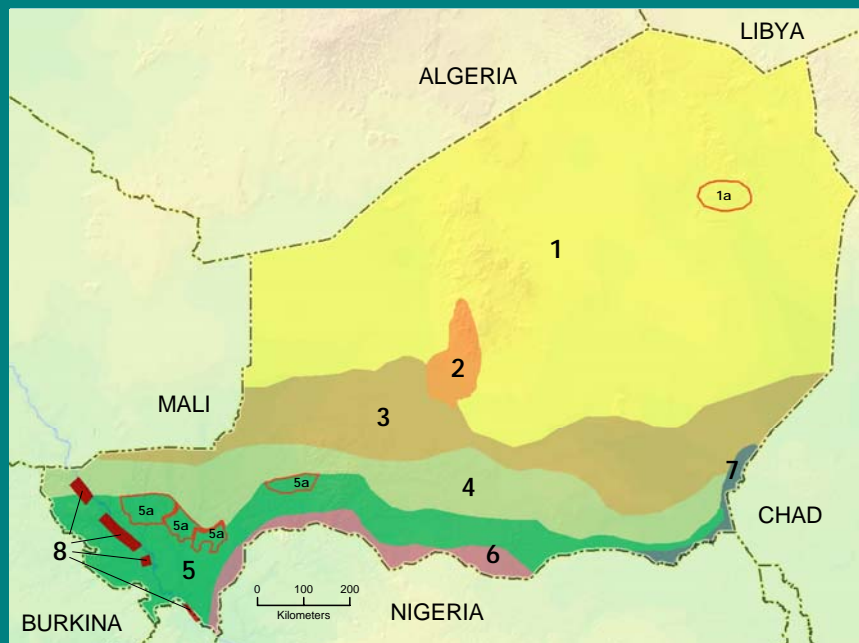


# Niger Livelihood Profiles

January 2005



**USAID  
FEWS NET  
PROJECT**

## Food Economy Zones

- 1 Desert
- 1a Bilma oases sub-zone: dates - caravan trade
- 2 Air mountains cultivation
- 3 Pastoral
- 4 Agro-pastoral
- 5 Rainfed agriculture
- 5a Sub-zones with high work-outmigration
- 6 Southern irrigated cash-cropping
- 7 Kamadougou - Lake Chad irrigated and flood retreat cultivation
- 8 Niger river irrigated rice

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## Introduction

The livelihood profiles that follow document how populations throughout Niger live. *A livelihood* is the sum of ways in which households 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:

<b>National Livelihood Zone Map</b>	The map shows the division of the country into homogeneous zones defined according to a livelihoods framework.
<b>Livelihood Zone Profiles</b>	The profiles describe the major characteristics of each zone, including a brief differentiation of the food security status 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.

In compiling the 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.

The preparation of these profiles was a joint activity between the USAID FEWS NET project, the Government of Niger, and the Permanent Interstate Committee for Drought Control in the Sahel (CILSS). The main focus of FEWS NET’s work is early warning, food security monitoring and emergency assessment. The livelihood profiles have been structured primarily with these types of activity in mind. However, it is hoped that they will also prove useful to the wider development community.

This document is divided into 3 main sections.

1. **Introduction**—This has 6 sub-sections
  - **The Uses of the Profiles**--which describe 3 main ways the profiles can be used.
  - **Key Concepts**--which defines the key concepts used in livelihoods based analysis.
  - **The National Livelihood Zone Map**—which introduces the concept of livelihood zones.
  - **What is in a Livelihood Profile**—which describes the layout and content of each profile
  - **Methodology**—which describes the methods used to develop the map and profiles.
2. **National Overview**— The national livelihood zone map, together with a national overview of livelihoods in Niger.
3. **The Livelihood Zone Profiles**—The profiles for each zone.

## The Uses of the Profiles

The livelihood zoning and profiles presented here offer an analysis of urban and rural food security on a geographical basis. The country is divided into homogeneous zones defined 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 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 food security conditions around the country. The geographical divisions are relatively small--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 equated with agricultural production outcomes. Hence, a chronic or temporary production deficit against local food requirement is immediately translated into 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 or wild foods, or charity from relatives or the sale of handicrafts may be equally important to the livelihood story as data on crop and 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 intervention.

Livelihood analysis can also be applied to other policy changes. For example, if government taxes on kerosene were reduced, or charges made for government veterinary drugs, what would be the impact on households? More generally, the household viewpoint offers a more secure footing for looking at the increasingly voluminous discussion of poverty alleviation. 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*

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- Drought is a major **hazard** affecting crop and livestock production in many African countries.
  - Poor households are more **vulnerable** to (i.e. 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** of a food shortage 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). Likewise, pastoralists may not be very vulnerable to drought provided they can move freely in search of water and grazing. They may, on the other hand, be highly vulnerable to conflict if that inhibits their movement to key water points and grazing areas.

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 a 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 1990s<sup>1</sup>. 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 or 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

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<sup>1</sup> See 'The Household Economy Approach', Seaman J., Clarke P., Boudreau T., Holt J., Save the Children UK 2000.

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 or 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:

***Outcome = Baseline + Hazard + Response***

***Baseline:*** The baseline analysis has three components:

**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 may 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 livelihoods, however. Another is market access, since this affects the ability of people to sell their production (crops or 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. In Djibouti, however, this has not been possible because only administrative level two (district) boundaries are clearly delineated, and patterns of livelihood in Djibouti do not neatly follow district 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, skills, 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**<sup>2</sup>: 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 within 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 regular 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 or 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<sup>3</sup> in certain settings might include an increase in the collection of wild foods, an increase in the sale of livestock or temporary out-migration 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, an 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** summarises the main findings from the zone. This section also provide insights that will inform the planning of various types of intervention, including emergency response, disaster mitigation and development programming.

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<sup>2</sup> Note that the information provided in the profiles does not constitute a full food economy baseline. A full baseline provides quantitative information on the *amounts* 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 units of measurement for a food economy baseline are kilocalories (i.e. food energy) and cash, whereas 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.

<sup>3</sup> 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 four 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<sup>4</sup>.

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

The sections on **Hazards** provide 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<sup>5</sup>. This section provides information on the key indicators and their likely timing by zone, based upon an understanding of local livelihoods and local patterns of response to food shortage<sup>6</sup>.

## Methodology

The livelihood zone map and profiles presented here have been compiled through a combination of interviews and workshops with national and Regional key informants and reference to existing secondary data sources. At a national workshop in December 2002 a preliminary national livelihood zone map and a

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<sup>4</sup> 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.

<sup>5</sup> ‘Famine, Conflict and Response: A Basic Guide’, Cuny F. C. and Hill R. B. Kumarian Press, 1999, pp 33-42.

<sup>6</sup> Fred Cuny identified two types of early warning indicator, 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.



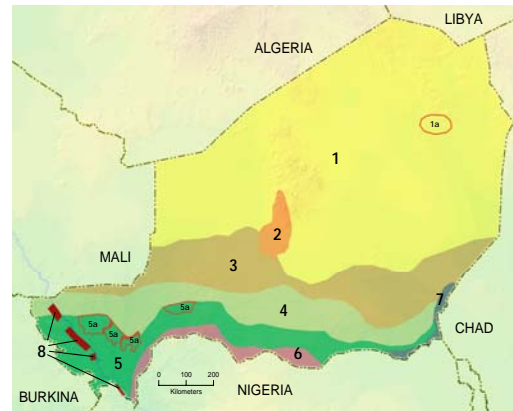
brief description of each zone were prepared by participating key informants. Three field teams were then formed to visit a series of Regional and sometimes Departmental centers, where meetings and interviews were organized to refine the preliminary map and collect further information on each of the zones. Rapid village visits were conducted in some livelihood zones to cross-check the information provided by key informants at the various levels.

# Niger Livelihood Profiles

## National Overview

### Introduction

In Niger there are two essential factors which account for the difference between zones. One is the degree of dependence on herding. As such, pastoralists are immediately distinguished from others because livestock form an essential basis of livelihood rather than simply a form of capital or savings. The second factor concerns the use to which arable land is put, especially whether there is an emphasis on cash crops as opposed to the staples millet and sorghum. The decisive element in all this is rainfall, and a first indication of the potential zones in the country would simply follow three or four isohyets from north to south. Thus 100 mm would indicate pastoralism; 200 mm would indicate the northern limits of millet cultivation; and 350 mm would suggest a more varied set of staple and cash crops.



This is the basic agro-ecological picture. But other factors play a role too, so that a larger number of zones emerge even when we are using a broad brush rather than a fine pencil. The geology of the area influences the potential and choice of crops, both in terms of soil quality and the degree of access to underground water for irrigation (i.e. the depth of the water-table). The great Niger River, after which the country is named, and which is straddled by the country's capital city, Niamey, has an important effect along its course in allowing substantial irrigated rice cultivation as well as off-season (i.e. dry season) cultivation of garden produce. In the far south-east, too, the Komadougou River, along the Niger border and reaching Lake Chad, offers a special irrigation environment for the lucrative 'red gold' cash crop of chilies. Proximity to an international frontier also has an influence, and with some 1000 km of frontier with the Nigerian giant, that influence is particularly important across the south of the country, notably in terms of cross-border casual labor earnings by Nigériens. The national grain market is subject to importation of cereals from Nigeria, Mali and Burkina Faso. But the huge market of northern Nigeria in particular has a contrary influence too: when there is any scarcity there, and especially when the exchange rate favors the naira over the CFA, grain is sucked away from the Niger national market into Nigeria – sourced particularly from Zinder and Maradi, as well as from the Niamey market. The Nigerian demand for meat adds value especially to Niger's small stock.

There are also some differences due to cultural and historical factors, for instance where for historical reasons there is a particularly high density of population on land of mediocre quality, and thus a particular emphasis on out-migration for work. On the political front, government decentralization has recently moved forward, with 265 *communes* created at the lowest level of administration, and it is envisaged that local decision-making, with its potential economic impacts, will be more influenced by people at the middle and poorer economic levels. Direct aid to households in times of acute shortage includes not only relief food aid but market subsidization in the form of sales of staple grain at 'social' prices. More generally, there is concern to promote the maintenance by poor households or communities of a security stock of grain against the almost yearly rigors of the April-August lean season. Meanwhile food-for-work and cash-for-work schemes favor the fight against local land degradation – perhaps the most serious long-term scourge for the country.

A particular finding is the dynamism of Niger's rural populations, for it is not just pastoral nomads who use the overall territory in a mobile way. Residents of one livelihood zone will make important use of another. For instance, poorer people will regularly seek seasonal work beyond their zone, in a sense extending the territory in which they can make a living because their home territory cannot fully support them in favorable years, let alone in years of local rain failure. Another form of territorial 'mobility' is seen when settled cultivators with very limited local pastures send off the greater part of their cattle – their prime savings – with contract herders who take the animals north for the rainy season (for pastures and the salt cure) and south to the pastures of more humid zones in the dry season. This allows them to invest more heavily in the country's most valuable rural industry – livestock. Finally, the farthest 'extension of territory' comes through the *exode* – work migration – of rural Nigériens beyond the country's borders.

## Geography and Climate

The geography and climate of Niger vary greatly from north to south, a major factor in shaping livelihood patterns throughout the country. The Sahara Desert dominates the north, covering over half of the country's total land area. Interspersed by plateaus and mountains, this region receives minimal rainfall and is the most sparsely populated part of the country.

Toward the center of Niger, in the Sahel belt, a semi-arid climate allows more wooded areas to emerge. An unpredictable rainy season means that agriculture alone is a capricious undertaking and pastoralism and agro-pastoralism dominate this area.


Receiving high amounts of rainfall (up to 32 inches, or 813 mm per year), the fertile southern region possesses the greatest amount of forested area. It also maintains access to the largest bodies of water in the Republic: the Niger River in the southwest and Lake Chad in the southeast (which it shares with its eastern neighbor). Vegetation is rich and includes extensive grasslands and a variety of tree species. The south also benefits from the 1000 km shared border with Nigeria, an essential trading partner.

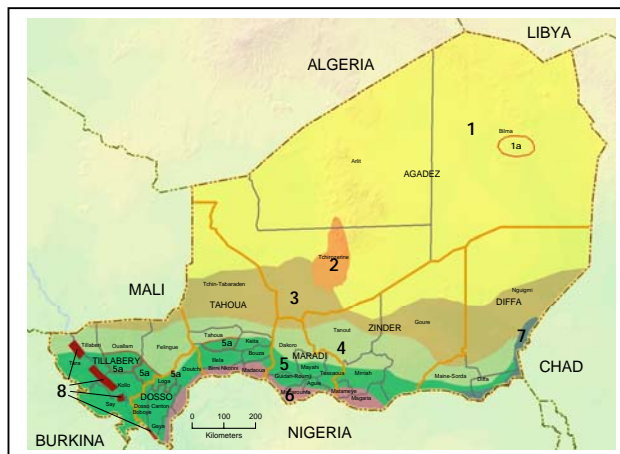
Niger is rich in mineral resources including high-grade uranium ore in north as well as coal, tin, gold, phosphate, iron ore and copper. Soil erosion and desertification are major problems in the country and are worsened by periodic droughts. Deforestation is another serious concern, exacerbated by a dependency on coal and firewood as the primary sources of fuel.

## Rural Livelihood Zones

### Livelihood Zones of Niger

- 1 Desert
- 1a Bilma oases sub-zone: dates - calaban trade
- 2 Aïr mountains cultivation zone
- 3 Pastoral zone
- 4 Agro-pastoral zone
- 5 Rainfed agriculture zone
- 5a Sub-zones of high work out-migration
- 6 Southern irrigated cash crop zone
- 7 Komadougou River & Lake Chad cash crop Zone
- 8 Niger River irrigated rice zone

-  District
-  International
-  Province



It is notable that these days, the livelihoods of rural households even in remote areas are increasingly based on the cash economy, which means not only the marketing of livestock, cash crops and surplus cereals, but casual employment which brings an important part of the overall income of the poorer half (and more) of the rural population. Even in areas where cereal production is the main basis of the economy, the poorer families rely for more than half of their food on working for others and being remunerated in cash (and to a far lesser extent, in kind).

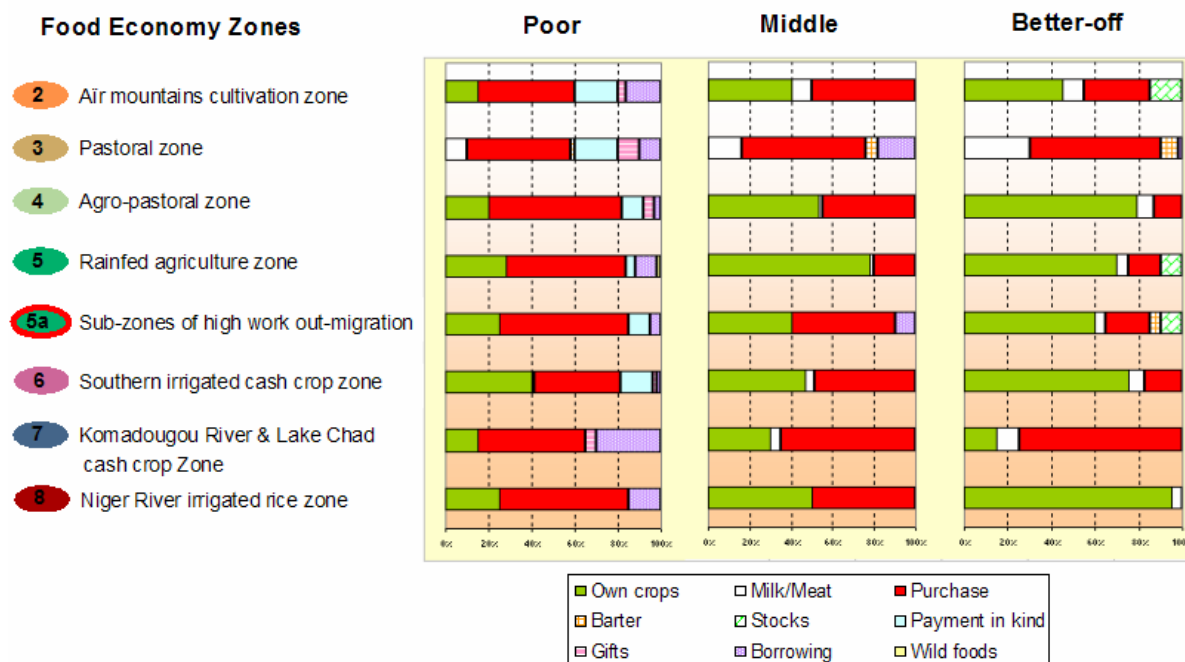
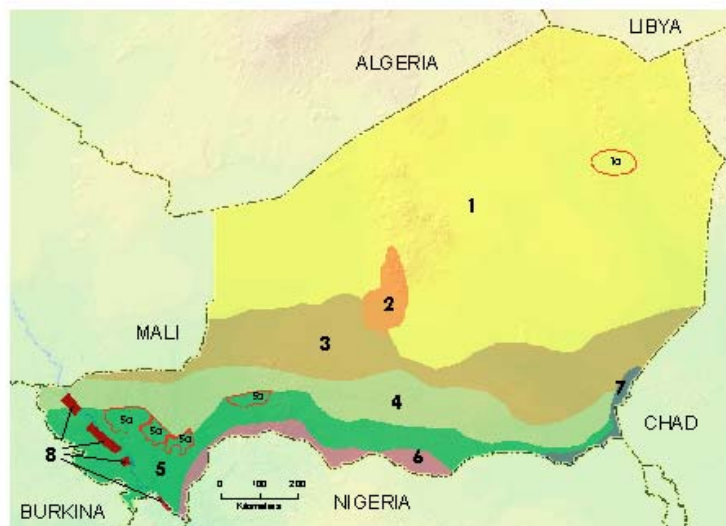
At the same time, we find that amongst pastoralists and agro-pastoralists the stuff of life is not milk but grain, i.e. that these populations today consume by far the greater part of their calories in the form of cereals, which they must purchase with income earned mainly via the sale of livestock and livestock products. It should be stressed that this does not automatically make them the most food insecure people in the country: a regular grain 'deficit' in an area is not synonymous with hunger. What counts is people's capacity to purchase grain on the market, and the nature of the threats to that capacity.

A successful herder may be more 'food secure' than an ordinary cereal farmer; that is, he may have a greater capacity to withstand the effects of a hazard such as drought. He may be able to move his herds to better-favoured areas, whilst the farmer cannot move his fields. Or the herder may be able to bear the loss of a large number of animals and still be able to purchase sufficient food, whilst the poor farmer who loses his annual harvest is in dire trouble: he is more *vulnerable* to the effects of a hazard. On the other hand, a farmer who has assets in livestock will be able to sell them to buy food, whilst a poor herder who loses his small herd or flock may have nothing else to fall back on but charity. Taking the Livelihood Profiles as a whole, it is striking that whilst the better-off households in different zones differ in their kinds of wealth (livestock, surplus cereals, and cash crops), the pattern of poor livelihoods is ubiquitous: poor households essentially survive more by working for others, near or far, than by consuming or selling their own produce.

## Rural Sources of Food and Cash: Main Findings and Implications

### Sources of Food:

The food sources graph below illustrates a major dependence on the market for staple foods by a majority of rural people regardless of where they live. As noted in the Pastoral Livelihood Zone Profile, this is not surprising for pastoralists; but it is also the case even for the Rainfed Agriculture Zone, which is by far the most populated zone of the country and which also produces most of the surplus grain for the national market. Here the poor, who form just under half of the population, are normally able to obtain somewhat less than 30% of their food requirements from their own fields, and even the middle group need to buy some 20% of their basic food needs from the market. The corollary is that surplus production is highly skewed towards the better-off minority (who prefer to purchase rice rather than rely entirely on their own abundant millet and sorghum).



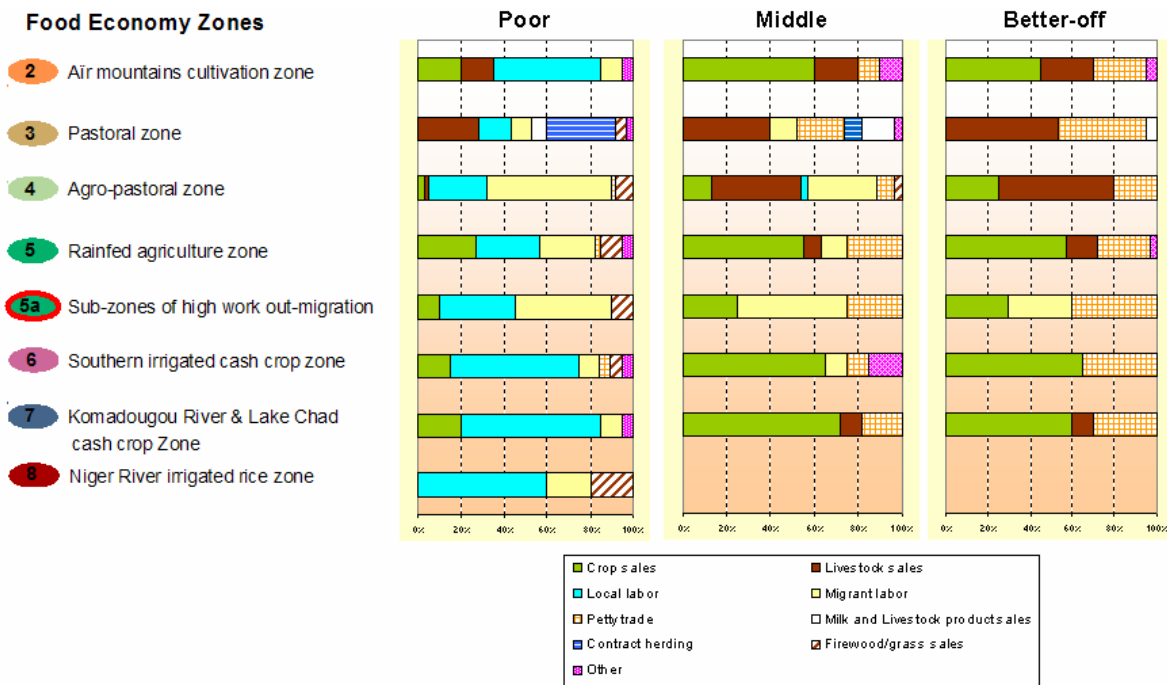
Clearly therefore, cash earnings, illustrated below, are essential for the survival of well over half of rural households around the country. But for the poor especially, survival from one end of the year to the other is also mediated by food loans, often from the same traders or other creditors who provide credit in cash. Once

the harvest is in, a first priority for food borrowers is to repay the loan, because they must try to remain credit worthy against future acute needs. In the Rainfed Agriculture Zone at least, if poor households consume less than 30% of their food requirement from own fields, they may well be having to sell the equivalent of 10-20% at disadvantageous prices immediately post-harvest (joining the marketed 'surplus'), only to buy grain later in the year at higher prices.

**Sources of Cash:**

There is a notable absence of major sales by poor and middle households of their staple food crops millet and sorghum (with a modest exception in the Rainfed Agriculture Zone). This reaffirms the fact that the great bulk of locally marketed grain comes from the farms of the better-off.

Poorer farmers tend to try to retain such grains they have and sell their cash crops instead, which in many cases consist of cowpeas which they have intercropped with their staples. However, in most zones poorer households do often sell some part of their often meager cereal harvest because they have pressing credit repayments and social obligations to honor. Rice is partly consumed, partly sold by its growers, but its value on the market means that poorer growers tend to have to sell it in favor of buying the cheaper staples, and of repaying the credit on inputs, whether fertilizers or pesticides. Elsewhere in irrigated zones the tendency is for staple crops to be grown on drylands (rain fed) so that every square meter of irrigated land can be put to the most profitable use under onions, chilies, sugar cane, vegetables or again rice. These too are the crowded zones where livestock are difficult to keep locally and are not a major item of sale, except in the Komadougou and Lake Chad Zone and the northern limit of the Niger River Irrigated Rice Zone where agro-pastoral and pastoral areas are near at hand.

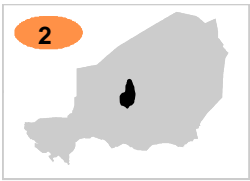



It is graphically clear that for the poor, working for others, whether nearby or on seasonal migration, is the mainstay of their household budget. In other words, the poorer you are, the more you depend upon cash<sup>7</sup>. There is perhaps one virtue in this: most areas beyond the far south are to a significant degree prone to periodic rain failure, and the poor are able in bad years to go the extra mile to find work in better-favoured areas. Having little by way of local investment in land or livestock, the poor lose absolutely less than other people in a bad year; however most poor people in arable areas do try every year to get a crop, and given

<sup>7</sup> Income data for the middle and better off groups in Niger River Irrigated Rice Zone (8) is unavailable.

their modest margins of existence, the loss of a harvest, however modest, is a serious blow. These are food insecure people.

## Rural Livelihood Zone Summaries

Zone 2: Air Mountains Zone		
	<p>This zone comprises the valleys of a massif rising out of the surrounding desert and rangelands, with low rainfall but a water table allowing crop irrigation from wells. A small population (less than 15,000) occupies a sub-zone of oases in the far north-east of the country, living principally from date production and the caravan trade.</p>	<p><b>Livestock</b> Sheep Goats Draft-Camels</p>
<p>Successful farmers here are able to produce something throughout the year: the use of wells to irrigate both cereals and cash-crops – especially the valuable onions - is the basis of the economy. But the rains, though modest in volume, make an important contribution to one harvest, and rain failure is thus a substantial (and frequent) hazard. The poor cannot afford to operate more than one well, and the loss of rainfall moisture means a particular constriction of their production. They are still able to gain income by working for the bigger irrigated producers, and this relationship may extend to credit in money or food. However, apart from some demand for labor and craftwork in Agadez town, they have few other, local options for income, and they are geographically isolated from potential seasonal employment in the south of the country. The poor of this zone must thus be counted amongst the most food insecure people in the country.</p>		<p><b>Main Income Sources</b> Vegetable sales (especially onion) Casual labor Small livestock</p>
		<p><b>Main Food Sources</b> Wheat Maize</p>
Zone 3: Pastoral Zone		
	<p>This zone stretches across the north of the country and borders the desert proper. In the far north-east of the zone, a small population (of around 15,000) occupies a sub-zone of oases living principally from date production and the caravan trade. Making the one possible economic use of a harsh environment, both nomadic and ‘transhumant’ pastoralists not only produce a high-value nutritional item – milk – for home consumption, but also meat on-the-hoof as a high-value market product. This allows them to pay inter <i>alia</i> for the cereals which form their staple food even though they cannot grow any. There is extensive movement of livestock during the year in search of grazing and watering (and the ‘salt cure’) mainly on a north-south axis. Nomads tend to move as whole households together with other closely-related households; transhumants tend to keep the majority of the household in one locality all year, whilst the men who are the family’s chief herders take most of the animals seasonally to far grazing, often for several months at a time.</p>	<p><b>Livestock</b> Camels Sheep Goats Cattle (in localized areas)</p>
<p>This is a mode of livelihood particularly adapted to very wide fluctuations of useful local rainfall from one year to the next. But pastoralists are not immune to drought: livestock numbers appear to go in cycles, with a rising trend through a period of years and then a more or less acute fall brought about by rain failure. Whilst substantial stock-owners can survive great losses, the poor cannot afford much decrease their small livestock holdings; they have no other product, and reconstitution of a flock is not achieved immediately when better rains come. In the short term they may be able to dependent on others for direct support and/or herding contracts; otherwise they must journey particularly far and long to find employment. They are amongst the most food-insecure people in the country.</p>		<p><b>Main Income Sources</b> Livestock sales Contract herding Trade (including caravan trade)</p>
		<p><b>Main Food Sources</b> Milk Meat</p>



**Zone 4: Agro-pastoral Zone**



This zone stretches across the country between the Pastoral Zone proper to the north and the Rainfed Agriculture Zone to the south. In this zone millet cultivation pushes towards northern limits where livestock are the customary product. Despite relatively risky rainfall conditions for crops, the zone has the advantage of offering in extensive areas (e.g. Tanout, Dakoo) still-fertile soils which make for excellent cereals production in those years when rainfall is favorable.

But elsewhere in the zone (e.g. North Ouallam, North Filingue) are to be found some of the most degraded soils in the country, constituting a principal chronic hazard.

Economic success means making the most of cultivation whilst owning substantial numbers of livestock as both wealth and insurance. There are those who can achieve this balance and make a major profit in the roughly one in four or five years of favorable rainfall when there can be remarkable harvests. But those who can't are triply disadvantaged: they frequently suffer poor harvests; they own very few livestock as insurance; and they are not guaranteed local employment possibilities in the bad years which the better-off people are able to sit out. In addition, they are further than other settled populations from the more trustworthy employment demand to the south – although that is an important recourse for them, often taking them beyond the country's frontier. Many of the poor in this zone may be taken as the most food-insecure people in the country.

**Livestock**

Cattle  
Goats  
Sheep

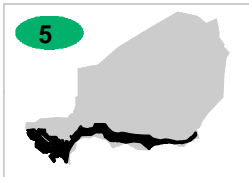
**Main Income Sources**

Livestock  
Migrant work  
Casual labor  
Cash crops (cowpeas)

**Main Food Sources**

Millet  
Sorghum (some)

**Zone 5: Rainfed Agriculture Zone**



Stretching from east to west across the south-center of the country, this zone exhibits the typical Sahelian millet/sorghum-plus-livestock economic base. Over such a wide territory, virtually every year one or other locality will experience poor rainfall conditions, leading to acute losses in harvest. This is also by far the zone with the highest absolute population, so that the numbers, as opposed to the proportion,

of poor people who are relatively vulnerable to hazard are high. But taken as a whole, the zone suffers less frequent and severe rain failures than further north, although there is always the typically Sahelian expectation that rains may fail.

The greater part of the country's marketed surplus cereals emanate from this zone, as well as the cowpeas (*niebe*) which are the main sauce-component around the country. This means that several areas with particularly favorable soil and moisture conditions are usually in surplus. However, this surplus is produced by a minority of local people, since the poorer majority are nowhere in the zone self-sufficient in cereals, let alone in surplus. However, these productive areas offer seasonal farm-labor income both to local people and to migrant workers from other zones.

On the other hand there are certain areas in the zone which are less naturally favored than others, yet host a particularly dense population for historical reasons. This combination makes for chronic cereals deficit as well as a markedly larger proportion of poor than in the zone overall – and a higher than usual tendency for people to go yearly in search of labor opportunities elsewhere. Four such sub-zones have been identified, of which one (Loga) is exemplified in profile.

**Livestock**

Cattle  
Sheep  
Goats

**Main Income Sources**

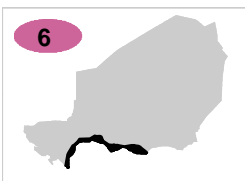
Cash crops (cowpeas, groundnuts, tiger-nuts)  
Cereals  
Trade  
Casual labor  
Livestock

**Main Food Sources**

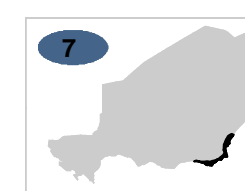
Millet  
Sorghum



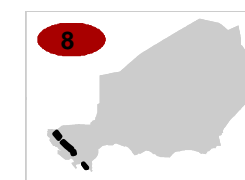
**Zone 6: Southern Irrigated Cash Crop Zone**

	<p>This southernmost zone of the country, forming much of the frontier with Nigeria (and Benin), is mainly associated with three centers: Konni, Madawa and Madarounfa. What makes for the predominance of cash-cropping is not simply the relatively high and trustworthy annual rainfall but the availability of groundwater for irrigation, due to a complex of shallow water-table areas and seasonal flooding along water-courses originating in Nigeria. In addition to some groundnuts, sugar cane and vegetables, tens of thousands of tons of high-quality onions are produced annually, finding a particularly lucrative market not only within Niger but far around the region and even in Europe. This is the most densely populated rural area of the country (together with irrigated strips along the Niger River and the Komadougou river which are the basis for two further, much smaller zones). But the population also cultivates the neighboring and wider stretches of rain fed land, producing cereals as well as cowpeas and the cooking additive <i>souchet</i>.</p> <p>The cash wealth of this zone does not mean that there are no poor people – indeed this economy is particularly marked by the division between owners of resources and Produce on the one hand, and on the other their workers who cannot afford the inputs for successful cash-cropping even if they have title to land. For these people, casual labor opportunities across the national frontier can be important. As the zone becomes more crowded, poverty may increase. But as regards short term hazard, although rain failure does occur it is not as acute as further north, and irrigation reduces the threat of any general production failure. There is extensive poverty, but relatively little food insecurity.</p>	<p><b>Livestock</b></p> <ul style="list-style-type: none"> <li>Cattle</li> <li>Sheep</li> <li>Goats</li> </ul> <p><b>Main Income Sources</b></p> <ul style="list-style-type: none"> <li>Cash crops</li> <li>Casual labor</li> <li>Trade</li> </ul> <p><b>Main Food Sources</b></p> <ul style="list-style-type: none"> <li>Sorghum</li> <li>Millet</li> <li>Rice (some)</li> </ul>
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**Zone 7: Komadougou River and Lake Chad Cash Crop Zone**

	<p>This zone lies at the far south-east frontier of the country, with a population using the land along the northern bank of the Komadougou river for irrigated and flood-retreat cultivation, and specializing particularly in the cultivation of high-value chilies. The Komadougou river, which eventually feeds Lake Chad, originates in tributaries in the neighboring Plateau area of Nigeria. The sale of chilies as an eminently transportable dried crop greatly reduces the disadvantages of the remoteness of this area from the commercial centers of this country. For the poor minority, it is neighboring Nigeria which provides employment away from the local, irrigated fields, and which adds to their economic security. Nevertheless, whilst the better off partake substantially in the livestock industry which surrounds the zone in Niger, the poor have little else going for them, apart from the roughly one-fifth of their cash income which comes from selling their own chilies. This is an area of frequent rain-failure, and rain-dependent cereals are a risky investment: those poor who depend substantially on them are the truly food-insecure of the zone.</p>	<p><b>Livestock</b></p> <ul style="list-style-type: none"> <li>Cattle</li> <li>Goats</li> <li>Sheep</li> </ul> <p><b>Main Income Sources</b></p> <ul style="list-style-type: none"> <li>Sale of chilies</li> <li>Casual labor</li> <li>Trade</li> </ul> <p><b>Main Food Sources</b></p> <ul style="list-style-type: none"> <li>Millet</li> <li>Sorghum</li> <li>Rice (some)</li> <li>Maize (some)</li> </ul>
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**Zone 8: Niger River Irrigated Rice Zone**

	<p>This zone lies at the far western end of the country, stretching along the River Niger both north and south of the capital Niamey, through a surrounding hinterland changing from semi-desert to savannah. The zone is defined by a population mainly dependent on rice cultivation, most of whom also cultivate fields of millet or sorghum on neighboring rain fed land. Livestock form a minor part of assets even of the</p>	<p><b>Livestock</b></p> <ul style="list-style-type: none"> <li>Goats</li> <li>Sheep</li> <li>Cattle</li> </ul> <p><b>Main Income Sources</b></p>
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wealthy, who are more inclined to invest further in rice cultivation or in trade – especially given the proximity of the capital city as well as of the Malian frontier. For the poor minority, rice proves a more dependable crop (because of irrigation) than the rain fed cereals so often fed by too little rain. But they tend to have very little financial profit from rice once they have sold a good part to pay debts on production inputs and have consumed most of the rest. The great majority of their cash income is from paid labor on other people’s rice paddies or farther away in the city, or on the fertile rain fed lands neighboring the south limits of the zone.

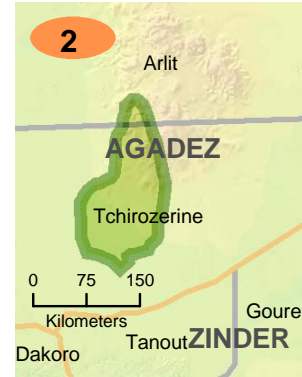
Rice sales  
Casual labor  
Small livestock  
Trade  
**Main Food Sources**  
Rice  
Millet  
Sorghum  
Cowpeas

# Niger Livelihood Profiles

## Zone 2: Air Mountains

### Main Conclusions and Implications

The water-table and soils of the valley areas of this zone promote a market-oriented venture in irrigated vegetables as well as wheat which allows a settled population to survive; otherwise at this latitude the rainfall is only sufficient for the pastures in the surrounding rangelands used by pastoral nomads. Success in the Air requires investments in wells, draft animals/motor pumps and agricultural inputs which are the prerogative of wealthier households. But on relatively very small land-holdings even for the better-off, intensive cultivation is profitable enough to promote employment for the poor majority who cannot make a living from their own plots (and sometimes lease or share-crop their own land).



This means that the poor are needed by the others, and are both supported and tied in by loans and gifts as well as by contracts of employment. This offers them some economic security. But such mutual dependence can only go so far, and in a bad year the poor are faced with the fact of relative isolation: there are very few other local economic opportunities, and work migration requires particularly long travel, notably north into Algeria and Libya and south into Nigeria. As this zone is exceptional amongst the arable areas of the country in mainly consuming a cereal it hardly produces – millet - local markets, all at the expensive end of the cereals supply chain from the south, very soon show acute price hikes. This area is therefore one noted both for great profits for the few and food insecurity for the many.

### Zone Description

The Air Mountains – or more specifically the valleys – are the scene of a highly distinctive zone. In common with the surrounding pastoral areas, the annual rainfall is insufficient to produce any crop; yet the population lives principally by cultivation of produce destined for the market. This is possible because of the combination of a water-table accessible by wells (the aquifer vitally contributed to by water-courses or 'koris') and soils conducive in to vegetable cultivation – notably onions - as well as cereal crops – notably wheat. These products are sold to buy the cheaper staple, millet, which is however little cultivated locally and thus comes up the road from southern markets.

Population (2001)	Total:	200,000-300,000
By Department: Agadez		100%
(% of total)		

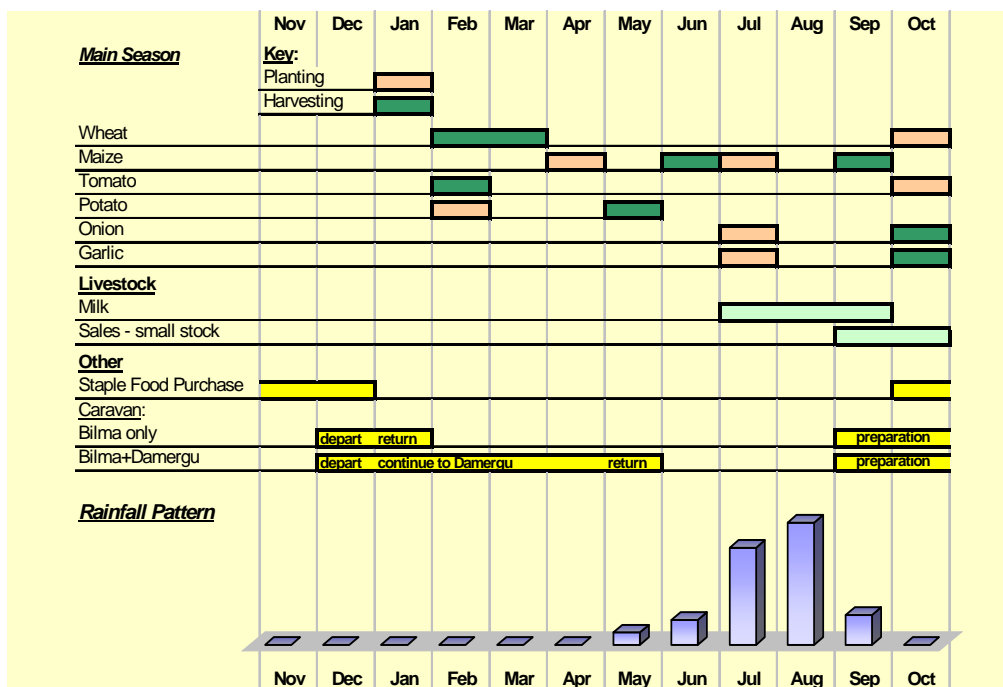
Water for irrigation is drawn by the use of draft animals (camels), and amongst the wealthiest by motor-pumps. Rainfall is important as a seasonal contribution of moisture, and rain failure is keenly felt. Production can normally continue throughout the year, with three cultivation and harvest periods. Land is shared between cereals, in the form of wheat and maize, and vegetables as the cash crops whose market value makes it possible for the Air cultivation system to be sustainable, offering considerable profits to the minority who can afford to invest in capital equipment and inputs. High-quality onions in particular are harvested at a time when the national and cross-frontier markets are in short supply from elsewhere. Despite the distances, Air people do well out of this trade: as much as 80% of onions go as far as Ivory Coast.

Land availability is not to date the absolute constraint: it is the capacity to use it which is the dominant factor – and capacity means wells, draft animals, fertilizers, pesticides, and labor. But the poorer households, amounting to some 70% of all households, cannot put together this package to make a whole living from the land. The poor are usually only able to cultivate land by hiring animals for draft power and obtaining credit for fertilizers from the wealthy. This limits them to one well supporting one-quarter to one-third of a hectare, commonly for one annual harvest. They have to make payment through laboring for others and/or mortgaging a set proportion of their harvest. They further labor for others in return for payment in food or cash, and this brings about half their income. The other half comes principally from the sale of their own cash crops, sale of a few small stock, and migrating elsewhere for seasonal work.

Amongst the wealthier, two or more wells, some served by motor-pumps, bring profits which tend to be partly re-invested in trading, especially in the caravan trade. This integrates transhumance, commerce of livestock products and food etc. supply needs of pastoralists. All parts of society are involved: members of poor households will work within the caravan, e.g. leading a particular camel. A proportion of the better-off farm proprietors are resident in the provincial centre of Agadez, or further afield. Pasture as well as water availability in the Air is low, and those who possess more than a few animals (camels and small stock) have them chiefly maintained way in the rangelands.

There is limited local scope for diversifying economic activities away from cultivation. The increasing international tourism which Agadez attracts as a desert adventure centre already increases the market offtake of fresh vegetables. In addition, it adds value to the traditional handicrafts produced by many households – but this is also a market dominated by middlemen/retailers and, given also the easy saturation of the market, prices to the producer are low.

## Seasonal Calendar

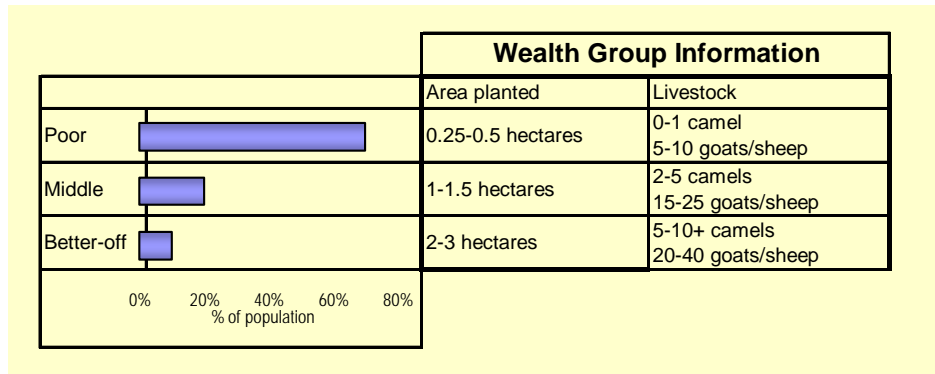


**Caravan** operators take camels, dry meats, butter, cheese and dried tomatoes, wheat and millet purchased in the south for sale in Bilma (north-east oasis and trading post for the Libyan market). Return with dates and salt. Either return directly back to their villages within 45 - 50 days or go directly from Bilma to the

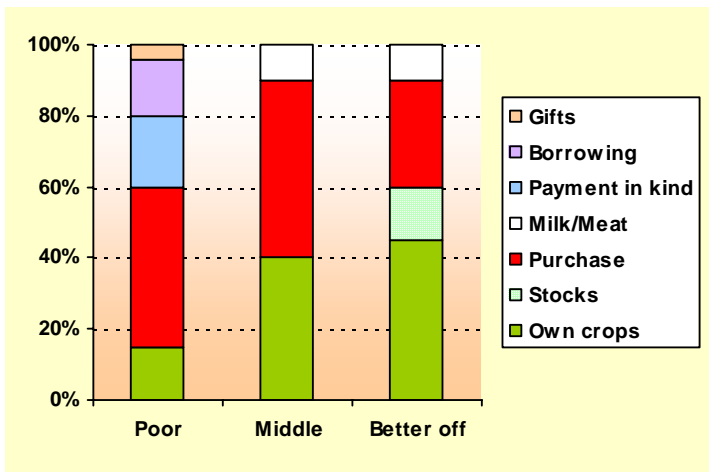
Damergou area to the south where they simultaneously find pasture for camels and sell dates and salt. Bring tea, sugar, clothes etc. back with them. Normally lasts 3 months. If it is a particularly bad year with low availability of fodder, they will go further south to the frontier with Nigeria until the rainy season begins.

Cereals, in the form, are grown over six-month periods: maize from April to September (including the rainy season from July); wheat in the winter dry season between October and March. Some vegetables are also grown in these months (tomatoes, lettuce), but vegetable production comes into its own especially during the rest of the dry season from February up to the end of June or a little beyond. The harvesting of onions during this period is particularly advantageous because the main growing areas in the south of the country are slack at this time so that prices for Air onions can be relatively high.

### Wealth Breakdown



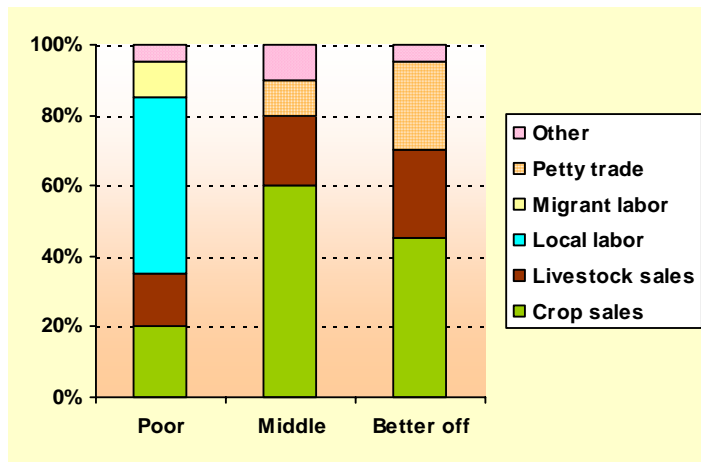
### Sources of Food



The poor majority are able to produce not more than two months' supply of cereals for the household, since they also grow vegetables on their small, albeit intensively cultivated, plots. For the rest, they purchase on the market and receive payment in kind for labor. Such payment, along with credit in food, is advantageous since markets are few and relatively highly priced. The middle group could feed from their fields for more than five months, but choose to put land and labor into vegetables in view of the attendant opportunity costs. Similarly the better-off make a balance between cereals and vegetables, but commonly

also keep a commercial stock of cereals (grown or purchased) for later release onto the market at advantageous prices and for loans and payments to their workers.

## Sources of Cash



The crucial difference here is between the poor majority who earn most by working for others, and the others primarily sell vegetables and engage in trading. All groups sell livestock to a greater or lesser extent – in the case of the poor only three or four goats/sheep in the year.

## Hazards

- Low rainfall on the mountains and surroundings, leading to lower water table and early drying of wells
- Isolation from main national cereals markets – immediately higher local market prices if there is any southern production failure
- High transport costs

### Periodic hazards:

- Crop pests: the Air is a periodic nesting ground for plagues of grasshoppers/crickets
- Livestock disease
- Drought

## Response Strategies

The Air zone remains to date a somewhat self-contained economic area in the sense that people usually do not much travel elsewhere to find employment. Under stress of local production failure, however, there is a marked migration of men to Agadez, the Tahoua agricultural area to the south and farther to Nigeria and to a lesser extent to Algeria if transport funds can be mustered.

Otherwise, locally:

- Households try to find extra local agricultural work, although this is necessarily constrained;
- Households attempt to intensify irrigated gardening rather than cereals growing, with the water available;
- There is increased petty-trade activity with towns and increased sales of wood/charcoal and fodder-grasses.
- Increased consumption and sale of wild foods, including the doum palm fruit;

## Indicators of Imminent Crisis

- Early drying of shallower wells;
- Increased and early departure of men for migrant work;

- Early and high prices on local markets for cereals and disappearance of cereals from some markets.

# Niger Livelihood Profiles

## Zone 3: Pastoral

### Main Conclusions and Implications

Although periodic drought strikes particularly acutely in this zone, it is notable that the ‘felt’ hazards are overwhelmingly of the chronic kind. The list (see Hazards section below) amounts to a description of the constraints of an unexpandable



resource (pasture) subject to human population pressure, resulting in animal overstocking and the encroachment of agriculture on some grazing lands.

In the pastoral economy there is a natural pattern of increase of livestock numbers over years of generally favorable conditions, and then a more or less sharp reduction in numbers when conditions deteriorate, and then a restoration of herds and flocks in subsequent years. But the ecological balance is now so delicate that drought episodes, even if not as catastrophic as in 1984-85, tend to result in an increase of poor households who have lost too much to climb back into pastoral subsistence again – i.e. they can never get together the capital to regenerate a substantial animal holding. At the same time, there is an increasingly skewed livestock ownership, with a major proportion of animals owned by the small proportion of better-off households.

Some half of all households today fit the poor category. Their vulnerability to bad rainfall seasons is tempered by pastoral ‘solidarity’ which may be seen as an economic and social necessity to keep working hands/people within the system through employment which has something of the patron/client quality to it. This means the redistribution of cash profits and to some extent milk; but resources are unstable and apparently in a long-term declining trend per capita. There is an increasing fall-out of households who effectively cease pastoral activity and depend on casual work around centers and on migrant work. The options for non-pastoral earnings are very limited, however, and distance and isolation makes the cost of living – crucially the price of millet – comparatively high. This is a zone where a large part of the population is relatively highly vulnerable to hazard.

### Zone Description

In this most northerly, inhabited ecology of the country, south of the desert proper, livestock rearing is the only form of rural primary production possible. This requires the extensive grazing and seasonal movement to which pastoral nomadism is the response. The majority of the zone’s rural population are Touareg camel pastoralists, who also raise large numbers of smallstock as well as some cattle where conditions are conducive. A minority population of Fulani cattle pastoralists use the pastures of the southern

		Previous	Current
<b>Population (2001)</b>	<b>Total:</b>	<b>100,000-250,000</b>	<b>500,000-550,000</b>
By Department: (% of total)	Agadez	30%-45%	15%-25%
	Diffa	5%-15%	
	Tahoua	25%-30%	
	Tilabery	5%-15%	
	Zinder	10%-15%	
	Maradi	Unavailable	5%-10%



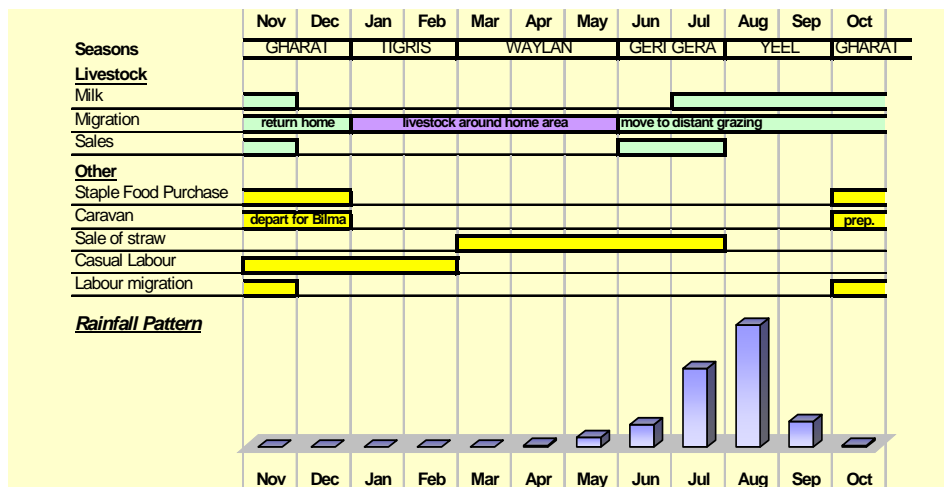
fringes of the zone, migrating further south during the dry season, and coming further north only for the salt cure in the rainy season (between July and September).

Cultivation of any crop in this zone is negligible in terms of food for the whole population, relying on small-scale irrigation at some water points or the incursions of rain fed agriculture into pasture areas where local conditions tempt farmers to take the gamble. The Bilma oasis area in the far north-east is the exception: a population of some 10,000 is able to live essentially by date production and caravan trading.

Given today’s human/animal population ratio, pastoralists live substantially on purchased grain rather than on milk (chiefly millet from the south, sometimes imported rice and pasta). Although milk is highly prized in the diet, selling animals to buy grain is the way to maximize the food calories obtained from livestock. Further cash is required for other essential expenditure: household items, clothes, medicine, transport. Modern life for pastoralists as for others is increasingly cash and market oriented.

However, fully half of the households are in the poor category and most of these possess far fewer livestock than could support them. A minority of these have fallen out of the pastoral system to the extent of skimming a living around the few centers, selling collected wood and grass and undertaking casual labor. But most survive essentially by working for others as contract herders: they herd the livestock of substantial livestock owners, often amongst their near kin (but including large-scale stock owners who are now town-dwellers and traders rather than pastoralists in their own right). Contract herders obtain milk from the animals under their charge, and variously the ownership of a proportion of the progeny (especially small stock) and/or a fixed cash sum per head of the contracted herd per month. They may further receive gifts, including clothes, from owners to maintain the good relations and trust which promote successful herding. The owners for their part obtain the workers without whom they cannot maintain large herds, and effectively maintain patronage over a set of ‘client’ families within their sub-clan or smaller kinship division. The ownership of large herds is thus to be seen not only in terms of the notional cash value of the livestock (only ever very partially realized) but of the social and political status conferred.

### Seasonal Calendar



**Livestock Migration:** this is completely dependent on rainfall distribution and corresponding availability of pasture and water. Peak movement of people is between June and August. They move within the Tadress or Irghazer or sometimes to Air, finding out where there is pasture as they move. They normally return to their home at the end of November/early December. If rainfall has been poor, they migrate further than usual southwards, even as far as Nigeria. Usually elderly and very young remain behind when migration occurs; a

few goats are also left so they can have some milk and if necessary sell in order to purchase millet.

Sale of livestock: peaks in June/July (the 'soudure' or 'hungry season') and Oct/Nov (provisioning for caravans). An average household needs to sell at least 20 goats/sheep per year to provision a household of 8-10 people; for a household of 10-15, one camel together with at least 25 goats/sheep.

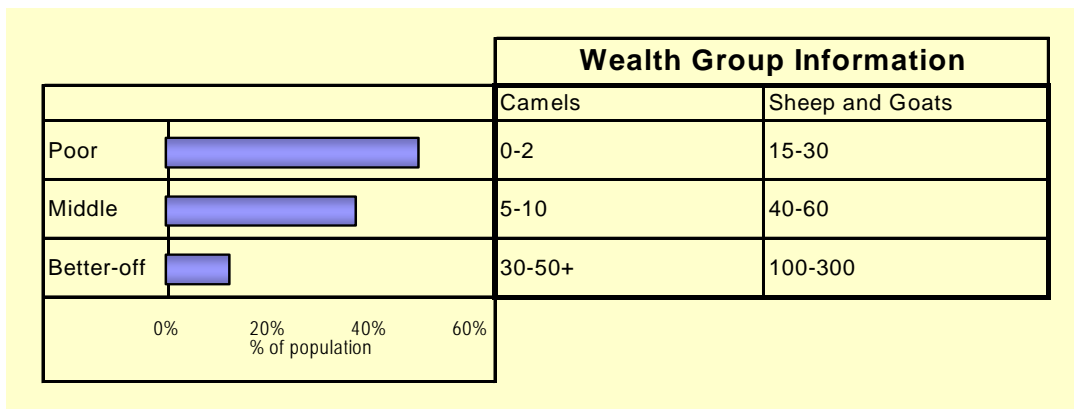
Sale of wood: a perennial activity. People have to search farther and farther from centers to find it these days.

Sale of grass: seasonal - between March and July, before rains. Usually donkeys are used for transport.

Casual work: peaks between October and February. Typical activities include house construction, construction of other shelter, working on the caravans, searching for lost animals, watering and guarding others' livestock.

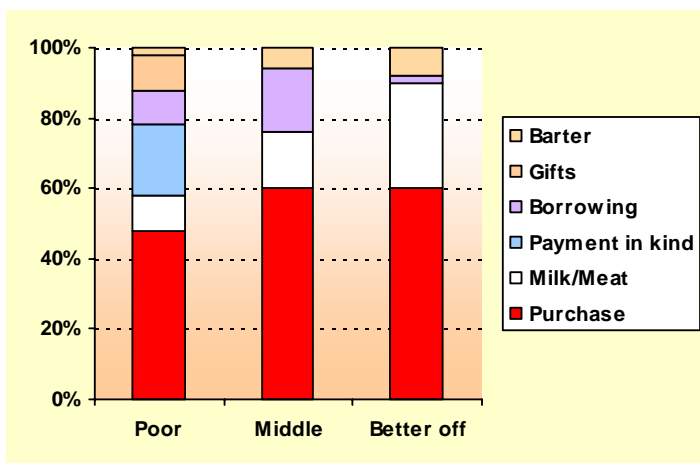
Work migration: people leave throughout the year, but peak time is October/November), selling animals to start the journey. Main destinations are Libya, Nigeria and then within Niger. People often remain abroad for 1 year. Cash sent or brought back is often partly invested in livestock.

### Wealth Breakdown



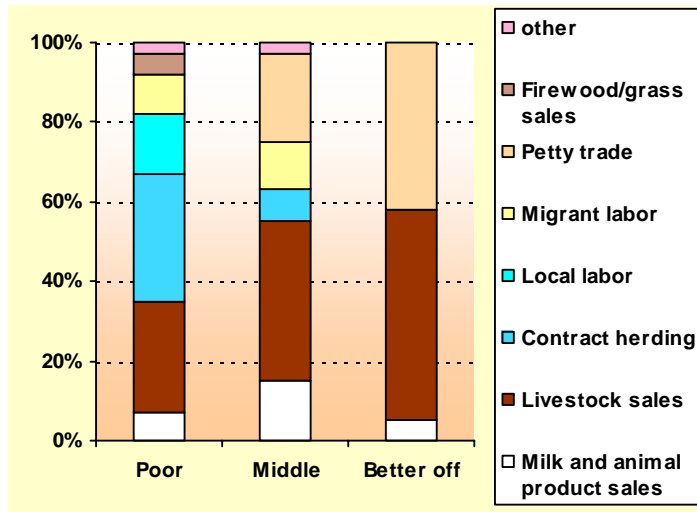
The 50% of poor households cannot make ends meet with their own livestock, and are highly dependent on working for the better-off and the more comfortable of the middle group. This is a burden of wealth redistribution which a pastoral system can hardly bear, so that the prospect is of increasing numbers of poor effectively leaving the pastoral system and depending on casual work around centres or migrant work.

### Sources of Food



Whilst virtually all households depend primarily on purchasing grain, the degree of consumption of own milk essentially denotes wealth. However, the 'payment in kind' for the poor includes both millet and milk taken from livestock under herding contract. 'Solidarity' amongst pastoralists, which keeps the system going, makes for some blurring of lines between food 'gifts', 'loans' and 'payments'. The staple millet tends to be relatively expensive on local markets since it must be transported up from the growing areas to the south.

## Sources of Cash



The poor try to maximize multiple options, from contract herding to selling small stock to migrant work. But one option which they don't have, because they have neither the camels nor the capital, is the lucrative caravanning trade, which is second only to livestock sales amongst the other wealth groups. As livestock ownership per capita reduces, given human population increase and at least unexpandable pastures, it is likely that trade will become an increasingly important option for those with capital.

## Hazards

### Chronic/frequent hazards:

- Inadequate / geographically poorly-distributed rains, therefore poor pastures;
- Competition for pasture with herds moving up from south for the annual 'salt cure';
- Encroachment of agriculture onto some grazing lands;
- Lack of wells for animals and humans, limiting capacity to exploit all pastures;
- Desertification and environmental degradation (including over-cutting of wood cover)
- Lack of education facilities for pastoral children

### Periodic hazards:

- Rain failure
- Rampant livestock disease

## Response Strategies

- De-stock, selling older animals first.
- Migrate with livestock earlier than usual to the south, and possibly further – even into Nigeria.
- Attempt to maximize local casual work earnings, including sales of firewood and grass.
- Work migration – to local towns, elsewhere in Niger, and across frontiers – begins early, is extended in time from three to six or more months, and is undertaken by more people than usual.
- Collect wild foods not usually used because they are difficult to process and unpalatable. In extreme circumstances, ant-hills are broken into for grain.

## Indicators of Imminent Crisis

- Pasture quantity and quality reported substantially below usual.
- Early start to the annual migration south in search of grazing.
- Early and high sales of livestock, including in southern markets; sharply declining small stock prices.

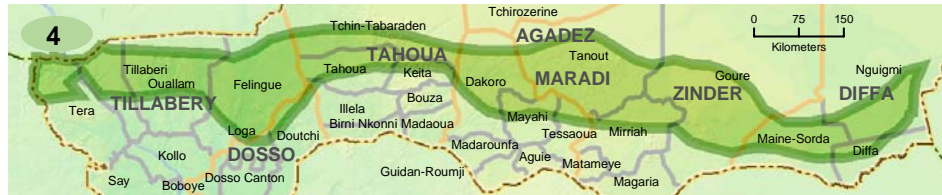
- Some water points dry up early, putting extra pressure on pastures around still-active water points.
- Water charges (from private sources) inflate.
- There are fewer livestock births than usual.
- Milk from livestock ceases unusually early.
- Local market prices of grain rise unusually due to early local demand (or due to drought in the south)

# Niger Livelihood Profiles

## Zone 4: Agro-pastoral

### Main Conclusions and Implications

In this zone an unusually acute divide exists between success and failure of livelihood strategies. Success means making the most of



the zone's advantages: extensive cultivation in areas of still-fertile land and a favorable environment for livestock. These two elements must be in balance to overcome the relatively high risk of rain failure, which is especially damaging to crops. Failure results from an imbalance in these elements, especially a lack of livestock. This translates into an inability to cultivate optimally, i.e. with hired labor, which then translates into a dependence on migrant work since local employment is insufficient. That is the main characteristic of poverty here.

This zone has a particularly worrying food security outlook. The poor majority have few and possibly decreasing assets in livestock, and no capacity to cultivate enough for minimal self-sufficiency in most years. The risks of agricultural rain failure are particularly high, and the poor are increasingly vulnerable to this. Taking a longer-term view, increasing conflict between settled residents and nomadic pastoralists is a sign that population pressure is beginning to exceed resources. There is a minority which still does remarkably well in this environment: but one might say that for the large majority the best years of agro-pastoralism are over, and that the profits from occasional bumper crop years – perhaps one in five – no longer compensate for the deficiencies in other years. In other words, nothing quite works for prosperity: not the rainfall performance, not the sustained quality of soils, not the policy environment where the land-use relationship between pastoralism and cultivation is poorly regulated.

Even if there is not an apparent trend of outmigration of families, there is likely to be an increasing outflows of labor and capital: the poor majority, perhaps swollen by people falling out of the middle wealth group, will depend increasingly on distant, largely unguaranteed, employment; the small, better-off minority will increasingly use their capital for trading beyond the zone. None of this indicates much local development or any available strategy to substantially increase local livelihood security in the face of natural population growth, let alone any further in-migration from the crowded south.

If there is no hiding a bleak picture, there are nevertheless some positive indications. Adaptation to a harsh environment has prompted a capacity for very far migration in search of pasture and fodder – as far as Togo, Ghana and even Gabon – where also the market value of livestock is very high. A more ambiguous element is the modern tendency for people to sell and buy those natural or waste products (grasses, crop residues) which were traditionally respected as part of the shared 'commons'. Thus now there is added market value but new 'ownership' inevitably skewed towards the better-off. On the other hand, the acute food security problems in the zone in recent years has made it the focus of government and agency programmes to provide more wells and other improvement measures.

## Zone Description

This extensive zone from west to east of the country, comprising both plateaus and plains, which lies between the northern fringe of the more densely settled Rainfed Agriculture Zone and the southern limit of the more sparsely populated Pastoral Zone. In that sense, it contains the transition between rain fed agriculture and pastoralism. Traditional millet cultivation pushes against the northern limits of viable rainfall; cultivation has taken over previous grazing grounds, but there are still many areas where the combination of grazing and water points supports large numbers of livestock for a good part of the year, although cattle must be kept away from the fields in the cropping season. There is a distinct lack of ‘valley’ areas where localized irrigation for counter-season cultivation could take place.

Population (2001)	Total:	2,000,000-2,500,000
By Department: (% of total)	Diffa	1%-10%
	Dosso	1%-5%
	Maradi	15%-20%
	Tahoua	10%-15%
	Tillabery	30%-40%
	Zinder	25%-35%

The risks of cultivation are high: rainfall is not only sparser than in the major rain fed agriculture zone to the south, but is also subject to wider fluctuations from year to year. On the other hand, there are still fertile soils which are not yet overcrowded, and fallowing is still practicable (having disappeared from more southerly zones). In a good rainfall year – perhaps one in four or five - households gain a bumper harvest of both millet and niebe beans (the main cash-crop) and even the poorer families may be able to survive on their own production for the best part of the year.

It is cattle, goats and sheep which provide the essential balance against agricultural risk. But poor households own very few livestock, and in the face of agricultural risk they depend heavily on seasonal work migration. The ‘pastoral’ element of the zone essentially involves the middle and better-off minority, who own livestock in more or less large numbers, although the main basis of their work is usually agriculture.

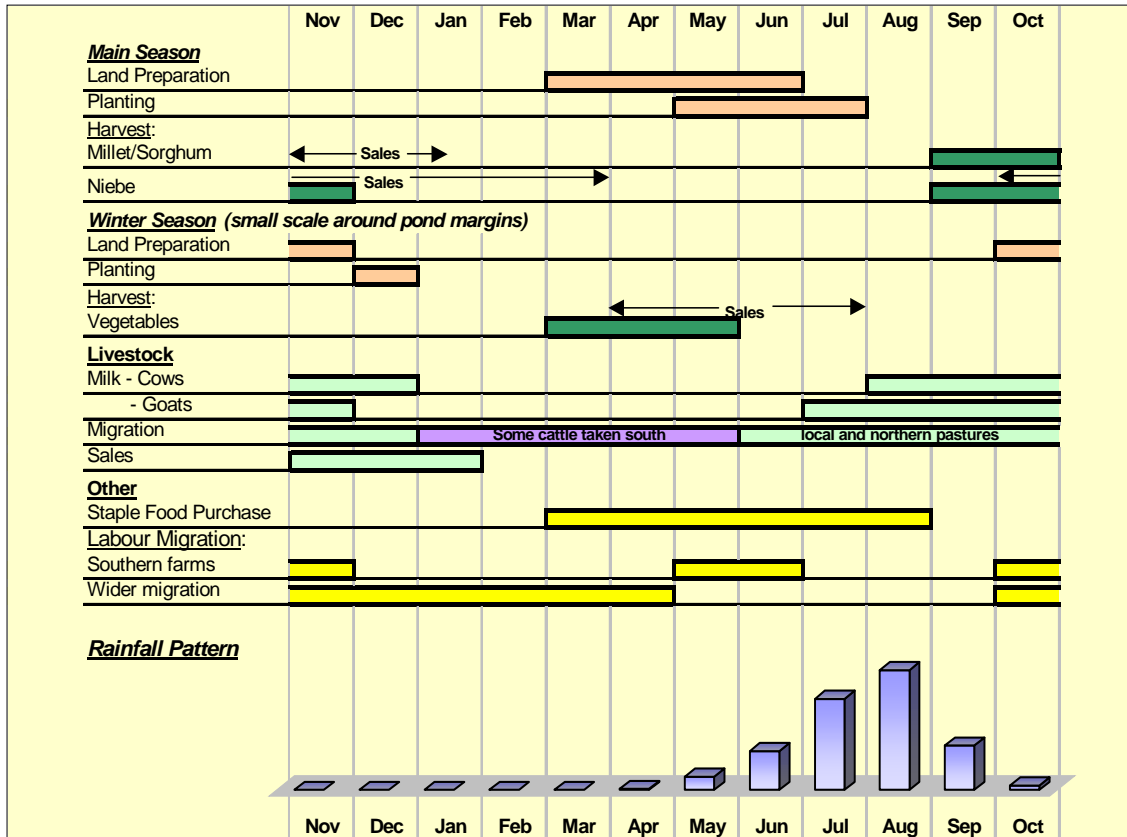
## Seasonal Calendar

The agricultural season lasts from early seeding in June through the rainy season which, apart from isolated showers, occurs essentially from early July to late September. The harvest for short-season millet is from as early as mid-September through November. The main selling season for crops (niebe and groundnuts as well as millet) is from November to January/February, early post-harvest sales being induced by the need for ready cash.

Millet purchases begin in earnest no later than April, although for many poor families there is hardly a season, and sales depend more on when cash is available from local and migrant workers.

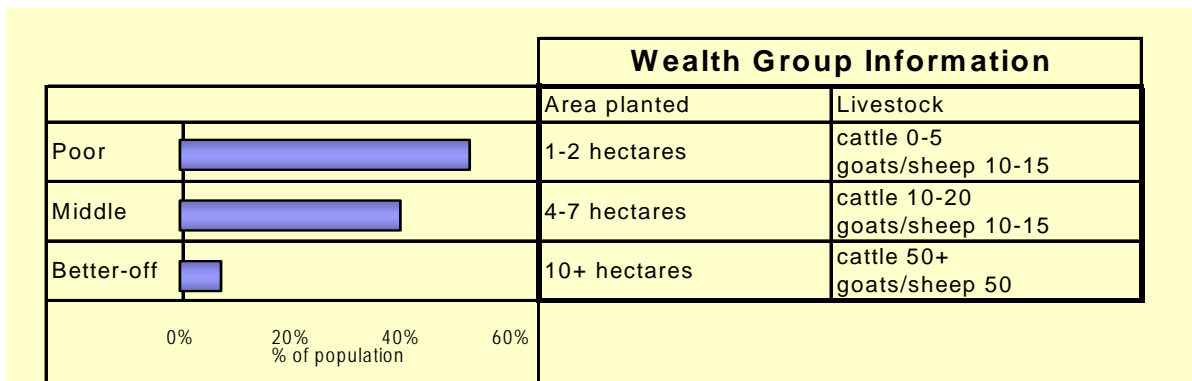
Animal sales are most numerous during the dry months, especially from November through January, when cattle have come back to eat the post-harvest crop residues, and in the hot months of April-June, before the main rainy season grazing migration.

Migration for work tends to extend over several months; for the poorer migrants this means leaving home as early as July, once the home crops are planted, up to January when the employment on southern harvests has finally run out.

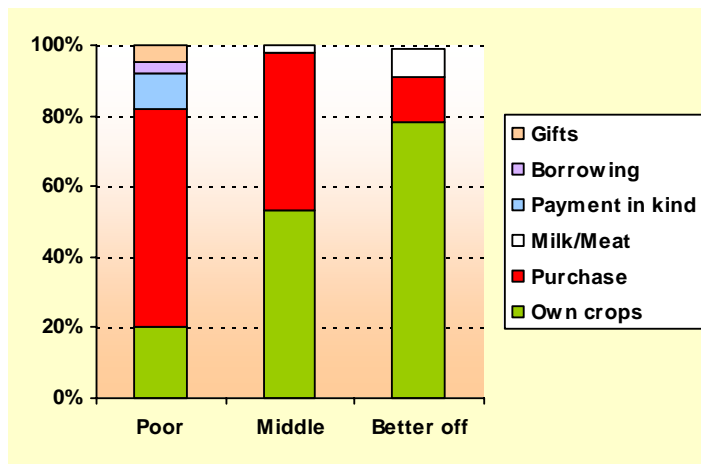


## Wealth Breakdown

Upwards of 50% of households are in the poor category, whilst the better-off account for only 5%. There is a much skewed ownership of the chief item of wealth, livestock, in that the poor majority possess less than 5% of the cattle and some 20% of the goats and sheep. The poor tend to cultivate not more than 2 hectares whilst the middle cultivate 5-7 hectares and the better-off upwards of 10 – although that depends on their relative commercial interest in crops and livestock. The poor and a good number of middle families too, depend heavily on migrant work because they cannot find sufficient work from more comfortable households either on the farm or as shepherds (a role often taken by specialist Fulani herdsmen).

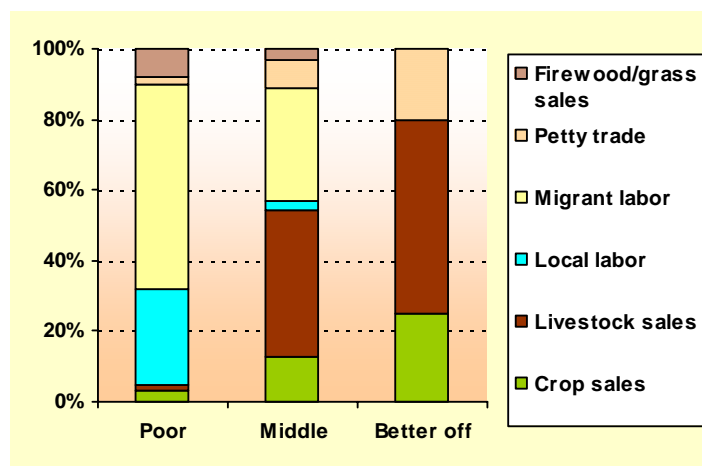


## Sources of Food



The poor generally cannot feed themselves from their fields for more than three months, but depending on location, the middle households obtain 40-60% of their staples consumption from their harvest, and the better-off 60-100%, sometimes with a substantial surplus. Only the better-off are able to maintain sufficient cattle around them to drink much milk over the year. For the poor households, and many middle households too, the market is their main provider, although to some extent their labor is paid in kind; the poor also receive gifts and loans in kind.

## Sources of Cash



The essential balance is between employment income (with migrant work uppermost) and livestock sales: for the poor, it is overwhelmingly employment; for the middle, heavy dependence on livestock sales but often with a family member engaged in migrant work; for the better-off, livestock sales are tempered by earnings from trading which has been capitalized by previous livestock sales.

## Hazards

### Chronic/frequent hazards:

- Irregularity of rainfall, and in recent times an apparent tendency for a late onset of the rainy season  
Crickets and grasshoppers
- Livestock on far-migration from Nigeria and Chad passing on diseases at watering-points
- Land degradation increasing in space and severity

### Periodic hazards:

- Drought, i.e. rain scarcity causing crop failure beyond that experienced in chronic fluctuations from year to year
- Severe drought of the 1984/85 magnitude is rare.



## Response Strategies

The poor majority here have perhaps the most insecure livelihoods in the country: they are critically dependent on employment elsewhere because locally they do not possess the livestock to balance the agricultural risk of chronically irregular rains, nor do they have sufficient local employment. Thus in a sense their normal livelihoods contain already a strong response to local risk; if local crop failure is particularly bad, they can only increase that response by seeking earlier and longer migrant work – including attempts to stay for counter-season farm work in southern parts of the country. A greater use of wild foods is made by the rest of the family who remain at home.

In exceptionally bad years many middle group families will also try to increase their income from migrant work, especially since the alternative is the sale of unusual numbers of livestock at unusually low prices. The better-off minority will sell livestock, but will try to minimize this by increased trading activities.

## Indicators of Imminent Crisis

- Early return of cattle from the northern Salt Cure migration (rainy season)
- Increasing conflict around grazing and water resources between settled residents and nomadic pastoralists
- Early departure for distant work migration
- Early (unseasonable) rise in cereal prices
- Early consumption of wild foods to help stretch out the use of remaining cereal stocks

# Niger Livelihood Profiles

## Zone 5: Rainfed Agriculture

### Main Conclusions and Implications

This is the zone with the biggest absolute population, who depend fundamentally on rain fed cultivation of staple millet and sorghum and on mainly rain fed cash crops. Livestock remain an important investment for those who can afford them (including often paying for them to be taken on seasonal migration); but increasing populations have progressively spread agriculture onto former grazing areas.



There are local variations in land and population factors, but universally this is today far from being a scene of subsistence agriculture. The poor roughly half of the zone’s households cannot produce enough from their land to survive on in any year, and are heavily dependent on working for others, near and far. They commonly operate on credit from better-off neighbors/traders, so that they are forced to sell off some produce, including cereals, at low post-harvest prices, and/or engage their labor on creditors’ property.

In poor crop years, poor households seek more and earlier work – but if the season is unfavorable also in other zones, notably agro-pastoral areas, they will find themselves in competition with other migrant workers, some even from middle-wealth households who are feeling the pinch. Apart from the rare episodes of severe drought which bring widespread acute hunger, a growing proportion of an increasing population is faced with constraints on any alternative wealth generation. This means that poor crop years result in impoverishment which may not be fully restituted in more favorable years. Their lack of a buffer of stocks and savings means they are more vulnerable to periodic hazards than were their grandparents and parents.

### Zone Description

This is the zone in the country with the largest rural population in absolute numbers. It represents the most typical Sahelian situation: rain fed cultivation of millet and sorghum on more or less sandy soils, with inter-cropped niebe and other items as both consumption and cash crops; and livestock – cattle, goats, sheep – as the principal form of savings/investment.

		Previous	Current
<b>Population (2001)</b>	<b>Total:</b>	<b>4,500,000-5,000,000</b>	
By Department: (% of total)	Diffa	1%-10%	0,5%-1%
	Dosso	15%-25%	
	Maradi	15%-25%	
	Tahoua	15%-25%	
	Tillabery	15%-20%	
	Zinder	15%-20%	10%-20%

Within the zone there is much local variation on this theme. Rainfall is in general more plentiful and reliable towards the south of the zone than towards the north, with the difference at the extremes at some 350mm versus 600 mm per annum. This means that cultivation is generally less intensive towards the north and the population sparser. Soil quality varies between localities, whether north or south, as does the availability of ground water (including natural ponds) for usually very limited irrigated cropping. These elements together affect the relative capacity for high cereals yields and the production of cash crops such as groundnuts, *souchet*, and cotton.

This zone produces much of the surplus grain marketed around the country. But except in years of bumper crops, surplus production comes largely from a minority of better-off farmers, whilst a middle-wealth group is more or less self-sufficient in basic food. The poor approximately half of the population can normally only meet around one-quarter of their staple food needs through their own production and are highly dependent on working for others to make ends meet.

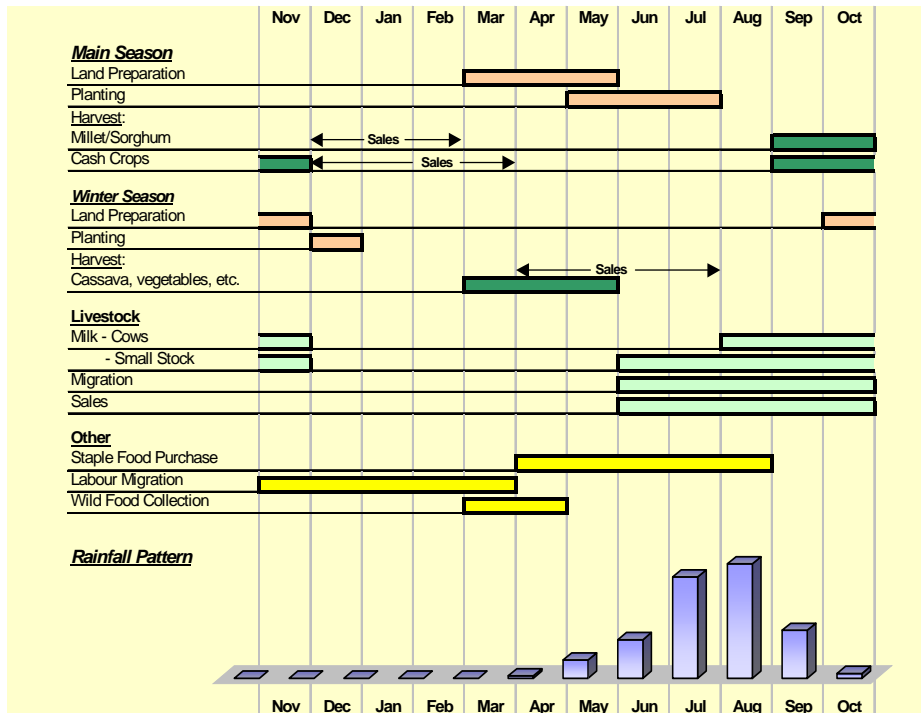
Sub-Zones: see the separate Profile of Loga.

## Seasonal Calendar

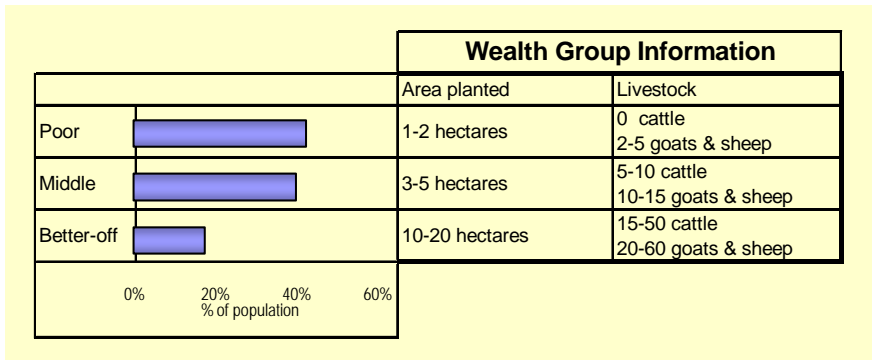
The agricultural cycle is from March-May (land preparation), through June – September (rainy season – crop growing) to late September – early November (harvest).

Normally, poorer households produce only enough cereals to feed the family for some 3 months, but nevertheless sell some cereals as well as cash crops immediately post-harvest in November and December for essential cash – including for debt repayments. This is the time of lowest market prices. They must begin to purchase cereals latest by April – and by this time market prices are on the rise. Other households are more self-sufficient: they sell surplus cereals and cash-crops up to February, and begin purchasing, if at all, from August onwards. Richer households may stock grain up to August to sell at the year’s highest prices.

In years of crop failure, all but the richer households are already buying by March – and the poorer households already by January. They become very dependent on early earnings from migrant work, and families must await the transfer of funds or the return of the worker with grain.

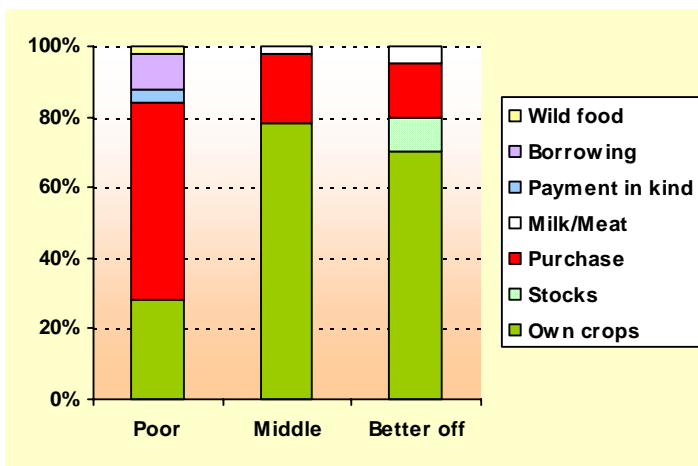


## Wealth Breakdown



The poor group in this zone, in general, form a substantial minority (40-45%), somewhat less than most other zones, but in absolute number more than several other zones put together. The sub-zones (see below) have a majority of poor. The degree of self-sufficiency in cereals is one key, but another is rain-fed cash-cropping (niebe beans, tiger-nuts etc.) and trading activity. For instance, Mirryah, a grain basket in the centre-east, has a substantial middle group self-sufficient in cereals, whilst in Douchi, nearer to the commercial centre of Niamey, trading has promoted a relatively large better-off group. Cultivation is generally extensive but greatly skewed: the poor cultivate for themselves on two hectares or less, the better-off on some 15-20 hectares – on which they employ local and migrant labour.

## Sources of Food

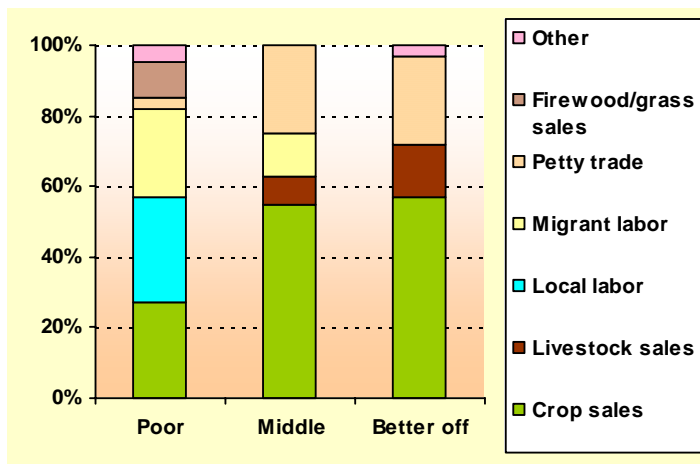


The poor manage to consume from their fields only about one-quarter of their yearly basic food requirement. They essentially survive by working for others and purchasing food. Most middle and better-off households are potentially self-sufficient in cereals or in surplus, but make a choice between that and putting land and labor into cash-crops and investing in trading activities.

The position of poor households needs to be seen in a multi-year context. The effects of a period of low production, which may cover three years, cannot be eradicated by a single subsequent good

year, even if it gives a bumper crop. Indeed, a poor householder needs three good years to recover: in the first he pays his main debts to better-off creditors and NGOs; in the second, he can use more of his harvest for consumption, although there are some lingering debts and costs; in the third year his production will secure the family for all or most of the year. But investment of any profit in assets (notably livestock) may be nullified if the householder greets his good fortune by marrying a second or third wife and entailing the short-term costs involved.

## Sources of Cash



The poor have three main sources of cash income: local agricultural work, migrant work and cash-crop sales. They also often have to sell part of their cereal harvest immediately for debt repayment: credit is a yearly necessity for them. The middle and better-off households depend to a varied extent on surplus cereals sales, depending on local conditions, but also substantially on cash crops and/or on trading activities. Livestock sales are substantial only for the better-off. It should be noted that the modern tendency is for an increasingly cash-based economy, so that the poor may be seen as operating more in a rural and

urban market place – for cash-crops, firewood and other collectibles, and casual employment – than in a traditional rural environment where arable soils and natural resources are cherished and sustained for the long term.

## Hazards

### Chronic/frequent hazards:

Population pressure contributes to progressive soil infertility due to increasingly intensive land use; this affects the poor who can afford neither the time for maximal attention to their own land (weeding etc.) nor chemical fertilizers. This leads to increasingly skewed land ownership towards the better-off as poorer households fail on their plots and seek more of a living from casual employment.

### Periodic hazards:

- Poor distribution of rainfall over the season (e.g. extensive re-seeding needed, damage at flowering stage); an early end to the rains.
- Crop or pests including crickets/grasshoppers and stem/crophead parasites
- Livestock disease brought in by migrating cattle
- Catastrophic drought, resulting in widespread complete or near-complete crop loss, is rare. People still refer to the 1984-85 episode as the last real disaster.

## Response Strategies

The poor have neither the stocks nor the savings (in cash or animals) to make up for a bad season. Their single substantial recourse is to more employment. If local farm work cannot be increased (high competition for local work on middle and better-off households' land) they must look to early other opportunities. If the first rains to the north (agro-pastoral zone rains begin somewhat later) are promising, there may be more work on fields there. Otherwise they will go early southwards to look for work in the irrigated cash-cropping areas, or beyond across the country's frontiers.

The middle and better-off households have assets in cash and/or livestock; but some middle households may decide to send an extra member on work migration across the frontier – although often with some capital for trading activity in coastal areas, which the poor cannot muster.

## Indicators of Imminent Crisis

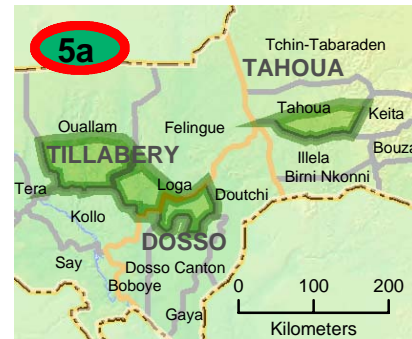
- Late start of rains
- Hesitant early rains leading to substantial re-seeding
- Poor rains leading to widespread crop failure
- Early and marked work migration
- Little dip in cereal prices post-harvest; and early and steep rise in prices thereafter
- Acute decline in livestock prices (An early crisis indicator – not an early warning indicator)
- Movement of whole families to administrative centers or better-favoured areas (A mid-crisis indicator – not an early warning indicator)

# Niger Livelihood Profiles

## Sub-zones of High Work Out-migration: Zone 5a: Loga Sub-zone (within Rainfed Agriculture Zone)

### Main Conclusions and Implications

Within the extensive Rainfed Agriculture Zone, four sub-zones have been identified as areas of relatively high food insecurity risk. These comprise all of Loga Department (Dosso Region), and those (southern) parts of Ouallam Department (Tillabery Region) and Filingue and Tahoua Departments (Tahoua Region) which fall in the Rainfed Agriculture zone. Each sub-zone has its own localized features, but what all have in common is three elements of structural poverty more pronounced than in the rest of the zone: relatively infertile soils; relatively unfavorable conditions for cash crops, with relatively few pond or valley areas where retained moisture allows winter cropping; but a population at least as dense as the zonal average. To these elements may be added a tendency to rainfall irregularities shared with the agro-pastoral zone just to the north (where there is adaptation through livestock rearing).



These areas are chronically in food deficit (although in an exceptional year they are self-sufficient or even produce some surplus - such are the wide inter-annual variations typical of the sahelian ecology). Local pasture availability allows only modest numbers of livestock to be maintained. This makes the majority of households relatively heavily dependent on finding income from outside their home area. In this, Tahoua and Loga sub-zones are particularly marked out as areas from which great numbers of people go each year for migrant work outside the country. People of Ouallam and Filingue tend more to look for nearer options, e.g. in the more southerly, well-favored areas of the general zone. Taken as a whole, the sub-zones can be seen as having more of the population in the 'poor' category than elsewhere in the zone: but this distinction of the sub-zones may well fade if population pressure on the land in the rest of the zone leads to progressive soil infertility without compensating local wealth generation. On the other hand, there are better-off and some middle households who make substantial money from their work migration (e.g. if they have the capital to invest in trade in the towns or in Nigeria); yet profits are not evidently much invested in local development, e.g. for boosting schools or clinic availability.

It should be emphasized that these are quite limited areas within the Rainfed Agriculture Zone, and they are like 'worst case' scenarios which do not typify the general situation to date in the Zone.

### Loga Sub-Zone:

Loga Sub-zone has relatively poor natural resources, but no less dense a population than in the Rainfed Agriculture Zone at large. The sub-zone is in grain deficit in any but a bumper-crop year, and there is no compensating possibility of concentration on cash-crops or livestock. The proportion of poor, at some 80%, is well above the norm for the zone. At the same time, this is one of a handful of localities in the country where there is a very high proportion of households which send at least one person on migrant work every year, local employment opportunities being very limited. Contiguous areas such as Douchi and notably Gaya are surplus-producing areas, which gives some advantage to Loga in access to grain, although prices are influenced by the proximity of demand from the Niamey conurbation.

This is an area which must always be under observation for food security problems. Taking a longer-term

view, the question arises whether Loga shows what the zone as a whole will be like in the future if population pressure progressively reduces resources per capita and causes ecological degradation. This may be unduly pessimistic – nature has given Loga poorer soils and fewer groundwater resources than elsewhere. Nevertheless, the message is perhaps that the resources of better-favoured areas need careful husbanding and development: the employment markets for migrant labor are not infinite.

## Zone Description

Loga has a relatively dense population but large stretches of degraded soils and extremely few groundwater resources. It is chronically in cereals deficit and has limited cash-crop production. The ecology favors only millet, and very little sorghum is grown. Niebe beans and groundnuts are the main cash crops, the latter declining over the years and mainly invested in by middle to better-off households. Average land-holdings are relatively low. Pastures are also limited in extent and quality, and the annual presence of migrating herdsmen causes conflict for resources with the local, settled residents. Livestock holdings are relatively low for each wealth group.

Population (2001)	Total: N/A	100,000-135,000
By Department: Loga		100%
(% of total)		

There is relatively little local agricultural employment, and reduced opportunities for petty trading. From the point of view of household budgets, work migration forms almost as much of a foundation of the economy as agriculture, and is practiced in each wealth group. This includes both seasonal migration by youth to nearer towns as well as Niamey (with females also going to work as house-servants), and migration across the national frontier (a journey often only funded by previous work in local towns). Poorer people tend to look for agricultural as well as town work principally in northern Nigeria, Ghana and Ivory Coast; other people who are able to put together some capital (e.g. from selling livestock) are more able to venture further to the coastal areas where work returns are higher and investment in trading more profitable.

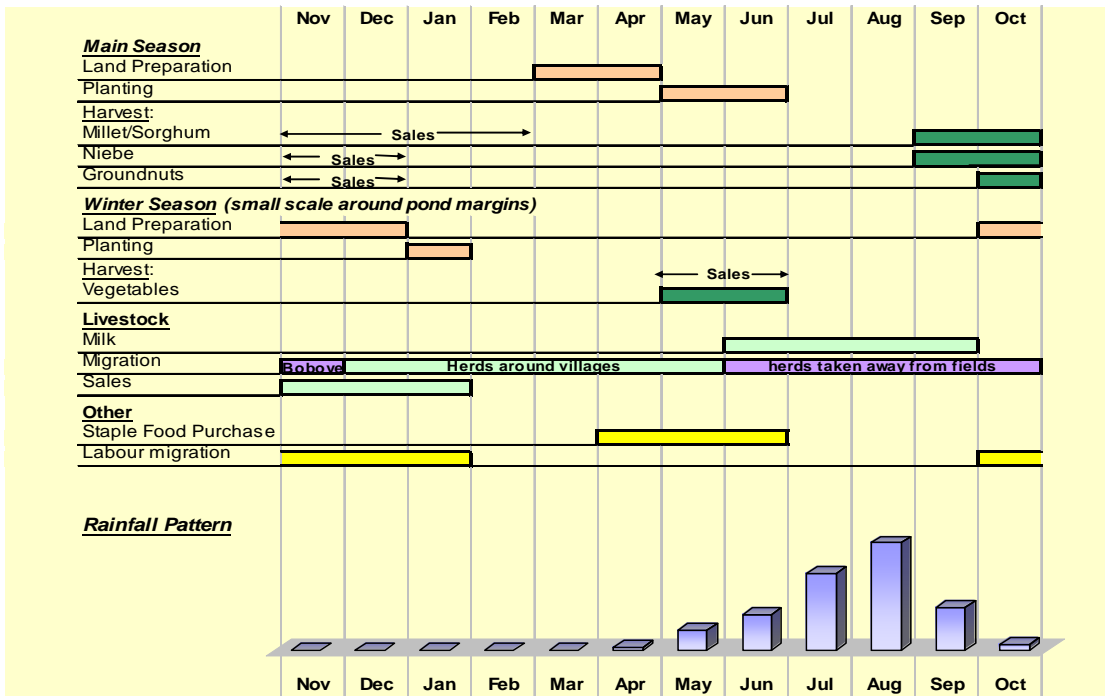
The migration system especially amongst poorer households is primarily aimed at preserving the home grain store for annual lean period of April-August: well past the harvest and before even green-stage crops are available. Whether in good or bad years, both husband and wife tend to migrate (sometimes leaving children with relatives) timing their return for land preparation for the new season (see next section).

## Seasonal Calendar

The agricultural season lasts from early seeding in June through the rainy season which, apart from isolated showers, occurs essentially from early July to late September. The harvest occurs between September and October. The main selling season for millet is from November to January/February, early post-harvest sales being induced by the need for ready cash. Niebe and groundnuts are mainly sold in November-December.

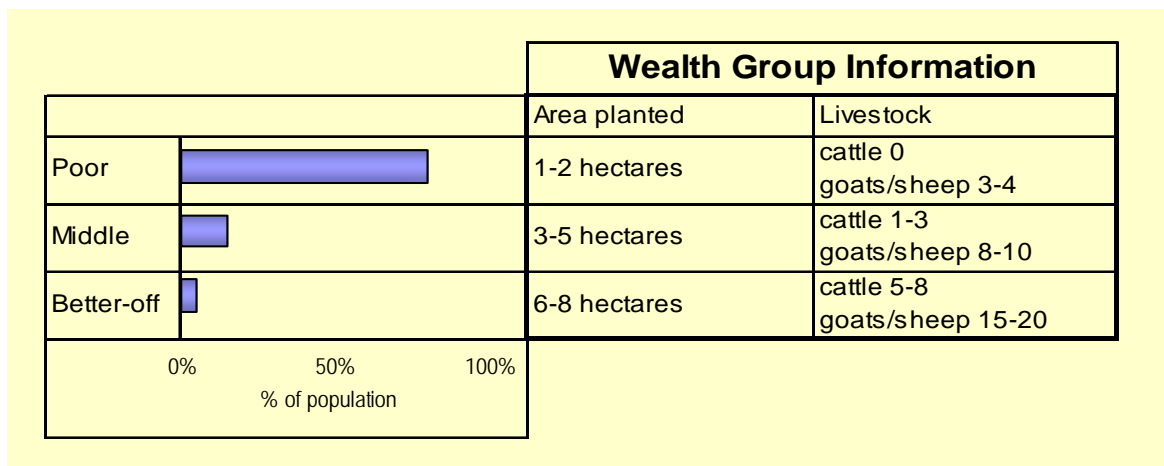
Millet purchases begin in earnest not later than April, although for many poor families it hardly has a season and depends more on when cash is available from local and migrant workers. Animal sales occur mainly during the cooler dry months, especially from November through January, when cattle have come back to eat the post-harvest crop residues, although some are sold in the hot months of April-June, before the main rainy season grazing migration. Migration for work tends to extend over several months. For the poorer migrants this means leaving home as early as July (once the home crops are planted) up to January when the employment on southern harvests has finally run out.



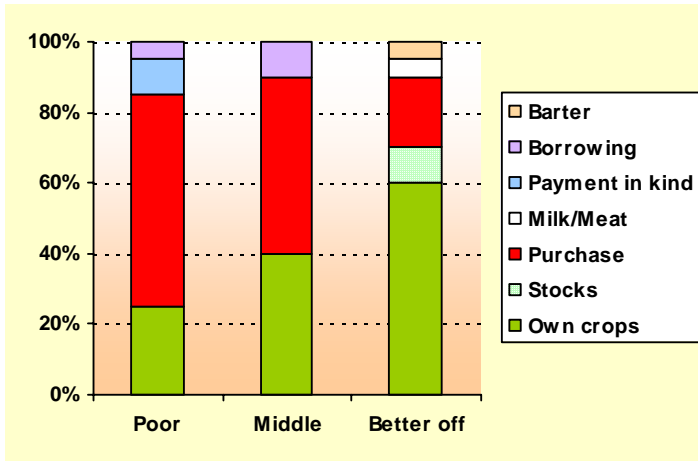


## Wealth Breakdown

The sub-zones have a particularly skewed wealth pattern, with an exceptionally high proportion of poor households (some 80%) and relatively few better-off households (5%).

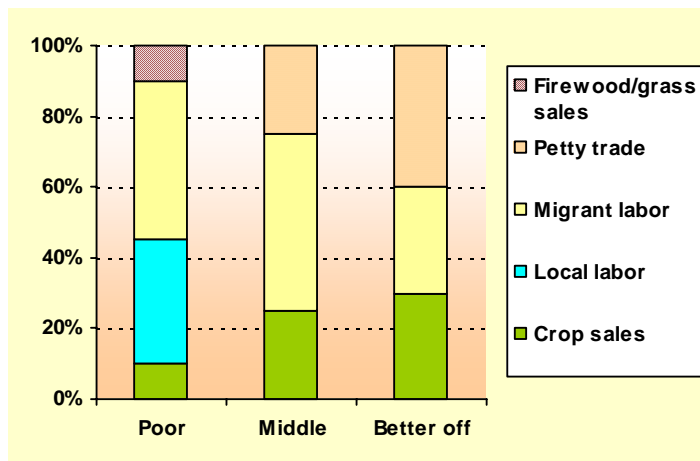


## Sources of Food



In these sub-zones, even many of the better-off minority tend to produce less than their annual grain requirement in favor of cash crops, although they may invest in a commercial stock bought up cheaply immediately after harvest to make a profit on sales to other HH later in the year. For the great majority of HH, own production covers not more than three months' requirement, and virtually all the rest must be purchased or earned in kind. Food loans from creditors are common, to be repaid in kind or in labor.

## Sources of Cash



By far the most striking element in sources of cash is the relatively very high dependence on migrant work amongst the great majority of families. In this the better-off, as well as some of the middle group, have distinct advantages in holding some capital, which, just as at home, allows them to pursue trading opportunities rather than simply casual labor. At home, the poor attempt to maximize all earning opportunities, including servicing the minority who own livestock in any number with collected fodder and contract-herding/shepherding.

## Hazards

### Chronic/frequent hazards:

- Progressive soil infertility and disappearance of fallowing
- Reducing pasture resources and conflict with migrating herders

### Periodic hazards:

- Crop pests
- Livestock diseases acquired during grazing-migration
- Political or economic barriers to the migration of able-bodied people (e.g. long closure of a crucial national border).
- It is notable that in this sub-zone, although damaging irregularities and failures in rainfall do occur,

the 'felt' hazards of resource constraint and competition far outweigh climatic hazard.

### **Response Strategies**

Exceptional local production failure results in a greater dependence on migrant work, notably amongst some middle group households who do not normally send someone away for work. Also, whole families will move to towns, and youths will try any means of gaining cash, including shoe-polishing and hawking. Only the better-off have sufficient livestock to sell for food if they do not wish to liquidate other capital.

### **Indicators of Imminent Crisis**

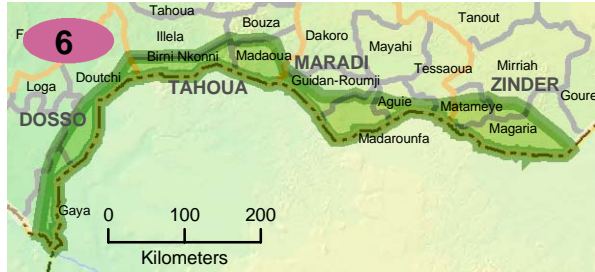
- Increasing conflict around grazing and water resources between settled residents and migrating herders
- Early departure to seek agricultural work in the more productive neighboring areas
- Early and increased departures on distant work migration
- Departure of children taken out of school to accompany their parents on work migration
- Early (unseasonable) rise in cereal prices

# Niger Livelihood Profiles

## Zone 6: Southern Irrigated Cash Crop

### Main Conclusions and Implications

A veritable onion industry, accompanied by other cash-crops, makes this the wealthiest zone in the country. But just under half of all households are poor, working for others and rarely self-sufficient in cereals from their own fields. Nevertheless this group remains relatively food secure in this least hazard-prone zone of the country (although it is not untouched by rain failure, epidemic pests and flooding). The rare drought events affecting rain fed cereals production should have a less acute food security effect than elsewhere given that the great part of earnings come from the irrigated sector.



As many people as possible are trying to get an advantage from this cash economy, including a substantial proportion of in-migrants from other zones, some of whom manage to settle onto small plots of land. There is no current reason to suppose that the economic bubble will burst, e.g. that the international demand for onions will suddenly decline. On the other hand, there appears to be a natural limit to any expansion of the cash-cropping in terms of soil and water, and no great dam or water development program is in prospect. In this case, the longer term prospects for the poor do not appear rosy. They have already been hit by economic ‘Liberalization’ entailing the withdrawal of subsidies and loans for fertilizers. Poorer people in an increasingly densely populated zone will try to survive on less and less land of their own and possibly on less employment as competition rises. The result should be that not only in bad years but as a trend, the proportion of poor household earnings which comes from migrant work outside of the country will rise. Much further north, in the agro-pastoral zones, we observe that the dependence on this is at least twice as high as in these southern zones. This may well not be the case within less than a generation: the poorest will effectively be crowded out of the cash-cropping economy. If market competition in onions and other products increases from other Sahel countries with similar ecological niches, then the poverty trap will tighten still further.

### Zone Description

This zone is not geographically continuous, but comprises areas in the far south of the country between Gaya and Magaria. Its distinguishing characteristic is the dominance of irrigated cultivation based on the shallow water table and seasonal water flow in ‘valley’ areas, associated with good soils. These are also areas receiving relatively high rainfall,

		Previous	Current
<b>Population (2001)</b>	<b>Total:</b>	<b>2,000,000-2,500,000</b>	
By Department: (% of total)	Dosso	15%-25%	15%-20%
	Maradi	30%-40%	15%-20%
	Tahoua	20%-30%	30%-40%
	Zinder	15%-25%	

around the 500-600mm p.a. mark. High-quality onions are the biggest earner overall, with an international market taking tens of thousands of tons annually. On ion cultivation is more concentrated in some areas than others; elsewhere the particular local soil and moisture conditions promote other principal cash-crops including sugar cane, rice, *souchet*, sesame and chillies. The huge, nearby market of Nigeria (this zone is bounded by the international frontier) is the biggest destination of the cash-crops, as well as of surplus

cereals - bigger than the internal demand of Niger. But onions in particular also travel far into other neighboring/coastal countries, and some tonnage even reaches European supermarkets.

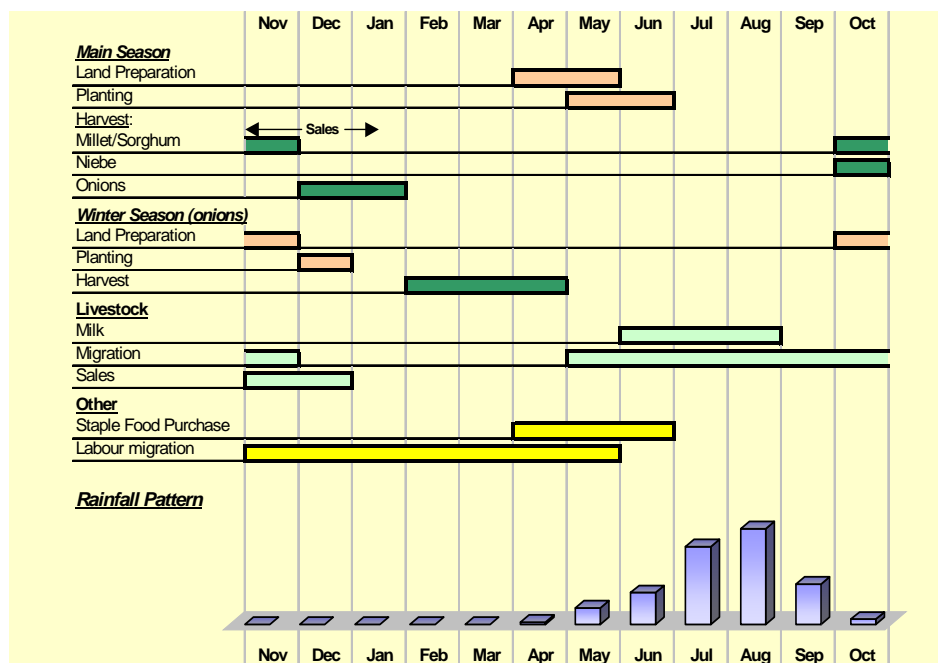
To label a zone as 'irrigated cash-cropping' is to emphasize the major distinctive feature of the area. However, very few farming families concentrate their production exclusively on cash-crops. Virtually all also devote labor to rainfed fields for staple cereal crops, mainly millet and sorghum, with some amount of maize where conditions are conducive. Here there are also some rainfed cash-crops: the ubiquitous *niebe* beans as well as groundnuts and water-melons. At the same time, virtually all households maintain some amount of livestock, even if only a handful of goats. But even the better-off cannot maintain substantial herds because there is an acute and growing lack of local pasture.

The zone shows the densest rural populations in the country, meaning severe constraints on the ownership of cash-cropping lands. Criteria for gaining and holding onto land include not only customary rights but the capacity of a farmer to create wells and buy or hire pumping or other irrigation equipment, to maintain or hire draft animals and ploughing equipment, and to provide labor – more through hiring workers than through running a very large family unit. The minority of captains of the onion industry become spectacularly wealthy by national standards, and invest a good part of their money in the urban economy (houses, business). The corollary is a poor group of households numbering around half of all households, who make the best part of their living by laboring for others (work paid in cash or in kind). The production of irrigated cash-crops is labor-intensive, and the workforce hired by the middle or better-off groups must come either from local poorer households or from migrant workers (from the neighboring 'rainfed' zone and the agro-pastoral areas). The local, resident poor usually have access to some irrigated land, but their use of it depends on obtaining fertilizers and pesticides, and sometimes in making arrangements to hire draft power for ploughing. Credit and hire becomes a form of sharecropping, so that a part the land or the crop effectively mortgaged to better-off people. The hold of the poor on any irrigated production of their own has been dealt a major blow in recent years by the withdrawal of fertilizer subsidization and loans by the government in as part of the policy of economic 'liberalization' promoted by international institutions.

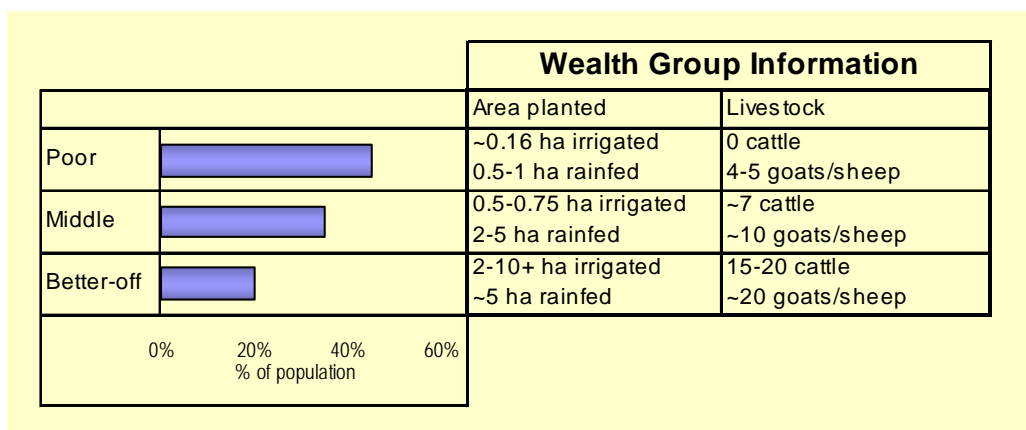
On the other hand, the rainfall in these areas promotes more trustworthy food-grain production than elsewhere, so that poor households gain between one-third and one-half of their food from their own non-irrigated production. This, together with cash-cropping and local work opportunities (including bagging and transport of onions) means that even the poor may be occupied locally for much of the year and have less need to go for migrant work than poor people elsewhere.

## Seasonal Calendar

Note: The storage of onions after harvest and before transport to main markets is a major preoccupation for large-scale producer-traders. They may be in a financial position to hold off sale of some quantities until the seasonal market glut disappears and prices rise appreciably. However, against this they must offset the risk of losses through rotting of a percentage of a crop stored for several months (from 20% upwards, even with optimally constructed traditional stores).

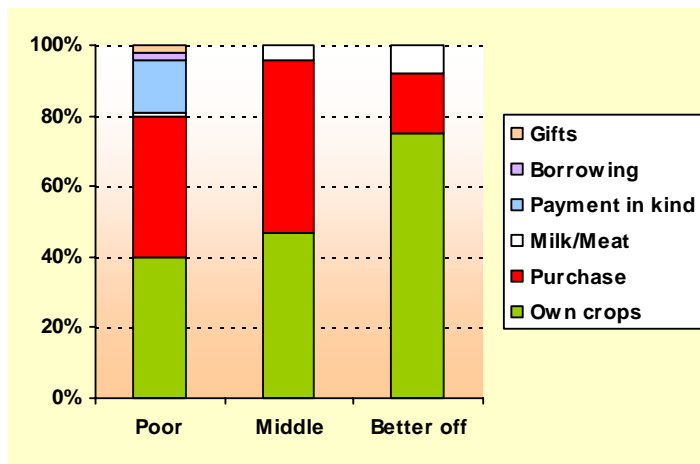


## Wealth Breakdown



In common with other cash-cropping zones, the poor form a minority here, in part because the economy overall is relatively wealthy, and in part because residence usually means having some stake in irrigated land, and for reasons of lack of capital and indebtedness a proportion of poorer people are finally pushed into mortgaging/selling their land. The better-off form a relatively large group by comparison with other zones; but within their group there is a small number of truly rich who dominate especially the trading side of onions and other commodities.

## Sources of Food

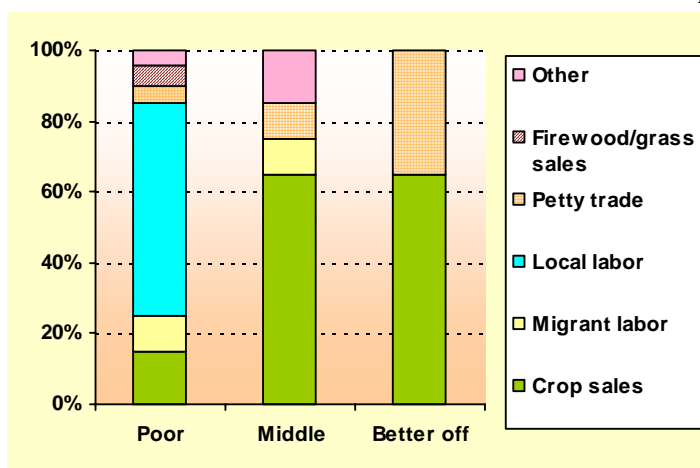


Favorable rainfall conditions mean that even the poor, with little land under cultivation, can survive for some five months on their own rainfed cereal crop. For the balance they depend on the market but also to a significant degree on direct earnings in kind. At the other end of the scale, better-off families engage in cereals cultivation to very varying degrees, their choice depending not so much on land availability as on a calculation of the opportunity cost of putting (mainly hired) labor into rainfed cereals and increasing their labor on their irrigated plots. A proportion of poor

households have a member engaged to look after the herds of the better-off, and these families get to drink milk from the contracted animals.

## Sources of Cash

The most remarkable element here is the divide between the poor, with few cash crops, and the rest with



cash crops as their major source of earnings. However, the poor do attempt to grow cash crops on very small plots, and for a few, success may get them out of the poverty trap and onto the ladder of cash profits. But for the majority it is a gamble which doesn't pay off, in that the costs are unsustainable, and they become inextricably debt-bound – and labor-bound to creditors as repayment (i.e. the cash shown from cash crops is not 'profit'). There are still relatively very few residents departing seasonally for migrant work – the zone is as substantial net-importer of labor.

## Hazards

### Chronic/frequent hazards:

- Decreasing soil fertility in irrigated areas due to over-intensive use; concomitant requirement for high investment in fertilizer;
- Poor rainfall distribution over the season, affecting rainfed crops more than irrigated crops;
- Crop pests;
- Shortage of pasture – competition with seasonally incoming herds

### Periodic hazards:

- Infestations of grasshoppers and flowering-stage insects;
- Drought;
- Rampant livestock disease resulting from grazing migration of troops of cattle to and from infected areas.

### **Response Strategies**

Acute food security problems are a rarity, even though there are better and worse years in terms of both irrigated and rainfed production. For the poor, a substantial loss of their cereal crop might face them with making up an extra three months of basic food for the family. One major recourse will be credit, often in kind, for which they are eventually likely to pay in labor (further reducing their capacity to work optimally on their own land). A second recourse will lie in casual work in the trade sector, since cash-crops, especially onions, require craftwork and labor for bags and ropes, stores and loading.

### **Indicators of Imminent Crisis**

- Unusual cash-crop damage due to pest infestation or, rarely, widespread drought
- Rainfall problems bringing very substantial and unusual failure of cereal crops
- Unusual numbers leaving the zone to seek migrant work



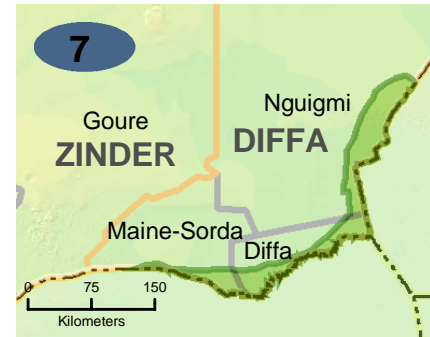
# Niger Livelihood Profiles

## Zone 7: Komadougou River and Lake Chad Cash Crop

### Main Conclusions and Implications

To date, the irrigated chili production which defines this zone has been a growing industry only temporarily affected by climatic or other hazards. The frequent hazard of irregular rains for staple crop production is offset by the less vulnerable cash-cropping sector (unlike the fully rainfed production systems). Cereals from their own rainfed cultivation give the poor somewhat less than 20% of the basic food they require in the year, but they have little margin in savings or livestock assets to dispense with this. If they repeatedly lose their cereal crop they must take on larger than usual credit in cash and kind. Over a run of two poor rainfall years (which will also to some extent affect the cash-crop production) poorer households might find themselves impoverished to the point even of going hungry in the short term and mortgaging/selling off their irrigable land in the longer term.

In the longer term too, an economy so greatly dependent on one agricultural product must give some cause for concern. The biggest threat is unlikely to be any acute diminution of demand for this 'red gold' on a wide internal and external market. Danger lies rather in the dependence on waters over which Nigeria has great control through her dam operations up-stream. Finally, Nature has ultimate control, and a severe drought sequence in Nigeria, more than local drought, could cripple the chili industry. In such an event, the highly capitalized better-off group would be in a position to look for other business; and the middle group would at least survive at the cost of selling up much of their relatively substantial livestock holdings. But the poor would be in a trap: without savings and assets, and with much diminished local employment, they would also face a disadvantage in the final option of work migration, since to date they have not much needed to use it and therefore to develop the contacts and experience upon which it depends.



### Zone Description

This zone is part of the eastern basin of Nigeria, with the typically low rainfall of the north Sahelian environment. The distinguishing characteristic of this zone is the production of chilies as a cash-crop using the Komadougou River for flood-retreat and irrigated gardening on narrow strips of land adjacent to the river banks, which together stretch for well over 100 kilometers. The zone also comprises moist environments

similarly used near the eastern shore of Lake Chad. Other cash-crops than chilies are also produced, including both vegetables and rice which is mainly cultivated by the flood-retreat system. But it is chilies which are the real wealth of this zone, finding a big market demand both within Niger and across the nearby frontier with Nigeria. One advantage of the crop is that it is mainly sold in sun-dried form and is thus more easily stored and transported than the fresh onions of the other zones, with fewer losses.

<b>Population (2001)</b>	<b>Total:</b>	<b>40,000-50,000</b>
By Department: (% of total)	Diffa	100%

As in the other southern cash-cropping areas of the country, virtually every household also produces rainfed staples – millet, sorghum, niebe beans – in this case on lands a little beyond the riverine strip. But although this zone is mainly located at only one-quarter of a degree of latitude north of those other zones, it is in a far drier rainfall regime, lying at the southern edge of the agro-pastoral and pastoral areas which hold the majority of the region's population. This means that rain-fed cultivation bears relatively high risks of failure

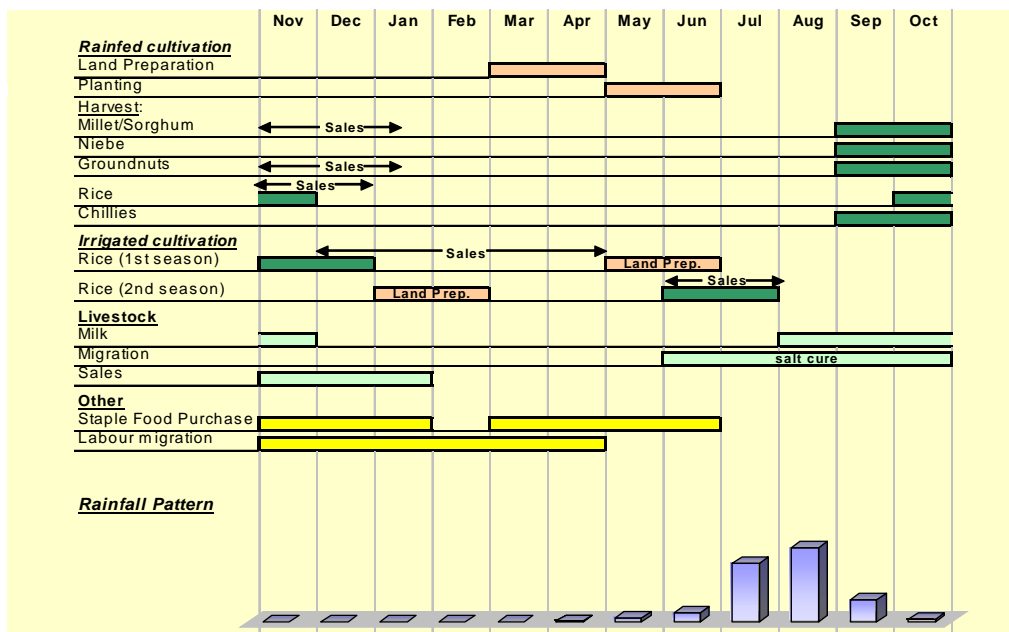
from one year to another. Nor is there any appreciable area beyond the river where the water table allows irrigation from wells. The wealth of the rest of the region lies mainly in livestock, and it is therefore not surprising that those in the riverine zone who acquire wealth through cash-crop production tend to invest heavily in livestock, particularly cattle, which are mainly kept at a distance by contracted Fulani herders.

Also as in other cash-cropping zones, the determining factor for wealth tends to be the capacity to finance profitable land-use: motorized water-pumps, fertilizers, pesticide, hired labor. Given the limited riverine land available (the middle majority cultivates three-quarters of a hectare or less of irrigated land), profit lies in intensive land use. With optimum cultivation conditions, chili fields will yield up to four harvests per year, although the quality and quantity reduces in the later harvests. On the other hand, market prices of chilies can triple between the moment of the first harvest and the moment much later in the year when chilies are scarcer on the national and cross-border market.

Poor households can only obtain the necessary inputs for their own, limited cash-crop production by earnings through laboring for others and/or through credit from wealthier people. If you borrow a team of oxen for one day's ploughing, you repay the owner with two days' labor on his land. A typical poorer household is virtually permanently in debt; a particular form of speculation is for the wealthiest households to buy millet cheaply on the market during the post-harvest period, store it, and then give it to poorer families later in the year as credit-in-kind (since their own rainfed millet cultivation rarely if ever suffices for a full year). The creditors are repaid in labor or with a share of the poor household's chili crop – a very favorable exchange of purchased millet for chilies. The pressure of financial debt as well as other essential expenses also pushes the poor to sell the rest of their produce early, before the increase in chili prices later in the year.

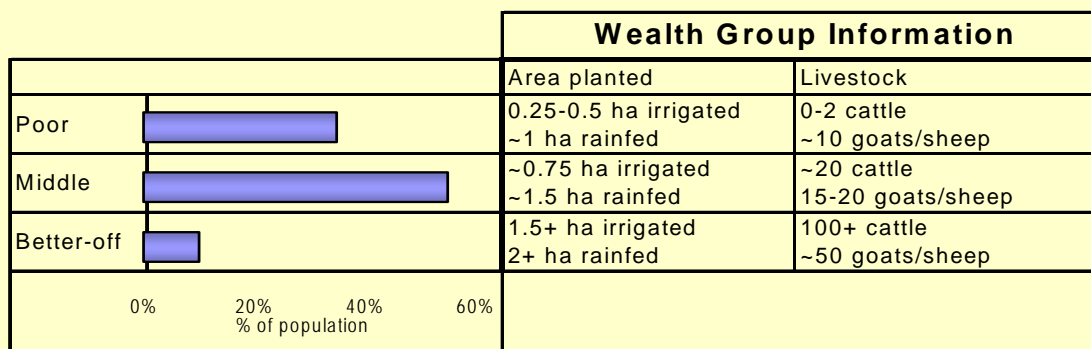
The demand for labor is high, especially at critical moments of harvest, and the zone attracts substantial numbers of seasonal workers from the adjacent agro-pastoral and pastoral zones areas. People from local poor and some middle households undertake seasonal work for better-off neighbors: the planting-out of seedlings and the harvests are the critical times, and women join the workforce especially for these activities.

### Seasonal Calendar



Note: For chilies only the main or ‘first’ harvest months are indicated. Depending on local circumstances and the capacity of a given farmer, up to three further harvests are possible, so that cultivation activity may cover nearly the entire year.

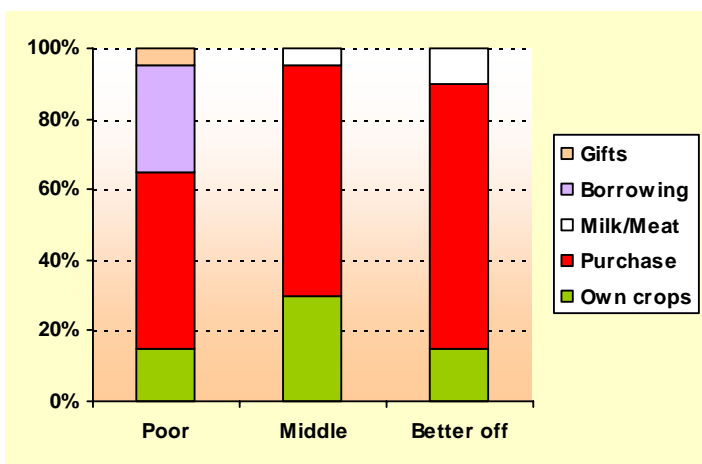
## Wealth Breakdown



An unusually large middle group is explained partly by the fact of a comparatively wealthy economy by Niger rural standards. Also, the population here is somewhat selective: it can be seen as a part of the wider rural population operating in this latitude – the part that has their hands on valuable riverine land. Insofar as influence rather than customary title plays a role, there will be some bias against poorer households; in addition, poor households may fall out of the system by mortgaging or selling irrigable land to pay overwhelming debts, and their plots will be purchased by better-off or middle families.

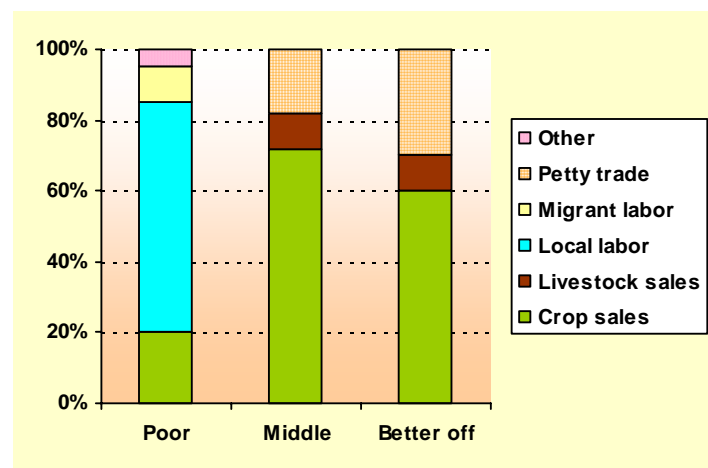
The comparatively high investment in cattle is due to comparatively high profits on chilies plus the system of contracting pastoralist herders to take stock to far grazing. Some better-off and middle households may diminish their livestock holdings in favor of investment in trade – and amongst the small, truly rich minority it is not unusual to see a car parked outside the compound.

## Sources of Food



No group depends heavily on their own cultivated millet, and all groups are essentially market purchasers of staple food. The poor also tend to be locked into a system of credit in kind – which accounts for a part of the cereals which the better-off harvest (they tend to eat rice). Rainfed cultivation is not only relatively risky in view of frequent rain failure, but represents a use of labor and inputs which must be set against potentially more profitable uses on irrigated land.

## Sources of Cash



The most striking element here is the very high dependence of poor people on local agricultural employment, and the relatively low element of migrant work. The intensive labor associated with chili gardening in particular, with as many as four harvests in the year, and the high value of the product, mean that there is a large demand for both male and female labor. In addition, this is a relatively remote area, and competition from incoming work-migrants is mainly from people from the sparsely-populated surrounding rainfed/agro-pastoral areas. The middle group depend very heavily on cash-crop sales, whilst the better-off capitalize business interests which bring in a roughly a quarter of their overall earnings.

## Hazards

### Chronic/frequent hazards:

- Fluctuation in the amount of water reaching the irrigable areas, due to the operation of dams further south in Nigeria
- Crop pests, especially aphids
- Irregular rains for rainfed millet and niebe

### Periodic hazards:

- Flooding of crops, due to dam operations in Nigeria
- Drought affecting the rainfed millet and niebe
- Cricket and grasshopper infestation of rainfed millet

## Response Strategies

The threat of drought on the rainfed staple crop production is generally offset by the less vulnerable cash-cropping sector (unlike the fully rainfed production systems elsewhere). Nevertheless, if the poor lose their cereal crop they must take on greater than usual credit in cash and kind.

Over a run of two unfavorable rainy seasons (which will also to some extent affect the cash-crop production) poorer households may find themselves impoverished to the point of going hungry in the short term, and even mortgaging/selling off their irrigable land in the longer term. However, this is not a frequent phenomenon, and the local economy is productive enough to offer sufficient employment to the poor in nearly all years to make migrant work a remarkably little-pursued option. But by the same token, the poor are also dissuaded from migration by their indebtedness to the better-off for food-loans. Repayment is made in labor since they cannot make it cash or kind.

## Indicators of Imminent Crisis

- Seasonal low levels of water in the river which acutely reduces moisture for garden crops – especially if affecting the first and biggest of the annual chili harvests;
- Flooding of the river to the extent of killing garden crops;
- Late starting and/or unusually irregular rains damaging the rainfed millet prospects;
- Unusually tenacious infestation of garden-crop pests
- Unusual numbers going away to seek migrant work (almost always in Nigeria)

# Niger Livelihood Profiles

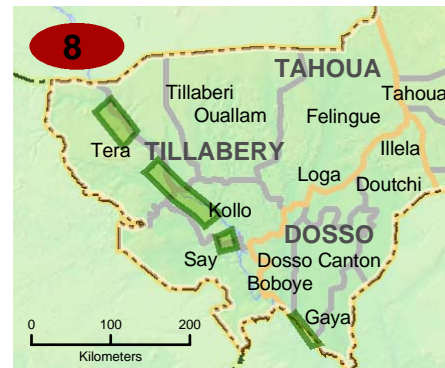
## Zone 8: Niger River Irrigated Rice

### Main Conclusions and Implications

As in other zones dominated by irrigated agriculture, hazards to crop production are fewer than in zones with only rainfed agriculture. Taken as a whole, the population is buffered by the fact that irrigation greatly diminishes the effect of local rain failure on the dominant cash crop, and by the geographical proximity of economic activity and therefore employment in both the Niamey area and in the well-favoured south-western rainfed crop-growing areas.

Nevertheless, rain failure, especially in the northern stretches of the zone, is a common hazard for the purely rainfed millet and sorghum, and also affects the rice to a limited extent. But there are other hazards for rice cultivation. The water level of the river depends substantially on the management of the dams in Mali, which in turn is influenced by drought upstream or by expansion of local offtake. Pest attacks are a chronic phenomenon, in particular caterpillars and birds. A more long-term matter is the growing salinity of the irrigated soils which has begun to reduce fertility to a worrying extent. This in turn has discouraged poorer and some middle households from staying in government-managed schemes: for here, the various stages of the cultivation cycle no less than the provision of water are very strictly controlled, so that a farmer cannot chose to invest his time partly on other activities. Given the growing cost of inputs too, opportunity cost considerations push some farmers out of the system.

This zone shows less evidence of acute risk of unusual hunger than is found within the rainfed agricultural zone which surrounds it, especially towards the north. The poor are often highly indebted, but this accentuates their poverty trap rather than producing acute shortages of food for the family. It appears that the most food insecure are poor households in the north of the zone who in years of failed rainfall may lose their own crop of millet representing up to 25% of their source of food, without necessarily being able to find the extra employment through which to purchase the extra food from the market. At the same time their handful of small livestock will not allow the selling-off of more than two or three animals in a year if they are to maintain any stock at all for the future.



### Zone Description

This zone is characterised by irrigated rice production on either side of the River Niger, in the far west of the country. It stretches from Ayorou in the north down to the south of Say, and thus through several surrounding ecological zones from northern Sahelian to southern savannah. But the population of this zone numbers less than one fifth of the rest of the population of the *Departments* through

Population (2001)	Total:	250,000-300,000
By Department:	Dosso	15%-25%
(% of total)	Tillabery	75%-85%

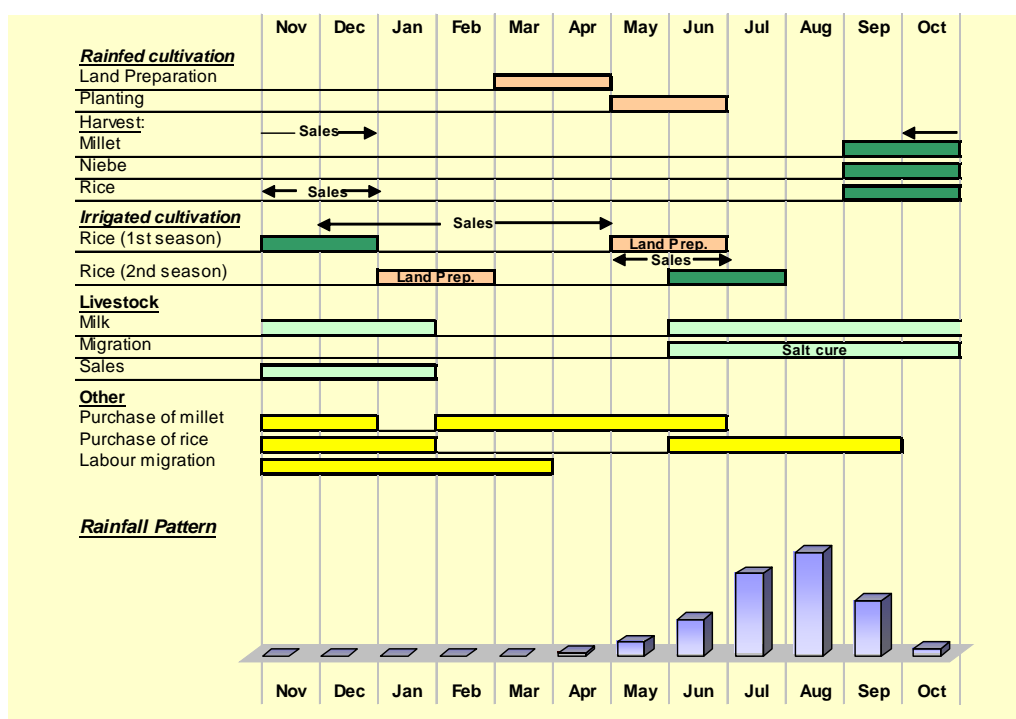
which the river passes. Part of the rice cultivation lies within government-managed irrigation schemes in which individual farmers have title to plots. The rest of the cultivation, whether irrigated, flood-retreat or 'floating' rice, is carried out off-scheme by households in villages alongside the river or in some instances on islands in the river.

Rice production is highly labor-intensive and requires not only strict water-management but substantial fertilization and pesticide application to obtain a crop justifying the work devoted by household members. The better-off, able to hire workers and supply optimal inputs, tend to make a substantial profit on the 1-2 irrigated hectares they cultivate. At the other end of the scale, a poor household will attempt to make a profit out of the 0.25 ha it can maintain with the required inputs: but on this area, the repayment of credit for the inputs, and perhaps of some loaned grain, will require the cash from six of the seven bags of paddy harvested in a satisfactory season. The income of the poor comes essentially from working for others, both locally and elsewhere through work migration.

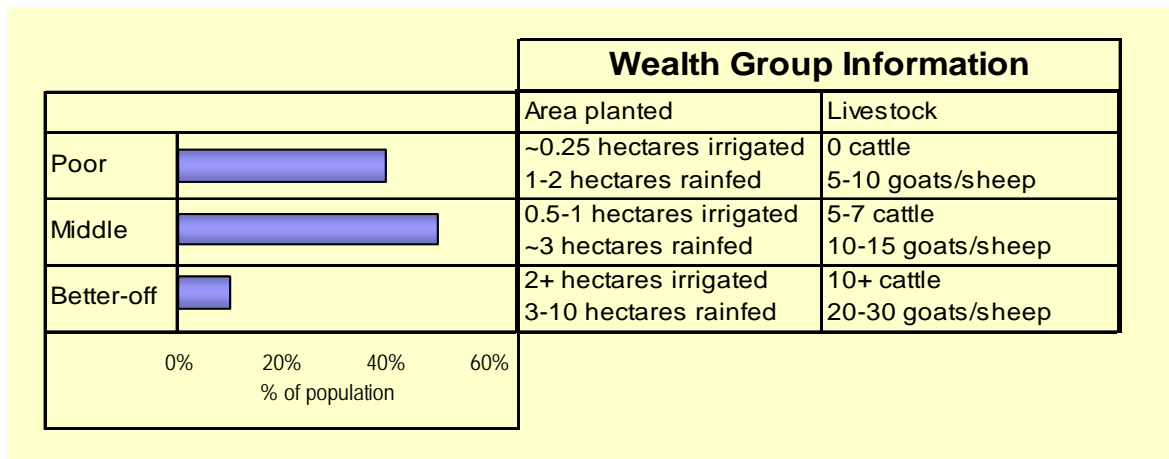
Except in unusual circumstances, rice is more expensive than the national staple millet and sorghum, and Niger's rice is generally of a higher quality than imported rice. It is therefore far more consumed in towns than amongst rural families. Rice growers may consume some of their rice produce at home, but most is sold – and in the case of poor households, normally virtually all. However, even for poor families rice consumption appears to be increasing. One reason is a taste for it developed during periods when other cereal prices are high due to shortage, so that rice is temporarily not so much of a luxury. Another reason is that women prefer it because it is easy to prepare: it does not require pounding, and it is relatively easy and fuel efficient to cook. The zone lies within the economic orbit of Niamey and not far from the frontiers with Mali and Burkina Faso, thus occupying a favourable position for marketing of rice. Indeed, much of the produce is bought up at village / collective level by traders supplying Niamey.

As in other cash-cropping zones of the country, beyond their irrigated plots most households, whatever their wealth status, also grow rainfed millet or sorghum (and intercropped niebe beans) for home consumption. There is a tendency to put more rainfed hectares under cultivation in the north than in the south; this undoubtedly reflects the need to sow more land in the drier north than in the south; but by the same token, the south is a crowded grain basket where rainfed land is at a higher premium. Only the better-off minority are able to grow enough to support them for the whole year – and they may invest in hired labor to grow substantial amounts for the market too.

### Seasonal Calendar



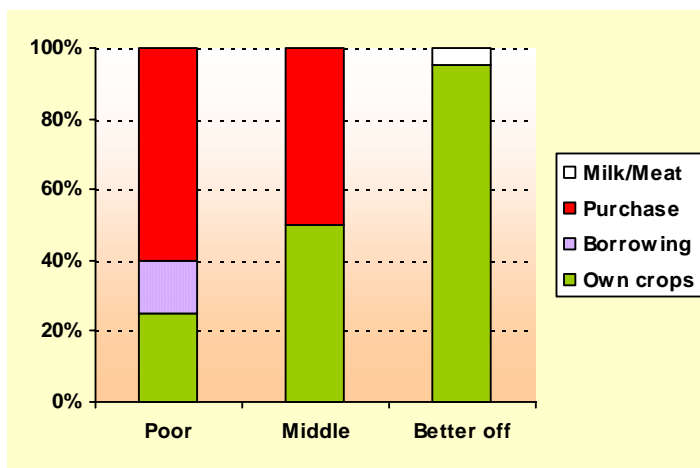
## Wealth Breakdown



The proportion of poor households to the rest is lower than in most other Livelihood Zones, and indicates economic limitations on who can operate in the irrigated cultivation economy. Although the poor provide a workforce for the better-off, the costs of producing rice on their own account tend to present a relatively high risk, given their slim or non-existent margin of capital assets or savings.

Livestock holdings, in particular cattle, are relatively modest even for the better-off, who tend rather to re-invest profits in cultivation or in trade boosted by proximity to Niamey.

## Sources of Food

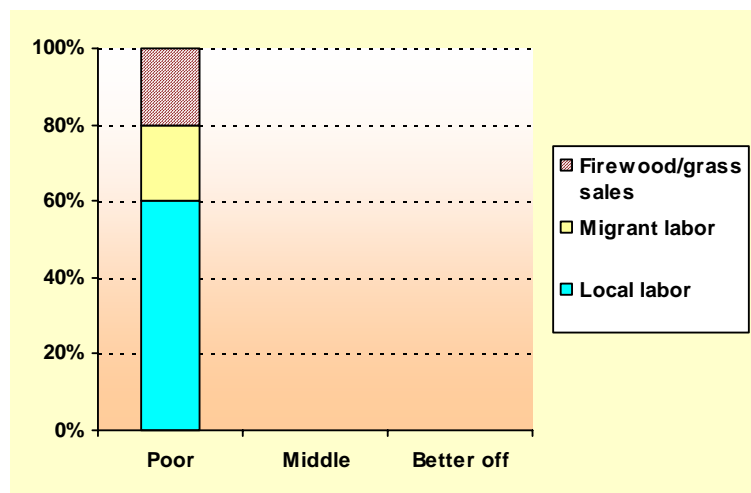


'Own crops' refers very largely to millet and sorghum for the poor and middle groups, since rice is a luxury for home consumption, given its price, and they sell virtually all they produce. The better-off, on the other hand, will consume a good deal of rice at home – whether their own or purchased (imported rice being usually cheaper). However, they are in principle fully self-sufficient in millet, sorghum and rice.



## Sources of Cash

Note: Data for middle and better off households was not collected for this zone



Poorer households essentially make their living working for others, mainly on local rice plots but also travelling elsewhere for seasonal work; they also cut and sell firewood and straw/grasses. In some localities mat-making from local reeds is an important extra cash-earner for women.

Middle households tend to gain the cash needed for purchasing the required staple grain from the sale of their rice and a few small livestock, and from petty trading activities. Better-off households sell both rice and

surplus coarse grains, but also invest in trading activities which may bring a fair proportion of cash income.<sup>8</sup>

## Hazards

### Chronic/frequent hazards:

- Fluctuating river levels from year to year, a diminishing trend in recent years due to dam operations up-river in Mali
- Increasing infertility and salinity of irrigated soils and a lack (because of increasing cost) of sufficient fertilizers
- Pest attacks on rice nurseries; grasshoppers and birds on planted-out rice.
- Hippopotamus destruction of rice: farmers cannot take effective measures because of animal protection law.
- Grasshopper and bird pests on rainfed crops
- Late/irregular rains, especially towards the north of the zone

### Periodic hazards:

- Drought affecting rice, but particularly rainfed crops

## Response Strategies

When production, irrigated or rainfed, fails, there are few recourses within the local economy for the poor, since they have few assets, including livestock, to liquidate. However, the zone is geographically near both the Niamey conurbation and the south-western grain baskets, and poor households will try to send more members early to find town or agricultural work outside the zone. Work migration across the national frontier to coastal countries is a further, expandable option, but requires funds for transport and initial upkeep, if not for a petty-trading stock. Therefore poorer people commonly work away from home within

<sup>8</sup> Income data for the middle and better-off groups in Zone 8 is unavailable.

Niger for some weeks to fund more distant migration.

### **Indicators of Imminent Crisis**

- Production problems early in the rice cycle –i.e. before planting out paddy
- Late or failed rains for rainfed crops, i.e. from June
- Particularly strong indicator: both rice and local rainfed cereals production encounter problems in the same season.
- Early rise in millet/sorghum prices, e.g. by November/December, possibly reflecting wider drought problems in the country
- Unusual/unseasonable depression in livestock prices especially towards the north