



Application of the Livelihood Zone Maps and Profiles for Food Security Analysis and Early Warning

Guidance for Famine Early Warning Systems
Network (FEWS NET) Representatives and Partners

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Introduction

Famine early warning involves the analysis and communication of hazard events, the effects of those events on different variables (economic, production, policy, etc.), and how those variables influence food security outcomes for specific populations. In essence, famine early warning is a form of disaster risk analysis.

Disaster risk is typically understood as a function of some hazard and the vulnerability of a population to that hazard (and likewise, their ability to cope). This relationship is expressed as follows: $RISK = f(\text{Hazard, Vulnerability/Coping Capacity})$. For the purposes of early warning, this equation is useful for organizing and linking the information required to provide decision makers with the answers they need to their food security questions. It helps analysts to identify multiple geographically-specific causes of potential food crises and to determine when these are likely to lead to particularly negative outcomes.

The Disaster Risk Reduction (DRR) framework, expressed in this way, is powerful because it helps us differentiate between cause and effect. 'Risk' is the effect or outcome we are measuring, specifically the 'risk of food insecurity'. There are two factors that cause this outcome: the external cause, which is the *hazard*; and the internal cause, which is a combination of people's *vulnerability* to that hazard, and their capacity to *cope* with it.

In food security analysis, a household may be 'vulnerable' to a particular hazard, but not necessarily at 'risk' of food insecurity. Why is this the case? First, a household's level of vulnerability to a particular hazard will vary depending on how the household meets its basic needs, which is related to its livelihood system – i.e., the assets or capitals (social, natural, physical, financial, productive, human) available to it. For instance, if a household meets these needs by relying primarily on crop production, then a staple price shock will not necessarily put this household at risk of food insecurity. A drought, on the other hand, may. Second, the magnitude of the hazard is important to consider, as there are variations within each year and from year to year. Third, even if a household is vulnerable to a hazard, it may still be able to effectively respond, or cope, by increasing reliance on livelihood strategies not affected by that hazard, or by drawing down on stocks or savings. So, the risk of food insecurity depends not only on the household's vulnerability to a hazard, but also the magnitude of that hazard and the coping capacity of households in the short- and medium-term.

FEWS NET's livelihoods analysis, which is based on the Household Economy Approach (HEA), is organized around these central concepts in the DRR framework. HEA provides a practical means for making the Disaster Risk Reduction (DRR) framework operational because it links each of the concepts to one another. The 'vulnerability' and 'coping' information is found in the livelihood baseline data sets (including assets, sources of food and income, expenditure patterns, and coping capacities), collected and organized by livelihood zone and quantified by wealth group. The 'hazard' information is derived from, for example, climate, production, policy and market-related information and analysis. In HEA, the 'risk assessment' – or outcome analysis – combines both sets of information in order to judge the likeliness of a severe gap in household food access.

$RISK = f(\text{Hazard, Vulnerability/Coping Capacity})$

HEA Livelihoods Framework

Brief overview of HEA and FEWS NET's Livelihood Zoning and Profiling

The Household Economy Approach is an analytical framework used to examine household operations – how households across the wealth spectrum, source food and income, their expenditure patterns, social relationships, and how they cope with hazards. The analytical process involves six steps, beginning with a general disaggregating or zoning of geographic areas according to similar livelihood patterns and access to markets. Step two involves classifying households into common wealth groups using local determinants and quantifying asset ownership. Once the wealth groups are determined, focus group interviews are conducted with each in step three. This involves triangulating food access, income and expenditures, allowing for ‘in-field’ analysis. Food access is calculated as a percentage of minimum energy requirements, taken as an average food energy intake of 2100 kcals per person per day. Annual household income is captured and balanced with expenditures.

Once the full story of household economies is understood, the next steps are to operationalize the data for early warning and food security purposes. The fourth step in HEA involves analyzing the initial impact of shocks on household livelihoods for different wealth groups in a livelihood zone. Next, an analysis of households coping capacity is incorporated into the problem (shock) equation. Once the problem or problems have been defined, and the ability of households to cope on their own has been analyzed, the final picture is projected. This last and crucial step in the analytical framework translates the shock into terms that allow decision makers to take appropriate action.

In 2000, FEWS NET adopted the HEA livelihoods analytic framework as a lens through which to view early warning information. Soon after, the project realized that it would not be able to bear the cost of completing national level HEA baselines in all FEWS NET countries, at least not immediately. In response, a three stage approach was developed with an aim to provide the minimum amount of livelihoods information in the immediate term while building the necessary foundation for future HEA baseline development. Stage one is development of the Livelihood Zone Map and stage two is development of the Livelihood Zone Profile.

Stage 1: Livelihood Zone Map – divides the country into homogenous zones within which people share broadly the same pattern of livelihood. It provides geographical orientation of livelihood systems and a sampling frame for future livelihood zone profiling and livelihood baseline development.

Stage 2: Livelihood Zone Profile – provides a snapshot of livelihood options (food and cash sources) of households in each zone, including a brief economic differentiation¹ between groups (wealth groups). Unlike HEA baselines, the Livelihood Zone Profiles do not offer quantified detail about household budgets (source of food, cash income, expenditures) nor the expandability of livelihood strategies/coping. Therefore, they cannot be used to determine the degree to which households are vulnerable to different stresses and thus do not provide the mechanism for identifying households at-risk of food and/or livelihood insecurity. Instead, the Livelihood Zone Profiles provide information on the relative importance of different sources of food and income by wealth group. This information provides a basis to begin understanding vulnerability to particular events – i.e., which stresses will impact which populations and how (but not how much). This allows us to identify where potential risk of food insecurity exists and further investigation is required.

¹ The economic differentiation in a Livelihood Zone Profile is based on local determinants of wealth. It is not predetermined by some external standard, such as living on \$1/day.

Stage 3: HEA livelihood baseline – provides a detailed, quantified breakdown of household livelihood options (food, cash and expenditure patterns) and coping capacity/expandability for different wealth groups in the livelihood zone, highlighting market linkages, and constraints and opportunities for economic growth.

This guidance document focuses on the content and application of information gathered during the first two stages, livelihood zoning and livelihood zone profiling. For more information on HEA livelihood baselines, please see “The Practitioner’s Guide to HEA”, which can be downloaded from the FEG website at www.feg-consulting.com.

What is a Livelihood Zone Map and why is it important?

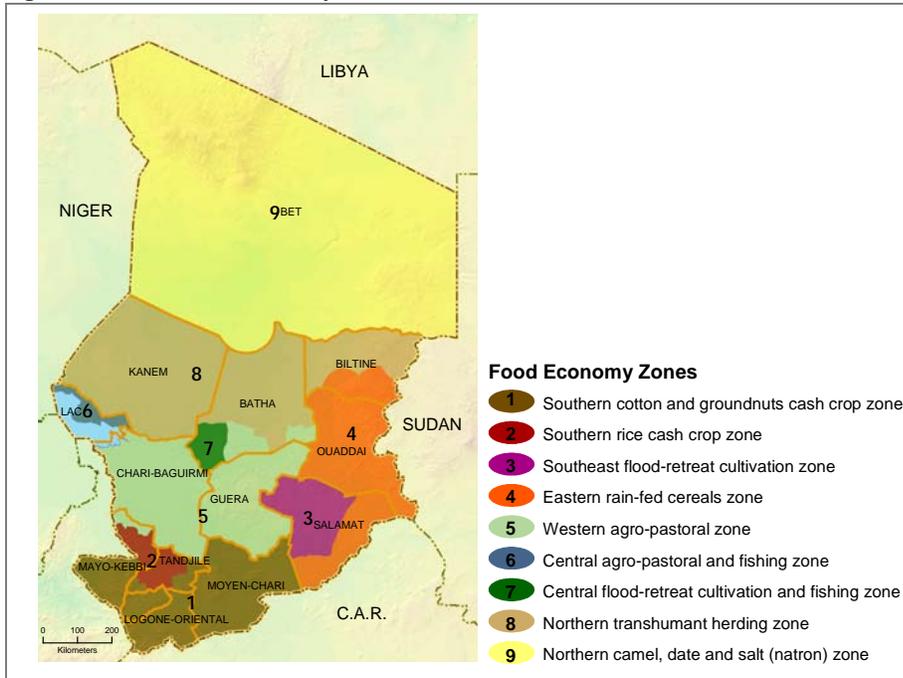
Livelihood patterns clearly vary from one geographic area to another, which is why the preparation of a **Livelihood Zone Map** is a logical first step for livelihoods-based analysis. Local factors such as climate, soil, water availability, infrastructure, social networks, access to markets, etc. all influence livelihood patterns. For example, people living in a fertile highland area have very different livelihood options from those living in a semi-arid lowland area. Because these options determine who may be vulnerable to different hazards, it’s critical to group like with like in order to conduct meaningful food security analyses.

Agro-ecology is one aspect of geography which determines patterns of livelihoods. Another factor is market access. Market access affects the ability of people to sell what they produce (crops or livestock or other items) and the price they obtain for these goods. Since livelihood patterns depend so much on geography, it makes sense to divide a country or a region into a number of **livelihood zones**. These can be defined 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 income earning opportunities and patterns of trade/exchange). A Livelihood Zone Map, based on information gathered from Chad, is presented in figure 1. In this example, there are two agro-pastoral livelihood zones in Chad; however, one is situated on a lake that provides additional food and income from fishing.

A livelihood zone is an area within which people share broadly the same pattern of livelihood, including options for obtaining food and income and market opportunities. A livelihood zoning is essential for the following reasons:

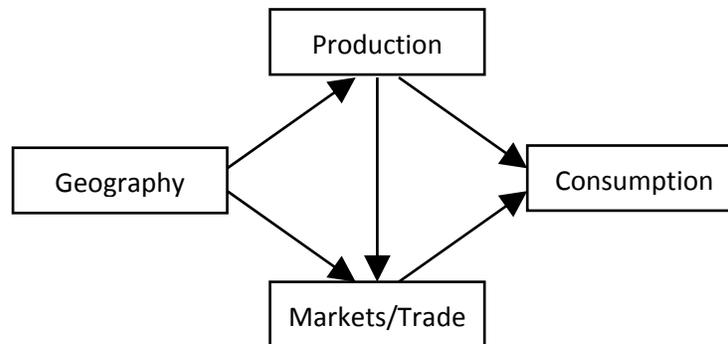
- 1. It provides geographic orientation of livelihood systems to inform food security analysis and assistance targeting*
- 2. It provides the basis for identifying geographically relevant food security monitoring indicators*
- 3. It provides a sampling frame for on-the-ground assessments and assistance targeting*

Figure 1: Livelihood Zone Map of Chad



Livelihood zoning involves more than just the drawing of maps, however. A Livelihood Zone Map is of little use unless it is accompanied by a basic description of the patterns of livelihood in each zone, and ideally by an analysis of the underlying reasons for differences between zones. This means assessing in some detail the production and trade/exchange options in each of the zones, and the influence that the underlying geography has on each of these. We can think of these three factors as linked to consumption as follows:

Figure 2: Livelihoods Zone ‘Diamond’



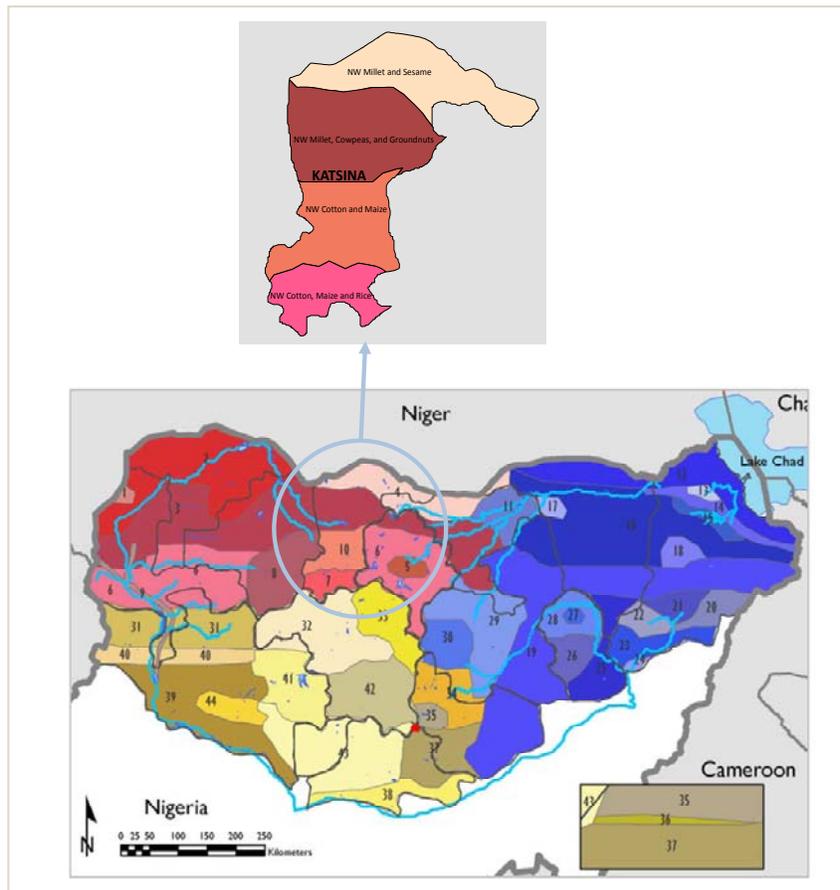
Geography affects both the options for production (climate, soil, topography, etc.) and for marketing/trade (roads, proximity to urban centers, etc.), which, in turn, affect consumption by the household. Household production (of food and other items) may either be directly consumed or may be traded/exchanged for other items in the market.

Administrative divisions such as districts, while important for political and governance purposes, are not as useful for food security analysis. Homogenous ecological and economic zones often cross political boundaries. At the same time, within a single administrative unit in, say, a mountainous area, there may

well be two or more different ecologies at different altitudes. Similarly a single district may stretch from agro-pastoral to agricultural areas, with two different economies. In the case of nomadic populations, the livelihood zone may actually be a group of people contrasted with another group in the same general ecology.

Because resource allocation and service provision decisions are made on the basis of administrative zones, not homogenous livelihood zones, the administrative map is always superimposed on the Livelihood Zone Map, as in the map of northern Nigeria in Figure 3. It is then possible to ‘cut’ the administrative unit from the Livelihood Zone Map. Below, Katsina Local Government Area (LGA) in northern Nigeria is shown independently, with its four livelihood zones identified.

Figure 3: Katsina LPA, Nigeria with 4 livelihood zones



Application of Livelihood Zone Maps for food security analysis

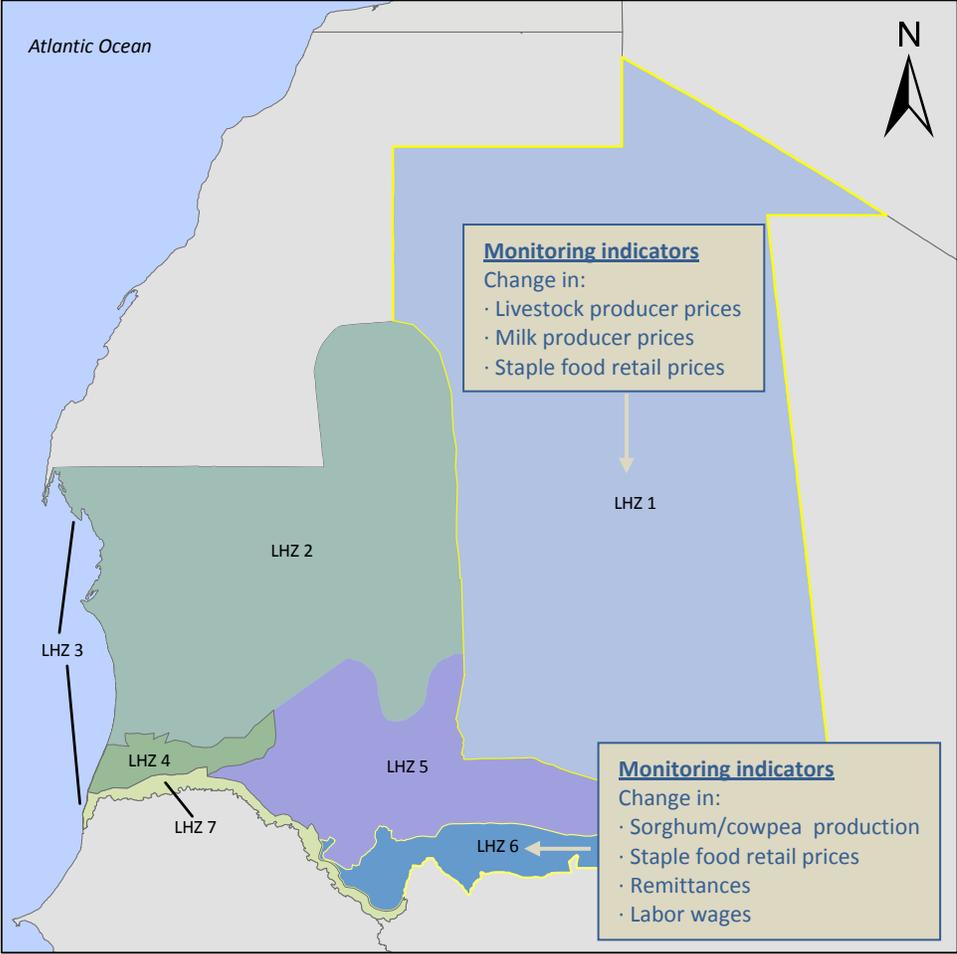
The main function of a Livelihood Zone Map is to provide geographic disaggregation for food security monitoring, analysis and decision support.

Monitoring

For early warning purposes, the Livelihood Zone Map is a first step to identify relevant monitoring indicators. The Livelihood Zone Map tells us what is produced in each zone, which hazards the zone is

prone to, how food and income is accessed and which markets populations depend on (both inside and outside the zone). This tells us which production-related and hazard-related indicators to monitor as well as which producer and retail prices are relevant to livelihood and food security in the zone. For example, if the cash crops in a livelihood zone are carrots and maize, the producer prices of carrots and maize are much more significant to monitor than say, sorghum. Likewise, if the majority of the population depends on livestock sales for most of their cash, livestock producer prices are important to monitor. Figure 4, below, identifies monitoring indicators based on their relevance for populations in specific areas, using the livelihood zone descriptions for Mauritania.

Figure 4: Monitoring indicators identified for two livelihood zones in Mauritania



The next section on “Livelihood Profiling” takes this a step further by looking at how disaggregated wealth group information is used to identify the most important and relevant monitoring indicators for those households within a livelihood zone that are at greatest risk of livelihood and food insecurity.

Analysis

Livelihood Zone Maps provide essential geographic orientation for food security and early warning analysis. When a shock occurs or is forecast to occur, the Livelihood Zone Map tells us whether or not that shock is likely to have a direct or indirect impact on populations in particular livelihood zones.

For example, let's say there is a shock that negatively affects cotton production across two livelihood zones, *Zone A* and *Zone B*, that are primarily dependent on cotton sales for income. At the same time, laborers from *Livelihood Zone C*, where only grains and beans are grown in small quantities, depend on the income they earn through seasonal migration to *Zones A* and *B*, during the cotton harvest. Clearly, the livelihood and food security of certain people in *Zones A* and *B* may be compromised as a direct result of the shock. The production and producer prices for cotton should be monitored over the next few months to track the situation. Likewise, the livelihood and food security of migratory laborers from *Zone C* may also be threatened by a shock to cotton production. If possible, the demand for and wages paid to laborers should also be monitored to better understand the livelihood and food security impacts on laborers in *Livelihood Zone C*.

The Livelihood Zone Map can also be used as a sample frame for food and livelihood security assessments. This includes additional livelihood profiling or baseline work, rapid needs assessments, nutrition surveys, market assessments, etc. The map provides an initial understanding of livelihood systems in each area of the country as a starting point for further investigation or verification of food security outcomes.

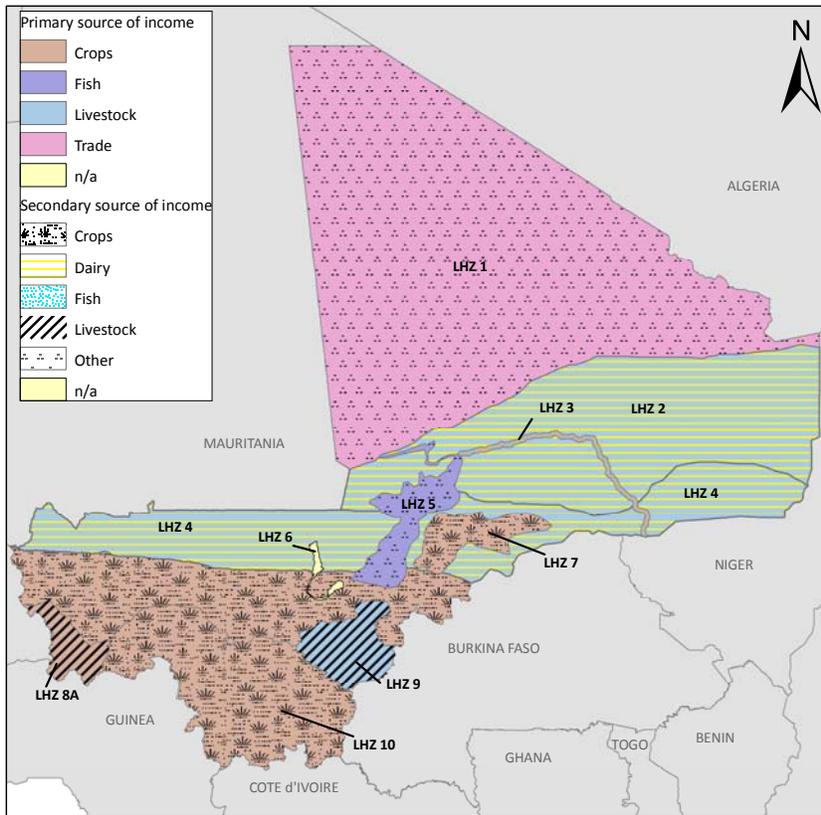
Decision Support

In the same way that Livelihood Zone Maps provide orientation for conducting analysis, they also orient decision makers and others by making it possible to clearly indicate where food insecurity is likely to occur and why. In food security and early warning reporting, Livelihood Zone Maps should be used to geographically disaggregate potential food security outcomes. They should be used to more accurately state where a food security situation is likely to deteriorate (or improve) and the factors driving the situation in that area. For example, livestock/cereal terms of trade may be declining in pastoral livelihood zones, where livestock sales are the most important source of income and cereal purchases the most important source of food. In another livelihood zone, a key market for the sale of cash crops may be located in a neighboring district (or livelihood zone) that has become inaccessible due to conflict or infrastructure damage, resulting in significant income loss and purchasing power.

Reports can be explicitly organized by livelihood zone, but they do not need to be. When reports are organized by livelihood zone, the Livelihood Zone Map should be included for reference. When reports are organized by some other unit, such as districts or provinces, the Livelihood Zone Map should still be used in the analysis to better understand and communicate the impacts of shocks, including variations in different parts of those districts or provinces. In this case, it may still be useful to include the Livelihood Zone Map (either the full country or part of the country, depending on the number of livelihood zones) to orient the reader.

Livelihood Zone Maps can also be overlaid with other map layers, such as market flow maps, WRSI, water systems/aquifer maps, hazard maps, assessment results, outlook maps, etc., to help analyze and illustrate multiple factors associated with a food security situation. For example, during scenario analysis, an overlay of the FEWS NET production and market flow maps with the Livelihood Zone Map illustrates the movement of goods between zones and helps analysts project how market-related shocks/stresses and responses may or may not evolve in a particular livelihood zone. Various elements of the livelihood zone descriptions, such as the main sources of food or income by zone, can also be mapped to provide additional information and context for food security briefings and reports. In the figure 5, the Livelihood Zone Map and zone descriptions for Mali were used to map the first and second most important income source by livelihood zone. This is useful for spatially referencing and identifying important income-related food security indicators.

Figure 5: Map of Mali showing primary and secondary sources of income by livelihood zone



What is a Livelihood Zone Profile and why is it important?

The Livelihood Zone Profiles are a “light” product of the Household Economy Approach (HEA). 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. They provide a rapid introduction to livelihoods in the country; they do not offer localized detail.

Because the Livelihood Zone Profiles do not offer *quantified* detail about household budgets and expandability/coping (i.e., *actual* amount of income earned, expenditures, etc.), they do not provide the mechanism for calculating food deficits and thus identifying who is at-risk of food and/or livelihood insecurity (as can be done with true HEA). However, by providing *qualitative* information on the *relative* importance of different sources of food and income, the Livelihood Zone Profiles offer a means for understanding which stresses will impact which populations and how (though not how much); thereby identifying where potential risk exists and further investigation is required. If we think of this in the context of the disaster risk reduction framework, where $RISK = f(H, V/C)$, the Livelihood Zone Profiles provide a qualitative description of the nature of vulnerability (V) to specific hazards (H) and the coping (C) mechanisms typically employed.

The Livelihood Zone Profiles also provide an important context on which to develop seasonally specific monitoring systems and identify trends in monitoring information.

A Livelihood Zone Profile (LZP) describes the major characteristics of each zone, including a brief differentiation of the food security status of different wealth groups. The LZP also provides some information on hazards, how they impact the zone and the capacity of different types of households (HHs from different wealth groups) to withstand them. The following describes the different elements of a Livelihood Zone Profile and its uses for early warning monitoring and analysis.

A. Livelihood Zone Map: a necessary first step preceding livelihood zone profiling. For more information, see the section on livelihood zoning, beginning on page 12.

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

C. Zone description: offers a general description of local livelihood patterns (crop production, livestock rearing, off-farm income generation etc.). They provide information for identifying monitoring indicators by zone and a basic livelihood context for interpreting monitoring information.

D. Markets: contains basic information on the marketing of local production, labor markets and on any importation of staple food into the zone. It provides information that is useful in developing monitoring systems.

E. Seasonal Calendar: visually presents the timing of important key activities during the year, allowing correlations to be made. This is useful in a variety of ways, for example to judge the likely impact of a hazard according to its timing during the year; to assess whether a particular activity is being undertaken at the normal time in the current year; to help interpret trends in and analyze monitoring information; and to develop seasonally appropriate interventions.

F. Wealth breakdown: describes the main wealth groups (for example, 'poor', 'middle' and 'better-off'), explaining the differences between these groups and how this affects potential access to food and cash income². Just as the same external shock will have a different effect on two separate food economy zones, it will also have a varied impact on households in different wealth groups. Thus even within one livelihood zone, analysts must make distinctions about the ways in which households live.

Households with different levels of assets tend to do different things to get food. In an agricultural zone, for example, different people will own different amounts of land, and may obtain different yields, often because they can afford improved seeds, fertilizer, pesticides and herbicides, while others cannot. Poor households with little land may work for richer households to get money to buy food; rich households may use profits from agriculture as capital to engage in trade. In the event of a crisis, poor and rich households will be affected differently and therefore warrant separate examination. The elucidation of differences between households and the links between households is central to building up appropriate 'vulnerability' information.

² 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.

G. Sources of Food and Sources of Cash: examines patterns of food and cash income at each level of wealth, relating these to the characteristics of each group. The information in this section identifies which sources are most important to which wealth group, and therefore which groups will be impacted by which shocks. For example, a household that depends on purchase to meet a large percentage of food needs will be impacted by a rise in staple food prices (all else remaining equal), particularly during their peak buying period. The information helps identify which indicators should be monitored in different livelihood zones and for which wealth groups.

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

I. Response Strategies: describes the various strategies available to different types of households in the zone, together with a judgment of the likely effectiveness of these. This information helps us analyze whether or not households may be able to withstand a particular shock, though it does not tell us absolutely whether these coping strategies will be enough to avoid food insecurity. Response strategies are also something to look for during the course of a season, as evidence of these may signal that a crisis is occurring.

J. Indicators of Crisis: provides information on the key crisis indicators and their likely timing by zone, based upon an understanding of local livelihoods and local patterns of response to food shortage. Early warning involves identifying and interpreting key events that indicate that a severe food shortage or famine may be developing.

Application of Livelihood Zone Profiles for food security analysis

As outlined above, livelihood Zone Maps and Profiles provide important information for early warning. The following explains how different elements of a Livelihood Zone Profile can be combined to inform monitoring, analysis, decision support and needs assessments.

Monitoring

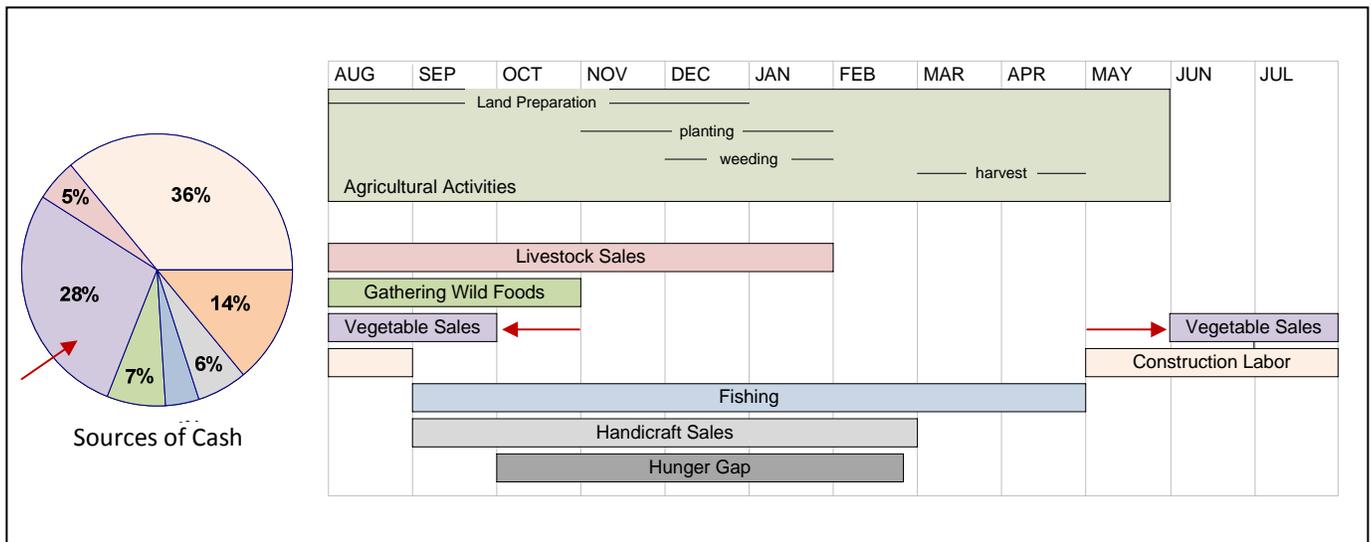
When developing a monitoring plan, it is important to consider which variables³ are most important to populations of concern and when. The Livelihood Zone Map provides a first step by identifying what is produced in each livelihood zone, what hazards the zone is prone to, the main sources of food and income and which markets populations in the zone depend on (both inside and outside the zone). The Livelihoods Profiles, then, provide information to identify the most important and relevant monitoring indicators for those households within a livelihood zone that are at greatest risk of livelihood and food insecurity (i.e., disaggregated by wealth group).

The seasonal calendar and sources of food and sources of income graphs in the Livelihood Profiles provide information to identify critical indicators by wealth group. In the following example from Zimbabwe, poor households earn 28% of their income from the sale of vegetables between June and October. The producer price for vegetables is therefore important to monitor in this livelihood zone.

³ 'Variable' here is defined as the feature (such as labor or crop production) of a category (such as sources of food and income) that may or will vary depending on the conditions (e.g., normal conditions (or reference year conditions), current conditions, projected conditions, etc.).

Should the price of vegetables fall while other costs remain constant, households will face cash flow problems that could ultimately affect their ability to purchase food and other basic necessities.

Figure 6: Seasonal calendar and sources of cash for poor households in Zimbabwe livelihood zone #20



In the following example from Niger, figure 7, the seasonal calendar from one livelihood zone is looked at alongside the sources of food and income to create a seasonal monitoring calendar that indicates which variables are important to which wealth groups in that zone. This serves as a useful and quick reference when developing a monitoring strategy.

Figure 7: Seasonal monitoring calendar for Niger LHZ #3, with important variables by wealth group identified

		Livelihood Zone 3: Pastoral											
Key Variable	Wealth Group	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
Purchased food	All	↑↑↑↑↑ purchases					Retail Prices					↑ purchases	
							Hunger season					Millet from S.LHZ	
Milk & meat	All	Quantity										Quantity	
		Producer Prices										Producer Prices	
Livestock sales	All						Producer Prices					↑↑↑ sales	↑ sales
Contract herding	p	Availability											
		Compensation											
Labor	p	Terms of trade & wages (local)										Local	
		peak										Terms of trade & wages (migrant labor)	peak
Livestock migration	All						Around homestead					Distant pastures	
		Return											
Water & pastures	All	quality and availability											
Livestock disease	All	Increased instances											

* "All" stands for all wealth groups; "p" stands for poor wealth groups

Analysis

The Livelihood Zone Profiles contain important information for food security analysis. The livelihoods information helps technicians to better understand food security impacts and the types of assistance that should be considered. Looked at together, the different elements of the Livelihood Zone Profile – wealth breakdown, seasonal calendars, sources of food and income, hazard and response information – help answer the questions, “who is likely to be affected by a hazard event, how and when.” See example in text box 1.

Whether analyzing the impact of hazard events on current food security conditions or developing scenarios that project future livelihood conditions for monitoring, contingency and response planning, the Livelihood Zone Profiles provide the necessary information to help translate shocks (economic, production, availability and otherwise) into food security outcomes for households.

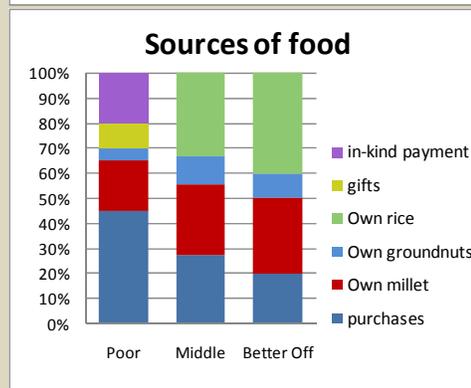
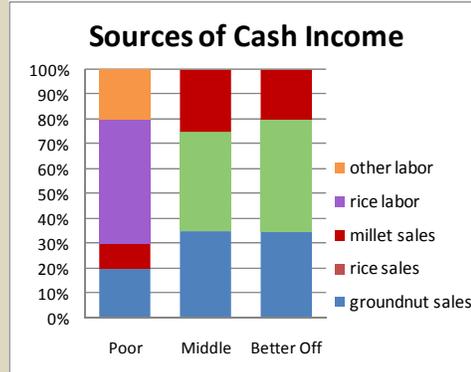
Text box 1: Fictitious case study demonstrating uses of Livelihood Profile information for food security analysis

Country: Mauzimala

Situation: A recent government policy aimed at improving national production has diverted water upriver to commercial farms in January, resulting in loss of irrigation in the zone.

Key Variable	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
Millet & sorghum											Harvest	
Groundnuts											Harvest	
Irrigated Rice				weeding			Harvest					
Labor				migrant labor influx							Local labor	

By looking at the seasonal calendar, we can see that this is going to cause a serious problem for rice production in the zone. Irrigated rice provides a significant source of income for all wealth groups. Middle and better-off households earn 20 – 25% of their income from the sale of this crop and 30 – 45% of their food comes from their rice crop. They are going to feel the impact of this loss starting in May. Even more worrying is the impact this will have on poor households who do not have access to irrigation for rice production, but depend on labor in neighboring rice fields for 50% of their income. This is quite serious, as 45% of their food comes from purchases. Another 20% comes from in-kind payment for labor. They are going to feel the effects of rice losses as early as February. At the same time, migrant laborers from districts to the south, who also depend on labor opportunities during the rice weeding and harvesting periods, will also be impacted.



Decision Support

Just as the Livelihood Zone Profiles provide important information to analyze food security conditions, they also provide a means to more clearly communicate the drivers of food insecurity and their impacts to decision makers and others. Livelihood Profiles contain information that provides context for understanding ongoing and emerging food security conditions and answers important food security questions. Decision support occurs through various mediums, including regular reporting products, briefings, and more informal communications. In all cases, the Livelihood Profiles can be used to more accurately state where a food security situation is likely to deteriorate (or improve), who is likely to be affected, the factors underlying household vulnerability to an event and the likely food security outcomes for different wealth groups.

A. Reporting

When writing reports, it is important to keep in mind that the livelihoods framework is designed as a lens through which to view more clearly early warning and other food security information. The ultimate question in famine early warning is, “Who will be affected, where, why, how, when and to what degree?” In order to answer this question, one must have an understanding of the livelihood system affected by an event, and hence, the relative vulnerability of the population to that event.

Food security reports, aimed at decision makers, should provide the information necessary for them to begin answering the following (not exhaustive) list of questions?

- What should be monitored over the next few months and what requires immediate attention?
- What next steps should be taken and when?
- What are the underlying factors that determine vulnerability to the event?
- Who is at possible risk of food insecurity? (What are the characteristics of the population in need and where do they live?)
- Where, how and when should assistance be targeted?
- What plausible events could change the nature of future conditions and how?

The Livelihood Zone Maps and Profiles offer a

Text box 2: Example of what to do when writing reports

WHAT TO DO: *A recent rise in food prices across the country is having a minimal impact on household food security in the northern pastoral livelihood zones. This is because all wealth groups in these areas rely on livestock and milk sales in neighboring Catri City and Kigad Country for the majority of their income, and livestock production and prices have kept up with the rise in cereal prices due to high demand and favorable rains over the last 6 months. In the southern maize and cotton producing livelihood zones, however, a 50% drop in cotton production due to disease, combined with high cereal prices, will result in extreme food insecurity for poor households, beginning in June. These households depend on labor from the cotton harvest, between June and August, for the majority of their income and are dependent on market purchases for more than half of their food needs. The number of labor days available to these households will be halved. Cotton producers in the middle wealth groups are moderately food insecure. Higher prices are expected for the cotton that is produced, helping to ease the impact of crop losses, but even greater food price increases will force these households to rely on excess sales of ruminants to fill income gaps.*

WHAT NOT TO DO: *High food prices across the country have resulted in extreme food insecurity for poor households. Conditions are expected to get worse in areas that produce cotton, where production has fallen by 50%.*

means to provide informed and disaggregated analysis of the impact of events on households, information that is key to answering the questions above. They allow you to disaggregate geographically and by population group; determine the underlying factors associated with vulnerability to an event; describe typical coping options available to a population; and describe how households will be impacted over time, including how livelihood factors will change as the season progresses and which months are most critical to households at risk. The following should be addressed in food security reporting:

- **Geographic disaggregation** - What areas/livelihood zones are affected? What are the key characteristics of these zones in terms of food, income, and market access?

It is not necessary to list all characteristics, but rather to pull out the key characteristics that help frame the specific food security issue(s) you are discussing. There are many different elements at play in a livelihood system; however, certain elements may be more or less significant in the context of a specific hazard event. For example, a zone whose systems of livelihood are primarily dependent on cash crops and agricultural labor will be affected differently by a hazard event than a zone whose systems of livelihood are primarily dependent on livestock or some off-farm industry (e.g., tourism).

- **Population disaggregation** – Which wealth groups will be impacted? How will households from different wealth groups be impacted?

This should be reported on in key areas. Questions to think about might include:

- How do different wealth groups access food and income (e.g., are some groups more dependent on crop sales while others are more dependent on labor? This will affect how and to what degree different households are impacted by a particular hazard event or shock)?
 - How will access to income, as well as prices, affect purchasing power of different groups? What significance does purchasing power have to household food security (e.g., are market purchases a significant source of food for specific wealth groups or are they able to meet most of their food needs through other sources)?
 - Do different wealth groups access markets differently (e.g., do poor households sell at the farm gate soon after harvest while better-off households sell in larger markets later in the season)?
 - What is the relationship between different wealth groups (e.g., Are there important economic relationships such employer/employee? Do they share labor or assets? Do they support each other through gifts or other means)?
- **Seasonality** - When will food/cash income-generating activities take place? Answering this is important both for understanding when different groups will be impacted and how long they will be affected by a shock. It is also important for identifying what indicators should be monitored, when, why, and for how long. For example, if a poor household depends on their own crops for food for two months of the year, but depends on labor for the following three months, it may be equally or more important to monitor labor supply and demand as well as wages.

See text box 3 for an example of the importance of seasonality in Chad.

- **Linkages between zones** - How do events in one zone affect other zones? Populations that do not necessarily live in an affected zone may, nonetheless, be impacted by a shock in that zone if they rely on it for labor (hiring or selling), grazing land, markets, etc.

- **Household response/coping strategies** - How will households respond to the situation themselves? Will their own coping strategies be enough to keep them from experiencing food deficits? If yes, will their livelihoods be seriously compromised? If so, why? Can they survive through non-harmful coping strategies or must they resort to distress coping strategies?

As noted earlier, Livelihood Zone Maps should be included in reports when referring to livelihood zones. If this is not possible, because of the size or detail contained in the map, then clearly refer to the geographic area(s) and characteristic(s) of these zones as part of your analysis. If reports are organized by administrative or other unit, Livelihood Zone Profiles should still be used to inform and disaggregate the analysis, including differences that exist between different parts of an administrative unit.

In addition to Livelihood Zone Maps, livelihood products developed from the zones and profiles, such as the livelihood attribute maps described below, can be added to reports and presentations to provide additional context, orientation and answers to specific questions.

B. Mapping

One way to provide context for decision support is to map the livelihoods information contained in the Zone Maps and Profiles – for example, to geo-reference where a crisis is likely to have the most significant effect. The following examples pose possible decision maker questions and provide livelihood maps to help answer those questions.

Question #1: Where in Haiti will households be most affected by a sudden rise in staple food prices or inadequate availability of staple foods on the market?

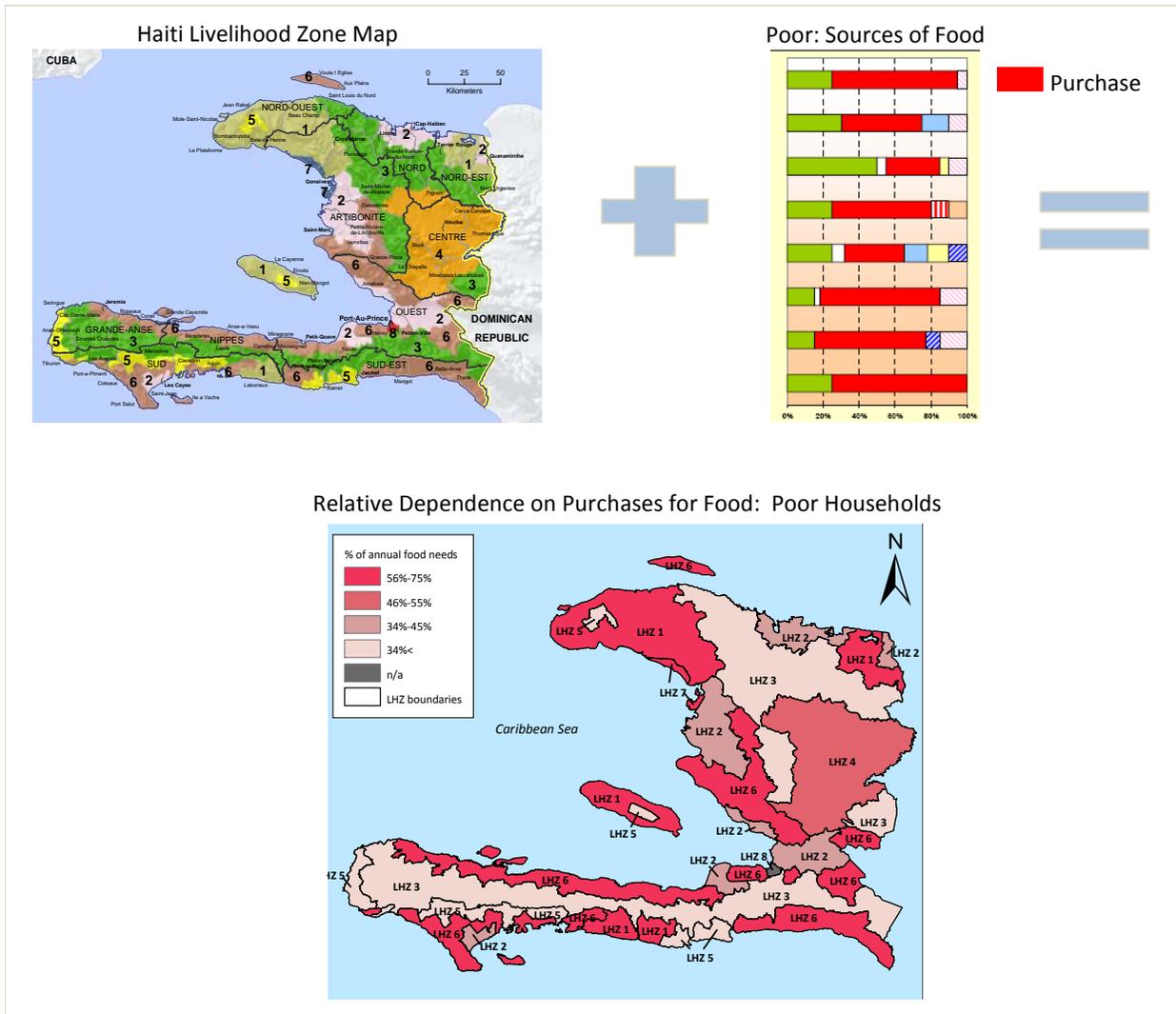
Map #1: The following map combines the Haiti Livelihood Zone Map with information on sources of food from the Livelihood Zone Profiles to geographically reference household dependence on purchases to meet total food needs. Households in the darkest red areas will be most affected by increases in staple food prices (assuming an unequalled rise in income).

Text box 3: Importance of seasonality, example from Chad

Livelihood systems are often influenced by seasonality and it is essential to understand seasonal variations for food security analysis. The following example for Chad, illustrates the importance of understanding seasonality of labor patterns:

In Chad, the transhumant populations of Kanem and West Batha prefectures are some of the most vulnerable to shocks affecting food security. Before 2003, the Government of Chad and US Embassy frequently declared disasters in these areas, as a result of perceived food shortages or deficits. After the Livelihood Zone Profiles were developed between 2003 and 2004, the seasonal calendars revealed that a significant number of households were migrating to N'Djamena for labor opportunities to earn additional cash during specific times of the year. Labor migration was shown to play a significant role in filling food gaps and avoiding food insecurity.

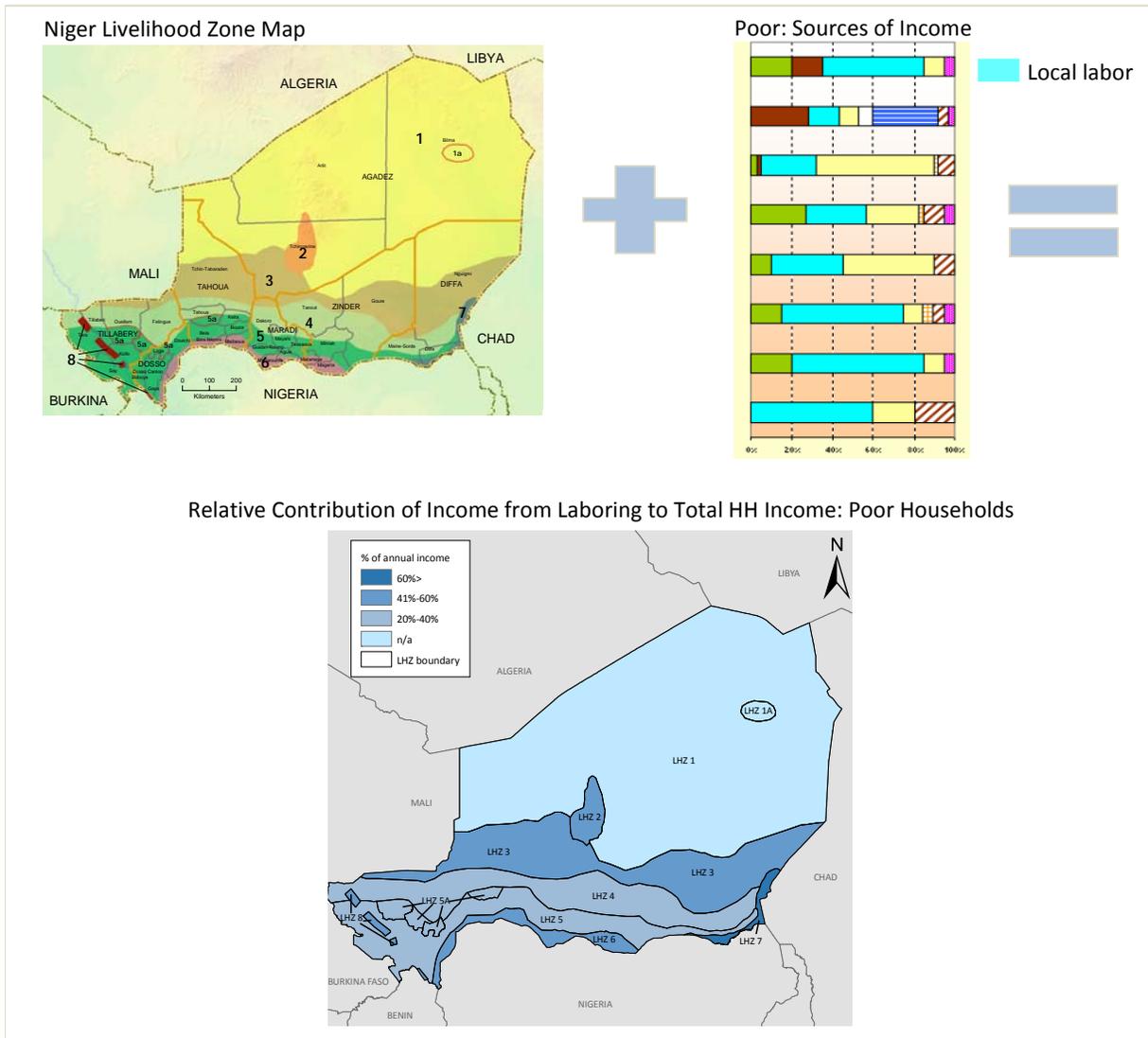
Figure 8: Combining Livelihood Zone Maps with 'Sources of Food' information



Question #2: Reports indicated that some households in Niger are unable to meet their food and other basic needs because labor opportunities, and subsequent income, have been greatly reduced. Where is labor an important source of income for the rural poor?

Map #2: This map combines the Livelihood Zone Map of Niger with the sources of income information from the Livelihood Zone Profiles to geographically reference the relative importance of labor to total income of poor households. Households in the darkest blue areas will be most affected by reductions in labor opportunities and subsequent income or in-kind payment.

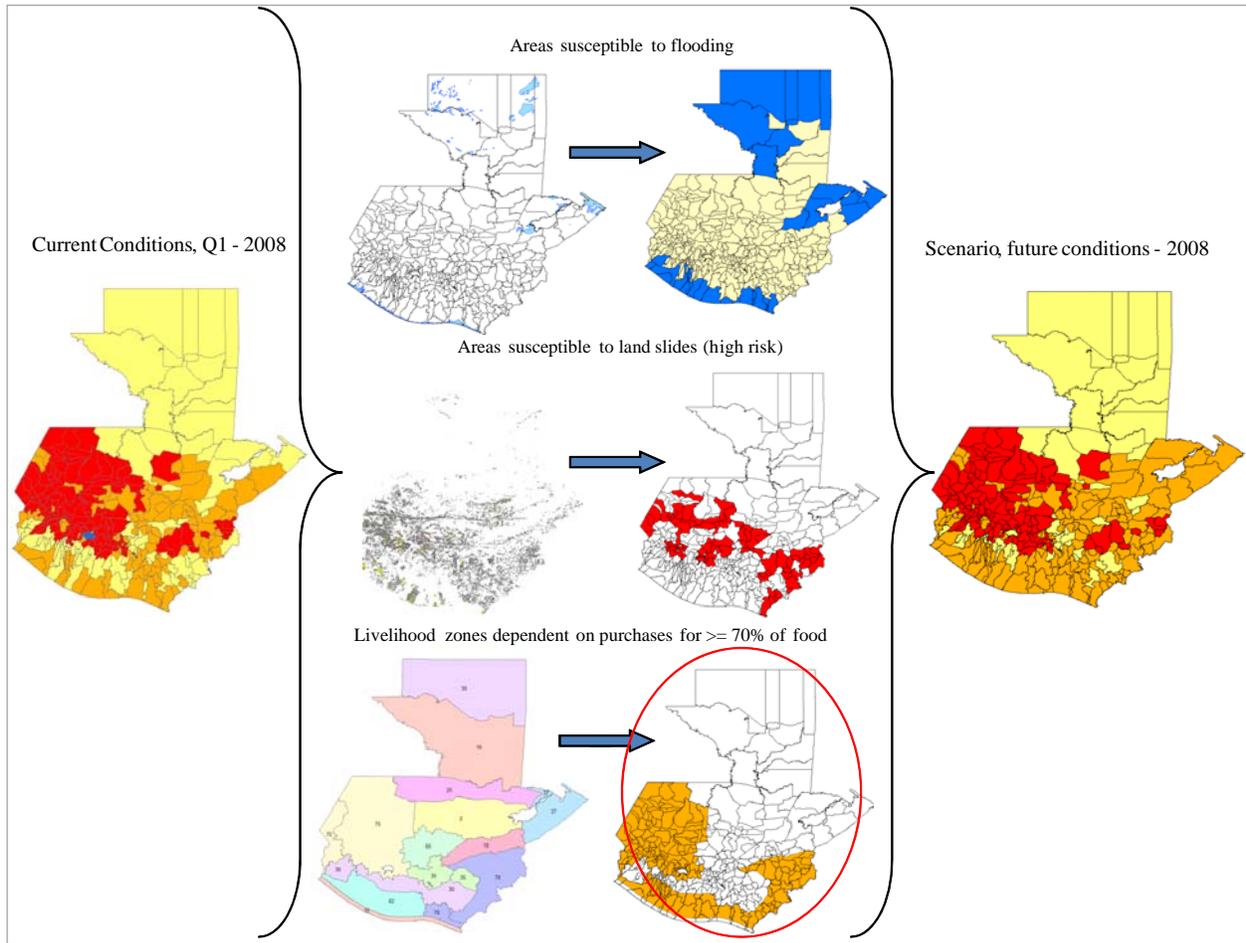
Figure 9: Combining Livelihood Zone Maps with ‘Sources of Income’ information



In the following example from Guatemala, livelihood attribute maps were layered with hazard maps to inform the FEWS NET Outlook mapping and scenario development process.

Here, three variables were identified as key to the food security outcome: susceptibility to flooding; susceptibility to landslides; and dependence on purchases to meet household food needs (developed from the Livelihood Zone Map and Profiles). Maps relevant to each of these variables were overlaid and used to map severity of food insecurity for the FEWS NET Outlook.

Figure 10: Combining Livelihood Attribute Maps with Hazard Maps for Guatemala



The seasonal calendars can also be used to create seasonal maps – for example, to answer a question such as, “Where are poor households dependent on labor during the first half of the year?” This type of information could help inform food-for-work programming, for example, to ensure that activities do not overlap and interfere with regular labor opportunities.

Needs assessments

A Livelihood Zone Map provides a division of the country into reasonably homogeneous zones defined according to patterns of livelihood. It provides an understanding of the geographic distribution of livelihood systems as initial context for various types of survey or assessment, including seasonal assessments, emergency needs assessments and baseline studies. It can be used as the sampling frame for household questionnaire surveys and for rapid assessments. It can form a basis for prioritizing the needs of different parts of the country and for targeting assistance on a geographical basis.

Just as households in different livelihood zones will be affected differently by a shock, so will households in different wealth groups. Thus separate examination of different wealth groups is critical to understanding household vulnerability to shocks and risk of food insecurity. The wealth group breakdown in a Livelihood Zone Profile provides parameters to help identify which households fall into which wealth group – land size, livestock holding, productive assets, etc. Using these as a guide, survey teams can work with community leaders and key informants to organize focus group interviews by

wealth group, to randomly sample households within each wealth group, or to identify which wealth group a household belongs to at the start of an interview. In a rapid assessment, the wealth breakdown can help identify households of greatest concern to focus energy and resources. Assessments conducted by wealth group will allow you to compare current conditions to reference year conditions in order to better understand the magnitude of change and severity of a crisis.

The 'sources of food' and 'sources of income' sections in a Livelihood Zone Profile detail the different types of activities that wealth groups engage in and the relative importance of these activities to their overall livelihood system. During the development and implementation of an assessment, this information provides the livelihood context. It serves as a guide for the types of data to be gathered and/or confirmed and provides reference year information to better understand changes in livelihood patterns that may affect overall food security.

The sources of food and income graphs, when examined alongside the seasonal calendar, illustrate which livelihood strategies are important to each wealth group at different times during the year. This seasonality should be taken into consideration when developing assessment instruments and analyzing data. It tells assessment teams which sources of food and income are pertinent during the assessment period and which are important during different points in the year. For example, if a poor household loses 10% of their maize crop during one of two growing seasons, it may not translate into a food security problem if labor is the major activity of these households during this period and they source the majority of their food through in-kind payments and purchases. In this case, demand for laborers, wages and food prices would be more important factors during this timeframe.

It is also important to consider seasonality when designing assessments in order to make sure that the questions being asked are seasonally relevant and to avoid overlooking important seasonal and annual variations. For example, dietary diversity questions that ask informants to recall consumption during one week, but that do not consider seasonal variations, could miss key sources of calories and micronutrients consumed up until the end of a recent season.

Additional resources

The preceding guidance describes Livelihood Zoning and Profiling Products, their structure, purpose, and application for food security analysis and early warning. The following is a list of additional resources for developing livelihood zones as well as for the application and development of HEA baselines:

1) The **Guide to Rural Livelihood Zoning** provides guidance for preparing a Livelihood Zone Map and explains the utility and answers frequently asked questions about Livelihood Zone Maps. This is currently available electronically from FEWS NET.

FEG Consulting. (2004). *Guide to Rural Livelihood Zoning*. London: FEG Consulting.

2) **The Practitioner's Guide to the Household Economy Approach** is a collaborative effort by FEG and Save the Children, UK to develop a user friendly document to assist HEA practitioners, field staff and program planners. It can be downloaded free of charge from the FEG Consulting website at www.feg-consulting.com/resource/practitioners-guide-to-hea

FEG Consulting and Save the Children. (2008). *The Practitioners' Guide to the Household Economy Approach*. Johannesburg: Regional Hunger and Vulnerability Program.

3) **The Household Economy Approach: A guide for programme planners and policy makers** is a guide, developed with support from the Regional Hunger and Vulnerability Programme (RHVP), Save the Children, UK and FEG, that includes many case examples to help programme planners and policy-makers understand the methodology, interpret results and translate results into program and policy recommendations. This book can be purchased from Save the Children, UK's website at http://www.savethechildren.org.uk/en/54_5678.htm

Holzmann, Penny, et al. (2008). *The Household Economy Approach: A guide for programme planners and policy makers*. London: Save the Children.