includes agricultural labor as well as the manufacture and sale of bricks. The other three groups depend more on their own production, whether livestock or crops. It is only the large middle group that engages in market gardening; the two poorer groups are excluded by the financial investment that is required. The upper two wealth groups receive a significant amount of their total cash from trade. It should also be noted that salaried and casual employment in Ouagadougou itself was not typical for any wealth group in this zone.
Hazards

Key informants were asked to classify each year in the last 6 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an average year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but nonetheless helps to demonstrate the level of food security in this zone. Despite population density, low land holdings and poor soil quality, this is a generally food secure zone, in large part due to its proximity to Ouagadougou.

Chronic Hazards

Diseases affecting poultry (most common from December to February).

Periodic Hazards

Increase in prices of food, agricultural inputs, fuel etc.

Slump in sales of produce from market gardening.

Crop pests and diseases, especially ‘striga hermontheca’. Also locust attacks, as happened in 2004-5.

Livestock diseases (February is commonly the worst month).

Poor distribution of rains, as happened in 2008-9.

Late starting/ early ending of rains (4-7 years in every 10).

Hesitant early rains leading to substantial re-seeding (Re-seeding takes place in from June-July).

Lack of rain when crop is flowering (mostly occurs in August).

Poor rains leading to some degree of crop damage (1-3 years in every 10).
Response Strategies

In a bad year, all wealth groups change their expenditure patterns, allocating a greater proportion of their cash to staple food and reducing the proportion spend on non-essential non-staple foods and household items. In some bad years cereals have been sold at a subsidized price. All groups also try to maximize their income, although the nature of these strategies depends on a household’s wealth. Very poor and poor households typically try to increase their income from the following sources:

- PFNL, ‘agregat’ and wood sales
- Labor migration, most often to Ouagadougou or Côte d’Ivoire.
- Remittances, often coming from children or relatives in Ouagadougou.

The middle group also sell PFNL and receive remittances. The middle and better-off increase their income through livestock, poultry, cereal sales and trade. Both groups practice ‘l’embouche’: purchasing livestock when the price is low, fattening it and reselling at a much higher price. Furthermore they provide loans and gifts to poorer households.
Burkina Faso Livelihood Profiles

Zone 7: North and east livestock and cereals

Main Conclusions and Implications

This is an extensive zone within which there are local variations. Most importantly, food insecurity in the north and west of the zone is greater than in the east, in part due to more unreliable and less plentiful rainfall. In a normal year the zone is structurally in food deficit, the middle and better-off not managing to cover their annual food requirement with their own harvest. However, in very good years this zone switches to being the ‘granary of the Sahel’ and supplies cereals to the neighboring zones 5 and 8. In these zones it is Yagha, Komondjari as well as parts of Séno and Soum that are particularly noteworthy for their bumper harvests.

In a normal year, zone 7 households depend heavily on the market for staple grain, and consequently the increase in food prices from the end of 2007 has had a considerable impact on households’ food security. In a bad year livestock sales are particularly important for households’ food security, although in the current year the high price of livestock feed and the late start of the agricultural cycle have had a serious negative effect on the condition of livestock. For the very poor and poor, who have few livestock, income from gold mining and migration is important in both a good and a bad year.

Zone Description

This zone covers a large swathe of the country, including parts of Yatenga in the west, parts of Soum and Séno in the north and Yagha, Gnagna and Komondjari in the east. It sprawls across four regions: the Sahel, the East, the Centre-North and the North. The picture is typically sahelian: rainfed cultivation of millet and sorghum on fairly sandy soils, with inter-cropped niébé and other items as both consumption and cash crops, groundnuts and sesame being the main examples together with whatever part of the niébé harvest is not consumed at home, and some rice in bas-fonds). Livestock - cattle, goats, and sheep - are an important
source of cash income (particularly amongst the wealthier households) and the principal form of savings/investment.

Within the zone, there is much local variation on this theme. The rainfall in the south-east of the zone (Yagha and Komondjari) is more plentiful and reliable—500-700 mm per year—than in the west (Soum and Séné), which receives 400-500 mm per year. As a result, millet is the main cereal in the west of the zone, sorghum in the east. Market gardening, while not typical, has become increasingly important in many villages. In addition, the zone is well endowed with bas-fonds, which could be used to cultivate cash crops, but these are generally not well-developed. In Sampelga department, for example, there are only 40 such hectares devoted to cultivating rice. There is also some tourism, for example to visit the mosques at Bani. Some forest products and wild foods (PFNL)—especially gum Arabic extracted from Acacia laeta and Acacia senegal—are to be found in this zone. Other commonly collected PFNL are Sclerocarya birrea and Adansonia digitata.

Those rearing livestock face several difficulties, notably the lack of pasture after the rainy season, and an insufficient number of permanent water sources for animals where pasture availability would justify their development. Permanent access to water for humans is similarly problematic. This is especially the case in the communes of Sollé, Kain, Bahn, in parts of the provinces of Soum and Séné, and sometimes in Yagha and Komondjari. There is also a lack of access to the nationally marketed livestock feed, especially following recent price rises.

Gold mining (performed both locally and beyond the zone) is another important income-generating activity for residents of this zone, specifically for the poor and very poor. It has increased in significance in recent years to provide poorer households an alternative to labor migration as a source of income. This said, in some areas gold mining has held this significance for a while; a Save the Children UK study in Séné in 2001 found that income from gold mining made up a large proportion of cash income for some wealth groups and, in some cases, equaled labor migration in its importance. The zone is home to several industrial mines – Inata, Taparko and Essakane – that provide some employment. There are also many smaller sites in the zone, where traditional prospecting methods are used: Solhan, Gangoal, Gaigou, GoulGountou and Silmadjo are some examples). Unlike in zone 5, gold mining is not an activity that the middle and better-off typically engage in. Those who employ poor and very poor householders to mine for them generally come from zone 5.
Access to markets is poor relative to other parts of the country, but the zone is less isolated than zone 8. Roads in some parts of the zone are impassable during the rainy season, including in the communes of Seytenga, Banh, Sollé and all départements in Yagha province. The three tables below show some of the trade routes for agricultural and livestock exports from the zone and cereal imports.

### Main agricultural products exported

<table>
<thead>
<tr>
<th>Product</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>Villages → Main provincial markets → Ouagadougou, Niger</td>
</tr>
<tr>
<td></td>
<td>Villages → Ouahigouya → Ouagadougou, Ghana, Togo, Benin, Mali</td>
</tr>
<tr>
<td>Cash crops (Niébé)</td>
<td>Villages → Main provincial markets → Ouagadougou, Niger, Togo, Benin, Mali</td>
</tr>
<tr>
<td></td>
<td>Villages → Ouahigouya → Ouagadougou, Ghana, Togo, Benin, Mali</td>
</tr>
<tr>
<td>Market Gardening</td>
<td>Villages, Main departmental markets → Ouahigouya → Mali (Koro); Ouagadougou → Togo, Ghana, Côte d’Ivoire</td>
</tr>
</tbody>
</table>

### Type of livestock exported

<table>
<thead>
<tr>
<th>Livestock</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, Sheep, Goats</td>
<td>Mali, Villages → Dori → Fada N’Gourma, Ghana, Côte d’Ivoire, Nigeria</td>
</tr>
<tr>
<td></td>
<td>Mali, Villages, → Djibo→Ouagadougou, Côte d’Ivoire</td>
</tr>
<tr>
<td></td>
<td>Villages → Ouahigouya (Youba) → Ouagadougou, Pouytenga → Ghana, Côte d’Ivoire</td>
</tr>
<tr>
<td></td>
<td>Gayéri → Fada N’Gourma, Ghana, Côte d’Ivoire, Nigeria</td>
</tr>
<tr>
<td>Poultry</td>
<td>Villages → Ouagadougou</td>
</tr>
<tr>
<td></td>
<td>Villages → Main provincial markets → Ouagadougou</td>
</tr>
</tbody>
</table>

### Main staples imported into the zone

<table>
<thead>
<tr>
<th>Staple</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>Pouytenga → Dori, Sebba → Villages</td>
</tr>
<tr>
<td></td>
<td>Hauts bassins, Ghana, Boucle du Mouhoun → Ouahigouya → Soum (Djibo), other provincial markets → Villages</td>
</tr>
</tbody>
</table>
Because the rainy season is relatively short the agricultural cycle is also short by comparison with further south in the country, running from June-July (planting) through August-September (weeding) to October-November (harvesting). During this period, all poor and very poor householders will have returned to the zone from migration in order to secure the best possible yield from their land. In a normal year they will leave again in December, but in a bad year they may leave as early as October/November.

Market gardening, while not currently typical of the zone, has increased in importance and takes place from November to April.
Livestock and land are clearly key determinants of wealth in this zone. Not only does the land area cultivated increase with wealth, so too does soil quality and the ability to use organic fertilizer. Between the two upper and two lower groups the most striking difference is in livestock holding; notice the large gap that separates the poor from the middle. The same is true of the difference between the middle and better-off – the latter group having a much larger holding than the former. This said, livestock is more evenly distributed across wealth groups in this zone than it is further north in zone 8. It should also be noted that in terms of absolute numbers of people, the two upper wealth groups with only 45% of all the households actually form the majority of the overall population, given the size of their families. Nevertheless their per capita livestock holdings are vastly greater than those of the poorer 55% of households. For the poor and very poor groups the most important factor is not the number of livestock, but the number of household members who can work – ‘bras valides’. This is because both these groups depend on paid work for their much of their income (see sources of cash below).

It is noteworthy that the middle and better-off do not possess ploughs; as in Zone 8, fields in this zone are not ploughed before planting. The traditional system continues to be used, which consists of breaking separate holes in the sandy soil with a hoe and depositing two or three seeds in each.

In the countryside as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
Sources of Food

In a normal year, all wealth groups rely on the market for a substantial proportion of their food needs; the very poor manage to consume from their fields only about a fifth of their annual requirement. As mentioned above, this makes households in the zone particularly vulnerable to food price rises. Both the very poor and poor take food loans in the hunger seasons before the harvest; they are careful to pay them back afterwards, to remain creditworthy for the following year.

In terms of food quality, there is little variation in the diet. Millet and sorghum are basic staple foods (the traditional ‘Tô’ dish is prepared from the flour of these two cereals). Only the middle and better-off are able to afford rice; they can also consume more meat and dairy products than their poorer neighbors. However, although they own no or very few cattle, the very poor and poor are able to obtain at least a small percentage of their food needs from milk, which they receive in payment for looking after the livestock of the middle and better-off. This is an important boost to the quality of diet, especially for their children, by comparison with most parts of the country.

Sources of Cash

The structure of income in this zone differs in some ways from that further north in zone 8. Reflecting the slightly more even distribution of livestock (including poultry) in this zone, the lower three groups receive more of their income from livestock sales while the better-off receive less than in zone 8. Agricultural productivity is also greater in this zone and the middle and better-off sell both cereals and cash crops. On the other hand, the importance of petty trade/trade for the middle and better-off is common to both zones 7 and 8. Also crucial in both is the income the very poor and poor receive from labor migration, remittances and gold mining. These income sources are closely linked and it can often be difficult to distinguish between them for the purposes of classification. The above proportions are indicative only; suffice it to say that between 40-50% of poorer households’ cash income comes from a combination of these activities. Labor migration is most commonly to the Côte d’Ivoire, Ouagadougou and gold sites; workers do not travel to other rural zones in Burkina Faso in search of work. ‘Exode’ also provides income for the
middle group; however, for these households it is young adults aged from 17 to 20 who migrate, rather than
the head of the household as is the case for the poor and very poor.
Local agricultural labor includes both work on the fields of the middle and better-off, and the shepherding of
their livestock. The very poor also perform other local labor, such as brick building and roughcasting (crépissage).

Hazards

Over the past ten years, this zone has been affected by poor, unreliable and poorly distributed rains, which
have militated against optimum harvests. However, when asked about disastrous years in terms of food
security, informants had to think back as far as 1973 and 1984. Given the histogram below it is fair to say
that in the past five years, food security in zone 7 has, on average, been reasonable; acceptable years allow
recovery from and asset building against worse years. Key informants were asked to classify each year in the
last 5 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3
an acceptable year, 4 a good year and 5 an excellent year. A year classified as 0 is one for which there are no
data. Such an exercise is subjective, but can give us an idea of food security in the zone over time.

Chronic Hazards

Lack of water for both humans and livestock.

Periodic Hazards

Serious rain failure (1-3 years in every 10).

Abnormally high livestock mortality (1-3 years in every 10).

Crop pests, especially locust attacks (1-3 years in every 10).

Late start of rains.

Hesitant early rains leading to substantial re-seeding. (When this happens, re-seeding takes place in June and
July).

Early ending of rains (October is the month to monitor for this).
Response Strategies

The **poor** and **very poor** do not have the savings (in cash or in livestock) to make up for a bad year. If they can, they may sell some of their livestock, but their major option lies in increasing their income from paid work. They increase their collection and sale of wood and may take out larger than normal food loans to meet their requirements. Additionally, both the number of people and the time spent migrating or working on gold mining sites will be increased. Workers may leave as early as October, though they will always return to the zone before the beginning of the next agricultural season. Poor and very poor households may also receive gifts from friends and relatives through a bad year.

**All wealth groups** change their consumption patterns in a bad year, most notably increasing the proportion of their cash they spend on staple foods. For the very poor this can account for over 70% of their expenditure. This increase is at the price of reducing expenditure on household items and more ‘luxury’ food items, such as sugar. During the hunger season and in bad years, women from poorer households leave the village early in the morning to gather edible wild leaves (Cassia tora), which are then mixed with cereals to increase their bulk, palatability and nutritional value. Interestingly, **middle** and **better-off** households report spending a greater proportion of their money on inputs in a bad year to try to ensure that the potential for the next season is maximized.

In a bad year, the **middle and better-off** increase their livestock sales and petty trading. In addition, the better-off can afford to buy livestock when prices in this zone are low, and then re-sell them at a profit in zone 5. Like the very poor and poor the middle also increase their income from migration. Women in better-off households who are able to do market gardening will try to increase their income from this in a bad year.
Burkina Faso Livelihood Profiles

Zone 8: North transhumant livestock rearing and millet

Main Conclusions and Implications

This northern Sahelian zone is one of the most food insecure in the country. The longer-term story here is of a growing population in former pastoralist areas becoming increasingly dependent on agriculture and other income sources, such as labor migration and gold mining. Indeed, although livestock is directly or indirectly important to all wealth groups in the zone, cattle herds are accumulated in the hands of the better off and middle 40% of households whilst the very poor and poor have only small numbers mainly of small stock and rely mostly on casual laboring.

In terms of food production, the zone is structurally in major food deficit and all wealth groups depend very heavily on the market for their staple cereals, imported from the more productive zones further south. This should also be seen against the isolation of several départements within the zone and the relatively poor market access in general. Of all the livelihood zones in the country, this is the most affected by changes in the market price of cereals and livestock. The increase in food prices from the end of 2007, for example, has had a considerable impact on households’ food security. In some very bad years cereals have been sold at a subsidized price.

Zone Description

This is the northernmost zone in Burkina Faso, covering all of the province of Oudalan and parts of Seno and Soum. It is characterized by livestock rearing, both on a transhumant and non-transhumant basis (nomadic pastoralists form a very small minority of the local population), and some rainfed cultivation. The rainfall in this zone is the lowest and most unreliable in the country—less than 400 mm per year; and the soil is sandy and of poor quality. These conditions dictate what crops can be cultivated in the zone and mean that yields are usually low. Millet is overwhelmingly dominant with some (but not much) sorghum,
niébé and sesame. This said, niébé (mostly inter-cropped) has become increasingly important as a cash crop in recent years, but cannot currently be described as typical of the zone.

The main livestock are essentially cattle, goats and sheep. Poultry are also important for the poor and very poor. Camels are only owned by the middle and better-off and have become less commonly kept as a result of repeated raids. There are other difficulties associated with keeping livestock in this zone, notably the lack of pasture after the rainy season, and an insufficient number of permanent water sources for animals, though less so for those who live near lakes (e.g. Oursi and Tinédia). Permanent access to water for humans is similarly problematic. There is also a lack of access to the nationally marketed livestock feed from agro-industrial by-products (cotton cakes). In addition the zone has limited numbers of village Cereal Banks and livestock feed stores.

Aside from livestock, there are other income earning opportunities within zone 8, most notably on gold mining sites. These have increased in importance and over the past three years gold mining has become a serious alternative to migration to Côte d'Ivoire in terms of household revenue. Within zone there are sites that are exploited on an industrial level. Around these sites and other not formally contracted out by the state, villagers use traditional prospecting methods. Less important than gold mining are the opportunities for fishing for those who live near the zone's lakes. However, these are little exploited by the inhabitants of the zone who generally lack equipment and expertise. It is more commonly some Bozo, specialist fisher folk from the Niger River in Mali, who come here to fish. There is also some tourism in the zone. Some forest products and wild foods (PFNL)—especially gum arabic—are to be found in this zone.

Every year, able-bodied members of poor and very poor households migrate to seek work outside the zone ('exode'), primarily in Côte d'Ivoire, but also in Ouagadougou (see seasonal calendar and sources of cash below). Whilst they are away workers send cash back to their relatives in their village. This money can be remitted in several ways: through Western Union, via postal order, or informally, carried by a friend who is returning to the zone. This last is the most difficult to quantify, yet it is undoubtedly important and would be the most affected if the Burkina Faso – Côte d'Ivoire border were to close. Households in zone 8 also commonly have relatives who live permanently in Côte d'Ivoire (and sometimes Saudi Arabia) and send remittances.

**Markets**

Access to markets in this zone is poor in comparison with the rest of the country. This is partly due to a poorly-developed road network, particularly in the province of Oudalan (the exceptions being the main road connections to Gorom-Gorom and Oursi). Access to some parts of the zone becomes more difficult during the rains (see seasonal calendar below). And yet market access in this zone is exceptionally important, since households of all wealth groups rely on the market for a substantial proportion of their food needs.

Cereals (chiefly millet and sorghum), coming from the more productive livelihood zones, are imported into zone 8 and sold at a substantially higher price than at their point of origin further south, especially in the last months before the new harvest. These imports generally come via the large markets of Pouytenga and Ouahigouya located in zone 5 and Sankaryare in the capital Ouagadougou (zone 6). From Pouytenga, the trade route is to Dori and Gorom Gorom and from there to village level markets. From Ouahigouya, cereal is transported north to Djibo and then to villages. From Ouagadougou, the trade route runs via Kaya and Dori and then to villages of the zone. Some households (primarily middle and better-off) buy sacks of grain at the market and then sell it at a profit in smaller quantities in their village. Some also buy cereals to sell in neighboring villages in Niger when prices are higher there.
Zone 8 exports a significant number of livestock, some of which comes into the zone from Mali. Poultry is also exported and is a source of income for the poorer groups in the zone. Trade routes for both livestock and poultry are shown in the table below.

<table>
<thead>
<tr>
<th>Type of livestock exported</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, Sheep, Goats</td>
<td>Mali, Villages → Gorom Gorom → Dori → Fada N’Gourma, Ghana, Côte d’Ivoire, Nigeria</td>
</tr>
<tr>
<td></td>
<td>Mali, Villages → Djibo → Ouagadougou, Côte d’Ivoire</td>
</tr>
<tr>
<td>Poultry</td>
<td>Villages → Ouagadougou</td>
</tr>
<tr>
<td></td>
<td>Villages → Main provincial markets → Ouagadougou</td>
</tr>
</tbody>
</table>

Seasonal Calendar

Because the rainy season is relatively short, the agricultural cycle is also short, running from June-July (sowing) through August-September (weeding) to October-November (harvesting). Staple food purchase for the very poor and poor continues for most of the year. Although the first cowpeas (niébé) are mature in September, staple purchase continues in that month. Only during the main harvest months of October and November do the poorest not need to buy staple foods.

During the agricultural cycle all poor household members will be present in the zone in order to ensure the best possible harvest from their own land, as well as to work for others for payment in cash and in kind.
From the months of December to May able-bodied household members from poor and very poor households travel within the zone or leave it, in search of work elsewhere.

**Wealth Breakdown**

<table>
<thead>
<tr>
<th>Wealth Group</th>
<th>HH size</th>
<th>Land area cultivated</th>
<th>Livestock/asset holding</th>
<th>Other assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor</td>
<td>5-7</td>
<td>1.5-2.5 ha</td>
<td>0-2 goats, 1-3 sheep, 2-4 hens, 0-2 donkeys</td>
<td>none</td>
</tr>
<tr>
<td>Poor</td>
<td>8-10</td>
<td>2-4 ha</td>
<td>1-3 cattle, 2-4 goats, 3-5 sheep, 5-9 hens, 0-2 donkeys</td>
<td>none</td>
</tr>
<tr>
<td>Middle</td>
<td>13-17</td>
<td>4-5 ha</td>
<td>15-20 cattle, 1-3 camels, 15-17 goats, 25-30 sheep, 15-25 hens, 1-3 donkeys</td>
<td>1-3 carts</td>
</tr>
<tr>
<td>Better-off</td>
<td>20-25</td>
<td>5-7 ha</td>
<td>45-55 cattle, 2-4 camels, 45 goats, 30-40 sheep, 25-25 hens, 1-3 donkeys</td>
<td>2-4 carts</td>
</tr>
</tbody>
</table>

The wealth breakdown presented above is similar to that of zone 7; the poor and middle groups contain the same proportion of households in both zones. The difference in this zone is that the percentage of very poor households is larger, whilst the percentage of better-off households is smaller than in zone 7. This may reflect the greater food insecurity of zone 8 as well as the greater challenges and risks of crop and livestock production there.

Wealth in this zone is determined by several factors. Between the two upper and two lower groups the most striking difference is in livestock holding; notice the large gap that separates the poor from the middle. The same is true of the difference between the middle and better-off – the latter group having a much larger holding than the former. It should be noted that in terms of absolute numbers of people, the two upper wealth groups with only 40% of all the households actually form the majority of the overall population, given the size of their families. Nevertheless their per capita livestock holdings are vastly greater than those of the poorer 60% of households. For the poor and very poor groups the most important factor is not the number of livestock, but the number of household members who can work – ‘bras valides’. This is because both these groups depend on paid work for their much of their income (see sources of cash below). It is not simply a question of having more children, however; the expense of paying the dowry means that the poorer groups are unable to have several wives.

Differences in the land area cultivated are important, but in a zone where crop production conditions are so risky, it is significant that households cultivate as many hectares as they do. Population increase, accumulation of livestock in fewer hands and a tendency to more limited transhumance all make for more
efforts in cultivation, and more dependence upon it by the poorer groups. In years of favorable rainfall, this pays off in terms of at least saving on market expenditure for food, whilst in exceptional years some people can even sell a substantial surplus. But it doesn’t take exceptional drought, rather just one of the frequent ‘bad’ years, for the greater part of cultivation to fail. This makes for a high degree of food insecurity especially amongst the poorer households.

It is noteworthy that the middle and better-off do not possess ploughs; as in zone 7, fields in this zone are not ploughed before planting. The traditional system is maintained of breaking separate holes in the sandy soil with a hoe and depositing two or three seeds in each. The wealthier groups do, however, have access to organic fertilizers, which the very poor and poor do not.

In the countryside, as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.

**Sources of Food**

In a normal year, all wealth groups in this zone rely heavily on the market for their food. The poorer groups must get as much as 70% of their food from purchase, payment in grain for work, and food gifts and loans. But even the better-off only cover just over 50% of their annual food requirement from their own harvest. Even in a good year the harvests of the middle and better-off will cover no more than 7 months of their food needs.

As mentioned above, this makes households in the zone particularly vulnerable to food price rises. Notice that the very poor and poor in zone 8 receive considerably more of their food needs from payment-in-kind than do the same groups in zone 7. This far north, payment-in-kind may be popular because of market volatility far from centers of supply.

In terms of food quality, there is little variation in the diet. Millet and sorghum are the main ingredients of the traditional ‘ tô ’, which is the basic staple. Only the middle and better-off are able to afford rice; they can also consume more meat and dairy products than their poorer neighbors. However, although the poor and the very poor own no/few cattle, they are able to obtain at least a small percentage of their food needs from milk, which they receive in payment for looking after the livestock of the middle and better-off. This is an important boost to the quality of diet, especially for their children, by comparison with most parts of the country. For the wealthier households, roughly 5% or so of calories they get from milk may seem rather low and certainly suggests that they are not real pastoralists. But it should be remembered that to obtain a more milk-based diet throughout the year for upwards of twenty people in a family would require large numbers of cows in milk, more than can be expected in the overall cattle herd of some 50 head which the better off hold - although in commercial terms these are assets far above the value of assets held by better off people in most other zones.
Sources of Cash

There is a striking difference between the income sources of the two upper and two lower wealth groups in this zone. The middle and better-off earn the majority of their income from their livestock, as well as a considerable proportion from trade. In contrast, the very poor and poor, owning few livestock, have much more diversified income sources and rely heavily on the money they earn from different kinds of labor (including gold mining referred to earlier). However, this does not mean that the poorer groups are not dependent on livestock, especially indirectly. As well as receiving some of their income from their own livestock and chicken sales, the milk they sell is part of their payment for looking after the animals of the middle and better-off. They also receive cash from this shepherding, the income from which has been included in the ‘local agricultural labor’ category, along with the income received for working in the fields of the middle and better-off. In order to collect wood, the very poor and poor may use carts owned by the middle or better-off, who, as payment, take a cut of the profits from the wood sales (up to four fifths). For this and for other trading purposes, cart ownership presents major earning opportunities.

Petty trade encompasses a range of things. Some examples are: buying cereals at the market and retailing them at a profit in the village; selling sugar; selling manufactured products; and buying and re-selling livestock at a profit.
Hazards

Key informants were asked to classify each year in the last 6 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an acceptable year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but the histogram below does help to demonstrate the food insecurity of this zone, especially when compared to most other zones in the country.

Chronic Hazards

Poor rainfall/ mild drought. Informants said that since the year 2003-4, only in the 2005-6 season was there no problem with the rainfall. This limits both annual crop yields and the multi-year increase in herd sizes. Despite these ‘bad years’, however, the catastrophic droughts of 1973 and 1984 which brought the attention of the world’s media and aid agencies to this zone have not been repeated.

Hesitant early rains leading to substantial re-seeding. When this happens, re-seeding takes place in June and July.

Poorly distributed rains.

Early ending of rains - September and October are the most important months to monitor.

Lack of water for humans and animals.

Periodic Hazards

Livestock disease outbreaks.

Crop pests including grasshoppers, birds and locusts.

High winds.

Livestock raids: these may involve all livestock, but it is camels that are most targeted. As a result of repeated raids, informants said that camels were now less commonly kept as livestock.

Late start of rains.

Lack of rain when crops are flowering - the critical month is August.
Response Strategies

A household’s wealth determines the strategies it can pursue in a bad year. The poor and very poor do not have the savings (in cash or animals for sale) to make up for a bad season. They rely heavily on extra employment for the cash to meet their needs. In zone 8 this primarily involves increased labor migration (‘exode’) and increased work on gold sites. This often means that more household members migrate for work, leaving behind only the old and the very young. The duration of migration can also be increased to some extent, but able-bodied household members always return to the zone for the agricultural season to ensure the maximum yields from their land.

Poor and very poor households also receive gifts from the wealthier groups. Solidarity between wealth groups is strong and in a bad year the middle and better-off increase the proportion of their expenditure devoted to gifts.

During the hunger season, and in bad years, women from poorer households leave the village early in the morning to gather edible wild leaves, which are then mixed with cereals to increase their bulk, palatability and nutritional value. However, households in all wealth groups proportionally increase their expenditure on staple foods, since, in a bad year, less of their food requirement can come from their fields and there is greater dependence on the market.

In contrast to their poorer neighbors, middle and better-off households have more cash and livestock assets, enabling them to pursue different strategies in a bad year. In particular both groups commonly increase their livestock sales and trade (particularly in cereals) to provide extra cash income. In addition, the better-off can afford to buy livestock when prices in this zone are low, and then re-sell them at a profit in zone 5. Finally, the wealthier groups may also provide the poor with money to find work in towns or on gold, in return for a share of the profits.
Main Conclusions and Implications

This is a food secure, surplus-producing and relatively wealthy zone, characterized by rainfed agriculture, livestock rearing and the dynamics of cross-border trade with Ghana, Niger, Togo and Benin. It is also something of a transit zone for transhumants and migrant workers, as well as playing host to seasonal grazers from outside the zone. Access to markets is good and the zone has considerable natural resources, in terms of water, forests and wildlife.

A particular finding is the large livestock holdings in the zone, almost on a par in terms of value with zones 7 and 8 in the north. Sales of livestock provide around a fifth of revenue for the middle and better-off, but it is cash crops such as cotton and niébé, are most important in cash terms, providing large returns if the initial investment can be afforded.

In a normal year, very poor and poor households can consume their own harvest for 5 and 7 months respectively; this is more than in many zones, but still leaves them reliant on the market, food loans and gifts. More reliant on the market in a bad year, these groups increase their trade, labor migration, PFNL and wood sales to purchase staple foods.

Zone Description

This sparsely populated southern zone covers parts of the East, Center-East and Center-South regions. It is characterized by rainfed agriculture and sedentary and transhumant livestock rearing. The long border with Niger, Benin, Togo and Ghana means that cross-border trade is important, particularly in those towns and villages closest to the frontier. Households in all wealth groups benefit from some degree of trade. This is also something of a transit zone as transhumant herders and migrant workers pass through. Furthermore, it plays host to a large number of seasonal grazers coming from outside the zone to benefit from its good pasture.
Rainfall here is much more plentiful and reliable than in the north, at some 800-900 mm per annum. This, along with good soil quality, allows the production of a wide range of crops. Sorghum, millet and maize are those consumed in the highest quantities, while maize, cotton and niébé are the most important crops sold. However, this order is not necessarily static. Maize is increasingly popular and competes with millet in terms of importance. Cotton, although still very important thanks to the companies FASO COTON and SOCOMA which organizes producers and buys their production, has seen a decline over the past year, as a result of expanding maize cultivation and decreasing cotton prices. This has been to the benefit of other crops, such as sesame, rice and peanuts. There is also local variation in the significance of certain crops: the prevalence of irrigated rice, for example, in the irrigated areas of Bagré. Livestock holdings - cattle, sheep, goats, pigs, poultry- are important in this zone: large in comparison with zones 1 and 5 and approaching in value to zones 7 and 8 in the north (see wealth breakdown section below).

Zone 9 has large forests and vast areas of animal reserves, home to a remarkably diverse range of species. This attracts both tourists and hunters, providing revenue for those villages situated around the reserves. There are a number of dams in the zone, including Kompienga (20,000 ha), Tapoa (5,000 ha), Sirba, Dakiri, Samboendi, Manni and Boudiéri. These provide excellent opportunities for fishing, especially in the East region, which is the country’s primary fish producer. The rest of the zone is mostly plains with a much smaller, but significant area, covered by bas-fonds—localized depressions which retain moisture after the rainy season.

In terms of water the zone has much potential to satisfy human, animal and irrigated agricultural needs and it would be possible to construct dams throughout the zone. Despite the zone’s natural resources, it should be noted that both animal and human pressure has had a negative effect on the vegetation and the land and this will continue as the population increases. (In East Region, for example, the population is estimated to be increasing by 2.9% per annum).

There are several other notable features, which cannot be described as typical, but which are nevertheless significant. Honey sales provide income to those households who own beehives. Fruit production - e.g. watermelons, bananas, papayas - also takes place within the zone, most commonly along the rivers.
Markets

Access to markets and the road network are good, as would be expected in a zone where trade is important. There are a few exceptions, however: the communes of Botou, Yamba, Diabo, Logobou and Madjoari (all in the East Region) suffer from poor road access during the rainy season.

This zone exports both cereals and livestock and sometimes imports other cereals and tubers. A large amount of trade simply passes through the zone. Examples of the trade routes are given in the table below. It is notable too that much trade flows through this zone, given its strategic position on the national frontier; livestock coming from Sahel, for example, often pass through this zone on their way south.

<table>
<thead>
<tr>
<th>Goods</th>
<th>Trade Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sorghum, Millet, Maize</td>
<td>Village markets → Natiaboani, Kompienga, Tanwalbougou, Bittou, Ouargaye, Kainbo, etc. → Fada N’Gourma, Tenkodogo, Manga, Pouytena (Zone 5) → Ouagadougou, Benin, Niger Guiaro etc. → Pô, Gwelwongo → Ouagadougou</td>
</tr>
<tr>
<td>Imported Foods</td>
<td>Ouaga → Fada N’Gourma, Pouytena (Zone 5) → Local markets Ghana → Bittou → Tenkodogo → Village markets Ghana (maize, millet and tubers) → Gwelwongo → Pô, Manga Ouagadougou (rice) → Pô → Principal département-level markets</td>
</tr>
</tbody>
</table>
The agricultural cycle runs from June-July (planting), through August-September (weeding) to October-December (harvesting). Market gardening takes place in the dry season; this is also the time (December-April) when members of poorer households may migrate in search of labor, returning for the start of the agricultural season in May. Cow milk production has been put on the seasonal calendar, but it is typically only the Peuhl who drink and sell significant quantities of milk, which they receive as part of their payment for shepherding the livestock of the middle and better-off. Cattle, sheep and goat sales are at their height around October; at the end of the rains the animals are in good condition and those who are not constrained by a food deficit to sell animals earlier, wait to get the best prices.

10 The calendar shows on the period of peak wild food (PFNL) sales; however, wild foods are available throughout the year.
Wealthier households are able to cultivate more land because they have more household members, plough oxen and equipment to work it, as well as the option of employing the poor and very poor as labor. Livestock holdings are large in comparison with zones 1 and 5, and with the addition of pigs almost on a par value with the sahelian zones 7 and 8 further north, which are known as livestock oriented areas. People in zone 9 with any appreciable number of livestock pay the Peulh to shepherd their livestock. Livestock sales provide around one fifth of total annual cash income for the middle and better-off groups. This is a far lesser proportion than for the same wealth groups in zones 7 and 8, but that is because crop sales here are far greater. In other words this is a relatively wealthy area.

Land holdings here are significantly smaller than in zone 7. This may be explained by the higher yields and the concentration on cash crops in this zone, which require more labor and inputs, but are more profitable per unit area. Notice also that in this comparatively wealthy economy there is a sharp skewing of assets between the poorer and the wealthier groups. This is perhaps influenced by cash-cropping, which produces large returns, but which demands a large financial outlay in terms of inputs and labor, which the poorer groups are unable to afford. This said, the poor still receive some of their income from cash crop sales, but in real terms this is far less than the upper two wealth groups. The type of ‘other’ asset holdings varies across the zone; beehives, for example, are common in some areas.

In the countryside, as well as in the town, poorer people make sacrifices to send children to school, but the middle and better-off can and do invest more in absolute cash terms. Children from very poor and poor households are likely to receive only a basic primary education, sometimes little formal education at all. Children from middle and better-off households generally receive some secondary education and perhaps more.
Sources of Food

This zone is productive and the middle and better-off can afford to feed themselves fully from their own harvest. The very poor and poor rely to the same degree on the market, even though poor households can live off their own crops for two months longer. The difference between these groups is the amount of food they receive in gifts and loans. Despite their reliance on food loans, the very poor can typically earn enough to repay them and remain credit-worthy for the following year. Although cattle holdings for the upper two wealth groups are substantial, milk does not contribute significantly to the requirements of any group. The milk is generally consumed or sold by the Peulh, as part of their payment for shepherding livestock.

Sources of Cash

In comparison to the neighboring zones (1, 5, and 7) the high proportion of income from crops, particularly cash crops, is striking, even for the very poor. It is only the middle group who generally practice market gardening. The cost of investment in agricultural inputs excludes the poor and very poor; and at the other end of the scale the access to other lucrative and less labor-intensive sources of income typically excludes the better-off. The influence of the national frontier means that trade provides income for most wealth groups, but is particularly important for the better-off. The influence of the national frontier means that trade provides income for most wealth groups, but is particularly important for the better-off. The influence of the national frontier means that trade provides income for most wealth groups, but is particularly important for the better-off. This is a broad category that ranges from trade in cereals and household goods to electronics and other goods brought up from the ports of Lomé and Cotonou. Labor migration, often to towns like Fada N’Gourma, contributes a small amount to the income of poor households.
Hazards

Key informants were asked to classify each year in the last 10 according to its relative food security; 1 represented a very poor year for food security, 2 a poor year, 3 an acceptable year, 4 a good year and 5 an excellent year. Such an exercise is subjective, but nonetheless helps to demonstrate the food security of the zone, despite two recently below average years, which have been caused by poorly distributed rains, leading both to flooding and to crop damage.

![Bar Chart](chart.png)

Periodic Hazards

Livestock diseases (most common from June-October). This has been a problem over the past five years.

Crop diseases/ crop pests (July).

High winds (4-7 years in every 10).

Floods (1-3 years in every 10. Most common from July-August).

Poor rains leading to some degree of crop damage (4-7 years in every 10).

Hesitant early rains leading to substantial re-seeding (re-seeding in May/June).

Lack of rain when the crop is flowering (August).

Early ending of rains (September).
Response Strategies

In a bad year, the very poor and poor try to maximize their income and reduce their expenditure on non-essential items. A greater percentage of their total cash goes on staple foods, while, in contrast, proportionally less is spent on things such as ‘luxury’ foods and clothes. The poorer groups try to increase their income from the following sources:

- PFNL/ firewood/ straw sales.
- Brick construction and sales.
- Petty trade.
- Migration to urban centers, such as Fada N’Gourma, or to neighboring countries (e.g. Côte d’Ivoire and Ghana)
- Small ruminant and poultry sales (although this option is limited by the small livestock holding of these groups).

The middle group pursue many similar strategies, including petty trade, migration, wood and brick sales and increased livestock/poultry sales. However, these are done on a larger scale than for the poorer groups; wood, for example, is sold by the cart-load. The middle may also intensify their market gardening activities and make and sell handicrafts, such as pottery and chairs.

The better-off generally increase their income through trade and livestock sales. They also practice ‘l’embranche‘:- purchasing livestock when the price is low, fattening it and reselling at a much higher price. Finally, this group provides loans to the other three wealth groups.