ACF INTERNATIONAL

FOOD SECURITY AND LIVELIHOOD ASSESSMENTS
A PRACTICAL GUIDE FOR FIELD WORKERS

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TECHNICAL DEPARTMENT OF FOOD SECURITY AND LIVELIHOODS
ACF INTERNATIONAL

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This book was updated by Muriel Calo, Greg Scarborough and Lisa Troy in coordination with a peer review team consisting of María Bernardez, Julien Chalimbaud, Anne-Lyse Coutin, Philippe Crahay, Adrienne Daudet, Hélène Deret, Julien Jacob, Julien Morel, Silke Pietzsch, Devrig Velly and Marie-Sophie Whitney.

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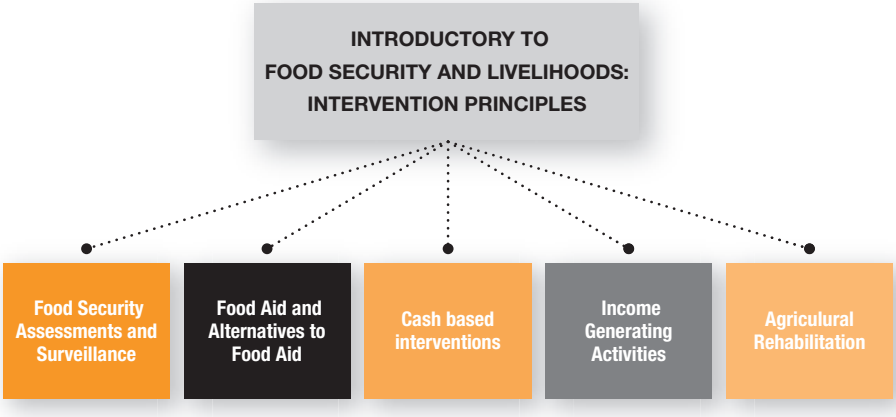
PREAMBLE

This book is part of a series of food security and livelihood books developed by Action contre la Faim International (ACF) and is based upon a consolidation of experiences and investigations led over the past ten years in the field. This series looks at and develops specific aspects of the different food security and livelihood programs, especially the technical tools that can be used within the scope of precise projects. Each of these books can be read alone or they can be complemented and reinforced with the other ACF Food Security and Livelihood books included in the series constituting the 'food security and livelihood kit', which can be presented as follows:



The books address a variety of audiences including the international humanitarian community, technical and operation field workers and the public who wishes to learn more about food security and livelihoods at the international level. Each book contains a detailed index with examples of the different tools that can be used for the implementation of the programs, a glossary of technical terminology and commonly asked questions that can give the reader a quick response to key points highlighted throughout the document. This series could eventually be completed with other types of food security and livelihoods programs depending on the development and research led in the field (e.g., food security and livelihoods in the urban context, in the pastoral environment or other topics such as community participation or fish farming). All of these books are subject at all times to additions and or improvements following the development of the food security and livelihood departments at Action contre la Faim and the continued internal and external evaluations and evolution of the different food security and livelihood activities.

OBJECTIVE OF THE BOOK

To constitute a methodological, technical and practical reference tool for the implementation of Food Security and Livelihoods assessments.

Contents

INTRODUCTION

This book is intended to provide practical guidance to ACF field workers on how to implement a Food Security and Livelihoods (FSL) assessment. It is intended to be used by ACF food security & livelihood project managers, team members and consultants responsible for undertaking rapid and in-depth assessments in emergency, recovery and chronic crisis contexts.

This guideline is a review and update of the 2006 ACF publication *Methodological Approach for Food Security Assessments and Surveillance*. Surveillance methods are not included in this book and will be covered in a separate updated module. This is the sixth book of the series and is conceived as a supporting document to the first reference book, Introduction to Food Security: Intervention Principles which explains the basic notions, concepts, definitions and general approaches to food security; as well as the ACF Food Security & Livelihoods Policy Paper. The book sets the foundation and necessary understanding for all ACF food security and livelihood programs, introduced in the previous four books: Agricultural Program, Income Generating Activities, Cash based Interventions and Market for the Poor. In addition, this book is meant to complement the SPHERE Humanitarian Charter and Minimum Standards for Disaster Response, revised in 2010.

The overall conceptual approach and associated methods presented in this guideline are based on two conceptual frameworks adapted from the UNICEF causal framework for malnutrition and the DFID Sustainable Livelihoods framework. Food security and livelihoods encompass a tremendously complex field underpinned by a range of factors that are in constant dynamic flux. Likewise, our understanding of how best to address a population's food insecurity and support its livelihoods in a timely, effective, locally coherent and sustainable manner changes over time. Our challenge as practitioners in the field is to adapt our conceptual approaches and related tools to reflect new insights and proven methods that ideally will have been developed in concert with affected communities and local institutions. As such, this guideline represents a snapshot of our current state of knowledge but will likely require review and revision as time passes.

Assessment is the second step in the project cycle. Its main purpose is to allow us to gather information on the food security and livelihoods situation of a crisis-affected population in order to identify appropriate responses by the agency. Many assessments will be carried out during various stages of an emergency (acute or chronic) in order to support programming decisions and inform the development of mid and long term strategies. Assessments will also be carried out at other stages of the project cycle, including as part of monitoring and evaluation activities and to support transition and exit strategies.

To inform decisions by ACF and other actors regarding appropriate responses, assessments must answer some or all of the following key questions.

KEY QUESTIONS

- Which crisis?
- What has been the impact of the crisis on the zone? On the food security and livelihoods of the population?
- Which groups are at risk? Where? When? Why?
- What types of risks do these groups face?
- What type of response is required to assist these groups?
- How much assistance is required? How much assistance is provided by other actors?
- How should beneficiaries be selected?
- How many people are in need of each type of assistance?
- When should the assistance be provided and for how long?
- What results are we seeking to obtain with our response?

THE STRUCTURE OF THE GUIDELINE IS AS FOLLOWS:

Chapter 1. Conceptual framework
This chapter lays out the broad approach to food security and livelihoods programming at ACF and the key concepts and principles that should guide the design and implementation of food security and livelihood assessments.

Chapter 2. Gathering information
This chapter reviews the different types of food security and livelihood assessments, types of information to be gathered and broad methods for doing so.

Chapter 3. Sampling
This chapter looks at the main sampling approaches and provides a checklist of the key steps involved in planning an assessment.

Chapter 4. Core components of a FSL assessment
This chapter provides detailed guidance on the ten core elements of a food security and livelihoods assessment and suggests the use of specific tools, methods and sources of information to support the data collection.

Chapter 5. Analyzing results
This chapter provides an analytical framework for drawing conclusions on the assessment findings in order to judge the severity and scale of food and livelihood insecurity in the surveyed area and identify most vulnerable groups.

Chapter 6. Identifying solutions
This chapter gives guidance on how to identify appropriate interventions and formulate recommendations for action based on the key analytical results of the assessment.

Chapter 7. Disseminating information
This chapter highlights the need to share findings with a range of stakeholders and provides a structure for report-writing.

Appendices
Sample question guides, questionnaires and a variety of tools can be found here.

LIST OF ACRONYMS

ACF	Action Contre la Faim International
ASPI	Agro-Sylvo-Pastoral Interventions
CBI	Cash Based Intervention
CFW	Cash For Work
CSI	Coping Strategy Index
DD	Dietary Diversity
DRR	Disaster Risk Reduction
EFSA	Emergency Food Security Assessment
EMMA	Emergency Market Mapping and Analysis
EWS	Early Warning System
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organisation of the United Nations
FCG	Food Consumption Group
FCS	Food Consumption Score
FEWSNET	Famine Early Warning System Network
FFW	Food For Work
FGD	Focus Group Discussion
FSNAU	Food Security and Nutrition Analysis Unit Somalia
FSL	Food Security & Livelihoods
FSMS	Food Security Monitoring System
GAM	Global Acute Malnutrition
HDDS	Household Dietary Diversity Score
HEA	Household Economy Approach
HH	Household
ICRC	International Committee of the Red Cross and Red Crescent Societies
IDDS	Individual Dietary Diversity Score
IDP	Internally Displaced Persons
IGA	Income Generating Activities
IPC	Integrated Food Security and Humanitarian Phase Classification
KI	Key Informant
MSF	Médécins sans Frontières / Doctors Without Borders
MUAC	Mid Upper Arm Circumference
NCA	Nutrition Causal Analysis
OCHA	Office for the Coordination of Humanitarian Affairs of the United Nations
PP	Proportional Piling
PRA	Participatory and Rapid Appraisal
SAM	Severe Acute Malnutrition
SCUK	Save the Children United Kingdom
SFC	Supplementary Feeding Centre
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SWOT	Strengths, Weaknesses, Opportunities and Threats
TFC	Therapeutic Feeding Centre
TOR	Terms of Reference
TOT	Terms of Trade
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAM	Vulnerability Analysis and Mapping
VCA	Vulnerability and Capacity Analysis
WASH	Water, Sanitation and Hygiene
WFP	World Food Programme of the United Nations
WHO	World Health Organisation of the United Nations
WHZ	Weight-for-Height Z Score

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Chapter 1
CONCEPTUAL FRAMEWORK

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1.1 DEFINING FOOD SECURITY AND LIVELIHOODS

For a long time, the conceptual framework used for ACF food security analyses and interventions has been an adaptation of UNICEF's conceptual malnutrition framework (1990). The increasing complexity of the global food security situation, as well as improved analysis and comprehension, has impelled ACF to broaden this initial focus on food security to encompass the notion of overall livelihood security, integrating food security programming and analysis into a more far-reaching sustainable livelihoods framework.

DEFINITIONS

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (FAO, 2002)

Within this definition of food security, there are three components:

- ➜ Availability refers to the quantity, quality and seasonality of the food supply in the affected area. It includes all local sources of food production including agriculture, livestock and fisheries as well as wild-collected foods. It also includes all foods imported into the area by traders.[1] The presence of well-functioning market systems able to deliver food to the area on a consistent basis and in adequate quantity and quality is a major determinant of food availability.
- ➜ Access refers to the capacity of a household to procure sufficient food to satisfy the nutritional needs of all its members. It is a measure of the household's ability to acquire available food during a given period through a combination of home production and stocks, purchases, barter, gifts, borrowing or food aid.
- ➜ Utilisation refers to a household's use of the food to which it has access, including food storage, processing and preparation as well as its distribution within the household. It also refers to an individual's ability to absorb and metabolize nutrients, which can be affected by disease and malnutrition.

A livelihood comprises the capabilities, comprised of assets (including both material and social resources) and activities used by a household for means of living. A household's livelihood is secure when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and productive asset base. (Chambers and Conway, 1992)

Any changes to food availability (arising from changes in production or trade) and to food access (arising from changes in economic entitlements) should be identified in a food security and livelihood assessment.

Changes in food utilisation that are linked to disease and malnutrition will be more readily identified and measured by colleagues in the nutrition, health and WASH departments since they are concerned with the access to health and sanitation services. Meanwhile, food security and livelihood teams will be responsible for identifying changes related to the preparation and distribution of food among members of the household. This will most often require an analysis of intra household gender relationships as well as a basic understanding of infant and young child feeding practices and associated care practices.

Refer to Appendix 1 for a description of the core food security and livelihood indicators used in Food Security and Livelihood (FSL) assessments.

[1] Government programs and agencies can also impact availability in an area by supplying food aid.

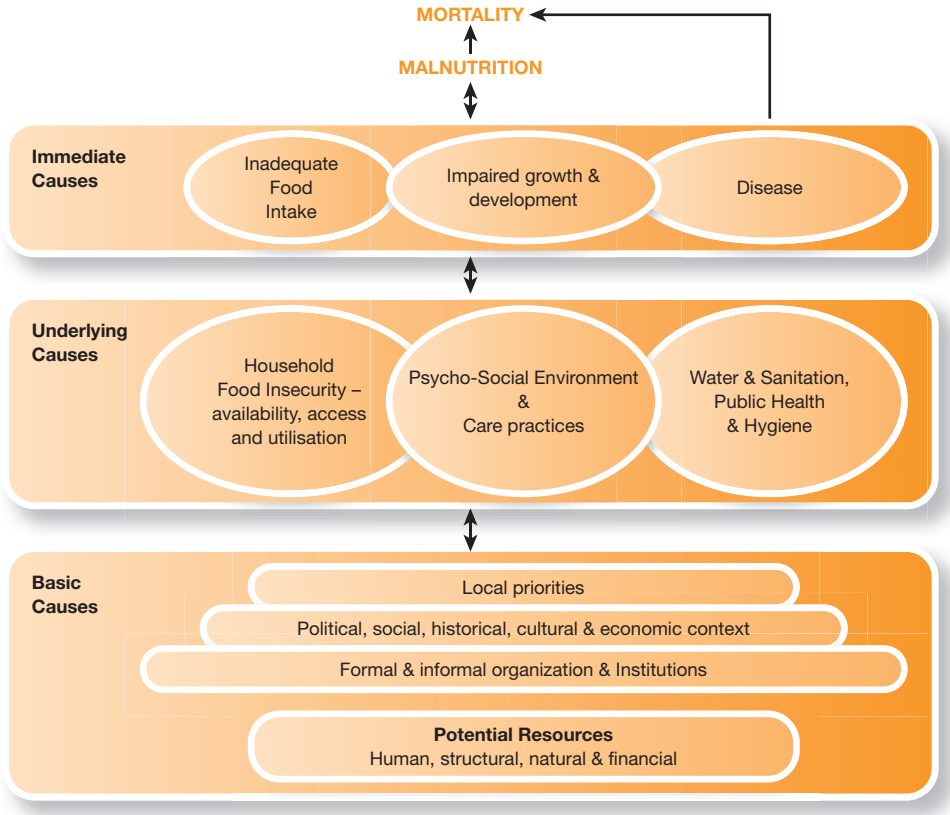
1.2 CONCEPTUAL FRAMEWORK OF MALNUTRITION

Nutritional causal analysis, the foundation of ACF interventions, considers immediate, underlying and basic causes of malnutrition. This analysis includes different technical elements (water-related, food-related, culture-related, etc.) that can influence the nutritional status of an individual. This integrated analysis can be represented through the conceptual framework of malnutrition, illustrated in Figure 1.

The framework represents an analytical process that establishes the clear interaction between various causes of malnutrition.

All ACF interventions are embedded within this conceptual framework, which provides a structure that helps to optimize resource allocations, ensure sector coherence, and favour efficiency toward achievement of objectives, outputs, impact and beneficiary satisfaction. Consequently ACF field activities are characterized by an integrated approach encompassing interventions in nutrition, health, water and sanitation, and food security and livelihoods, as well as increasingly integrated assessments, in order to address the spectrum of underlying causes of malnutrition.

Figure 1: Conceptual Framework of Malnutrition



Malnutrition is defined as an abnormal physiological condition due to an unbalanced diet in either quantity or quality or both. Three types of malnutrition are recognized: **acute malnutrition, chronic malnutrition** and **micronutrient deficiencies.** These three types are often met in the same individuals, and are not mutually exclusive.

- *Acute malnutrition* or wasting reflects the current nutritional situation of a child and is due to nutritional deficiencies related to poor intake or absorption. It results in a below-average weight-for-height score or the presence of bilateral oedema or both. We differentiate between 2 degrees of acute malnutrition: Moderate acute malnutrition, which can further deteriorate into severe acute malnutrition. Severe acute malnutrition is linked to a very high risk of mortality if not immediately treated.

- *Chronic malnutrition* or stunting causes growth retardation and is due to chronic nutritional deficiencies of mild proportion. It can also be the effect of an exposure to repeated infections or even to poor living conditions, which hinder the growth of the child. It results in a below-average height-for-age score.

- *Micronutrient deficiencies* reflect the poor intake or absorption of vitamins and minerals and are diagnosed based on a range of determinants.

ADDRESSING NUTRITION IN FOOD SECURITY & LIVELIHOOD ASSESSMENTS

ACF nutrition programs target specifically, but not always exclusively, acute malnutrition. This is because acute malnutrition results from risk factors that are directly related to an unfolding crisis situation and will lead to rapid loss of life in the absence of interventions.

Food security and livelihood assessments as a rule generally will *not* include anthropometry – which is the measurement of height, weight, skinfold thickness and other key indicators of malnutrition. This is because taking accurate body measurements requires training, specialized equipment and specific sampling methodologies, all of which remain the specialty of trained nutritionists.

Meanwhile, FSL assessments *do* need to include the gathering of **any available nutritional data** during the course of secondary data collection, as well as an analysis of this data and the overall nutritional situation in the final report. This means consulting internally with the ACF nutrition team or with other agencies, or both, at the stage of secondary data collection regarding the results of nutrition surveys recently conducted in the affected area. Adapted responses to the presence of malnutrition in an area often include food security and livelihood programs[2] and therefore nutrition data must be considered.

The exception to this rule is in the case of rapid assessments. Occasionally, food security and livelihoodteams may be the first ones to arrive into a new area and could be called on to include a measurement of Mid-Upper Arm Circumference or **MUAC** in their rapid assessment of the zone, if risk factors for malnutrition are thought to be present. Training and support from nutrition team members is required in order to effectively deploy this tool in the field, including sampling design, proper use of the tool, and analysis of results. See Appendix 2 and 3 for a discussion of nutrition indicators including MUAC and associated thresholds and methods.

1.3 SUSTAINABLE LIVELIHOODS FRAMEWORK

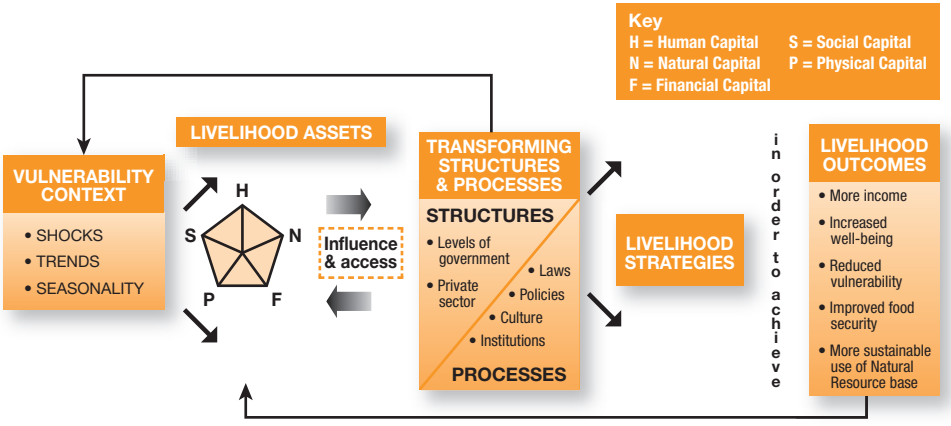
The sustainable livelihoods framework (Figure 2) focuses on the strengths and assets that people own to ensure their food security and livelihoods. These are represented by five key categories of capital that people can draw from to achieve positive livelihood outcomes such as

[2] For example, improving the targeting and quality of food distribution, improving access to a diversity of locally available foods through cash-based interventions, agricultural programs, support to income generation, support to market systems, etc.

increased income and well being, improved food security, etc. The sustainable livelihoods framework portrays food security and livelihoods as a cyclical process, as opposed to the linear process depicted by the conceptual malnutrition framework. It also adds the notion of vulnerability and integrates the concept of disaster risk reduction. It is a practical tool that outlines a holistic approach to the design and monitoring of food security and livelihood interventions.

Within this framework, ACF food security and livelihood programs focus mainly on strengthening the identified livelihood assets (and the five key categories of capital) and influencing the policies and actions of structures including government and private sectors, in order to reduce vulnerabilities and achieve the targeted livelihood outcomes. It is important, however, to note that ACF interventions have limited ability to impact established factors, such as laws, policies, culture and institutions, or to change natural conditions such as floods, drought, etc.

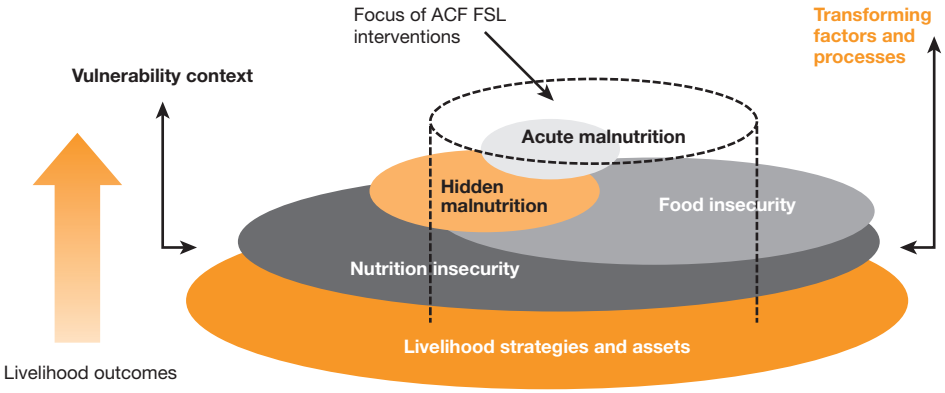
Figure 2: Sustainable Livelihoods Framework (DFID, 1996)



The interplay of malnutrition, food security and livelihoods, based on the above two frameworks, is illustrated in Figure 3, which highlights acute malnutrition as one potential negative livelihood outcome. The Figure also conceptualizes the theoretical scope of ACF food security and livelihood interventions, in line with the organization's overall strategy focusing on malnutrition.

The adoption of a livelihoods approach allows a broader vision of food security programming, as food security is only one factor that contributes to a specific livelihood outcome. Other factors include health, water and sanitation, as well as contextual factors that influence people's way of living and livelihood strategies. This analysis demonstrates how acute malnutrition can be the result from a situation where livelihood assets as well as transforming factors and processes are unbalanced, and the lack of one aspect cannot be compensated by the strength of another. This imbalance can negatively influence livelihood outcomes and become an underlying cause of malnutrition.

Figure 3: Acute malnutrition as a negative livelihood outcome (adapted from IFPRI, 2004) [3]



1.4 LINKING NUTRITION, FOOD SECURITY & LIVELIHOODS

Causal pathways for **malnutrition** are complex. Disease and inadequate food intake are widely recognized as the *immediate causes* of malnutrition but are influenced by a range of underlying and basic causes which are more qualitative in nature.

Inadequate food intake refers to the quantity of food eaten by an individual but also to quality and energy density. It shares an intimate relationship with **disease** which places increased nutritional demands on the body but can also compromise the ability of the body to metabolize and assimilate nutrients as a result of appetite loss, mal-absorption and loss of nutrients. A cyclical relationship exists between disease and malnutrition, where disease may cause malnutrition and severe malnutrition increases susceptibility to disease.

Understanding why an individual has become sick or has reduced food intake requires examining the three *underlying causes* of malnutrition: household food security, care & social environment and health environment.

- ➜ **Household food security** and its availability, access, use and quality components (defined earlier) directly impact the types and quantity of food an individual consumes within the household.
- ➜ Linked in with food security and nutrition is the household **care environment** which is the sum of the ways in which dependent members of a household are looked after and fed. It includes feeding practices for infants and young children e.g. breastfeeding and complementary feeding; priorities for food distribution within the household; food habits, culture and traditions; and the care of the sick and elderly. Inadequate care practices can lead to individual malnutrition within the home even where household-level food access is assured.

[3] Nutrition security is considered a wider concept than food security, which is based on the concept of availability, access, and utilisation of food. A household has achieved nutrition security when it has secure access to food coupled with a sanitary environment, adequate health services, and knowledgeable care to ensure a healthy life for all household members.

➜ Social and political networks, organizational structures, religious institutions and cultural and religious practices are elements of the wider **social environment** that impact food security and nutrition by determining a household's access to knowledge, resources and social networks.

➜ Access to health services as well as water supply, sanitation and housing make up the public **health environment** and are linked to nutrition status by conditioning exposure to infectious disease.

Livelihoods underpin food security: they are the means by which people access resources and assets in their environment in order to meet household needs. An analysis of the livelihoods of households and individuals begins with examining the five **livelihood assets** – physical, financial, natural, social and human capital– present in the surveyed area, followed by the range of **livelihood strategies** into which people translate them. Food security is one outcome of a successful livelihood strategy.

Ultimately, the larger political, economic, geographic, social and cultural **context** and its associated institutions determine the local environment and the type of access that households will have to resources. It conditions the external **vulnerability context** in which households operate – the shocks, trends and seasonality to which they are exposed – as well as the resources and coping strategies that households make use of.

Food security and livelihood assessments tend to focus on the *household food security* component of the underlying causes of malnutrition, as seen in the UNICEF framework, seeking to analyze the access, availability, quality and use factors associated with household food security. Food security and livelihood assessments now also integrate an analysis of the *vulnerability context* and of *livelihood assets and strategies* as represented in the Sustainable Livelihoods framework.

Meanwhile, psycho-social health, care and feeding practices, and access to potable water must also be examined in the framework of an FSL assessment because they have a direct impact on food intake and disease. Their neglect can lead us to erroneously identify the main risk factors for malnutrition. ACF nutrition staff can assist in the design and analysis of questions on these topics.

1.5 EXAMINING VULNERABILITY

DEFINITIONS

Coping mechanisms are temporary responses to reduce or minimize effects of a stressful event or an unfavourable situation where food access is abnormally disrupted, for instance by drought, flood, earthquake or military activity.

Adaptive mechanisms are measures used to manage and minimize the risk from chronic food insecurity and recurring situations. Adaptation is a process of adjustment to a longer-term solution, for instance pastoralists moving to new migratoryareas of better rainfall and pasture growth.

Vulnerability is the inadequacy of adaptive mechanisms, coping mechanisms or accumulated capital or food stocks to meet people's daily needs. Generally speaking, the level of vulnerability of a household and/or individual is determined by the risk of failure of coping strategies. More specifically, food vulnerability refers to the entire range of factors that place people in danger of food insecurity. The degree of vulnerability for an individual, a household, or a group of people is determined by its exposure to risk factors and by its aptitude to confront crisis situations and to survive them.

Disaster risk reduction (DRR) is the systematic development and application of policies, strategies and practices to minimize vulnerability, hazard and the unfolding of disaster impacts throughout a society, in the broad context of sustainable development. ACF interventions now also aim to integrate the concept of disaster risk reduction.

Vulnerability, risk and capacity to cope (influenced by the strength of livelihood assets) are the key concepts that define a potential livelihood outcome and a household's food security, and thus the need for a potential ACF intervention. In pragmatic terms, they can be translated into the analysis of:

- The likelihood and severity of a shock or ongoing stress, such as conflict, abnormal weather patterns, changes in household budgets, harvest failures, etc., and the impact of these shocks or stressors on the population.

- Coping mechanisms or strategies that households are likely to adopt when faced with a crisis, and the effectiveness and sustainability of these strategies.

- Changes in external factors (transforming factors, structures and processes or vulnerability context) that are likely to impact outcomes after a shock or ongoing stress, such as market fluctuation.

Food insecurity results from crises or events to which populations are exposed combined with a failure of adaptive and coping mechanisms. It often also involves the degradation of the social and/or natural environment. Frequently, vulnerable households can no longer manage a balance between dietary needs over the short term (survival) and the management of their means of existence (livelihood) over the long term. Chronic and transitory insecurity are closely linked. A succession of situations causing temporary but severe food insecurity increases the vulnerability of the household and leads to chronic food insecurity.

In the early or less severe stages of food insecurity, vulnerable households will sacrifice quality of the diet by changing their sources of food to less expensive and less preferred foods. Individuals in the household may also reduce meals and meal size, often while protecting working members of the households and/or children. Irreversible strategies that involve selling capital assets or migration are often a last resort: people will attempt to protect their livelihoods for as long as they can, even to the point of experiencing significant food shortage in the household.

The severity of food insecurity can be charted according to the adoption of a range of increasingly damaging consumption-related coping strategies as well as livelihood coping strategies such as borrowing, labour migration, sale of capital assets, etc.

Severity of coping strategies depends heavily on context. Table 1 (below) proposes a broad severity ranking of coping strategies and other indicators into stages of food and livelihood security, based on patterns that have been observed across diverse settings. Reference outcomes are based on the convergence of direct and indirect evidence rather than absolute thresholds. Each stage will not necessarily show all characteristics, but the table helps to illustrate which stage a situation has reached and in which direction the situation is likely to develop.

Table 1: Severity scale of food & livelihood insecurity

Severity of food insecurity & mortality risk →	FOOD INSECURITY	FOOD & LIVELIHOOD CRISIS	FAMINE
Mortality rate	Normal	Increased or high	Extremely high
Global malnutrition rate	Could be increased	Increased	Extremely high
Severe malnutrition rate	Low	Moderate or high	High
Population movements	Temporary migration	Population displacement +/-	Concentrated, large-scale
Income and livelihood sources	Normal or slightly disrupted	Reduced	Exhausted
Livelihood assets	Stressed and unsustainable utilisation	Accelerated and critical depletion or loss of access	Effective complete loss; collapse
Coping strategies	Adaptive, temporary, reversible	Distress, reversible/ irreversible, increasing	Survival, irreversible
Food availability	Normal or slightly increased	Reduced	Rare or none
Food accessibility	Slightly reduced	Reduced	Severely reduced or none
Dietary diversity	Chronic deficit	Acute deficit	Regularly 3 or fewer main food groups consumed
Dependence on food aid	Low	High or moderate	Complete
Reduction in caring practices	Low	Moderate or high	High
Water access and availability	Borderline adequate; unstable	Accessed via asset stripping	Extremely low, human usage only
Public health	Stable	Epidemic, increasing	Pandemic

The distinction between the different severity levels should be made very carefully through a thorough food security & livelihoods assessment. The indicators given above are general and should be applied according to each given context. The simple fact that one indicator is present in the famine column does not necessary indicate a famine, it is rather the combination of indicators that show the severity of the situation.

The exact type of response to be adopted can be defined only through detailed analysis of the context in which the program will operate, using participatory approaches and respecting the methods outlined in the following chapters.

Refer to the Integrated Phase Classification (IPC) reference table which shows quantitative reference outcomes for each stage of an emergency.

1.6 COMMUNITY PARTICIPATION

Participation of the community and local institutions is the process of actively involving local people in assessing their own needs, designing and implementing relief projects, and making decisions that affect them. It is vital at all stages of assessment and planning and is included as a SPHERE standard.

There have been an increasing number of analyses of development projects showing that participation is one of the critical components of success in irrigation, livestock, health, water, sanitation and agriculture. They show that success comes about when people's ideas and knowledge are valued, and power is given to them to make decisions independently of external agencies.

Community participation in humanitarian response is equally as important. Although emergency responses have tended to be more standardized than development projects, the trend is towards a greater range of humanitarian interventions that take into consideration community priorities and are tailored to the particular local context. In addition there is increased reliance on a variety of participatory tools and methods.

Populations affected by crisis and insecurity should be considered partners in any relief effort rather than as its passive recipients. Communities that have experienced recurrent natural disasters or conflict may have their own local emergency response systems, networks and contingency plans. It is important that such local capacities be supported.

Begin to consult and involve communities as soon as you start a project. A range of participatory tools to allow for meaningful consultation with communities at the assessment stage are presented in these guidelines. We also encourage you to include a section in the needs assessment on local capacities and resources using a stakeholder engagement approach.

When time comes to design a project, you can use this information to organize multi-stakeholder workshops and other types of local consultation to ensure that proposed projects are designed in ways that meet local priorities and respond appropriately to existing needs, while drawing on available local resources. Programs designed in a participatory manner have a much better chance of effectively and sustainably responding to needs because they have local support.

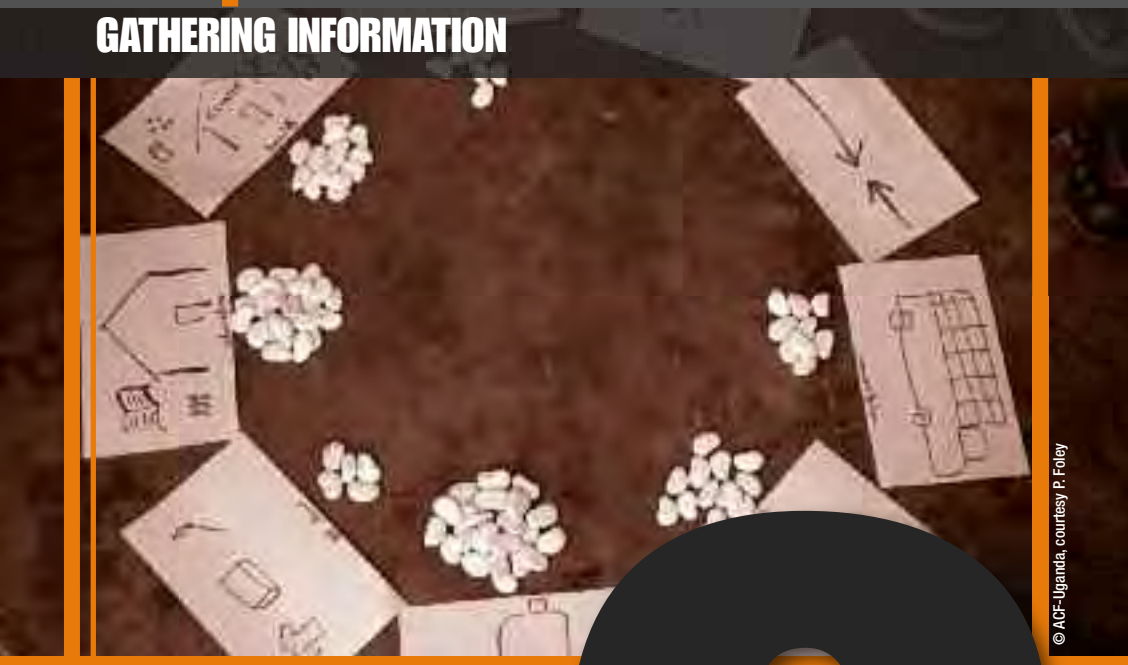
Participation leads to a deeper understanding of local vulnerability: when local communities and organizations are consulted and their views considered, we aim to create a more open space for the sharing of information. This often will allow aid workers to gather more relevant and timely information about the vulnerability context.

Participation leads to appropriate vulnerability targeting: local communities are in the best position to identify their own needs as well as recognize their most vulnerable members. Working with communities through partnership and consultation leads to more appropriate targeting and effective reduction of vulnerability.

Participation empowers communities: when local communities are consulted and included at each stage of a project, space is created for dignity, empowerment and the expression of voice. Community consultation and participation also helps encourage local ownership of a project and the more judicious use of its resources.

Participation leads to sustainable recovery: when local communities are consulted and their views considered in needs assessment and project design, they have greater control and ownership of the process, which encourages sustainability. The withdrawal of aid agencies will cause less harm as communities will be in a position of greater control.

Chapter 2
GATHERING INFORMATION



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The key to conducting a successful FSL assessment is to take time *before* beginning an assessment to formulate objectives, determine the information needed for decision-making and the most appropriate information sources and data collection methods. Even if time is limited, initial investment in the planning stage will ultimately save time later and provide the most useful information.

While having a well thought out initial plan is essential, it is also important to be flexible enough during the data collection process to pursue alternative pathways or follow-up on unexpected information. The FSL assessment is a dynamic process where information collected early in the process will help shape some of the questions that are asked and the data that is collected later. However, at each step be sure to ask what the alternative pursuit will provide and how the additional information collected will be used to guide decision-making. Often the wealth of interesting information can be exciting and distracting. Referring back to the objectives of the FSL assessment will help keep the data collection on track. This chapter serves as a guide to the different types of assessments and their respective objectives, the types of information collected in FSL assessments and information gathering methods.

2.1 OBJECTIVES

ACF approaches to food security and livelihoods assessments focus on identifying the main underlying causes of food insecurity and risks to livelihoods across a range of settings to identify responses that will save lives and preserve and reinforce the livelihoods of vulnerable populations.

Broad objectives of ACF food security and livelihoods assessments are outlined in the Box below. Specific objectives of an assessment will vary according to context, scope and available resources and will also differ according to the type of assessment that is being carried out.

BROAD OBJECTIVES OF AN ASSESSMENT:

- To identify hazards and vulnerabilities as part of preparedness activities and contingency planning
- To assess changes in food availability and food access as a result of a shock or a protracted series of shocks
- To analyze the underlying causes of food insecurity and threats to livelihoods in the surveyed area
- To identify the main geographic areas and livelihood groups that are vulnerable to food insecurity in the surveyed area
- To define vulnerability criteria that will allow these groups to be distinguished during the course of an intervention
- To assess local priorities surrounding needs and identify local capacities and resources to meet needs
- To recommend an appropriate response to address food security in the short to medium term and/or support and protect livelihoods in the long term

Generally ACF adopts an integrated approach to FSL assessments that can be applied in a range of settings, sharing aspects with SCUK's food economy approach and OxfamGB's livelihoods approach (which rely on methods derived from the Livelihoods approach), WFP's VAM approach (which highlights food consumption as a key indicator of food vulnerability) and drawing from the tradition of applied research and Participatory Rapid Appraisal methods. The strength of the ACF approach is often recognized as rapid qualitative analysis of crisis situations relying on

participatory methods and tools. See Table below for a summary matrix of FSL assessment approaches used by different agencies in the field.

Table 2: Matrix of agency approaches to FSL assessments

Approach	Objectives	Elements of livelihoods	Application
CARE livelihood security	To provide a multi-dimensional view of livelihoods to identify vulnerable households, and people's goals to identify programming priorities	All	Mostly development, stable situations
OxfamGB livelihoods approach to food security	To determine the severity of food insecurity in terms of risks to lives and livelihoods, and to identify appropriate interventions	Food Security	Mainly natural disasters Displaced political emergencies
SCUK household economy	To estimate the impact of a 'shock' on the ability of a household to acquire food and non-food items	Food security, income and expenditure	Natural disasters Refugees Conflict
ICRC economic security	To determine the risk of decapitalisation and to intervene to prevent this	Resources, assets, strategies, obligatory expenditure	Conflict
MSF-H food security	To determine the stage of food insecurity and appropriate food and health interventions	Food security and access to health care	Conflict, but limited applications because newly developed approach
WFP VAM	To provide a detailed understanding of food insecurity and vulnerability conditions and thus support programme design, particularly regarding food aid targeting and priority groups	Food security	Mostly development, but also includes monitoring in disaster-prone areas
USAID FEWS	To manage threats to food security through provision of timely and analytical early warning and vulnerability information	Food security	Natural disasters
Applied anthropological research	To improve knowledge of social and cultural dynamics to inform interventions	All, but often with particular emphasis on specific aspects, e.g. social capital, local institutions, governance, etc.	Mostly stable contexts Development

Source: Jaspers and Shoham, 2002. ODI. A Critical Review of Approaches to Assessing and Monitoring Livelihoods in Situations of Chronic Conflict and Political Instability

2.2 TYPES OF ASSESSMENTS

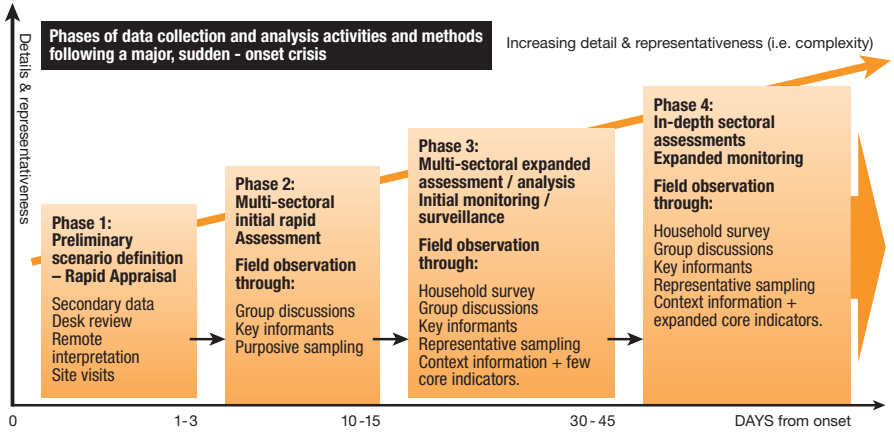
We generally recognize two different types of FSL assessments, both of which draw from the conceptual frameworks presented earlier: rapid assessments (including the rapid appraisal) and comprehensive or in-depth assessments.[4]

[4] In addition, an expanded multi-sectoral assessment is sometimes undertaken. This type of assessment is often erroneously named "rapid", but it is differentiated from rapid assessments by its broader range of methods (including the household survey), and its use of representative sampling techniques.

The Nutritional Causal Analysis (NCA) is another type of assessment which is based on the conceptual framework of malnutrition and therefore incorporates food security & livelihoods, WASH and nutrition aspects. Methodologies for implementing an NCA are described in detail in a separate ACF publication.

See Figure 4 below, showing the different phases of data collection in rapid-onset emergencies. In chronic crisis settings, ACF will periodically undertake comprehensive FSL assessments to track the evolution of a situation.

Figure 4: Definitions of assessments in emergencies



Source: CNA Workshop, Bangkok, January 2009. From Step by Step Methodology: Assessment in Emergencies. Acción contra el Hambre.

2.2.1 RAPID ASSESSMENTS

A RAPID FSL ASSESSMENT is a type of investigation designed to be implemented quickly, with the aim of obtaining a fast and clear vision of a specific context in a specific moment. It is used in emergency situations and relies primarily on qualitative methods in order to determine the needs of the population affected by a crisis.

Rapid assessments are carried out **at the onset of a humanitarian crisis** in order to gather basic contextual information and identify risks faced by the population. This type of assessment, sometimes referred to as an *exploratory mission*, is carried out in two steps: 1) the rapid appraisal, which is primarily desk-based and involves gathering information on the scale and severity of the emergency (1-3 days); and 2) the rapid assessment itself, which involves fieldwork in the affected area (10-15 days).

The rapid assessment can be carried out jointly between agencies or implemented by an ACF multi-sectoral team. At other times, FSL teams will be responsible for the rapid assessment in a new area. Note that most often, rapid assessments are multi-sectoral and are concerned with the identification of *all basic needs* in order to guarantee the survival of a population facing a crisis.

The food security component of the rapid assessment:

☑ Inquires about changes in food availability and food access following the crisis;

☑ Assesses market function;

☑ Assesses the severity and underlying causes of food insecurity;

☑ Analyses coping mechanisms;

☑ Identifies the worst affected groups and areas;

☑ Identifies resources and capacities of communities to meet immediate needs; and

☑ Identifies appropriate interventions to support food security

A rapid assessment may include measuring nutritional status (using MUAC).

THE TYPICAL OBJECTIVES OF A RAPID ASSESSMENT ARE:

- To learn about the general and specific situation of an area or context
- To appraise the humanitarian situation of the area or context under evaluation
- To estimate the size of a disaster/emergency
- To identify the population affected or under risk (kind of population, number, characteristics)
- To define vulnerability criteria that will allow these groups to be distinguished during the course of an intervention
- To evaluate the local response capacity to face the situation
- To obtain reliable information whose analysis will contribute to the definition of appropriate responses to the emergency situation

WHEN:

- Initial situations/quick developing situations: Natural catastrophes, mass movement of people, non-perceived situations/contexts that suddenly become perceptible
- Initial situations/slow developing situations: Drought, food crisis, starvation, war. Contexts where, for several reasons, a fast appraisal of the situation is needed
- Chronic crisis situations: Sudden shock or deterioration in conditions
- Special situations: Contexts with restricted access to the field or to people, for short periods of time (days/hours) for several reasons. Newly accessible areas previously inaccessible due to insecurity, weather conditions or other logistical constraints

The main tools used for data collection are qualitative: **secondary data review, semi-structured interviews with key informants, focus group discussions** and **observation**. Market appraisal is also often included. Sampling is purposive. Methods and associated tools used in Rapid Assessments are described in detail further in this chapter.

See Appendix 5 for the ACF Rapid Assessment Kit and a Guideline to Rapid Assessments, including sample objectives, methods and interview questions.

TIMEFRAME FOR A RAPID ASSESSMENT

Rapid assessments can take from 3 to 15 days. Length of the assessment is determined largely by the **context** – such as physical accessibility and security constraints – the **objectives** and **scope** of the assessment, as well as the **time** and **budgetary resources** available to the agency.

EXAMPLES:

➜ One experienced technical officer is deployed immediately after an emergency, enters the area, on her own, and gathers basic information using secondary data review, observation and key informant interviews in the space of just 5 days.

➜ An established M&E team with training in both nutrition and food security & livelihoods deploys into a geographic zone adjacent to where ACF is currently working. There is information of an emerging food security problem in the new area that is linked to the access and availability of the staple food crop. The team will analyze the causes of household food security and conduct a MUAC screening using a combination of key informants, focus groups and nutrition methods over the course of 2 weeks.

2.2.2 COMPREHENSIVE FSL ASSESSMENTS

A COMPREHENSIVE FOOD SECURITY AND LIVELIHOOD (FSL) ASSESSMENT is an in-depth analysis of the food security and livelihoods situation in a given area that is conducted to support longer term programming decisions. An in-depth assessment uses both qualitative and quantitative methods to comprehensively investigate the factors underpinning food security, analyze livelihood groups and assets, examine vulnerability and credibly orient program strategies for livelihood support over the mid to long term.

THE TYPICAL OBJECTIVES OF A COMPREHENSIVE FSL ASSESSMENT ARE:

- To conduct an in-depth analysis into the causes of food insecurity
- To carry out a vulnerability analysis that includes the identification of seasonal and longer term risks linked to the environment and the creation of a vulnerability profile
- To engage local stakeholders on the identification of local vulnerabilities, capacities and priorities
- To identify appropriate interventions and associated target groups that will address food insecurity and support livelihoods in the longer term

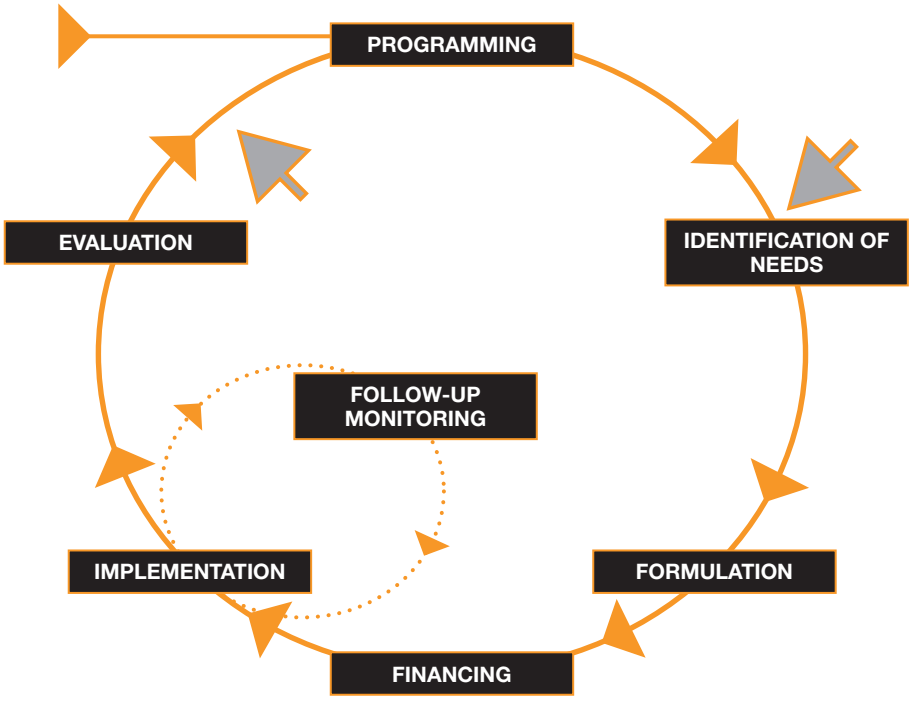
Due to the considerable investment of time and resources that is required for proper implementation, in-depth assessments are carried out at strategic points in the project cycle (see Figure below).

➜ They play a primary role in orienting program strategies when an agency **enters a new area** and requires a comprehensive baseline of the situation.

➜ They are also important at **transition points** in the relief and recovery effort to chart changes in the evolving food security and livelihood situation and recommend new orientations.

➜ Globally, the analysis developed in these assessments supports proposal-writing and project design and provides arguments that can be presented to donors for funding a particular intervention.

Figure 5: Assessments in the Project Cycle



Methodological approaches to comprehensive FSL assessments are more rigorous than in rapid assessments and must be carefully crafted according to the objectives of the survey, the tools to be used and the form of analysis. A range of quantitative, qualitative and participatory methods are used that allow for triangulation of data, correlation of findings and statistical analysis (if needed). Particular attention must be paid to sampling approaches and tool development and testing. **Household questionnaires** are the cornerstone of the comprehensive FSL assessment, augmented by a range of participatory approaches and key informant interviews and focus group discussions. Methods are detailed in section 2.3.

TIMEFRAME FOR A COMPREHENSIVE FSL ASSESSMENT

Comprehensive FSL assessments vary from 21 to 60 days – or more. Time investment is much more considerable due to the expanded scope and more involved methodologies of survey work. It varies according to context, scope and available resources. Recruiting / training enumerators and developing / testing field tools can take upwards of 30 days. Field implementation can take 15 to 30 days, followed by often time-intensive data entry and analysis.

EXAMPLES:

➜ With the objective of investigating the food security situation in a zone where conflict has displaced hundreds of thousands in recent weeks, a team of 10 enumerators plans to conduct 421 household interviews, 45 interviews with traders and 11 focus group discussions with displaced persons in 4 camps and residents across 5 municipalities. Due to efficient planning, fieldwork is completed in 12 days, and data entry and report writing requires a further 20 days.

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➜ A combined MUAC and comprehensive FSL assessment is planned in a remote region characterized by violent separatist activity and highly dispersed tribal villages. 3 enumerators and 1 officer require 30 days for secondary data collection followed by 90 days of fieldwork to visit 27 villages across 6 sub-districts, conducting 320 household interviews and 40 focus group discussions and measuring 946 children.

2.3 INFORMATION REQUIRED IN A FSL ASSESSMENT

Specific indicators are used to assess food availability, food access and food utilisation – the three pillars of food security – as well as livelihoods assets and strategies, the vulnerability context and institutional and policy environment – the basic elements of the Livelihoods Analytic Framework. Different types of indicators each contribute different information about the overall food and livelihood security picture. A single indicator or several indicators of a single type (e.g. food availability) is akin to having only one piece of the puzzle. At best one has only a partial picture. For example, knowing that there is plenty of food available says little about food accessibility or utilisation. The more pieces of the puzzles that are put together the more clearly one can identify the complete picture.

Essential indicators to be included in **all** food security and livelihoods assessment are listed in the table below; a more complete version of this matrix can also be found in Appendix 1. This **core set of indicators** is considered to represent the minimum package to be applied across all contexts and assessment types without which the basic FSL analysis will be incomplete. Meanwhile methods for gathering information on each indicator will vary according to the context, assessment timeframe and depth of analysis that is required. A much larger dynamic range of indicators exists for assessing the many dimensions of a population's food insecurity and risks to livelihoods. A number of these are described in the pages of this book and should be incorporated into assessment design as complements to the core set whenever they are found to be useful and relevant.

Table 3: Core food security and livelihoods indicators

	Indicator	Description
LIVELIHOODS	1. Institutional and policy environment	Socio-political context, past crises and conflict, ethnicity, social organization
	2. Vulnerability context	Climate; geography; physical infrastructure; hazards
	3. Livelihood assets	Access to capitals; land tenure, fishery and pasture access arrangements
AVAILABILITY	4. Food stocks	Sufficiency and diversity of food products in markets and households
	5. Food imports	Origin, diversity and availability of food in markets
	6. Market prices	Prices of staple food and basic commodities; variation and trends
ACCESS	7. Food sources	Diversity and seasonality of food sources; changes
	8. Income sources	Diversity and seasonality of income sources; labour migration; debt; changes
	9. Coping strategies	Range of food consumption strategies (adaptive, coping, crisis, survival)
UTILIZATION	10. Dietary diversity	Diversity of foods consumed over a 24 hour period; meal frequency
	11. Malnutrition prevalence	GAM/SAM rates, MUAC screenings, aggravating factors and contextual elements
	12. Water access & availability	Sources, quality, quantity and cost of water
	13. Public health	Incidence and severity of outbreaks; changes in access to health care
	14. Care practices	Prevalence of and changes in breastfeeding; food-sharing practices

A brief description of the most common food availability, access, utilisation and livelihoods indicators follows.

Food availability indicators

Food production, reserves, stocks, imports and exports along with resources necessary for production, such as field and pasture conditions, and opportunities for gathering wild foods provide information about the quantity and quality of the food supply. The existence of well functioning market systems from the international to the local level also influences the food supply and therefore food availability. Food availability indicators are useful for assessing population level food security status.

Food access indicators

Potential and actual income, expenditures, loan and remittance mechanisms as well as trade and market systems provide information about the way food is obtained. Market factors, the price of food and purchasing power related to employment and livelihood opportunities influence the ability to obtain food. In addition, coping strategies can be an important mechanism to meet food needs. Food access indicators are useful for assessing household or individual level food security status.

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Food utilisation indicators

Food consumption, sanitation conditions, and nutritional status, morbidity and mortality provide information about the use of food within the household. Behaviours such as intra-household food distribution, infant and young child feeding practices, food storage and preparation provide information about food utilisation. Food utilisation indicators are useful for assessing household or individual level food security status.

Livelihood indicators

Household assets, sources of income and livelihoods, diversification of income and livelihoods, expenditure and expenditure ratios provide information about livelihoods. Livelihood indicators often provide information about food access and are closely linked to coping strategies.

See Appendix 1 for a summary table of the core food security and livelihoods indicators to be included in all FSL assessments.

2.4 DATA COLLECTION METHODS

Various methods are used to gather information during an FSL assessment on food availability, access, utilisation and livelihood indicators that help answer the questions who, what, when, where and how. There are also many different sources of information from documents to specific community and household members that have important perspectives to help guide decision-making. While each information source provides useful information in its own right, examining the data from many sources is essential to gain an accurate sense of the overall picture.

2.4.1 TRIANGULATION

Triangulation is a method to verify the accuracy of FSL assessment data and reduce bias by cross-checking the information gathered. Triangulation is done by using different data collection methods and obtaining the same or similar information from different sources. Often triangulation also involves different staff members to collect information on the same FSL component. Food access, food utilisation, beliefs and attitudes and other aspects of FSL assessments are difficult to measure and quantify. Much of the information gathered in an FSL assessment is based on observations, opinions and perspectives - subjective data which are all prone to bias. The interpretation of the information and results is also somewhat subjective. The quality and interpretation of the information gathered improves over time with the continuous process of cross-checking. Incorporating triangulation throughout the FSL assessment process ensures a more accurate and complete FSL assessment. (See Appendix 6 for specific guidelines on triangulation).

2.4.2 SECONDARY DATA REVIEW

Secondary data is data that has been collected by ACF or another organization for previous assessments or other purposes. Often a wealth of secondary data exists at the country, regional or local level. Before starting an FSL assessment, identify relevant data that has already been collected by examining existing reports and speaking with key representatives that may have or know of relevant information.

Sources of secondary data include government documents, public health reports on mortality, morbidity, nutritional status and health services and NGO, consulting groups or university reports. When assessing the relevance of secondary data to the current FSL assessment, important questions to ask are: When was the data collected? What may have changed (e.g., natural disasters, increased political strife, migration) between when the data was collected and current conditions?

Who collected the data? How was the data collected? For what purposes was the data collected? How is the original purpose for the data collection similar or different from the FSL assessment objectives? The questions listed above will help determine how to integrate secondary data into the FSL assessment. Even if the secondary data does not measure the exact FSL component or region of interest, secondary data can provide invaluable contextual information that would be too expensive and time consuming to collect during an FSL assessment.

See Appendix 7 for specific guidelines on secondary data collection.

2.4.3 PRIMARY DATA COLLECTION

Primary data is data that is collected for the purposes of the current FSL assessment and is typically collected by ACF staff. However, primary data may be collected in conjunction with or by other organizations when the raw data and results are shared directly with ACF staff. Primary data collection methods commonly used in an FSL assessment are listed below.

Key Informant interviews

Key informant interviews are semi-structured interviews of key informants, people that have knowledge on an important aspect of the FSL assessment. A key informant is often chosen based on his or her position, experience or responsibilities and can provide information about local facts, attitudes and beliefs. Different key informants may have unique perspectives on the current situation. Being flexible enough to follow-up on unexpected information during or after an interview may lead to additional important insights. (See Appendix 8 for guidelines on key informant interviews).

Focus group discussions

Focus groups are small group discussions led by a facilitator who guides the group through a series of questions on a specific topic or series of related topics. Focus group participants are encouraged to interact with each other expressing opinions, relating similarities and differences in experiences and perspectives. The group dynamic encourages participants to respond to one another and generate new ideas or highlight conflicting attitudes that may be missed in a one-on-one interview. Focus group discussions are an effective way to understand the local conception of community and household food security. Focus group participants are selected based on specific characteristics (e.g., gender, age, job, position). Sometimes focus groups will benefit most from similar characteristics (e.g. all women, the same age, caste or religious group) while others from diversity (e.g. different ages with both mother- and daughter -in-laws). Cultural and social norms as well as topics are also important to consider when creating a focus group. (See Appendix 9 for guidelines on focus group discussions).

Household Questionnaires

Household questionnaires are used to gather detailed and quantitative information on a specific topic (e.g., food consumption, diet diversity, coping strategies) or a series of related topics about intra-household functioning or the functioning of individual households as a part of the larger community. Trained interviewers administer a structured questionnaire to relevant household members in a standardized way, with no deviation from the original questions. The desired information determines the relevant household member(s) (e.g., head of household, women with children, all women) to interview. Results are analyzed both statistically and qualitatively. Information from household questionnaires is often analyzed by livelihood group, zone or access group. (See Appendix 10 for specific guidelines on household questionnaires).

2.4.4 PARTICIPATORY AND RAPID APPRAISAL

Participatory and rapid appraisal (PRA) methods are a critical component of FSL assessments and offer rich qualitative data about the environmental and social context. The primary comparison of PRA data is relative in nature, that is how one area, set of community members, or villages compare relatively (not absolutely) to each other. PRA methods are often used together or in a specific sequence to fill out the context more fully. PRA methods can be used at the community level in specific or general groups or the household level to gain information on intra-household functioning. Some PRA methods useful for FSL assessments are listed below. (See Appendix 11 for specific guidelines on developing and implementing the PRA methods listed below).

Transect walk encourages the assessment team to explore an entire area (e.g., a village, farm or market). For example a walk through a village may specifically seek out areas of interest such as agricultural areas, water sources, schools, health centres or hospitals, markets, marginalized dwellings, and abandoned areas. Transect walks include moving along the periphery, walking through the area in zigzags, concentric circles or curves, talking to people along the way, inviting some people to join the walk, asking questions, looking and listening carefully and recording observations.

Direct observation offers valuable insights into the environmental and social context of an area and is particularly useful to gather additional and sensitive information without specifically asking the affected people. The condition of crops, livestock, local surroundings, dwellings, living conditions and interactions between people are some of the information to be collected during a direct observation. Direct observation is an integral component of transect walks and other PRA methods.

Mapping is used to identify specific characteristics in a defined geographical area such as climate, agroecological zones, livelihood zones, trade linkages, location of markets, etc and to represent them spatially. At the micro level, it is often used to identify community characteristics within specific areas and to provide quantitative information where various groups in the community are located. Community members plot out specific aspects of the community by drawing a circle to represent the village and drawing specific areas within the circle to represent the characteristic of interest. Mapping can also be used to identify market or institutional characteristics.

Seasonal Calendars are used to obtain information on traditional planning activities within the community and help to understand seasonal changes in food security within the cycle of one year. Calendars and diagrams identify times of the year during which specific activities (e.g., agricultural like sowing, harvesting, economic, or social) are done. Seasonal fluctuations in farming, hunting, fishing and gathering wild foods help identify time periods (when and for how long) of higher and lower food availability, and types and time periods for substitutions and coping strategies. Community members list all the activities that happen in a year then list the corresponding month(s) or time periods various tasks are achieved during the year. The information is recorded in a calendar or diagram format. Activity Profiles are used to gather information on time requirements for specific household and community activities and are often linked to seasonal calendars (e.g., livelihood activities, food procurement, household responsibilities, infant and young child caring practices, community dynamics, gender differences). Activity profiles can also provide information on how activities change throughout the year or given a specific shock.

Venn Diagrams can be used in institutional analysis to provide an idea of the strength of the relationship between two entities based on the size of the circle and distance from the centre. Venn diagrams can also show interconnections and membership overlap.

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Proportional Piling is used to assess the relative importance of an item or activity. Proportional piling can also be used to assess changes in FSL assessment components such as changes in food or income sources due to seasonality or a specific shock. The relative importance can be graphically illustrated through pie charts or putting objects like stones into specific classifications and provides answers in percentages.

Ranking is used to assess preferences (e.g., for foods, tools, or markets) or to provide information on relative physical, psychological or social conditions. Ranking helps identify priority needs within a community. Community members are asked to rate answers in order of importance. Different types of ranking used in FSL assessments are pair wise ranking, needs ranking and matrix ranking.

Capacity and Vulnerability Analysis is used to assess local perspectives of community capacities and vulnerabilities and to outline local priorities in addressing vulnerabilities. Community members discuss various aspects of livelihoods, ask participants about their capacities (what they have) and vulnerabilities (what they lack or puts strain on capacities) in terms of both skills and resources (e.g., people, time, equipments, inputs).

Approaches, methods and tools used in food security & livelihoods assessments are summarized in the Table below according to the broad context in which they are most usefully applied and the type of analysis to which they can contribute. Specific tools mentioned here are described in detail in the following chapters.

Table 4: Summary tools matrix

	Approaches, methods and tools	Particularly useful for	Context where applicable
1	Nutrition Causal Analysis (NCA)	Underlying causes of malnutrition	Emergency levels of GAM/SAM
2	Livelihood zoning and profiling	Vulnerability context, assets, strategies, comparisons between social groups	Acute, chronic and recovery
3	Key informant interview	Institutional and policy environment, vulnerability context, livelihood strategies, market analysis, rapid assessments, triangulation	Acute, chronic and recovery
4	Focus group discussion	Vulnerability context, assets, strategies, outcomes, triangulation	Acute, chronic and recovery
5	Household questionnaire	Assets, strategies, outcomes, triangulation	Chronic and recovery
6	Seasonal calendar	Vulnerability context, assets, strategies	Acute, chronic and recovery
7	Transect walk	Quality and quantity of natural capital	Acute, chronic and recovery
8	Hazard mapping	Vulnerability context	Acute, chronic and recovery
9	Resource mapping	Existence of shared natural capital	Chronic and recovery
10	Social mapping	Access to services and infrastructure	Chronic and recovery
11	Timelines	Vulnerability context, policy change	Chronic and recovery
12	Wealth ranking	Strategies and assets needed to exit from poverty, relations between social groups	Chronic and recovery
13	Venn diagram	Social capital, social networks, institutional and policy environment	Chronic and recovery
14	Pairwise ranking	Livelihood strategies, assets, hazards	Chronic and recovery
15	Proportional piling	Livelihood strategies, assets, sources of food and income, patterns of expenditure, uses of household production	Chronic and recovery
16	Vulnerability matrix e.g. VCA, SWOT	Vulnerability context, impact of hazards on assets and social groups	Chronic and recovery
17	Emergency Market Mapping and Analysis (EMMA)	Access to markets, outcomes related to food access and availability	Acute
18	Market mapping	Access to markets, outcomes related to food access and availability	Acute, chronic and recovery
19	Terms of trade	Access to markets, outcomes related to food access	Acute, chronic and recovery
20	Mid Upper Arm Circumference (MUAC)	Outcomes related to nutrition status	Acute, chronic and recovery
21	Coping Strategies Index (CSI)	Strategies employed in response to food shortage, outcomes related to food access	Acute, chronic and recovery
22	Household Dietary Diversity Score (HDDS)	Outcomes related to food access and utilisation	Acute, chronic and recovery
23	Individual Dietary Diversity Score (IDDS)	Outcomes related to food access and utilisation	Chronic and recovery
24	Food Consumption Score (FCS)	Outcomes related to food access and utilisation	Chronic and recovery
25	Decision Tree	Relation between assessment findings and appropriate responses	Acute, chronic and recovery

Chapter 3
SAMPLING

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3.1 STEPS TO PLANNING THE ASSESSMENT

Often both the time and human resources needed to undertake assessments in the field is underestimated. Depending on the context, certain processes which seem easy at first later prove exceedingly difficult, and unexpected surprises arise.

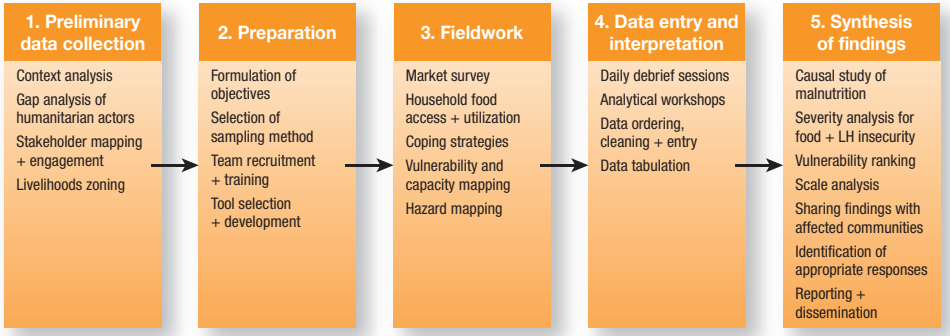
When the assessment timeline and process is poorly communicated or budgets are poorly constructed, enumerator expectations regarding time commitments, pay and travel can lead to conflict and even loss of the survey team. If offices do not have the capacity to internally translate documents into the necessary local languages, advance preparation of tools may be necessary. Both **attention to detail and flexibility** is essential.

The planning process takes time and is **not always linear**, and more often than not, circular. All tasks should be started as soon as possible. Many of the steps will be undertaken concurrently and continuously throughout the assessment with the completion of one task sometimes requiring adaptation of other. For example, the resources available in terms of time, team members and money may impact the assessment scope, objectives and timeline.

Aside from developing the tools and methodology for the FSL assessment, close attention should be paid to planning and carrying out the assessment at all stages in order to best ensure successful collection of data and use of resources. The **five fundamental steps to planning and carrying out an assessment** are shown in the below. Guidelines for these steps are covered below and throughout the following chapters.

Refer to Appendix 12 for a checklist of steps in assessment planning and Appendix 15-16 for a sample daily activity plan and sample protocol on the supervision of team leaders.

Figure 6: Stages of the Assessment Process



3.1.1 PRELIMINARY DATA COLLECTION

1. Gather and Review Secondary Data & Contextual Information
From outset and ongoing throughout assessment

- The assessment team should complete a thorough search and review of secondary data by searching the internet, asking local and international agencies on the ground for all available information, and contacting experts with special knowledge of the context and population.

- Collection of secondary data is one of the first steps in the process as it is necessary to support all stages of the assessment, from defining objectives, to sampling, to writing the report. This process will reveal what information is currently available and where there are gaps, as well as help define the population of concern and focus the objectives of the assessment. Information reliability should be considered as well.

- Important sources of secondary data include: all nutrition and food security surveys specific to the region and country; historical, anthropological and political analysis of the population and region; all up-to-date information on the current crisis including rapid assessment reports, media reports, UN security reports and updates from UNOCHA.

See Appendix 7 for further guidance on secondary data collection and review

2. Conduct Gap Analysis of Humanitarian Actors
From outset in conjunction with stakeholder consultation and ongoing throughout assessment

- Knowing the scale of humanitarian aid deployed in the affected area is necessary to anticipate gaps in coverage and guides the choice about where to conduct the assessment.

- Information about who is working where and doing what should be gathered by carrying out an informal census of aid organizations working in the affected areas. Other sources of information include the local OCHA office, agencies such as FAO and UNICEF, coordination and cluster meetings, ministry meetings, and websites that centralize resources on humanitarian crises such as Relief Web.

3. Identify Local Partners and Engage Stakeholders
From the outset and throughout the assessment and report circulation

- Stakeholder mapping and analysis by sector is usually conducted as part of agency preparedness activities. Building agency knowledge and memory in terms of relationships and understanding the 'lay of the land' will save time when the need arises to conduct an assessment.

- Local, national and international stakeholders, in civil society, academic, government and non-governmental institutions should be engaged at all stages of the assessment, from defining the objectives, to conducting the assessment and in the dissemination of and advocacy around assessment findings.

- Working with various stakeholders necessitates negotiating competing interests, agendas and missions. Participation of stakeholders should be achieved by integrating their various concerns while maintaining the focus of the assessment stated in the objectives and ToR. Engaging these actors both within and across sectors can enhance the resources available for the assessment and increase buy-in to the assessment results so that comprehensive action can be taken.

See Appendix 11 for further guidance on Stakeholder Mapping

4. Prepare a Preliminary Zoning
From outset in conjunction with secondary data review

- Secondary data review and consultation with stakeholders should provide information on differences in geography, agroecology and types of livelihoods present in the region to be surveyed.

- Livelihood zoning may already have been undertaken by other agencies or ACF itself as part of preparedness activities in the region, especially if there are regularly recurring disasters or chronic conflict. Detailed (micro-level) information about the specific area to be surveyed may not be available.

- An area should be zoned by livelihood or other salient criteria prior to carrying out the sampling and cluster selection, and population data for each identified zone collected or estimated. The results of the zoning exercise can then serve as the sampling frame for rapid assessments and surveys intended to be representative of the local range of livelihoods.

3.1.2 PREPARATION

1. Define Objectives & ToR
From outset in conjunction with secondary data review & stakeholder consultation

- Clear objectives and terms of reference will be necessary to communicate the purpose and necessity of the assessment to the survey team, local authorities, respondents and donors.

- When possible, objectives can be co-created and adapted through transparent consultations with stakeholders in order to increase their buy-in to the assessment process and results.

- Clearly stated objectives and ToR can serve as a 'contract' or guide to focus conflicting stakeholder agendas. Staying focused on the stated objectives saves time and resources and helps ensure data quality by limiting the data collection to meet the immediate needs of the assessment.

2. Develop Assessment Timeline
In the initial stages of defining objectives and ToR

- Exact timing of the assessment should be coordinated with local leaders and authorities.

- Potential conflicts with timeline and daily visits should be considered including transportation issues and road conditions, rainy season, harvest times, distribution schedules, market schedules.

- Depending on the tools and the sample size, implementation times will vary, however ample time must be given to preparation, tool development and recruitment (2 weeks to 1 month), training of enumerators and pilot testing (1 week), data analysis and report writing (~ 1 month).

3. Determine Resources Needed
After defining objectives and timeline in preparation for budget development

- A list of all logistical, human and material resources should be made and reviewed by a number of team members to prevent omissions. Common costs include: Assessment team member pay, per-diem and lodging, training costs (space, meals, lodging), vehicles,fuel, translation needs.

- Involvement of local stakeholders and international partners can lead to their committing essential resources to the assessment. This can result in additional buy-in, local participation and interest in the assessment process and results. Care should be taken so as to avoid conflicts of interest with contributions and co-opting of assessment objectives.

- Larger FSL assessments will demand many people's involvement including: administrators and logisticians; enumerators, interviewers and specialists, drivers; translators for international staff, questionnaires, training and data; team leaders and or monitors, and data encoders.

4. Develop Budget
As soon as objectives, ToR and needs are determined

- The budget will primarily be determined by the tools and sampling methods employed which will in turn inform the expertise needed, number of survey team members, vehicles and other equipment/resources needed.

- Budgets should be exhaustive in order that lack of funding does not hold up the process. Past NGO practices in the area should be researched to determine local team members' expectations regarding remuneration and per diems.

5. Sampling and Cluster Selection

- Sampling and cluster selection should be done as soon as possible as this will determine sites to be visited which may impact the assessment needs regarding team members' ability to travel, their place of origin and their language capacities.

6. Develop Tools, Ensure Translation and Prepare Supplies

- Tool selection and development should be started as soon as objectives for the assessment are defined, as the process is time-consuming yet critical to the success of the fieldwork. 2 weeks to 1 month may be required. Appropriate time should be budgeted to do justice to this process.

- Skilled facilitators and translators should be identified early on for the development of tools that require the collection of information from local communities to develop indices and thresholds. These facilitators will be needed prior to the launch of the fieldwork to assist in leading focus groups and consulting key informants.

- Steps should be taken early on to ensure timely translation into local languages of all training materials, objectives, protocols and tools/questionnaires. This includes both locating translators and including these needs in the budget. It is standard practice to back-translate questionnaires and tools into the language they were developed in to ensure the integrity of the translation.

- Sometimes translation duties are handed off to staff already overwhelmed by their workload or those incapable of providing technically sound translations. This may lead to translations not reflecting what the tools are seeking to measure or a failure to receive translations in time.

- Sufficient human resources, material supplies and logistical support should be arranged well in advance. Pay special attention to the number of vehicles needed to transport teams. Multiple team members should cross-check supply list to ensure nothing is left out prior to budgeting.

7. Select Assessment Team
To begin as soon as possible after determining how many team members are needed

- Local institutions, such as universities and statistics/research agencies, and civil society organizations may be a good source for obtaining qualified team members. Youth should be especially considered as they are often energetic, eager to learn new skills and willing to participate.

- When selecting and composing teams it is essential to consider local culture and crisis conditions with regards to gender and ethnic/linguistic groups. Team members should be able to speak the local dialects. In conducting household interviews gender dynamics should be considered with regards to using men or women as enumerators.

- Team members should be given the objectives, timeline and work-plan of the assessment as soon as possible and their commitment should be ensured. If outstanding issues such as remuneration, travel demands, sites to be visited or the timeline are left unstated until the training, some team members may opt out, thus necessitating a last minute scramble to find & train additional people.

- The number of team members needed and team composition will be determined by the assessment tools, timeline, budget and resources including transportation. As a general rule most tools (including household questionnaires, focus group discussions etc) require 2 team members to administer - one to ask questions and another to record and encode answers/notes.

8. Train Assessment Team
4-6 days just prior to the assessment (includes 2 days of field testing, see below)

- Training of the assessment team can be carried out over 4-6 days depending on the scope of the assessment. Two days of the training includes the piloting and revision of the tools.

- Ideally the training will cover the following: an overview of the conceptual frameworks underpinning the survey; clarifying assessment objectives and timeline; clarifying and verifying commitments to the roles and responsibilities of survey team members (including travel and remuneration agreements as necessary); extensive discussion of the assessment tools to ensure utmost clarity of questions and integrity of translation; training on conducting and recording household questionnaires, focus group discussions and key informant interviews as needed with role-plays.

- Trainings go more smoothly when held in accordance with cultural norms and past practices in the area with regards to venues, breaks, start-stop times. Diversity of tasks between plenary sessions, group break out sessions and activities also ensures energy among participants especially in large groups.

9. Pilot Test Questionnaires
2 days at the end of the training

- All assessment tools and sampling procedures should be tested in the field by the assessment teams by visiting one or two sites over a two day period at the end of the training. The field testing will help uncover problems with specific questions, test household selection procedures and give the teams time to practice and receive constructive criticism by the assessment leaders.

- Time should be allocated so that sampling procedures can be tested; each survey team member has time to administer their tools being sure to leave time at the end of each day for debriefings.

- After pilot-testing, questionnaires and other tools will need to be revised and possible issues in translation will need correcting. Be sure to wait until after pilot testing to copy questionnaires and leave time for this process.

3.1.3 FIELD IMPLEMENTATION

1. Establish Protocols & Daily Plans for Field Work, Management & Monitoring
As soon as possible in order to inform team members of their duties and obtain their feedback and commitment

- In calculating the capacity of the teams each day, be sure to consider the time needed to travel to the field sites taking into consideration security protocols for appropriate travel times, road access and local customs, holidays etc (e.g. Friday Prayer in Muslim countries).

- It is often useful to appoint a leader/supervisor for each team to ensure appropriate materials are brought each day (copied questionnaires, pencils, maps, household lists etc) and that all protocols are followed correctly (sampling procedures, coding of questionnaires etc).

- Supervisors should inform the appropriate local authorities before teams arrive on site as well as also check in with teams throughout the day to ensure work is being done appropriately, remaining vigilant that teams remain aware and engaged as the assessment progresses.

- Time should be allocated at the end of each day for teams to thoroughly check all data and debrief from the day's work.

- It is essential to not overwork teams. While they might be willing to work two weeks straight without a day off this is likely to compromise the quality of their work. Establishing appropriate start and stop times each day will also help prevent fatigue among the team members.

See Appendix 15 and 16

2. Adapt Methodology to Constraints Encountered

- Although every effort is made to anticipate logistical and security constraints on the field ahead of time, some unknowns are certain to arise once the fieldwork is underway (e.g. rains/landslides barring road access; sudden worsening of security context shortening the workday; unexpected migration of clusters to seasonal pastures). Flexibility is required.

- Security of team members should remain the paramount concern at all times.

- All adaptations to the original cluster & household selection should strive to minimize bias and follow the original objectives. Where methodological changes are made they should be reported under the 'Methods' section of the report; size and direction of bias estimated and used to inform interpretation of findings.

- Keep in mind that a certain amount of 'learning' will take place among team members over the course of the fieldwork as they become more familiar with the assessment tools, leading to greater efficiency and time savings.

3.1.4 DATA ENTRY AND INTERPRETATION

1. Data Entry and Management
To be done concurrently with the data collection

- The most efficient way to manage the data collected is to ensure adequate time and human capacity for the data to be processed immediately upon returning from the day's field work. Data encoders and computers should be available so that quantitative data can be entered on a daily basis so that it will be available for analysis immediately following the survey. This will also help ensure any recording errors or other problems which arise are caught early on in data collection.

- Any qualitative data should be reviewed and written up by team members either in the field or the same night so that memory of the data is not lost. Translators will need to be available to translate the qualitative data for analysis.

- Time should be allocated for both team members and supervisors to review and clean the data on a daily basis prior to processing.

2. Analytical Workshop
At the end of the fieldwork

- A post-fieldwork analytical workshop involving all team members is vital for highlighting key information, bringing out insights that may not have been captured on paper and supporting the data cleaning process. Qualitative data is best interpreted via daily debrief sessions and workshops with results tabulated wherever possible.

- Formally debriefing the team provides an opportunity to recognize individual members' contribution to the work and consider their personal analysis of the context.

3.1.5 SYNTHESIS OF FINDINGS

1. Data Analysis and Report Writing
2-4 weeks after data is processed

- After all data has been processed the final stages of analysis, interpretation and report writing can begin. The time needed for this process varies dramatically by assessment depending on the amount of data collected and the team involved though 2-4 weeks is often a reasonable amount of time to deliver the initial findings and a first draft of the report.

2. Sharing Findings and Identifying Responses
Following the synthesis of findings

- Preliminary findings should be shared with local stakeholders in each of the major zones visited to build consensus on priority needs and responses. This step is vital for formulating recommendations that are in line with community priorities and should be undertaken prior to finalizing the report.

- Care must be taken not to create false expectations about the capacity of the agency to intervene unless it is certain that funding has been secured.

- Data analysis and stakeholder feedback will guide the definition of appropriate responses taking into account local capacities and resources. Consider the broad political, economic and security environment and the quality of physical infrastructure as it will determine the level of access to vulnerable and marginalized groups.

- Where appropriate responses are identified that fall outside of the ACF mandate, these should be included in the report for dissemination and lobby with other actors.

3. Reporting and Disseminating Results

- Finally, care should be taken to disseminate final results to a variety of stakeholders so that information is broadly shared, e.g. affected communities, local and regional authorities, other humanitarian actors, donors and coordination forums. Translation to the major local language may need to be arranged.

3.2 INTRODUCTION TO SAMPLING

In undertaking food security and livelihoods assessments, it is not possible to collect information from every location or individual/household in the population concerned by the assessment, the **sample population**. Only in very rare cases will a survey be exhaustive and collect data from every unit in the population. Therefore, it is necessary to select a limited number of households or individuals, whatever the determined **sampling unit** may be, from whom data will be collected. This **sample** is drawn from the established **sampling frame**, utilizing rigorous methods and awareness

of potential bias, in order to best ensure that the assessment results will be able to be generalized to the population as a whole.

In designing your sampling methods it is essential to consider issues of bias and work to minimize its effect as bias drastically undermines how serious the assessment results are taken and thus acted upon. An in depth presentation on bias is found in Appendix 13 and its consideration is absolutely essential. The credibility of data collected in the assessment and the assessment's capacity to convince donors of community needs and inform program direction is ultimately dependant on sound sampling methodology. It is essential to present a clear and detailed explanation of the methodology in the report to ensure integrity of the results and respect for them among partners and donors. Strong understanding of sampling methods and the ability to present them logically will help ensure the integrity of the assessment results and protect from criticism.

While survey and assessment sampling methodology is a large field in itself and difficult to master, the following discussion will highlight key considerations necessary for one to keep at the forefront of the design process to ensure the integrity of the assessments goals, reliability and applicability in the field. The definitions below serve as an introduction to sampling and are essential to understand both in designing the assessment and in writing the methodology section of the report.

DEFINITIONS

Sampling, simply put, is the process of selecting part of a whole in cases where exhaustive assessments are unpractical or impossible. Sampling the part is done in such a way as to accurately represent the whole. A key question to always keep in mind is: "Who is being included and who is potentially being excluded in light of our sampling methodology?"

The sample or target population is the whole population from which a representative sample is drawn. Common examples of sample or target populations in food security and livelihoods surveys include the entire population of specific geographic areas such as a nation, province, region or town. Refugee or IDP camps may also be defined as sampling populations. The possibilities are endless but must be well-defined prior to drawing the sample and undertaking the survey.

The sampling frame is an exhaustive list of population elements or units or a geographical boundary which includes all elements of the sample population to whom the assessment is to be generalized, and from which a sample is drawn. In strictly controlled refugee camps or villages with defined boundaries and little in–out migration, camp lists may be exhaustive and provide a useful sampling frame. In more fluid situations where population elements are ever-changing or are not known, geographic areas may serve as the sampling frame.

Sampling bias is the tendency of a sample to exclude some members of the sampling universe and over-represent others. A common source of bias in food security and livelihoods assessments, especially in emergency and displacement contexts, occurs when the sampling frame from which the sample is drawn is not inclusive of the whole sample population to whom the assessment refers. For example, an assessment which has the goal of understanding the household food security of IDP households in a conflict-affected area may be strongly biased if insecure areas where IDPs are found are not sampled or if only camp-based IDPs are sampled, with those living in host families being left out. In such cases the sample population may need to be reconsidered, or limitations must be clearly spelled out and interpreted in the report. Again the question to consider is "Who is being included and who is potentially being excluded in light of our sampling methodology?"

The sampling unit is the element or unit selected in sampling which the data refers to. Most food security and livelihoods indicators use 'households' as the sampling unit, while nutrition surveys may use children under 5 years of age especially in anthropometric surveys. Thus, in collecting data on income, assets and coping strategies to determine household food security, individual household units are sampled from all the households in the sample population.

See Appendix 14 for sample protocols for household selection and Appendix 29 for a sample write-up of assessment methodology.

3.3 SAMPLING METHODS

The types of sampling methodologies which can be utilized in the assessment will be driven not only by the goals of the assessment, but also by constraints including time, resources, access and security. In general, sampling methods can be grouped into two camps, Non-Probability and Probability Sampling. Because of the various types of data collected in food security and livelihoods assessments, as well as constraints encountered in crisis and development contexts, methodologies will often utilize both probability and non-probability methods in selecting a sample.

3.3.1 NON-PROBABILITY SAMPLING

Non-Probability Sampling is any sampling method in which some units have no chance of being selected or if the probability of selection is unknown. This is commonly used in qualitative methodologies including selecting key informants, organizing focus groups or interviewing of traders in markets. **Purposive**, **Convenience and Snowball** sampling methods are the most common non-probability sampling methods. This method often involves the selective judgment of the enumerator or community leaders and has a high potential of introducing bias into the results.

1. Purposive – In Purposive sampling the researchers decide which particular groups or individuals to interview. Attempts are made to minimize bias and select a sample which best represents the population under study. Integrating this method at some level of the sampling process is common in FSL assessments and it is thus important to be acutely aware of potential bias in selection as this can lead to criticism of the whole assessment. Purposive sampling can be combined with other random approaches, for example, by specifying purposefully a number of communities or clusters to be visited, but then selecting respondents within the clusters randomly.

2. Convenience – In convenience sampling respondents are chosen because they are accessible or "convenient." This results in a great deal of bias due to the diverse differences, especially with regards to geographic, political and social isolation, between individuals and communities which are easily accessible and those who are not.

3. Snowball – Snowball sampling resembles the process of taking a small ball of snow and rolling it to gather more and more snow along the way until it becomes a big ball. Key informants are often sought out due to their specific knowledge of the situation. These first informants then point the researcher to other possible informants. One may simply ask whether the respondents knows anyone else who has experience with the same issues and provide useful information. In this way new informants are discovered and the snowball grows.

See Table below for an example of rapid assessment sampling methods relying primarily on purposive sampling.

Table 5: Example of sampling methods for a joint FSL and nutrition assessment in Jebel Marra, Sudan

Level	Factors considered for sampling	Sampling intensity	Comments
Zones within Jebel Marra	Security/ access & current humanitarian coverage	12	As defined in humanitarian coverage map (Oct 07)
(Groups of) communities	***PURPOSIVE*** selection (emergency level then representativeness - livelihood focus); security/ access	36	Depending on data collected at zone level (mapping, SSI)
Groups of household	***PURPOSIVE***: depending on information to be collected during FGD	4	1 general FGD + 1 livelihood FGD + 1 women FGD (incl. NUT/ health) + 1 WaSH
Key-informants	***PURPOSIVE***: depending on information to be collected during SSI	Various	None
Children	***RANDOM***	30/ settlement	Refer to Nut assessment

(1) Locations are chosen to include as much variation as possible; the wealth groups are self-defined by the community; interviews are conducted with representatives of particular wealth groups. The interview then refers to a 'typical' household in that group.

(2) Sampling procedures involve a representative range of affected population groups or livelihood groupings in the selection of key informants (are they representative of all groups?) and the composition of focus or other discussion groups.

3.3.2 PROBABILITY SAMPLING

Probability sampling, also known as 'random' or representative sampling, is possible when every sampling unit has a chance of being selected, the probability of being selected is known and the selection of the sample is made using random methods. Both selections within a geographical area and the households or individuals within a given location should be made randomly. Random sampling is preferred to non-random methods as it is the only one which theoretically has the potential to represent the entire sampling frame.

Probability sampling is used especially in cases where quantitative data is collected and statistical analysis is called for. In the food security and livelihood assessment this would pertain to any use of household questionnaires or collection of data at the household level, which will be generalized to the larger sample population. Possible methods include **Simple Random Sampling, Systematic Sampling, Stratified Sampling, Probability Proportional to Size Sampling, Spatial Sampling** and **Cluster or Multistage Sampling**.

1. Simple Random Sampling – This method is used when a list of every household or individual is available. Respondents are selected randomly from the whole list using a random number table. It is equivalent to putting all names in a hat and selecting one at a time at random. In contexts where FSL assessments are undertaken it is very rare to have reliable lists available and thus this approach is not often used.

2. Systematic Sampling – This method is often used when there is a list of the households or, where such lists do not exist, the population is geographically concentrated and dwellings are arranged in a regular geometric pattern. This is the most common sampling method used to select households within a cluster and is often employed in camp situations and in urban contexts. After a first household is selected at random, the following households are visited 'systematically' using a "sampling interval" determined by dividing the total number of households by the number needed to give an adequate sample. For example, if 400 households are on a list, and 20 need to be interviewed, the first step is to choose the first household at random using a random number table or other method – let us consider the choice of # 220. Because 400 divided by 20 equals 20, our sampling interval will be 20. We then select every 20th household starting from # 220; 220, 240, 260 etc, continuing at the beginning of the list when the end is reached until we arrive at our target number, 20, and we have returned to our start point.

The 'spin the pen method' also falls under the category of systematic sampling and is one of the most common sampling methods used in the field where lists are often unavailable. This is explained in depth in Appendix 14.

3. Stratified Sampling – When the population being considered contains distinct strata or sub-groups, these can be sampled independently. This allows references about specific sub-groups to be draw, which would be difficult if the population was sampled as a whole. This method is especially useful in FSL assessments where livelihoods or regional groups should be looked at in isolation for the purposes of understanding nuances specific to these groups and to compare them. In order to maintain statistical efficiency of the sample as a whole, sub-groups should be sampled proportionate to size, if population figures are known.

4. Probability Proportional to Size Sampling can be done in a number of ways, but ultimately seeks to ensure that the probability of each sampling unit to be selected is set to be proportional to its size. This method is often employed in the first stage of cluster sampling where a number of clusters are to be selected from villages or camps with different population sizes. An example from Wikipedia on the site's 'Sampling' (statistics) page is as follows, with the 6 schools representing the villages from which 3 "clusters" need to be selected.

"Suppose we have six schools with populations of 150, 180, 200, 220, 260, and 490 students respectively (total 1500 students), and we want to use student population as the basis for a PPS sample of size three. To do this, we could allocate the first school numbers 1 to 150, the second school 151 to 330 (= 150 + 180), the third school 331 to 530, and so on to the last school (1011 to 1500)." If three schools or "clusters" are to be chosen then the sampling interval will be 500 (1500/3 see above). Next a random start number between 1 and 1500 is chosen. The school where this number falls represents the first cluster and the subsequent two are chosen by counting through the school populations by multiples of 500. "If our random start was 137, we would select the schools which have been allocated numbers 137, 637, and 1137, e.g. the first, fourth, and sixth schools."

5. Two Stage Cluster Sampling – This is the most common sampling method used in FSL assessments. In the first stage of the process the population is divided into distinct units which are often defined by administrative or spatial boundaries. This commonly manifests as a list of villages with varied populations. In contexts of displacement where refugees or IDPs are spread over a large area the list may be composed of camps or 'evacuation centres.' Clusters are then randomly selected with the probability of selection being proportional to size to ensure each person in the whole area has an equal chance of being selected. After clusters are selected, a given number of respondents are chosen at random from each cluster. Where no population figures exist, figures must be estimated or area maps may be divided into sections and assigned weights.

The sample size of the assessment will determine how many clusters are selected and how many respondents are selected per cluster. Generally it is better from a statistical standpoint to design the assessment to reach the required sample size by selecting a higher number of clusters and fewer respondents per cluster. For example, in an assessment demanding a sample size of 300, selecting 30 clusters with 10 households each or 20 clusters with 15 households each is better than using 10 clusters with 30 respondents in each cluster. The design will also depend on factors such as the assessment timeline, travel time, size of assessment team and how long the tools take to administer.

While the statistical demands of anthropometric surveys often demand a specific ratio of clusters (e.g. 30 clusters x 30 children per cluster, 60 clusters x 20 children, etc.) household data collected in FSL surveys will often require a lower sample size with 10 households selected per cluster often being recognized as acceptable. Thus, if the total sample size for a FSL questionnaire needs to be 150 households, then 15 clusters would be selected with 10 respondents per cluster. Guidelines on conducting nutrition surveys as well as WFP's EFSA handbook are good sources to consult in developing cluster sampling designs.

See Table on next page for a summary of the key sampling methods discussed above.

Table 6: Summary of sampling methods

Type of Sampling	Situations in Which to be Utilized	Key Concerns
Non-Probability	• Qualitative Tools typical of FSL assessments; Used predominantly in initial/rapid assessments where time, budget or access is limited • These methods are often combined and triangulated with other methods including random selection	• Triangulation of data, collecting data from multiple methods, helps to ensure confidence in results • Whether sample represents the population is unknown and generalizations are subjective • Key questions to consider for all non-probability methods: Who is being left out? How do those being selected differ from those not being selected? How do these differences potentially affect the indicators of concern?
Purposive	• Often used where time and resources are limited allowing only certain population elements to be considered in the assessment • Useful where evidence suggests FSL risks exist only in certain population sub-groups • Useful in both rapid/initial and comprehensive FSL assessments	• Good purposive sampling needs thorough knowledge of the population and context to consider all sub-groups. • Diversity of population should be captured • Can be combined with random selection; selecting livelihood groups or geographic regions of concern purposively and selecting households or respondents randomly
Convenience	• Access is limited due to crisis context or due to the isolation of certain individuals or communities • Useful in initial and rapid assessments and in gathering information for planning FSL assessment and tool design	• Often incurs huge selection bias and thus results often cannot be generalized to the greater population of concern
Snowball	• Useful when the population of interest is hidden and or difficult to locate, due to low prevalence or possible stigmatization	• Snowball sampling carries a high risk for bias as the respondents often know each other and thus may belong to a specific population sub-group,
Probability Sampling	• Collecting quantitative data-especially in in-depth assessments where findings are generalized to larger populations • Used when unbiased estimates with known precision are needed	• Sufficient information on population numbers and/or location must exist or be constructed • All areas, households and individuals in the population must be accessible • Sufficient time and resources must exist that all selected respondents can be visited
Random Sampling • Simple Random • Systematic • Stratified • Spatial • Population Proportional to Size • Cluster, • Multi-Stage Sampling	• To be used alone or in conjunction with non-probability methods. In pure random sampling both zones/clusters and households or individuals will be selected randomly. In FSL assessments, livelihood zones or geographic areas may be purposively selected as a first step • Cluster or special sampling can be utilized in the absence of lists as long as cluster selection or chosen areas do not exclude population elements. Cluster sampling helps maintain random selection while limiting the geographi • Spread of the selected population, thus saving time & resources. • Random selection methods may be utilized after stratifying the population by distinct elements: geographic or livelihood zones, ethnic group etc.	• The most common approach used in the contexts in which FSL assessments are likely to be carried out involves a combination of purposive and random sampling, often utilizing both cluster sampling at the first stage of selection and then systematic sampling to select specific households. • Crisis contexts are often very complex and creativity in approaches and their combination is essential. Hidden populations and those dispersed throughout large areas are especially challenging including IDPs and urban displacement. • All bias incurred should be explicitly stated in the methods section of report.

Table Design Adapted from WFP EFSA Handbook

3.4 DETERMINING SAMPLE SIZE

The **sample size** of the assessment is defined as the number of sampling units, usually households, needed to give the required level of precision. Determining sample sizes for FSL assessments is notas straightforward as for nutrition surveys – which follow a general rule of collecting data on 900 children – due to the diversity of indicators involved and the use of purposive methods in many cases.

For purposive sampling, the accepted rule for household food security and livelihood assessments is to sample between 50 and 150 households for each reporting domain the assessment wishes to draw conclusions on. The goal in selecting the locations to visit within the assessment area is to **capture the diversity**. If the area in question is homogeneous this will require visiting fewer sites, while heterogeneous areas demand visiting more sites. In each site it is optimal to visit around 10 households.

For random sampling, it is recommended that between 150 and 250 households (or other sampling units) are visited for each reporting group to be compared – e.g. geographic area, livelihood group etc. In cluster sampling approaches, the sample should reach the upper limit of this continuum due to the design effect incurred in multi-stage sampling.

3.5 BIAS CONSIDERATIONS

Complex emergencies and other crisis are complicated when it comes to sampling. Each situation demands creativity and flexibility. A rapid onset emergency which demands a rapid assessment will have different constraints than that of an assessment carried out in a more stable context. IDP populations which are spread out in a large geographic area, hiding in forests or housed with host-families in villages or in urban centres present difficulties not encountered in some refugee camps which are well organized and managed. Where populations are highly mobile or security is unpredictable, it is highly likely that sampling will be **biased** in some way or another. In each case it is vital to be aware of potential bias and do everything possible to minimize it while also showing awareness of these constraints in the write up of the assessment methodology and analysis of the results.

In random sampling in each context the most important question to consider is whether **all members of the sampling population have an equal chance of being selected**, or a chance which is proportional to size if this method is used. In purposive sampling, it is necessary to capture all the diversity of the population so that no group is left out of the assessment.

Trying to uncover bias and minimizing it demands one to be critical of one's sampling methods and continuously seek to uncover the faults in the process by asking who may be left out of the assessment or over represented.

Selection Bias is most prevalent where non-probability sampling, such as purposive or convenience sampling, is used. Random sampling methods may also incur bias where certain communities are inadvertently left out of or not proportionally represented in the first stage of cluster selection, or when some households have no chance of being selected in the household selection procedures being utilized. For example, when household lists are used to select households in a rapidly changing situation or one which is insecure or the population is highly mobile. In such cases household lists provided by authorities are often not complete and may even exclude the most vulnerable.

It is important to remember that if sampling procedures cannot be carried out rigorously that the data gathered does not represent the population as a whole but rather the population that was surveyed. By extrapolation and analysis, results are then referred to the larger population taking into consideration the potential sampling bias.

Bias in selecting the sample is only one type of bias incurred in the assessment. Appendix 13 is adapted from the SMART protocols and gives an exhaustive discussion of bias, which is essential to consider especially with regard to administering the questionnaires and other tools.

Chapter 4
CORE COMPONENTS OF A FSL ASSESSMENT

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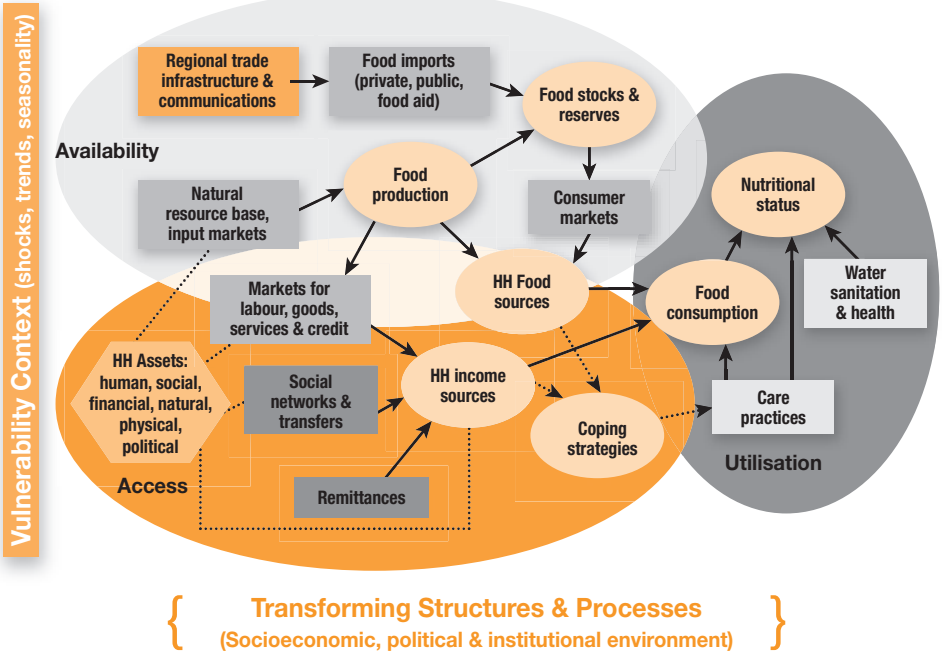
The core components of a food security and livelihoods assessment are:
1. Context analysis
2. Livelihood groups and zones
3. Markets and price trends
4. Food availability
5. Food access
6. Food consumption
7. Food utilisation and care practices
8. Coping strategies
9. Participatory vulnerability and capacity analysis

These should serve as the **standard basis** of all FSL assessments. ACF food security and livelihoods assessment approaches rely on a common logical framework built around the 9 core components whose analysis allows us to meet the broad objectives of a FSL assessment set out in section 2.1. Each core component and its associated set of indicators needs to be addressed in some form so as to ensure a minimal degree of shared understanding and permit comparative analysis across settings. The depth of analysis on each component will vary depending on the type of assessment being carried out and its specific objectives. The sequencing and relationships between each of the core components and associated indicators are illustrated graphically in the Figure below.

Figure 7: Sequential framework of core components



Adapted from WFP 2009: World Hunger Series, Hunger and Markets.

4.1 CONTEXT ANALYSIS

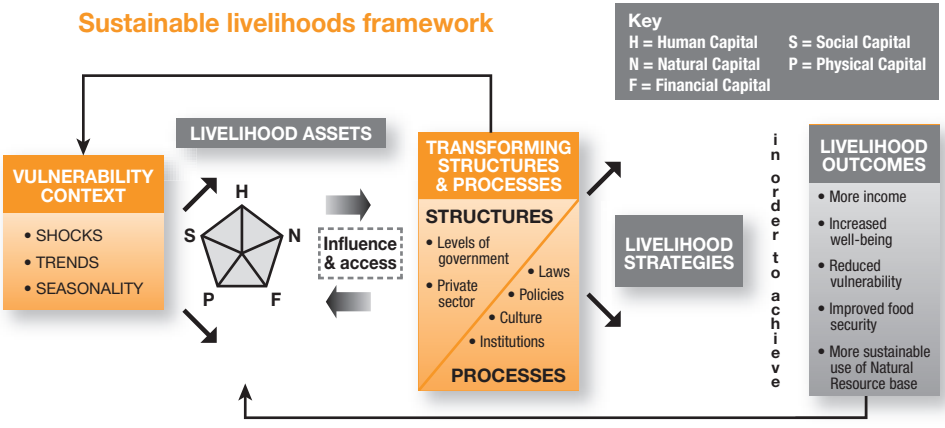
Before conducting the survey, an exploratory study of the region is required in order to have a broad understanding of the area to be surveyed. This includes at minimum a general investigation of the crisis context, its historical underpinnings and a snapshot of the current situation on the ground.

An analysis of the broad historical, political, socioeconomic and cultural context underlying a crisis or conflict forms an integral part of the ACF conceptual approach to FSL assessments. The socioeconomic and political environment is a basic cause of malnutrition, and makes up the Transforming Structures & Processes which influence access to livelihood assets and shape livelihood strategies and outcomes. The socioeconomic, political and physical environment also affects the shocks, trends and seasonality that make up the broad **Vulnerability Context**. This information is needed to provide the contextual backdrop for the food security and livelihood analysis that follows and to inform the interpretation of results.

Context analysis is needed to understand:

- The underlying factors that have resulted in vulnerability of the population e.g. political and economic context, recurrent exposure to floods or drought, degradation of the physical environment, high HIV/AIDS prevalence, weak governance structures
- Which population groups are marginalized and made more vulnerable by virtue of their religion, ethnicity, socioeconomic status, political affiliation or gender
- The geographic area and demographic profile of the population affected by the crisis
- The nature and scope of the crisis
- Its main humanitarian impacts, in particular health and nutrition
- The local and national response capacity as well as who are the main actors on the ground
- Security and stability of the situation; constraints on physical movement and access, both for the population and aid workers

The Sustainable Livelihoods Framework serves as the main analytical tool guiding this preliminary phase of data collection (see highlighted portions of the Figure below).



Socio-economic, political and institutional environment:
The key institutions and policies affecting economic and political life are identified and their major impacts on people described; a sociocultural and demographic profile of the population elaborated including breakdown by major ethnicity and geographic area; and the political organization and presence of formal and informal social networks defined. The social organization of the local landscape is assessed to understand community capacity for response, collaboration and partnership in the relief effort (see also section 4.9). Together these aspects make up the Transforming Structures and Processes.

Physical, environmental, security considerations:
The physical environment and agro-ecological profile of the region should be identified, including climate trends, geography and significant environmental processes such as drought, deforestation or desertification and their impacts on livelihoods. Major hazards such as drought, floods, civil conflict and economic shock are identified and their seasonality, frequency of occurrence, severity and contribution to underlying vulnerability analyzed (see also section 4.9). Together these aspects make up the prevailing Vulnerability Context.

Current crisis:
The geographic area and the affected populations (displaced, refugee, host, etc.) should be defined, including the location of the different populations and their numbers. The source and nature of the crisis should be identified.

Humanitarian situation:
Basic data on the prevailing humanitarian situation (nutrition, food, shelter, health, water and sanitation) is gathered. Then, information on the range of actors present is gathered by carrying out an informal census of aid organizations and UN agencies working in the affected areas and identifying who does what, when, how, for whom, and where. Knowing the type and scale of deployed aid leads to the next step: anticipating potential gaps in coverage in a so-called gap analysis. The gap analysis helps guide the choice about where to conduct the assessment and later, where to intervene. The security of the affected population as well as questions of physical access of relief workers and commodities will guide the development of the assessment methodology.

Methods
Contextual information is gathered in **a review of secondary data**, including websites and online databases, official government records, UN/ NGO joint assessments, evaluation reports. Much of this information can be gathered ahead of time. It should already exist on the mission and can be shared by the coordination team and FSL department onsite.

Knowledgeable **key informants**, experts and sectoral professionals should be consulted. In certain countries, national research institutes and universities will serve as important resources. In emergencies, often the best informants with the most up-to-date information are those serving directly on the ground: local organizations, NGOs, UN agencies, military officers (with caution), etc. The ACF Head of Mission and other members of the team should be consulted first.

Profiling and **mapping institutions** is done to gather information on the presence of and relationships between community-based organizations, religious institutions, trade and agricultural organizations, government agencies, etc. operating in the area. See Appendix 11.

Information will be largely **qualitative** (narrative) but will also include statistical data e.g. demographic and epidemiological data, maps and other types of quantitative info.

See table on the next page for a summary of key issues and suggested methods and sources of information.

Table 7: Contextual information checklist

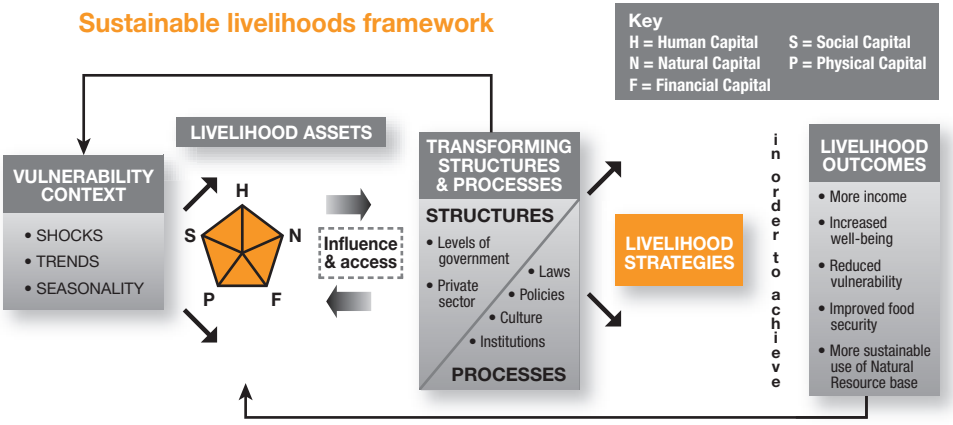
Area of analysis	Key issues to consider	Methods/sources
Physical and Environmental	• Climate, geography, environment • Physical infrastructure • Prevalence of natural disasters • Drought, deforestation, desertification and other degradation of the natural resource base • Conflict related to accessing natural resources e.g. land, water, forests • Seasonality	*Secondary information sources*: • Government documents • Official and other statistics • Maps • Reports published by national and international agencies • Project evaluations • Joint assessment reports • Websites • Local organizations *Key informant sources:* • Government representatives • UN workers, NGO staff • Local authorities • Traditional or religious leaders • Representatives of local NGO or civil society organization • Teachers, researchers, health professionals, WES professionals, agronomists and other food security professionals • Youth groups • Local media
Economic	• Major and minor production systems e.g. agriculture, livestock, fisheries • Sources of income, remittances • Seasonal migration • Markets	
Social, political and demographic	• Socio-political context • Past crises and conflict • Demographic breakdown • Ethnic groups, intra-group linkages • Social organization, local leadership and authority • Formal and informal social networks	
Institutional	• Existing institutions (public, CBOs, NGOs, religious, trade, etc.) • Policies and law • Nature of institutional programming • Partnerships and collaboration • Relationships with government and communities • Impacts on economic and political life	
Current crisis	• Nature and location of the current crisis • Underlying factors related to the crisis • Duration/ frequency • Security of affected population • Displacement • Numbers affected • Numbers displaced	
Humanitarian	• Health and disease • Nutritional status • Shelter • Availability of and access to food • Access to water and sanitation • Physical access to the affected area(s) • Presence and type of activity of other actors	

4.2 LIVELIHOODS GROUPS & ZONES

A **livelihood** comprises the capabilities, comprised of assets (including both material and social resources) and strategies used by a household for means of living. A household's livelihood is secure when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and productive asset base. Livelihood assets such as livestock, forest resources or financial credit in combination with broad structures and processes largely determine the types of livelihood strategies that households will undertake.

Profiles of livelihoods are constructed early on in the stage of secondary data review and later refined with primary data. The predominant systems of production in the affected areas such as agriculture, livestock, fisheries and mining are identified and their relationship to the agro-ecological, political and security landscape defined. Livelihood profiles are constructed using information on livelihood assets as well as key hazards and sources of vulnerability linked to livelihoods. The section which follows describes an iterative process that is initiated before the field portion of the assessment gets underway, refined with primary data and only completed in the final analysis phase.

See the highlighted portions of the Sustainable Livelihoods Framework below.



4.2.1 DEFINING LIVELIHOOD GROUPS

A **livelihood group** is a collection of people who share the same food and income sources, share access to the same livelihood assets and are subject to similar risks.

Examples of livelihood groups include small-scale fishers, agropastoralists, landless casual labourers and traders. **Livelihood portfolios** of individual households can be complex and include two or three main activities, such as subsistence rice cultivation + inland fishing, fishing + crabbing + small livestock-raising, or casual labour + charcoal production.

Sometimes, livelihood activities correlate closely with location. This can be true where tribes or ethnic groups remain historically tied to a particular way of life, or where ecology limits the type of productive activities that can be carried out. For example, in Wajir, north-east Kenya, pastoralists dominate the scrub desert landscape, while petty traders and labourers can only be found in town. Meanwhile, several pastoral zones can be distinguished in Wajir according to the type of herd animal (camels, cattle, goats, sheep).

Why do a livelihood grouping?
People with similar food and income sources will tend to respond in similar ways to particular shocks. They will also tend to benefit from the same interventions to promote their food security and support their livelihoods. Identifying livelihood groups within the affected population allows us to analyze the severity of food and livelihood insecurity by group, and formulate recommendations by group.

What about populations who have been cut off from their sources of livelihoods?
Displaced populations, as well as populations in situations of chronic emergency or political instability and insecurity, are less usefully characterized according to livelihood type. They should still be classified according to their main sources of income and food and the risks they face. In situations of insecurity and displacement, determinants of food access may be more closely related to physical location, risk of attack, settlement type, phase of displacement, gender, etc. rather than the type of livelihood activity that is practiced. In these cases, population groups are sometimes referred to as **access groups** rather than livelihood groups. Where options are severely constrained in situations of chronic emergencies, everyone may be forced to adopt the same limited number of food and income sources, making it impossible to distinguish any groups.

EXAMPLE: GROUPING HOUSEHOLDS ACCORDING TO DISPLACEMENT STATUS IN KENYA

The post-election violence in Kenya in 2007-08 displaced an estimated 250,000 to 300,000 people from their villages and traditional sources of livelihood. Many of these fled to Nakuru District. In March 2008, ACF conducted an FSL assessment of livelihoods in the urban slum areas and camps of Nakuru District and divided the population according to settlement type:

- IDPs integrated into inner-city areas (living with host families)
- IDPs living in camp situations in Nakuru town
- Host populations

These categories were chosen to reflect shared income/food sources despite varied backgrounds in business, trading, agriculture and livestock (in the case of IDPs). IDPs living in camps were found to be almost uniformly unemployed and reliant on food assistance, while those living with host families depended on petty trade and casual labour for income.

Source: ACF 2007 Rapid Assessment, Nakuru, Rift Valley, Kenya: Following Kenyan Post Election Violence.

Distinguishing livelihood and wealth groups
In general, poorer households will demonstrate a greater diversity in their sources of income, be more dependent on paid employment for income, rely more heavily on purchased food to meet their consumption needs, spend a larger proportion of their income on food and have fewer savings and fewer assets than the better off. However, classifying groups through a purely economic lens can be risky. Poverty is not always synonymous with vulnerability, especially in insecure settings where ethnicity and political status may matter more than economic assets. It is also complicated and inexact to compare wealth levels across groups of people who have very different asset profiles.

It is best to distinguish groups first according to the type of activity they practice e.g. landless labourers, rather than by their wealth or poverty. Wealth categories can later be determined *within* livelihood groups. For example, the wealth of pastoral households in Burkina Faso varies according to the number and composition of herds. Livestock holdings of the poorest households are low and limited to small ruminants (e.g. one goat, poultry), while better-off households have larger and more diverse holdings (e.g. poultry, goats, sheep, the occasional head of cattle) and the wealthiest households enjoy holdings numbering in the tens or hundreds of cattle and sheep.

The wealth ranking makes use of local indicators of wealth, and breaks down the livelihood group into 3, 4 or 5 relative wealth categories. See Appendix 11 for guidance on carrying out a Wealth Ranking.

What are the steps involved in identifying livelihood groups?
In order to group households who pursue a similar mix of economic activities, share access to a similar range and amount of resources and are exposed to similar risks, it is necessary to identify the ways households access food and income and to analyze their assets and resources.

To define livelihood groups, several steps are followed:

1. Identify main food and income sources in the area. Generally these fall into the following categories: production-based, where food is sourced from own production; *waged labour*; where food is *sourced* from the market; *trade-based*, where cash crops, livestock or artisan products are sold or exchanged for food; *gifts and transfers*, where food is received from social networks, the government or relief aid; and *other sources* such as looting and theft. Households will often pursue a combination of strategies, so the livelihood group is best identified by the main food source.

***Example**: The most important food source among poor agro-migrant groups in North Darfur State is market purchase, which is determined by the level of income, remittances and livestock holdings of the household. Wild foods and gifts/relief to poor households also are important sources of food in bad crop years. Income is obtained from migration and in-kind payment of women's agricultural labour in South and West Darfur.*

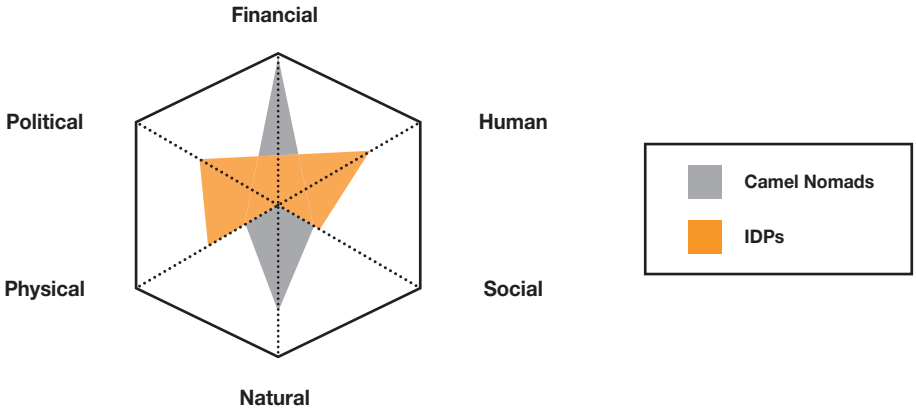
2. Identify livelihood assets. For the main groups already identified, a livelihood profile that lists the assets required for a sustainable livelihood can be constructed. The six asset classes of the Sustainable Livelihoods Framework should be considered for this task.[5]

Example: Mapping livelihood assets in Darfur
Camel-based pastoralism is facing severe challenges as a livelihood system as a result of insecurity limiting migration, lack of development adapted to pastoralist lifestyles, pressures to settle, and the economic incentives of strategies linked to the war economy. Camel nomads rely on access to natural assets (for water and pasture) and financial assets (via the camel trade) for their livelihoods. Access to these capitals has increased as result of the nomadic groups' participation in violence and war. Meanwhile their social, human and political capital has contracted, leading to a highly skewed distribution of livelihood assets. Settled farming groups who have been targeted and displaced in the conflict previously relied on the same types of assets but have since had to abandon their livelihoods, suffering major loss of income/financial capital and loss of access to natural resources (such as their former farms) in the interim. These IDP groups now rely mainly on social networks, other forms of social and political capital and humanitarian aid for survival. In the Figure below, the asset portfolio of the two livelihood groups is compared.

Source: Young et al, 2009. Livelihoods, Power and Choice: The Vulnerability of the Northern Rizaygat, Darfur, Sudan.

[5] Natural, physical, human, social, financial, political

Figure 8: Comparing the typical pattern of assets among Camel Nomads and IDPs in Darfur, Sudan



3. Identify specific vulnerabilities or risks linked to each group. External sources of vulnerability such as HIV/AIDS, insecurity, displacement, political status and drought should be analyzed, as these may be more important determinants of food security than livelihoods. When this is the case, populations can be grouped according to these risk factors rather than their sources of food and income.

***Example**: The vulnerability of poor agro-migrant groups in North Darfur State is closely tied to a number of external factors such as: drought, insecurity, limited options for livelihood diversification and seasonality of labour markets, as well as intrinsic factors such as high dependency on labour migration.*

4.2.2 DEFINING LIVELIHOOD ZONES

Livelihood zones are geographic areas with similar food access defined by:

- Geography
- Market networks
- Livelihoods or combinations of livelihoods prevalent in the area

A geographic area defined by a specific climate and ecology – for example, a coastal region – may be associated with a single type of livelihood group e.g. fishers who also cultivate cassava. But more often, several livelihood groups coexist in a geographic area that is ecologically uniform. Within the same zone, there are groups who pursue different types and combinations of economic activities. They do so by exploiting different niches e.g. hunting, fishing, gathering forest products, trading. These differences may be determined by wealth, ethnicity, religion, political affiliation, etc.

In the Table below from the cyclone-affected Delta region in Myanmar, livelihood zones are distinguished according to the criteria of freshwater access, as people's sources of income and food were found to be mainly determined by an area's reliable [off-season] access to irrigation water. The freshwater zone enjoys a greater diversity of income sources as staple food needs are more easily covered allowing for income to be reinvested in other productive activities.

Table 8: Example of livelihood zones and groups in the Irrawaddy Delta, Myanmar

Livelihood zone	Location	Livelihood group	Sources of income and food
Freshwater zone	Northern part of Delta	Commercial farmers	Rice farming (two crops/year) supplemented by: inland fishing, pig-raising, cash crop cultivation (pulses, groundnut, betel nut), homestead gardening
		Farmers	Rice farming, fishing, local fish trading, small shops
		Subsistence farmers	Subsistence rice farming and fishing, livestock, casual labour
		Landless labourers	Casual labour, water transportation, subsistence fishing
Brackish (salt) water zone	Southern and western parts of Delta	Fishers	Inland fishing supplemented by: rice cultivation (single crop), small livestock, crabbing
		Subsistence fishers	Subsistence rice farming and fishing, livestock, casual labour
		Landless labourers	Casual labour, water transportation, subsistence fishing

Why do a livelihood zoning?

Zoning is a tool that is most commonly used at **country level** where diversity of landscapes and climatic zones – as well as differing political and economic contexts and ethnic character – lends itself to the development of a range of livelihoods and therefore a range of vulnerabilities to shocks and stresses. A livelihood zone map provides a division of the country into homogenous zones that correspond to patterns of livelihoods. These patterns of livelihood can be associated with differing vulnerability to shock and stress. To understand how vulnerability is distributed spatially across a country, zoning exercises are often carried out by governments and prominent agencies and results made available to the wider humanitarian community. It is unlikely that ACF would be called on to carry out a country-level zoning independent of other actors.

Depending on the complexity of the physical and sociocultural landscape, zoning can be a useful tool at **regional and local level**. The level of detail will more directly support and inform the analysis of local-level livelihoods than a country-level zoning. Where a crisis-affected area is sufficiently heterogeneous for local coping responses to vary by livelihood, local area zoning is useful for:

- Serving as the sampling frame for rapid assessments and surveys that will be representative of the local range of livelihoods
- Understanding the differential impacts of the crisis on various groups and prioritizing needs
- Targeting assistance on a geographical basis
- Serving as a baseline for a FSL surveillance program

Incorporating hazards
A livelihood zoning map is not the same as a needs assessment map. Needs assessment maps are based on a current assessment of the needs of a population due to a specific hazard or combination of hazards, such as drought or armed conflict. While hazards are not used as a separate criterion for drawing up zones, livelihood zoning maps will still capture some aspects of **hazard exposure** by different groups as vulnerability to predictable hazards affects people's patterns of livelihood.

For example, subsistence producers of cassava might undertake complementary charcoal production in order to mitigate the impacts of mosaic virus disease [a biological hazard] on their crop and livelihood, thus changing the basic livelihood portfolio of the zone. Patterns of livelihood will also change over time in response to the recurrence of particular risks. For example, pastoral groups may abandon distant grazing lands due to ongoing chronic insecurity [a manmade hazard], thus shifting the boundary of the pastoral zone.

Globally, livelihood zoning maps are relatively static and are useful for providing a baseline on which to build a needs assessment.

Methods for *identifying* livelihood groups and zones include secondary data collection, observation and rapid appraisal methods such as transect walks that give a broad view of the landscape ecology and the ways in which people have organized and developed it. Key informants will complement this information so that broad patterns of livelihoods and vulnerabilities can be characterized for the area to be surveyed. Once identified, livelihood groups/zones will then form the basic **unit of analysis** for the FSL assessment.

Where time permits, more detailed data on livelihood assets and sources of income and food for various groups is gathered via the household questionnaire (refer to section 4.5). A number of PRA tools such as Timelines, Hazard Mapping, Vulnerability and Capacity Analysis and Wealth Ranking are useful for further *refining* the livelihood profiles of groups and zones (refer to section 4.9).

See Appendix 20 for guidance on carrying out a livelihood zoning exercise and examples from the field; Appendix 11 for guidance on PRA tools that can be used in building and refining livelihood profiles; and Appendix 21 for an example of a livelihood matrix showing changes in the asset hexagon following conflict and displacement.

4.3 MARKETS AND PRICE TRENDS[6]

While subsistence activities remain key sources of livelihood in many rural societies, markets form the backbone of economies everywhere. Today, most people live in cash or mixed economies and are at least partially reliant on markets to meet their basic household needs. Markets and systems of informal exchange are particularly important for urban households and displaced persons who will have negligible if any home production.

DEFINITIONS

A market is a formal or informal setting where buyers and sellers meet regularly to exchange goods and services.

Market Performance is the extent to which the market makes goods and services available at affordable prices to meet demand. When markets perform well, households that have cash are able to find and buy what they need, when they need it, at prices that reflect the traders' costs plus a reasonable trading margin (profit). When markets are not performing well, such households are either unable to find sufficient goods and services on local markets or can find it only at excessively high prices.

(continued on page 68)

[6] Adapted from WFP 2007

(continued from page 67)

Market Structure is the number of buyers and sellers, the size of markets, the volume of product traded and the degree of specialization, coordination and communication within the market. It includes how markets are linked by transport, storage and communication infrastructure.

Terms of trade are the ratio of two prices, for example, the ratio of the price of livestock to the price of a food staple, the ratio of the cash crop price to the price of a food staple, or the ratio of daily wage for unskilled labour to the price of a food staple.

Market analysis is needed to understand:

- Linkages between markets on different levels (national, regional, district)
- How markets have been affected by the shock, how well they are functioning and what are the main constraints on their activity
- The extent to which market disruption has affected food availability and food access, **using terms of trade** as a food access indicator
- The extent to which markets can deliver food and other essential commodities at affordable prices for affected populations
- The functioning of labour markets and their contribution to household food access and livelihoods in the area
- The capacity of markets to absorb large-scale sales of assets
- The appropriateness of cash-based interventions
- The potential for local/ regional procurement of relief materials and impacts on prices

Markets provide a venue for the exchange of goods and services, thereby influencing the movement of key commodities and setting their prices according to supply and demand. Changes in an economy are signalled through **price variations** which may be seasonal or due to crisis or conflict.

Prices tend to decrease or remain stable when there is an adequate **supply** of goods and services, when **demand** falls, or when demand does not increase in proportion to supply. Price will tend to rise when traders expect the import, supply or production of goods to fall. Market analysis and price monitoring helps the assessment team understand changes in the economy, their severity over time and the related impact on **purchasing power** of various groups. Market analysis is particularly important for measuring changes in **food availability** and **food access**.

Market analysis is also vital for assessing how markets can be used to support **local economic recovery**. Cash-based interventions (CBI) in emergency and recovery contexts now comprise one of ACF main FSL programming responses. Where markets are performing well, solid market analysis can provide the arguments for the implementation of cash transfers, cash-for-work programs, voucher schemes and other types of CBIs, as appropriate. Where market functioning and recovery is poor, other types of programs such as support to traders may be fitting to rehabilitate critical market systems. Where conventional relief distributions of food, non-food items and agricultural inputs continue to be practiced, market analysis is vital to anticipate and track potential impacts on the local economy. The same is true of projects entailing local procurement.

Establishing a **market price baseline** at the assessment stage paves the way for market price monitoring in the affected area, either as part of surveillance activities or program implementation.

Key information to be collected includes:

➜ Geographic location of markets; areas covered; commodities traded

➜ Sources of staple goods; trade flows; constraints on transport

➜ Price movements for a reduced food basket and fuel commodities

➜ Impacts on market supply (food availability) and consumer demand

➜ Impacts on labour supply and daily wage rates

➜ Access to capital by traders

➜ Household terms of trade

Sources of information
Market information sources can be both quantitative and qualitative. Qualitative sources refer to buyers' and traders' opinions and perceptions, while quantitative data includes prices in a particular place, and volumes traded.

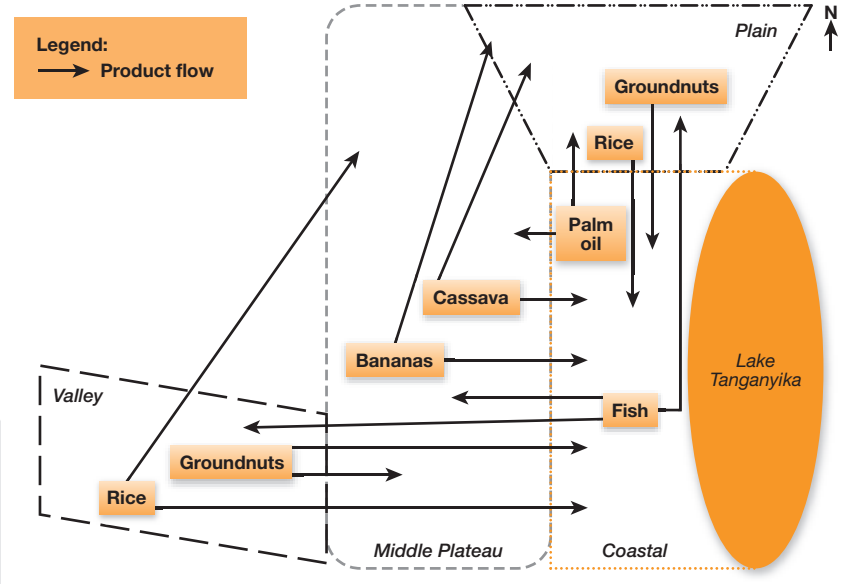
Qualitative data is derived from semi-structured interviews with key informants, discussions with focus groups, and observation. Sampling of traders is usually purposive. Sampling of households (for general data collection including some specific data on markets) can be purposive or random.

Methods
Methods should be participatory and allow key market players to sketch the various factors influencing the marketing chain. Discussions with traders and households on the existing problems and solutions combined with very simple price analysis can be a good basis to identify appropriate responses to address lack of effective demand and potentially low market supplies. The recommended approach entails working with people who know the markets, both domestic and regional, and are familiar with the history of the area.

See Appendix 8 and 17–19 for specific guidance of tools used in market analysis, including trader and focus group interview guides, market mapping exercises, price trends and terms of trade calculations.

The Figure below shows a mapping of trade flows for agricultural commodities across livelihood zones.

Figure 9: Mapping of agricultural commodity trade flows



Source: ACF, 2007: Socio-economic study in the ACF zones of intervention, Territories of Fizi/ Uvira, S Kivu DRC

See table on next page for a summary of key issues in market analysis.

Table 9: Markets and price trends checklist

Area of analysis	Indicator	Key issues to consider	Methods/ sources
Households	• Own production sold • Food bought from market • Participation in labour market	• Quantity sold of staple foods, cash crops, livestock, livestock or fishery products • Proportion own production sold • Quantities purchased weekly/ monthly • Prices • Seasonal variation • Access to credit from traders • Type of work and seasons • Proportion of annual income from labour market	• Household questionnaire • Focus group discussions • Proportional piling and ranking
Prices	• Staple food commodities • Cash crops • Livestock • Fuel	• Price changes compared with pre-crisis or baseline period e.g. one year ago • Price differences between regions, to assess market integration • Price variation and trends over recent weeks or months, to assess seasonal and inflationary trends • Impact of food aid on prices • Perception of future price evolution	• Market price databases, national and international e.g. FAO, Central Statistical Agency, Ministry of Agriculture; NGO, UN agencies publications • Spot observation in the marketplace • Local/ retail traders, wholesale buyers/ suppliers, households • Construction of price trends
Markets	• Location • Wholesale, retail • Number of markets • Frequency of markets • Distances between markets	• Geographic location of markets • Areas covered by markets • Geographic proximity of affected communities • Quantities sold and seasonal variation • Variation in supply and demand of key commodities • Trends over recent weeks or months	• Baseline studies • Trader interviews • Focus group discussions • Household questionnaire • Market mapping • Seasonal calendars
Sources of key commodities	• Main trade routes of commodities traded	• Types of commodities traded • Local, regional or imported • Ease of movement e.g. seasonality, road and storage infrastructure	• Observation • Trader interviews • Market mapping
Traders	• Number of traders • Credit availability • Storage capacity	• Number of traders and trend over recent weeks or months • Access to credit • Size of stocks • Impact of food aid on business • Transaction costs e.g. transport, storage, taxes	
Labour markets	• Seasonal labour availability • Daily wage rate • Main sources of daily labour • Remittance income	• Labour flows in/out of the area • Labour demand and supply e.g. number of people seeking and finding work • Change in daily wage rate and seasonal variation • Change in remittance flows	• Focus group discussions • Household questionnaire • Key informant interviews • Market mapping • Seasonal calendars
Terms of trade	• Daily wage rate/ s taple food • Cash crop/staple food • Livestock/staple food	• Changes in purchasing power for households selling labour, cash crops or livestock, to assess changes in food access by livelihood group	• Key informant interviews • Household questionnaire

4.4 FOOD AVAILABILITY

Food availability refers to the amount of food physically present in an area. It is largely, although not exclusively, analyzed at the population (macro) level.

To understand changes in available food resources in the affected area, **food production**, **stocks and flows** are considered. The assessment of trade flows of staple goods – including food – is examined in the section on Markets. Indicators, methods and tools for assessing food stocks and production systems are summarized in the table and described in detail below.

Table 10: Food availability checklist

Area of analysis	Indicator	Key issues to consider	Method/ source
Food stocks	• Sufficiency and diversity of food products available at local level • Self-sufficiency at household level	• Diversity of government food stocks and trader stockpiles held in the area e.g. emergency grain reserves • Duration of staple food stocks held by households for own consumption	• Secondary data review • Local authorities • Traders • Households
Food production	• Cropping, fishery and animal husbandry systems • Importance of each system e.g. scale and distribution • Work force e.g. number of active family members, paid workers • Tools, equipment and other infrastructure e.g. harvest equipment, storage units, nets, boats • Seed capital • Hydraulic infrastructures e.g. wells, protection of water banks, irrigation networks • Government policies	• Production estimates for local area • Market-based production vs. subsistence production • Seasonal variation in food availability • Local determinants of access to land, pasture & fisheries • Main constraints faced e.g. access to inputs, land, feed, draft power, water, markets etc.	• Secondary data e.g. food and crop assessments • Key informants • Focus groups by livelihood class • Field visits and transect walks • Seasonal calendars • Maps • Farm profiles • Proportional piling
Imports	• Main markets • Origin of food in the market • Diversity • Availability	• Location of markets • Change in quantity & availability of local food sources and imports • Proximity of markets to affected population	• Market survey (described in separate section)
Market prices	• Prices of staple foods • Government policies, subsidies	• Change in staple food prices compared to normal baseline • Changes in cash crop, fishery or livestock product prices compared to baseline • Terms of trade • Access to market and subsidy programs by gender/ ethnicity	

4.4.1 FOOD PRODUCTION

Food production systems in a given area often represent a diverse set of adaptations to the local geographical landscape and its climate.

A production baseline is defined in order to identify in normal times:

- the main production systems in the area and their relative importance,
- the main staple food and cash crops produced,
- estimates of land/pasture area, fishery size and production for these different products, and
- normal seasonal fluctuation in food availability in the area
- availability and access to seeds

In areas where agriculture is important, specific information can also be gathered on the sowing basics for each type of crop e.g. average area sown, seed rates, multiplication rates; preferred varieties; sources of seed and/or breeding material; input and management practices; and decision-making and management responsibility within the household for the various farming activities.

Global impacts on food production systems resulting from the shock should then be quantified e.g. losses of standing harvests, livestock, tools and equipment, seed capital, irrigation and storage infrastructure, labour, etc.

These data will help ACF anticipate how much food derived from local production is likely to be available now and down the road, as well as the immediate and mid-term impacts on agriculture, herding or fishery-based livelihoods in the area.

Here it is useful to inventory impacts according to the six classes of **livelihood assets**:

- *Natural capita*l (e.g. land degradation, water shortages)
- *Human capital* (e.g. loss of knowledge or change in labour availability due to death, illness, displacement or migration)
- *Social capital* (e.g. impact of war on cooperative labour arrangements)
- *Financial capital* (e.g. availability of agricultural credit, loss of assets produced exclusively for sale, loss of other income opportunities)
- *Physical capital* (e.g. loss of productive assets, livestock, changes to market roads, market closures)
- *Political capital* (e.g. links/contacts with public authorities, rights over natural resources)

See Appendix 21 for an example of a livelihood matrix.

Population-level data can be further refined by assessing **impacts at the level of the farm production unit** or household for each livelihood group. Types of information to be gathered for a basic characterization of the farming unit include:

- Type and number of productive assets held by each livelihood group e.g. land area, seed capital, livestock, boats/nets
- Diversity and sources of seed, livestock and other inputs

- Type and number of workers

- Quantities produced and proportion sold/ exchanged/ donated/ stored etc. of staple foods, cash crops, livestock and fishery products, wild foods, etc.

See Table below for a sample format of the uses of household agricultural production. This can be adapted for other types of products produced and exchanged by the household.

Table 11: Sample format for uses of household production by %

Type of food	Household consumption	Sale	Seed	Donation	Repayment of loan	Tax
Bean						
Groundnut						
Rice						
Plantain						
Sweet potato						
Maize						
Cassava						
Vegetables						
Meat						
Milk						
Wild-collected products						

This information can be used to calculate the minimum land area, herd size or other productive asset(s) needed to provide for the average household, together with data on income sources and expenditures by livelihood group. Such a measure can later help in the definition of vulnerability criteria.

Following this should be an assessment of specific household-level impacts of the crisis on normal patterns of production and marketing. This often includes an **inventory of losses** experienced by the household: proportion of the harvest or herd lost, seed capital and other productive assets lost, damage to irrigation infrastructure, boats and nets lost, etc.

It also should include an enumeration of the **main constraints to production** currently faced by the household, including labour. Where inputs are needed, it should be carefully considered whether households simply lack the purchasing power to acquire inputs – a question of access – or whether those items are truly absent from local markets – and therefore unavailable. Often the two are confused and in-kind distributions justified on the basis that items are locally unavailable, when in fact they might easily be brought in by traders but there is no effective demand.

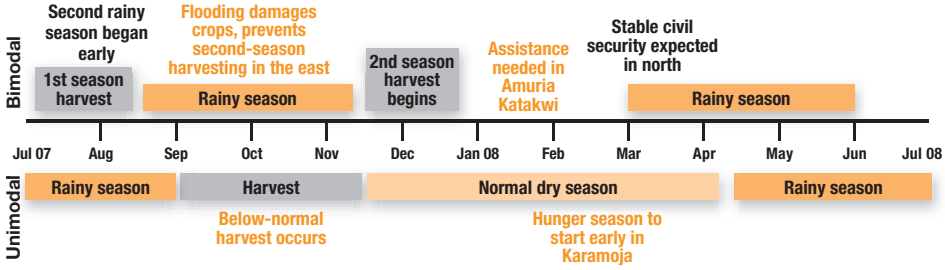
Example: Constraints to agricultural production in N Kivu, DRC
In an area affected by civil conflict, the looting of crops in the fields and the absence of physical security due to the presence of armed groups has affected the ability of women farmers to maintain and harvest their crops. While people cite the lack of seeds and tools as a constraint to their production, the overriding constraint to production concerns field access.

An assessment of **seed security** can be included in the larger assessment of local production systems in order to anticipate needs linked to supporting agrarian livelihoods. Farmers' ability to secure seed of adequate quantity, acceptable quality and diversity and in time for planting is described as seed security. A suggested question guide can be found in Appendix 22.

Methods for gathering information include: secondary data collection e.g. food and crop assessments; primary data collection: semi-structured interviews with key informants; focus group discussions by livelihood groups; household questionnaires; and a range of PRA tools including field visits and transect walks, seasonal calendars, farm profiles, mapping exercises and proportional piling. See Appendix 8-11 for a description of these tools.

The following seasonal calendar illustrates the key features of the Karamoja unimodal seasonal calendar along with the timing of harvest and the hunger season, comparing it with the bimodal calendar prevalent in the rest of Uganda.

Figure 10: Example of a seasonal calendar



4.4.2 FOOD STOCKS AND RESERVES

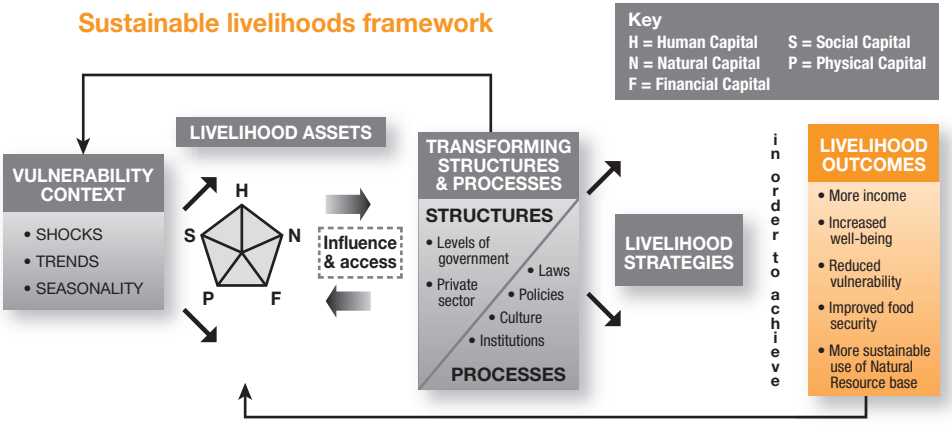
Governments in many countries keep emergency or **strategic grain reserves** on-hand to buffer price variations and be able to respond quickly to an acute food gap. It is important be appraised of government policies regarding the size of the stocks and the modalities for their use. Government food stocks can contribute significantly to food availability in an area for prevention purposes and in the immediate aftermath of a crisis where trade routes and markets have been disrupted, if they can be rapidly channelled to affected populations.

The size and diversity of **trader and household food stocks** and their estimated duration can be appraised visually or in the framework of an interview. The presence or lack of food stocks can help ACF judge the severity of a food crisis in situations where households lack the economic means to replenish stocks and/or markets are cut off from their sources of supply.

4.5 FOOD ACCESS

Food access is a measure of a household's ability to acquire available food. It usually refers to a household's economic means e.g. having sufficient income to buy food on the market, but it is also a measure of the strength of a household's social networks, political status and power within a community.

Food access acts as useful measure of improved food security and increased income, two key livelihood outcomes (see highlighted portion in Figure below). Examples of other livelihood outcomes include: reduced vulnerability, increased well-being and more sustainable use of natural resources. Some measures of livelihood outcomes that are commonly used in the framework of assessments are: food utilisation, nutritional status, care practices and coping strategies. These are explored in sections 4.6 – 4.8.



Because food access is such a broad concept, a range of indicators are used to capture its different dimensions. They include:

- Sources of food
- Sources of income
- Assets
- Expenditures
- Credit
- Terms of trade

Other indicators of food access are discussed elsewhere in this guideline, including market prices, household-level production, and coping strategies. These data will allow ACF, in the analysis phase, to make determinations about which livelihood groups are most food insecure, face the greatest threats to their livelihood and are considered most vulnerable.

Table 12: Food access checklist

Area of analysis	Key issues to consider	Method/ source	Tool
Food sources	• Normal food sources • Changes to food sources • Seasonality	• Focus group discussions • Household questionnaire	• Proportional piling or ranking • Seasonal calendar
Income sources and assets	• Changes in remittances • Changes in type and diversity of income sources • Loss/sale of productive and non-productive assets • Seasonality	• Focus group discussions • Household questionnaire	• Proportional piling or ranking • Seasonal calendar
Expenditures	• Changes in patterns of expenditure • Seasonality	• Focus group discussions • Household questionnaire	• Proportional piling or ranking • Seasonal calendar
Credit	• Changes in access to credit • Debt liability • Seasonality	• Focus group discussions • Household questionnaire	• Seasonal calendar
Terms of trade	• Market prices for staple foods • Market prices for cash crops and livestock • Local wage rate	• Key informants (traders) • Household questionnaire	• Market survey
Coping strategies	• Range of food and livelihood-related strategies employed by households to manage crisis	• Key informants and focus groups • Household questionnaire	• Coping Strategies Index (CSI)

4.5.1 FOOD SOURCES

Identifying household food sources reveals patterns of household access to food and the exposure or vulnerability of the household to specific threats. For example, if most of the food is drawn from subsistence production, risks that stem from drought, crop disease, civil conflict preventing access to fields, illness e.g. HIV/AIDS could be particularly acute. If most of the food is sourced from markets, associated risks include rises in food prices, collapse of labour markets and other factors that limit physical or economic access to the marketplace.

Food sources commonly include one or more of the following:

- Production
- Market
- Social networks e.g. gifts
- Exchange and barter
- Gathering wild foods and hunting
- Food assistance

These will vary according to the type of foodstuff and should be specified accordingly. For example, maize, cassava tuber and beans could be sourced from own production; while oil, dried fish and vegetables sourced from market.

Most often, sources of food will vary according to season and may also have changed as a result of the crisis or shock. Using the **seasonal calendar**, details on food sources for each of the seasons (rainy season, dry season) should be gathered. Changes in household sources of food as a result of the crisis also need to be specified.

Methods
Household-level information on sources of food is gathered using the household questionnaire. The seasonal calendar, proportional piling and ranking exercises are useful tools to support the data collection. The data can then be analyzed by livelihood group to enable the identification of specific vulnerabilities related to how groups source their food in normal times and currently.

4.5.2 INCOME SOURCES AND ASSETS

Productive assets are most commonly enumerated as part of the typology of household food production systems (see 4.4.1).

Changes to broad asset profiles that have been suffered as a result of acute or chronic crisis can be illustrated using an asset hexagon structured by livelihood or access group (see 4.2.1 and Appendix 21).

Information on income sources is gathered in places where household economies depend at least in part on the market for food and other goods. This is especially true in urban contexts. Analysis of market price data together with information on which groups are most reliant on markets for income and food helps to clarify the risks to which different groups are exposed.

Income sources commonly include one or more of the following:

- Sale of cash crops
- Sale of livestock or livestock products
- Sale of any other produce, wild foods, fisheries, honey, handicrafts, services
- Casual labour
- Skilled labour
- Salaried work
- Petty trade and commerce
- Loans
- Gifts and aid
- Remittances

BOX: REMITTANCE AS INSURANCE MECHANISM IN SITUATIONS OF CRISIS

Remittances are sums of money or goods transferred between migrants and their places of origin. Remittance flows are particularly significant for the world's poorest countries and are central to millions of households' livelihood strategies.

Migrants make **transfers** through banks or companies such as Western Union. But the bulk of remitters worldwide rely on informal hand delivery (home visits, friends or relatives, transporters) and cash transfers through businesses, microfinance institutions and migrant associations.

Humanitarian crisis and conflict that disrupt remittance flows can profoundly **impact vulnerability**. In other cases, remittances that remain stable during crisis can serve as insurance, allowing a household to meet basic consumption needs and playing an important part in **survival and recovery**. Research shows that remittances are often *counter-cyclical* – increasing during periods of crisis in response to need. Understanding the significance of remittances in pre-crisis livelihoods and how they are affected by disaster is an oft-neglected but essential component of needs assessments.

(continued on page 79)

(continued from page 78)

Example: In recent years, run-away inflation and exchange rate controls in **Zimbabwe** have made remitting money nearly impossible: an entire industry of 'transporters' has risen up to facilitate in-kind transfers from South Africa. The closure of the border between Sudan and Libya has dramatically cut down access to international remittances in Darfur, making domestic transfers from Khartoum and elsewhere increasingly important.

Reference: K. Savage and P. Harvey: Remittances during crises: implications for humanitarian response. ODI, HPG Policy Brief 26, June 2007.

Sources of income may vary according to season and are likely to have changed as a result of the crisis or shock. Changes in sources of household income as a result of the crisis and their relative importance need to be assessed. See below for a sample format.

Table 13: Sample format for changes in sources of household income by %

1. How many household members currently earn income for the household?		
2. How many different sources of income does your household currently have?		
3. How many different sources of income did your household have in an earlier reference period?		
4. What is each of these income sources? How much did each source contribute to total household income in the last month, and in the earlier reference period? [Use proportional piling to represent the contribution of each source. Record score below. Note incomes that are purely seasonal or temporary.]		
Income source	**Reference period (PP score)**	**Current (PP score)**
Own Production		
• Livestock (live animal, milk, butter, honey, hides, ox rental)		
• Fishing (fish, crab, shrimp)		
• Crop (Cereals, Pulses, Oil seeds & Vegetables)		
Self-employment (small business)		
Petty trade		
Sale of charcoal/ firewood		
Casual labour		
Remittance		
Loan		
…		

N.B. Information on changes to sources of income normally provides sufficient insight into the household economy without quantifying actual income levels. It is generally *not recommended* to use the household questionnaire to gather information on income levels, as this data is likely to be biased and unreliable. If income data is desired, trusted key informants in the local community can provide general information on wage and price levels for the most common occupations and types of commodities that provide revenue in the community.

Example: Change in income sources following civil conflict/displacement in N Kivu, DRC

Many families have been forced to flee their villages, where they had practiced subsistence agriculture. This population now mainly relies on daily agricultural labour. The resident population has diminished access to their fields due to civil disturbance. Sale of cash crops on local markets, previously an important source of income, has diminished. Daily wage rates have declined as a result of the rise in labour supply and the decline in demand for waged labour. Increasingly, families are resorting to credit to cover basic food needs – although moneylenders are hesitant lend to displaced households who they do not know, heightening the vulnerability of this group.

Methods

Household-level information on sources of income is gathered using the household questionnaire. **Proportional piling** and **ranking** exercises are useful tools to support the data collection. Understanding the changes in income sources for various groups who rely on the market (e.g. producers of cash crops, waged labourers, charcoal producers), together with information on food sources and market prices, allows ACF to identify the specific risks and vulnerabilities linked to the livelihood strategies of different groups.

4.5.3 EXPENDITURES

Information on changes in patterns of **household expenditure** can be gathered in the same way as for income sources, using ranking and proportional piling. Expenditures commonly reflect the same patterns of change as do income sources. See below for a sample format.

N.B. Collection of quantitative expenditure data (amounts spent on different expense categories) is not considered necessary.

Table 14: Sample format for changes in patterns of household expenditure by %

1. Of total household expenditure, what was the share of each item in the last month, and in the earlier reference period? [Use proportional piling to represent the share of each item. Record score below. Note expenditures that are seasonal or exceptional.]

Items	Reference period (PP score)	Current (PP score)
Food*		
Fuel		
Water		
Education		
Health		
Transport		
Purchase of productive assets		
Community obligations		
…		

* Within food expenditure, differentiate and rank: staple cereal/tuber, pulse, oil, animal product

4.5.4 CREDIT AND DEBT LIABILITY

The availability of **credit** from formal or informal moneylenders, community or family members is particularly important to analyze, as accessing credit can be an essential coping strategy for households whose sources of income are constrained and whose home production is insufficient to meet consumption needs. Regarding credit, it is important to gather information on:

- Sources of available credit
- Who has access to it
- Uses of credit e.g. primarily for consumption purposes
- Average debt liability by livelihood group
- Seasonality
- Impact of the crisis on sources of credit and debt load

Table 15: Sample format for changes in debt liability by %

1. Does your household currently have any outstanding food or money debts?		
If yes, to whom do you owe money or food? (tick all that apply)		
a. Bank/ other formal financial institution		
b. Informal money lender		
c. Local shop		
d. Landlord		
e. Family, friends or community members		
2. Of these sources, are there any who will no longer lend to you? If so which ones? (note the letter of the source)		
3. What are the primary uses for the credit? (tick all that apply)		
a. Food		
b. Health		
c. Water		
d. Other (specify)		
4. What is your debt liability currently and in an earlier reference period?	**Reference period**	**Current**

4.5.5 TERMS OF TRADE

In communities that trade without cash or depend on mixed economies, it will be important to record the terms of trade between essential commodities. A local standard may already exist in areas where it is common practice to track terms of trade, for example between a sac of sorghum and a male goat expressed as a ratio 1:1.

Terms of trade is the ratio between the value of a key commodity which is sold by a household e.g. a small ruminant, and the value of a key commodity purchased by a household e.g. kilograms maize flour. Income data on various groups allows for the identification of major sources of income in the surveyed area, e.g. herding, groundnut or sesame production, casual labour markets. Price data allows for the calculation of changes in the terms of trade for the major commodities exchanged by different livelihood groups (see 4.3).

Terms of trade are a useful indicator of changes in household purchasing power. This data may already have been gathered in the framework of the market survey.

EXAMPLE: TERMS OF TRADE IN BURKINA FASO

Terms of trade (TOT) in the eastern province of Tapoa, Burkina Faso are based on sacs of cereal that can be purchased with the sale of livestock. The most common TOT indicator compares the *price of a ram or goat to a 100 kg bag of white sorghum*. Pastoral and agropastoral communities, government structures and agencies responsible for surveillance of the pastoral zones routinely refer to the TOT indicator to judge the food security situation in the area.

A *minimum livestock/cereal threshold* is recognized below which household food access is considered insufficient. The threshold depends on the amount of cereal that the average household requires and other expenses that must be covered from the sale of livestock. In Tapoa, the standard TOT threshold is expressed as 1:1 for goats to cereal, and 1:2 for rams to cereal. A 100 kg bag of sorghum or millet is considered sufficient for a household for a month. If the price of sorghum rises relative to livestock, this translates to worsening terms of trade for pastoralists.

At the start of the lean season in February, the average price of a sac of sorghum across Tapoa was 11,200 XOF. Goat and ram prices were 16,417 XOF and 44,167 XOF, respectively. A household was able to purchase 1½ sacs with the sale of a goat (TOT of 1:1.5), or 4 sacs of cereal with the sale of a ram (TOT of 1:4). Over the next months in keeping with seasonal patterns, livestock prices fell slightly relative to cereals and TOT for goat/sorghum and ram/sorghum deteriorated to 1:1.3 and 1:3, respectively.

TOT	Feb-09	Mar-09	Apr-09
Goat/sorghum	1.46	1.30	1.32
Ram/sorghum	3.94	2.76	2.82

Source: Surveillance Program, ACF Burkina Faso, 2009.

See Appendix 19 for a more detailed discussion of Terms of Trade calculations.

4.6 FOOD CONSUMPTION

Measures of **food consumption** reflect the energy and nutrient intake of individuals and households. Household level food consumption patterns are generally considered a proxy indicator of food access; while individual level consumption is considered a proxy for food utilisation, as measures are more closely correlated with nutrient adequacy of the diet.

Patterns of household-level food consumption are strongly conditioned by traditional habits and the cultural and religious beliefs that influence choices about food. Even when households have access to sufficient food in their environment, food taboos and traditions can restrict usage to certain foods and for individual members of the household based on age, gender, working status, etc. Food habits and traditions, household sharing priorities, infant and young child feeding practices and other measures of food utilisation affecting the individual are explored in section 4.7.1.

ACF recommends using more than one indicator of food access and consumption in the FSL assessment, as each indicator captures a different aspect of the experience of food insecurity. The number and combination will vary according to the specific objectives of the survey. An assessment of changes in food sources and meal frequency is considered a minimum information requirement. This is usually combined with a measure of diet diversity to serve as a baseline for future monitoring of the evolution of the context. In rapid assessments that do not use household questionnaires, ACF focuses on changes in food sources as the principal indicator of food access.

Table 16: Food consumption checklist

Area of analysis	Key issues to consider	Method/ source	Tool
Meal frequency	• Change in number of meals taken per day • Standard definition of a meal • Seasonality	• Household questionnaire	• Seasonal calendar
Household dietary diversity	• Diversity of foods consumed by the household • Economically important food categories that correlate with HH purchasing power • Vitamin A and iron-rich food consumption • Seasonality • Trends	• Household questionnaire • Focus group discussion	• Household dietary diversity index (HDDS)
Individual dietary diversity	• Diversity of foods consumed by specific vulnerable members of the household e.g. lactating women, children <5 years • Vitamin A and iron-rich food consumption • Prevalence of children meeting minimum threshold • Seasonality • Trends	• Household questionnaire	• Individual dietary diversity index (IDDS)
Household food consumption	• Diversity and frequency of foods consumed by the household • Macronutrient adequacy of diet • Prevalence of “Poor” food consumption according to preset threshold • Seasonality • Trends	• Household questionnaire	• Food consumption score (FCS)

4.6.1 MEAL FREQUENCY

Changes in the number of meals that a family takes before and after a shock can be a simple and powerful indicator of changes in their food security. Measuring meal frequency can also serve to differentiate segments of the population who may have differing access to food in situations of chronic instability and crisis. In order to account for seasonality, it is best to compare the household's current situation with the same time period in the previous year.

The definition of a meal should be agreed upon and used consistently by enumerators. What constitutes a "meal" can vary by cultural context: in many places only the consumption of the traditional staple taken with other dishes is considered a meal and reported as such by households e.g. rice or wheat in Asia; boiled cassava, millet, plantain or maize paste in Africa. Children may snack during the day on available or scavenged foods (sugarcane, green mangos, boiled tubers, etc.) and take a single "meal" at night time.

The number of meals taken by adults and children within the same household may vary and is usually analyzed separately.

4.6.2 DIETARY DIVERSITY

The number of different food groups consumed by an individual or collectively by a household over a given reference period is known as **dietary diversity**. In recent years, household diet diversity has been increasingly used in food security assessments; research has shown that diet diversity is a good proxy indicator – well correlated with – a household's socioeconomic status. Even in very poor households, higher food expenditure resulting from additional income is associated with improved quantity and quality of the diet.

A more diversified diet has been found to be highly correlated with:

- Improved *quality* of the diet: protein adequacy, percentage of protein from animal source foods, micronutrients
- Improved *caloric adequacy* of the diet
- Improved *health outcomes* for children: improved birth weight, child nutritional status, and blood haemoglobin concentrations [iron status]
- Household *income*

More field-based research is needed to confirm the relevance of household food consumption patterns as a food access indicator. **Food preferences** are highly context-specific. In some cases diet diversity has been found to vary inversely with income, with wealthier households purposely restricting their intake to a few high-value foods e.g. meat, refined cereals; and poorer households relying on a wide-ranging and highly diverse diet that includes wild-collected and seasonal foods in order to meet their caloric needs.

Dietary diversity is assessed within the framework of the household questionnaire using a choice of 3 tools: the Household Dietary Diversity Score (HDDS), the Individual Dietary Diversity Score (IDDS) and the Food Consumption Score (FCS). The tools are described below. See Box below and comparison matrix in Appendix 25 for key differences between the tools.

BOX: DECIDING BETWEEN THE HDDS, IDDS AND FCS TOOLS

* HDDS is a proxy indicator of **household food access** as the food groups are chosen to reflect economically important food categories that correlate with household purchasing power. The tool can also be refocused on nutrient adequacy by altering food grouping and placing greater emphasis on energy-dense or micronutrient-rich foods. HDDS does not capture the nuances of intra-household distribution of food and caution should be exercised in extrapolating findings from households to individuals.

* FCS is a proxy of **household dietary adequacy** focusing principally on macronutrients and energy. The nutrient density weights are designed to reflect the macronutrient density of typical quantities consumed. The tool does not capture the nuances of intra-household distribution of food and caution should be exercised in extrapolating findings from households to individuals.

* IDDS is a proxy for **individual nutrient adequacy**. It is useful for capturing intra-household differences in food consumption habits and for highlighting consumption patterns that are deficient in micronutrient-rich foods. Caution in extrapolating evidence of nutrient-poor diets of individuals to explain outbreaks of micronutrient deficiency (vitamin A, iron) at the population level.

The three tools are complimentary and their choice will vary depending on the specific assessment objective (e.g. rapid classification of a population by food access) and context (e.g. suspected outbreak of goitre or scurvy). Where objectives are multiple, it is possible to combine tools as long as the recall period and food groupings are uniform (for instance HDDS and IDDS), in which case enumerators need to be well trained on the separate objectives and different modalities that are required to administer the tool.

4.6.2.1 HOUSEHOLD DIETARY DIVERSITY SCORE

The Household Dietary Diversity Score (HDDS) tool measures the number of food groups a household consumes over a reference period. It serves as a proxy indicator of household food access. Measuring dietary diversity is relatively simple: information requirements are small and do not require collecting or analyzing exhaustive data sets on food consumption habits. Measurements of diet diversity provide a snapshot of current household diet patterns and can serve as a tool for establishing baseline trends tracking seasonal changes and recovery rates among the surveyed population.

NB. Beware of the confounding effect of **food aid** on household dietary diversity scores.

4.6.2.2 INDIVIDUAL DIETARY DIVERSITY SCORE

The Individual Dietary Diversity Score (IDDS) tool measures the number of food groups an individual consumes over a given reference period, usually the previous 24 hours. The IDDS serves as a proxy indicator for nutritional quality, most commonly for young children and women of reproductive age. The IDDS is more closely correlated with nutrition status and care practices than with food access. Breastfeeding tends to confound the scores of young child and only non-breastfed children should be surveyed. The number of non-breastfed children in the survey sample population needs to be sufficiently large to ensure representative results.

4.6.2.3 FOOD CONSUMPTION SCORE

The Food Consumption Score (FCS) tool serves as a proxy of household dietary adequacy. The FCS is a composite indicator measuring 3 separate elements: 1) dietary diversity, 2) food frequency – the number of days on which a particular food group is consumed over the reference period, and 3) the relative nutrient quality of the different food groups. To capture nutrient quality within the FCS, standard weights are assigned to each of eight recommended food groups. These weights reflect the relative nutritional importance of the groups in the diet or their so-called 'nutrient density': the overall quality of the diet in terms of caloric density, macro and micro nutrient content taking into account the actual quantities typically eaten. Consequently the FCS tool is considered a relatively strong proxy indicator for diet quality and quantity[7]. While standardized thresholds for the classification of food security status exist, the relevance of the thresholds across all contexts is still debated and field research suggests that meaningful cut-offs need to be developed locally.

Methods

Dietary diversity is assessed in the framework of the household questionnaire. See Appendix 23 for guidance on the household dietary diversity score (HDDS) and individual dietary diversity score (IDDS) tools; Appendix 24 for guidance on the Food Consumption Score (FCS) tool; and Appendix 25 for a comparison matrix of HDDS, IDDS and FCS.

4.7 FOOD UTILISATION AND CARE PRACTICES

Food utilisation refers to a household's use of the food to which it has access, including food storage, processing and preparation as well as its distribution within the households. It also refers to an individual's ability to absorb and metabolize nutrients, which can be affected by disease and malnutrition.

Household food utilisation is influenced by care practices within the home and the household's access to water, sanitation and hygiene, which in turn are key determinants of nutritional status. Food utilisation constitutes one of the three core pillars of food security at the individual level, as discussed in the framework approaches presented in Chapter 1.

[7] Recent evidence suggests the Food Consumption Score is more closely correlated with diet quality than with calorie consumption. IFPRI, 2009. See: Validation of the World Food Programme's food consumption score and alternative indicators of household food security. http://www.ifpri.org/publication/validation-world-food-programme-s-food-consumption-score-and-alternative-indicators-hous

Table 17: Food utilisation checklist

Area of analysis	Key issues to consider	Methods/ sources
Food storage, processing and preparation	1. Storage and processing practices 2. Types of losses 3. Fuel type used for food preparation 4. Water source used for food preparation 5. Hygiene practices 6. Seasonality	*Secondary information sources*: • Reports published by national and international agencies • Joint assessment reports • Nutrition surveys *Key informant sources*: • Qualified health professionals • Traditional birth practitioners • Community health workers *Focus groups*: • Women-only groups *Household questionnaire*
Infant and young child feeding practices	7. Prevalence of breastfeeding in children 0-1 yr 8. Changes in the total number of women breastfeeding since crisis 9. Age of introduction of complementary foods 10. Types of complementary foods given to infants <1 yr in order of priority	
Food habits, taboos and interdictions	11. Food culture and traditions 12. Health and nutrition knowledge of mothers 13. Interdictions with regard to pregnant/ lactating women and young children	
Food sharing practices	14. Intra-household food allocation priorities based on age, gender, health or working status	
Care practices of the sick and elderly	15. Types of food given 16. Responsibilities for care-giving among the active HH members 17. Other types of care	
Water access	18. Sources 19. Quality and quantity available 20. Cost	
Public health situation	21. Changes in access to or quality of health care 22. Incidence and severity of major outbreaks	
Malnutrition prevalence	23. GAM/SAM rates 24. Aggravating factors & contextual elements 25. Caseload	

4.7.2 CARE PRACTICES

The concept of food utilisation includes a range of care practices – culturally-prescribed behaviours within the home that have important implications for the health and nutrition status of individual members of the household.

Care practices include:
- Infant and young child feeding practices
- the ways in which food is stored, processed and prepared at the household level
- food habits, taboos and interdictions
- food sharing practices within the household
- the care of sick children and adults and the elderly
- hygiene practices
- access to clean water and sanitation

WHO has published a set of recommendations on optimal infant and young child feeding practices that are summarized in the Box below.

OPTIMAL INFANT AND YOUNG CHILD FEEDING RECOMMENDATIONS (WHO GLOBAL STRATEGY FOR INFANT AND YOUNG CHILD FEEDING 2003)*

The aim is to create and sustain an environment that encourages frequent breastfeeding for children two years and beyond.

- Infants should initiate breastfeeding within one hour of birth
- Infants should be exclusively breastfed (with no food or liquid other than breastmilk, not even water) for the first six months of life
- Introduction of nutritionally adequate and safe complementary foods should begin at six months
- Breastfeeding should continue until the child is at least two years old and beyond

* These recommendations exclude HIV + mothers, for whom WHO has published separate guidelines.

As part of secondary data review, information is gathered on the broad health environment. Note that any suggestion of a potential relationship between care practices and nutritional status needs to be considered in light of the prevailing public health situation. Reported outbreaks of measles or diarrheal disease will have a direct and immediate impact on child nutritional status.

In the example below, infant feeding practices are assessed in post-tsunami Indonesia.

EXAMPLE: ASSESSING INFANT FEEDING PRACTICES IN INDONESIA'S NUSA TENGGARA TIMUR PROVINCE

Interviews were held with mothers who have children under age 5 as well as with medical staff and traditional healers to gather information on infant feeding practices. It was found that:

- Colostrum is given after birth or sometimes discarded. In Sumba Barat, colostrum is considered dirty and mothers do not give it to their infant. Exclusive breastfeeding is usually practiced during the first month, after which liquids such as tea with sugar or powdered milk are added to the diet. According to mothers, the amount of breastmilk is not sufficient for infant needs.
- At 3-4 months of age, complementary foods are introduced to coincide with the mother's return to economic activities (working in the field, fetching water). Weaning is done with the introduction of rice porridge. Families will prioritize commercial products (powdered milk, porridge) over local products whenever they can afford to purchase them. Most mothers will end breastfeeding between 1/2 and 2 years. Staple foods given to the child are rice or corn, cassava, banana leaves and papaya leaves – the same as for adults.

Early introduction of complementary foods and low diet diversity were found to be partly responsible for high rates of children underweight, together with high prevalence of diarrhoea and malaria (42% prevalence low WAZ).

Source: ACF 2006 - Nutrition, Food Security and Water & Sanitation Assessment, NTT Province, Indonesia.

Methods
Care practices are examined via secondary data collection, key informants and women-only focus groups. ACF nutrition staff should be involved in the design and analysis of questions on these topics. See Appendix 9 for a question guide template on nutrition, health and care practices.

4.7.3 WATER ACCESS & AVAILABILITY

Water is considered one of the essential food nutrients, making secure access to clean drinking water one of the major determinants of health. Household-level access to water resources for consumption purposes needs to be probed as part of an investigation of food utilisation.

The following are key considerations when assessing water access and availability:

- Sources
- Distance to primary water source
- Availability
- Quality
- Cost
- Seasonality

EXAMPLE: ASSESSING WATER RESOURCES IN MYANMAR'S IRRAWADDY DELTA

In normal times, *hand-dug rainwater catchment ponds* are the main source of drinking water for subsistence fishing and rice-cultivating communities living in Myanmar's Irrawaddy Delta zone. These communal water reserves are located adjacent to the villages.

During the passage of Cyclone Nargis in 2008, community ponds became contaminated from the tidal surge of saline sea water. People resorted to using the few remaining uncontaminated ponds for both human drinking purposes and livestock since traditional ways of coping with water shortage, including water purchase, were not available. Water quality rapidly declined. Availability also became limited as the dry season drew on and water levels went down.

Communities responded to the water emergency by *rationing water usage* and sharing across neighbouring villages. Agencies supported the community response with the delivery of unsalinated water pumped from riverways in other parts of the Delta, and the distribution of reverse osmosis systems.

Methods
Questions around community and household-level water access are explored through focus group discussions and/or the household questionnaire. Transect walks and observation are useful tools to triangulate the information. See Appendix 4 for a description of WASH indicators, definitions and thresholds and Appendices 8-10 for interview guide templates.

4.7.4 NUTRITIONAL STATUS

Nutrition in food security & livelihood assessments

ACF nutrition programs target specifically, but not always exclusively, acute malnutrition. Acute malnutrition results from risk factors that are directly related to an unfolding crisis situation and will lead to rapid loss of life in the absence of intervention.

Food security and livelihood assessments as a rule generally will *not* include anthropometry – which is the measurement of height, weight, skinfold thickness and other key indicators of nutritional status. Taking accurate anthropometric measurements requires training, specialized equipment and specific sampling methodologies, all of which remain the specialty of trained nutritionists.

Meanwhile, FSL assessments do need to include the gathering of **any available nutritional data** during the course of secondary data collection, as well as an analysis of this data and the overall nutritional situation in the final report. This means consulting internally with the ACF nutrition team or with other agencies, or both, at the stage of secondary data collection regarding the results of nutrition surveys recently conducted in the affected area. Adapted responses to the presence of malnutrition in an area often include food security and livelihood programs and therefore nutrition data must be considered.

Interpreting nutrition data in terms of the Causal Framework

Household food security is one of the three underlying causes of malnutrition according to the Causal Framework of Malnutrition (Figure 1), together with the public health environment and care practices. If the assessment team is able to account for the health and care determinants of malnutrition, then it becomes possible to use the prevalence of acute malnutrition to judge the severity of food insecurity in a population.

A good way to judge the health environment is whether there have been reported outbreaks among the affected populations e.g. measles or acute diarrheal disease. Barring major disease outbreak or a significant change in people's access to or quality of health care, it is unlikely that a sudden decline in nutritional status has occurred as a result of disease. Similarly, to assess major changes in or degradation of the social and care environment, it is important to note any large-scale population displacements that can have damaging effects on care behaviours. Maternal psycho-social health following massive trauma, or new crisis-related demands on maternal time such as walking long distances to fetch water or fuel can also affect mothers' ability to produce sufficient breastmilk or provide proper care to their children.

In slow-onset emergencies, nutrition surveys are conducted in order to assess the prevalence of malnutrition. They may also be used to confirm the severity of food insecurity in the area, as long as health and care determinants are accounted for. In the framework of a FSL assessment, information on the prevalence of acute malnutrition in a population is gathered during the secondary data review phase and in consultation with agencies that have carried out nutrition surveys in the affected area, including ACF. Care should be taken to consider the impact of factors such as seasonality and the presence of underlying chronic disease such as high rates of HIV/AIDS infection when interpreting the reported prevalence of acute malnutrition.

Measuring MUAC

Occasionally, food security and livelihood teams may be the first ones to arrive into a new area and are called on to carry out a measurement of Mid-Upper Arm Circumference (MUAC) if risk factors for malnutrition are thought to be present.

Training and support from nutrition team members is required in order to effectively deploy this tool in the field, including sampling design, proper use of the tool, and analysis of results. See Appendix 2 and 3 for a discussion of nutrition indicators including MUAC and associated thresholds and methods.

[8] For example, improving the targeting and quality of food distribution, improving access to a diversity of locally available foods through cash-based interventions, agricultural programs, support to income generation, support to market systems, etc.
[9] Young et al., 2001: Food security assessments in emergencies: a livelihoods approach. Humanitarian Practice Network (HPN) Paper.

Examining micronutrient deficiencies

Teams may also be called on to collect information on micronutrient deficiencies such as scurvy, night blindness, goitre and severe anaemia whenever outbreaks are anticipated or suspected likely e.g. restricted camp settings, snow-bound mountain communities, etc. The data is important for designing a proper food aid ration, blanket feeding intervention or micronutrient supplementation programs.

Methods

Information is collected through secondary sources and interviews with key informants such as public health officials and medical staff. Direct assessment of the quality of people's diets will also provide key insight into the nature of the potential deficiency or deficiencies with the use of tools such as the IDDS and HDDS. See Appendix 23-24 for a description of the tools.

4.8 COPING STRATEGIES

Household responses to food shortage include behaviours such as changing food sources and rationing food that appear to be widespread and nearly universal across different cultural contexts. These responses – or coping strategies – are the actions people take to manage food shortage and other shocks to the household. Household-level **coping strategies** are most often used as a proxy indicator of food access and livelihood security.

Strategies do not only relate to managing food shortage: households will also undertake a range of economic coping strategies that are intended to preserve assets and prevent destitution, such as buying on credit and migrating for labour. *Consumption coping strategies* can be engaged by all households regardless of their sources of livelihoods and assets holdings (including social capital), whereas the ability to engage *livelihood coping strategies* varies by these factors. For example, if a household indicates that they have not borrowed money from informal money lenders, this may have very different meanings in terms of the household's food security status - either they did not need to or they lack the credit worthiness to do so. In urban and peri-urban contexts there is a pronounced need to distinguish between consumption and livelihood coping due to the diversity and complexity of livelihood sources, available opportunities and assets.

When irreversible strategies are employed such as the sale of capital assets or distress migration, this usually indicates a situation of severe crisis. Strategies that are irreversible, damaging to people's livelihoods or their dignity, and that may permanently undermine future food security and livelihoods are sometimes referred to as **crisis, distress or survival strategies**.

Distress mechanisms should be distinguished from adaptive mechanisms, which are measures used to manage and minimize the risk from chronic food insecurity and recurring situations. Adaptation is a process of adjustment to a longer-term solution, for instance pastoralists moving to areas of better rainfall and pasture growth, or displaced agriculturalists becoming petty traders and casual labourers. Adaptation strategies often lead to the development of new livelihoods, and over the long term may naturally follow from the adoption of distress strategies when old livelihoods are forcibly abandoned.

DEFINITIONS

Adaptive mechanisms are measures used to manage and minimize the risk from chronic food insecurity and recurring situations. Adaptation is a process of adjustment to a longer-term solution, for instance pastoralists moving to areas of better rainfall and pasture growth.

Coping mechanisms are temporary responses to reduce or minimize effects of a stressful event or an unfavourable situation where food access is abnormally disrupted, for instance by drought, flood, earthquake or military activity. Consumption and livelihood coping mechanisms are often distinguished.

Distress mechanisms, also known as crisis or survival mechanisms in their more radical form, are measures that households will undertake in response to severe crisis that are largely irreversible, damaging to people's livelihoods or their dignity and that may permanently undermine future food security and livelihoods. They are an extreme form of a coping mechanism.

Preferred foods refer to foods of a particular form (e.g. whole rice vs. broken rice); type of staple (e.g. millet vs. corn); or quality (e.g. meat or fish). People will often switch to less preferred foods in the less severe stages of food insecurity, reducing quality to maintain the same level of consumption.

Undesirable foods refer to foods consumed only under extreme hardship or so-called famine foods, e.g. wild foods not normally consumed, immature crops, seed stock. Consumption of these foods is associated with severe food insecurity and a food crisis.

The table below suggests a classification of common consumption and livelihood strategies by severity of behaviour.

Table 18: Coping strategies by level of severity

Type of coping strategy	Examples of Observed Behaviour	
	Consumption strategies	**Livelihood strategies**
Adaptive (generally sustainable and reversible)	• Rely on less expensive/ less preferred foods • Gathering or hunting of nutrient/ calorie-rich foods • Slightly reduce food consumption (e.g. limit portion size, reduce number of meals in a day) • Reduce expenditure on non-food, nonessential items • Increase consumption of staple items vs. non-staple items • Minor reduction of diet diversity	• Borrow food, or cash to buy food, from neighbour/friend • Buy food on credit (with expectation of ability to pay back) • Atypical short-term, short-distance migration • Engage in atypical petty trade (e.g. firewood collection) • Engage in non-preferred wage labour • Slight sales of asset stocks (with expectation of renewal) • Adapting agricultural practices (e.g. planting quick-maturing annuals, switching to subsistence crops)
Distress (some not sustainable or reversible, depends on degree)	• Harvest immature crops • Moderately reduce food consumption • Consume next season's seed stocks • Devote all or nearly all cash resources to staple food purchase • Gathering or hunting of nutrient/ calorie-poor foods • Send family members (especially children) to richer relatives • Major reduction of diet diversity • Begging	• Removing children from school • Child labour • Moderate to heavy sales of productive asset stocks • Atypical long-term, long-distance labour migration
Survival (unsustainable, irreversible, high risk)	• Drastically reduce food consumption (e.g. restrict consumption by adults in order for small children to eat, skip eating for entire days) • Severe reduction of diet diversity	• Complete sales of assets • Widespread migration to search for money/food

* Adapted from Hunger Watch

The **Coping Strategies Index** (CSI) is a tool for rapid measurement of household food security in humanitarian emergencies. It enumerates both the frequency and severity of coping strategies of households faced with short-term insufficiency of food, with a focus on the enumeration of consumption-related strategies.

Information generated by the CSI allows for the assessment of *relative prevalence of household food insecurity across livelihood groups or zones* e.g. for the purpose of geographic and household targeting. It also allows for the detection of changes in the food insecurity situation of a population over time e.g. for monitoring and evaluation purposes.

Because the scoring across the population reflects a relative ranking, CSI is not an *absolute* assessment of food insecurity in a population and needs to be triangulated with other indicators such as HDDS and food sources. The CSI is an appropriate tool for emergency situations because it is a relatively fast and simple way to collect and analyze information on transitory responses to food shortage.

Methods

This module is included as part of the household questionnaire. It can also be adapted as a PRA tool and used in focus group settings to capture community-level prevalence of various strategies. It requires consultation with key informants and focus groups to gauge the relative severity of strategies used in the local context. See Appendix 26 for detailed guidance on the use of the CSI tool.

4.9 PARTICIPATORY VULNERABILITY AND CAPACITY ANALYSIS

Assessing community-wide vulnerability to hazards is important for a complete understanding of the vulnerability context and its relationship to food and livelihood insecurity. Participatory vulnerability analysis also helps to distinguish between **acute** and **chronic** sources of food insecurity and broad livelihood stressors by charting the historical evolution of the local vulnerability context. Analysing local capacities to address vulnerabilities and reduce risks enables ACF to tailor program design more closely to community priorities, and engage stakeholders as partners rather than beneficiaries in the recovery process. It also permits the mainstreaming of **disaster risk reduction** and **climate change adaptation** principles into its programming.

In rapid-onset crisis situations, people adopt coping strategies on a temporary basis to protect their livelihoods and prevent destitution as a response to food shortage and other shocks to the household (see 4.8). Sequential stages of coping are usually identified according to the severity and length of the crisis and the vulnerability of different groups. Over time, reconstruction and rehabilitation activities restore community resources and assets to some sort of baseline. Disaster risk reduction and preparedness activities become possible as part of early recovery and as the context stabilizes.

In emergencies where shocks are persistent and recurring, there may be no return to a 'pre-crisis baseline'. This is especially true in complex and slow-onset emergencies such as those involving armed conflict, the HIV/AIDS pandemic or the effects of climate change. The capacity for adaptive change in these contexts depends on communities' level of access to and control over resources necessary for adaptation. Broad-based adoption of adaptive mechanisms across a zone is a useful indicator of the success of a population's adaptation process.

[10] Research shows that households tend to use both consumption coping strategies and longer-term livelihood strategies simultaneously. Therefore restricting the CSI to short-term consumption behaviors – which are comparable across social groups – is adequate as a rapid indicator of both food and livelihood security at the household level.

Participatory analysis of community-wide **hazards**, **vulnerabilities** and **capacities** draws on a number of PRA methodologies and tools described below. The analysis process relies on a step-by-step approach:

1. Charting hazards to determine the nature and level of exposure to risk

2. Identifying vulnerabilities linked to the major identified hazards and threats

3. Analysing community capacities and strategies and their impact on reducing vulnerability

See Table below for a checklist of main issues and methods to consider.

Table 19: Hazards, vulnerability and capacity assessment checklist

Area of analysis	Key issues to consider	Methods/ sources
Hazards	• Nature, intensity and behaviour of hazards • Seasonality • Changes in hazards over time • Areas and resources at risk	Key informants Focus group discussions Seasonal calendar Historical timeline Hazard mapping Resources mapping Proportional piling & ranking
Community vulnerabilities	• Weaknesses to significant hazards • Impact of hazards on livelihood resources • Impact of hazards by social group	Focus group discussions Social and resource mapping Hazard mapping Vulnerability matrix e.g. VCA, SWOT, Wealth Ranking
Community capacities	• Local institutions and groups • Relationships between groups • Access to livelihood resources • Access to services • Availability of social networks	Focus group discussions Hazard mapping Vulnerability & capacity analysis Institutional mapping Stakeholder analysis and social mapping Solution trees Venn diagram

4.9.1 MAPPING HAZARDS

Hazard mapping supports communities to identify areas, resources and groups at greatest risk from climate and other hazards, to analyse potential or actual changes in hazards and to plan for risk reduction.

Hazards encompass a range of natural and manmade phenomena. Community perceptions of risks related to acute, seasonal and chronic hazards exposure are important to capture, as they provide an entry point for understanding the local vulnerability context.

DEFINITIONS

A hazard is a natural or manmade phenomenon that may cause physical damage, economic loss and threaten human life and wellbeing.

A disaster is the occurrence of an extreme hazard event that impacts on vulnerable communities causing substantial damage, disruption and possible casualties, and leaving the affected communities unable to function normally without outside assistance.

Disaster risk is a function of the characteristics and frequency of hazards experienced in a specified location, the nature of the elements at risk, and their inherent degree of vulnerability or resilience.

Localized risks related to **natural hazards** such as drought and floods are closely linked to the state of the natural resource base, and in many contexts largely determine the vulnerability of local livelihood systems. Environmental degradation is recognized as one of the key factors contributing to increasing human, physical and financial hazard-related losses. In many countries deforestation has disrupted watersheds and resulted in siltation of riverbeds, leading to more severe droughts and floods. Increased siltation of river deltas, bays and gulfs, together with the destruction of mangroves, reefs and other natural breakwaters, has also increased the exposure to storm surges and seawater intrusion. Poor land use management, unsustainable agricultural practices and more general land degradation have further contributed to increasing flood losses and the rising incidence of drought.

Globally, environmental degradation contributes to heightening **disaster risk** in hazard-prone areas. The anticipated rise in the frequency and intensity of hazards associated with climate change, and long-term unfolding processes such as desertification, are likely to increase vulnerability and further weaken livelihood systems over time. This is true unless timely measures are taken to boost the preparedness of local communities.

Risks related to **manmade hazards** such as violent conflicts, economic crises and chronic destitution are linked to the broad political and socio-economic environment and the way it translates in the local environment. The nature of the political economy, people's possession of social and political capital and their proximity to power largely determine vulnerability to such hazards. Weak and historically marginalized groups are often exposed to exploitation and abuse to a much greater degree. In predatory war economies and situations of chronic conflict, violence becomes a means of asserting power and economic control and may be perpetrated by states, warlords or other forms of leadership, or ordinary people. Forms of violence may include: asset stripping of weak or marginalized groups, looting, destruction of stores and resources, forced labour e.g. in mining, forced military or militia recruitment, and illegal taxation. Mapping such types of hazards should be done keeping in mind inter-group and inter-zone differences.

See Table below for examples of different types of natural and manmade hazards.

Table 20: Types of hazards

Hazard Type	Description	Examples
Hydro-meteorological and geological	• Natural earth, atmospheric, hydrological, oceanographic or climatological processes & phenomena	• Floods, debris and mudflows • Tropical cyclones, storm surges, wind, rain • Drought, desertification, wild fires, temperature extremes, sand or dust storms • Earthquakes, tsunamis • Volcanic activity and emissions • Landslides, rockslides • Surface collapse, geological fault activity
Biological	• Processes of organic origin or those conveyed by biological vectors	• Epidemic diseases e.g. HIV/AIDS • Seasonal exposure to disease e.g. diarrheal infection • Plant or animal contagion e.g. bacterial wilt • Pest infestations
Manmade	• Events related to the political & socio-economic environment	• Economic crises, sharp price fluctuations • Violent conflicts, protracted conflicts, war • Political instability • Government policies • Chronic destitution

*Adapted from: ProVention Consortium: Tools for Mainstreaming Disaster Risk Reduction, Guidance Note 2: Collecting and Using Information on Natural Hazards.

Methods

Participatory hazard mapping makes uses of focus group discussions and PRA tools including: seasonal calendars (to identify periods of stress, hazards, diseases, hunger, debt, etc.); historical timelines (to get insight into past hazards and note changes in their nature, intensity and behaviour); hazard maps overlaid on resource maps (to identify areas and resources at risk from hazards); and proportional piling & ranking (to identify most significant threats).

See Appendix 11 for guidance on use of the individual PRA tools.

4.9.2 ANALYZING VULNERABILITIES

Participatory vulnerability analysis is a process that supports communities in identifying and describing their vulnerability to the acute and chronic hazards they face.

Other approaches to vulnerability analysis that are highlighted in this guide (e.g., relying on a range of pre-defined indicators to identify and rank vulnerable groups) must be triangulated with participatory approaches that call on vulnerable and disaster-affected populations themselves to define and explain vulnerability. This is done by supporting people to draw on their own local knowledge, history, experience and understanding of the context.

Analysis of community vulnerabilities must be used to inform policies and actions in which communities will take a leading role, especially in linking disaster preparedness and response to longer-term capacity building. The process itself can help to build advocacy skills among poor and marginalized communities and lead them to better assert their rights in relation to state actors, customary or tribal leaders, NGOs and others.

In community-level analysis of vulnerability, several steps are followed:

1. Vulnerabilities related to significant hazards are identified and ranked, e.g. the absence of cyclone shelters, low livestock holdings, insufficient access to water, seasonality of labour, dependency on migration, high transport costs, etc.

2. Groups that are more prone or vulnerable to loss and suffering in the context of differing hazards are identified and ranked, e.g. by livelihood group, wealth group, caste, ethnicity, gender, disability and health status, age, nature and extent of social networks.

3. Areas and livelihood resources more vulnerable to loss or damage are identified, e.g. human settlements, access roads, production facilities, markets, pasture areas, specific cropping systems, etc.

In the section below, special attention is paid to mapping social networks as a tool to support the identification of vulnerable groups; and wealth ranking as an application of vulnerability ranking approaches.

4.9.2.1 MAPPING SOCIAL NETWORKS

Mapping social networks and other forms of social capital supports communities and ACF in identifying the formal and informal institutions which influence community life and understanding resilience and vulnerability in the local cultural context, including the identification of most vulnerable groups.

Strong social networks can significantly boost the adaptive capacity of a community. The extent to which households are able to call on family, kinship and community resources has an impact on their capacity to manage or cope with crisis. In some places networks will be poorly developed or

stretched thin by recurrent crisis. In other contexts, strong traditions of hospitality and reciprocity ensure that networks will be exceptionally broad and resilient, playing an effective role in protecting vulnerable community members from the worst impacts of crisis. In countries with strong religious traditions, mosques, monasteries and churches will play key roles in supporting communities in their recovery. Religious values such as *sadaqah* (alms) and *zakah* (charity) can underlie acts of solidarity and kindness towards others. Social analysis is needed to understand vulnerability, social exclusion and local determinants of poverty.

Minimum aspects that need to be considered in an FSL assessment are:

- the **types of social networks** on which people rely in normal times e.g. close family or kin; clan or tribe; religious, political or military organization; livelihood or trade group; government; NGO or charity group

- the **types of support** the networks provide e.g. providing gifts, loans, food, housing, temporary care of children, protection of orphans and widows, access to services, protection from attack

- the **level of access** to these networks by social group (who benefits)

- **recent changes** in the availability of support, if any (how much the community is able to provide currently in the wake of crisis)

Questions are asked about what sources and types of support people rely on when they need help. Who can they turn to when they don't have enough food in the house or when they can no longer provide for family members? What type of household is considered most vulnerable in the community? How do communities care for their most vulnerable and poorest members?

Social networks – also known as informal solidarity systems – are vital to analyze and understand, as this case study from Pakistan reveals.

EXAMPLE: VULNERABILITY & SOCIAL NETWORKS IN PAKISTAN'S NORTHWEST FRONTIER PROVINCE

The World Food Programme responded to the 2005 South Asia earthquake with massive food distributions. After the initial 6 months, partners on the ground scaled back distributions using eligibility criteria that focused on households headed by "vulnerable women, children, orphans and elderly and disabled people in communities whose access to food and basic services are impeded". The assumption was that these groups were socially vulnerable. Meanwhile, the criteria had been transposed from other humanitarian contexts without an assessment of social networks in the local intervention areas.

Careful assessment by ACF showed that traditional forms of solidarity in the area ensure that women and orphans are taken care of after the deaths of husbands and fathers. These individuals were protected by the community and absorbed into families in the wake of the earthquake: very few female, disabled- or child-headed households could be found.

Instead, large male-headed households with high dependency ratios and limited sources of income were found to be isolated from traditional networks and therefore more highly exposed to risk ("only Allah helps us"). Incidentally, these were often the same households who had taken in vulnerable individuals. *But they were not recognized as vulnerable according to the eligibility criteria developed by humanitarian agencies*.

Understanding social networks in Pakistan's conservative mountain communities later permitted appropriate targeting of vulnerable households.

Source: ACF Pakistan FSL Dept.

4.9.2.2 RANKING WEALTH GROUPS

Wealth ranking is a form of participatory vulnerability analysis that identifies and provides information on the poorest classes.

Wealth ranking makes use of local indicators of wealth, breaking down the livelihood group or geographic area into 3, 4 or 5 relative wealth categories such as Destitute, Very Poor, Poor, Middle and Better-off. In addition to defining wealth indicators, it should also define the primary social characteristics of each wealth group e.g. by caste, ethnicity, settlement status, access to social networks. The poorest classes will include traditionally weak or marginalized people, but also newly vulnerable groups such as female-headed households, orphans, unaccompanied minors and disabled people.

EXAMPLE: WEALTH RANKING IN NORTH DARFUR

The people in the Wadi livelihood zone are farmers and livestock herders. Main wealth indicators in the zone are: number and type of livestock holdings, access to cultivable wadi land, ability to hire agricultural labour and access to water pumps. Livestock holding is the key determinant of financial ability, which enables the better-off households to have cash to buy pumps and diesel and pay for labour. Water pumps are an important farm input for irrigating the winter crops. Some middle income households own water pumps, but oftentimes they do not have sufficient land to cultivate or cash to pay for labour. In this situation, they share the pumps with another farmer who has land. Most of the middle income households use their own labour force (family labour) to cultivate; therefore they cultivate less than the better-off. The poor households, who have no land, borrow land from better-off relatives or other poor who are unable to use all their land. Poor households irrigate their crops manually. Winter season wadi farming provides labour opportunities for poor both from the Wadi livelihood zone and others from neighbouring areas.

Wealth group	Poor	Middle	Better-off
% of population	45-55%	25-35%	15-25%
Agriculture – land area	0 – 1.6 Mukhamas	1.6 - 3.2 Mukhamas	2.4 - 8 Mukhamas
Livestock – size herds	20 – 25 shoats, 0 – 2 cattle	40 – 50 shoats, 10 –15 cattle	80 – 100 shoats, 8 – 20 cattle
Water pump ownership	0	0 - 1	1

Source: ACF Sudan, Food Security Assessment, North Darfur, May 2005.

Meanwhile, wealth ranking is not relevant in all settings. The poor are not necessarily the most vulnerable. The most vulnerable groups in the community should be defined in relation to the most significant hazards identified in the area.

Methods

Participatory vulnerability assessment follows closely from the results of the hazard mapping. It makes uses of focus group discussions and PRA tools including: social and resource maps (to identify most vulnerable areas and resources); Vulnerability and Capacity Analysis (VCA), Strengths, Weaknesses, Opportunities & Threats (SWOT) analysis, Wealth Ranking or other types of vulnerability matrices (to rank or score livelihood resources and/or social groups according to the level of impact of identified hazards).

To map social networks, discussions by social group are especially well suited as people may be hesitant to share personal information on these topics in an individual interview setting.

See Appendix 11 for guidance on use of the individual PRA tools.

4.9.3 ASSESSING CAPACITIES FOR RECOVERY, DISASTER RISK REDUCTION & PREPAREDNESS

Participatory capacity analysis supports communities to identify and describe specific capabilities and vulnerabilities and to mobilize local resources and assets necessary to build adaptive change to recurrent hazards.

Communities dispose of a diverse array of resources, strategies and potential solutions to cope with acute, chronic and underlying vulnerabilities. These exist in the form of strategies undertaken to manage crisis and long-term change at the household level, in the physical and natural resources of the area and also in the social networks and human and organizational resources present locally.

If mobilized for action these assets may substantially reduce risk, build resilience and prepare communities for adaptive change to recurrent hazards, including those related to climate change. As understanding is built of local impacts and existing adaptive capacity, communities can be better assisted in the formulation of strategies and solutions to their problems.

DEFINITIONS

Mitigation is any structural (physical) or non-structural (e.g., land use planning, public education) measure undertaken to minimise the adverse impact of potential natural hazard events.

Disaster risk reduction is the systematic development and application of policies, strategies and practices to minimize vulnerability, hazard and the unfolding of disaster impacts throughout a society, in the broad context of sustainable development.

Preparedness is activities and measures taken before hazard events occur to forecast and warn against them, evacuate people and property when they threaten and ensure effective response (e.g., stockpiling food supplies).

Resilience is the ability of a community to resist, absorb and recover from the effects of hazards in a timely and efficient manner, preserving or restoring its essential basic structures, functions and identity.

Adaptive capacity is the ability of a system to adjust to long-term change (including climate change) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences

One of the most important factors shaping the adaptive capacity of individuals, households and communities is their access to and control over natural, human, social, physical, financial and political resources. Examples of resources that may be important to adaptive capacity are shown in the Table on the next page.

Table 21: Examples of resources that support adaptive capacity

Human	Knowledge of climate risks, conservation agriculture skills, good health to enable labour
Social	Women's savings and loans groups, farmer-based organizations, social networks
Physical	Irrigation infrastructure, seed and grain storage facilities
Natural	Reliable water source, productive land
Financial	Micro-insurance, diversified income sources
Political	Representation, links to authorities

Source: CARE, 2009. Climate Vulnerability and Capacity Analysis

Access to and control over the resources necessary for adaptation varies within countries, communities and even households. It is influenced by external factors such as policies, institutions and power structures. Adaptive capacity can vary over time based on changing conditions, and may differ in relation to particular hazards. In general, the world's weak and historically marginalized people are also the most vulnerable to recurrent crisis due to their limited access to resources that would facilitate adaptation.

COMMUNITY CAPACITY IN CHRONIC CONFLICT SETTINGS

In situations of chronic conflict and political instability, community assets and resources are often deliberately undermined, diverted or destroyed e.g. blocking or destruction of access roads and productive infrastructure; diversion of boys and young men into local militias; girls and women as targets of rape; abandonment of villages and forced migration. Strategies adopted in such situations tend to focus on survival and may include:

- ➜ Falling back on subsistence farming
- ➜ Seeking relief
- ➜ Increasing indebtedness
- ➜ High reliance on remittances from abroad
- ➜ Engaging in the informal economy
- ➜ Theft and looting
- ➜ Prostitution (including child prostitution)
- ➜ Child labour
- ➜ Early marriage

In such contexts, the long-term erosion of local capacity combined with insecurity may limit the possibilities for sustainable adaptive change. The Coping Strategies Index (CSI) can be adapted for use in focus group setting to capture the range of strategies employed by communities to manage their survival, including any adaptive strategies currently employed. Activities focused on the protection of vulnerable groups may be more appropriate in the interim.

Community-level assessment of capacities involves:

1. Describing the existing strategies, resources and assets used to reduce vulnerability in the community

2. Identifying any external assistance used to reduce vulnerability

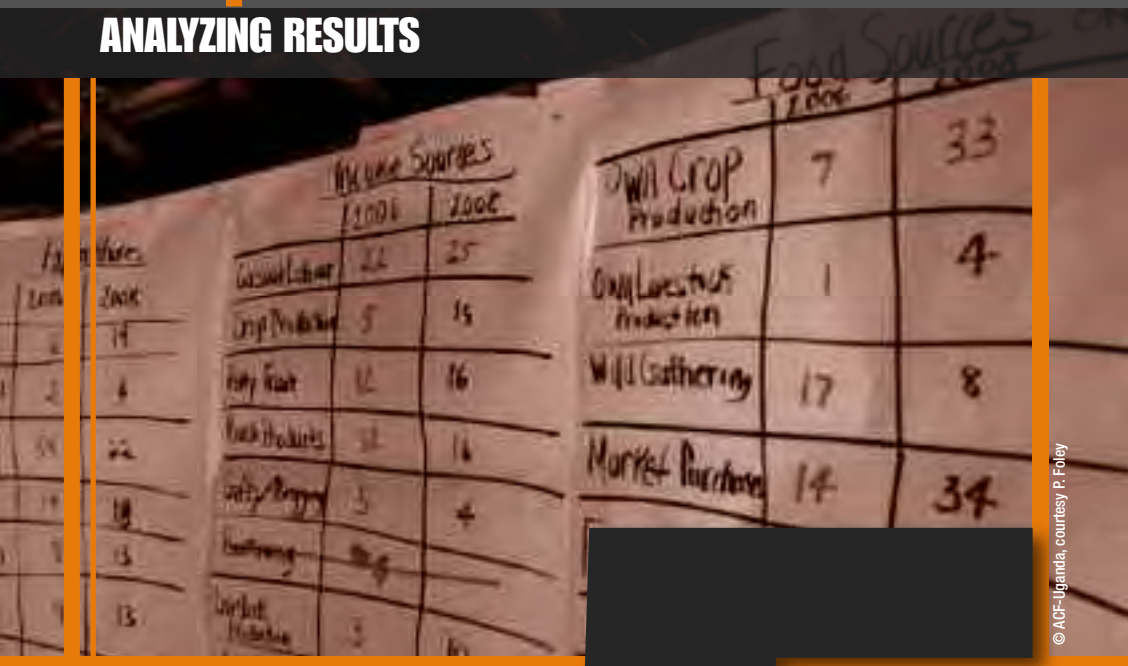
3. Identifying priority resources & assets for the reduction of risks and the building of adaptive capacity, including natural resources and local organizations.

Methods

Participatory capacity assessment follows sequentially from the results of the hazard mapping and vulnerability assessment. It makes uses of focus group discussions and PRA tools including: Vulnerability and Capacity Analysis, SWOT (strengths, weaknesses, opportunities & threats) analysis, and Solution Trees (to identify major physical, material, social and organizational resources available); Stakeholder Analysis and Venn Diagrams (to understand the role played by different organizations and their relative importance in the community; to identify the types of social networks on which people are relying and evaluate access by social group).

See Appendix 11 for guidance on use of the individual PRA tools.

Chapter 5
ANALYZING RESULTS



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5.1 BASIC CONSIDERATIONS

Data analysis and interpretation can and should be done throughout the assessment process. Opportunities for analysis can be found at every stage of the assessment process, including:

- At the stage of preliminary data collection, to decide on target populations, methods and sampling approaches
- During the training workshop, for the purpose of designing field tools
- Following pilot tests, in order to refine field tools and define appropriate thresholds and norms (e.g. for the CSI)
- Prior to leaving field sites, to present and validate preliminary findings with local authorities
- In analytical workshops with team members, to gather additional insights that were not formally recorded
- Following data entry, to synthesize findings from different data sources and prepare analytic charts and models
- In workshops with local stakeholders, for the purpose of sharing results and building consensus on priority needs and responses

Refer to Stages of the Assessment Process, Figure 6.

Analysis of **quantitative data** requires development of a spreadsheet or database using Excel, Sphinx or statistical software program which will have been developed at the same time as the development of the field tools (if possible). Consider carrying out the data entry alongside the field work as soon as data becomes available, so that tabulation and analysis can be undertaken as soon as the field study is completed. Templates of Excel databases are available in electronic form with this guidebook.

Qualitative data is best analyzed in post-assessment analytical workshops with the assessment team, and results tabulated. This debrief session with members of the team is useful for highlighting key information and bringing out insights that may not have been captured on paper during the formal assessment, thus supporting the data cleaning process. Debriefing the team also provides an opportunity to recognize individual members' contribution to the work and consider their personal analysis of the context.

Simple data analysis tools such as cross-tabulation and key considerations for data analysis are described in Appendix 27.

As a reminder, there are a number of key questions that ACF is looking to answer with the food security and livelihoods assessment. Analysis and interpretation of the data should provide answers to most of these.

KEY QUESTIONS

- Which crisis?
- What has been the impact of the crisis on the zone? On the food security and livelihoods of the population?
- Which groups are at risk? Where? When? Why?
- What types of risks do these groups face?
- What type of response is required to assist these groups?
- How much assistance is required?
- How should beneficiaries be selected?
- How many people are in need of each type of assistance?
- When should the assistance be provided and for how long?
- What results are we seeking to obtain with our response?

5.2 IDENTIFYING THE PRINCIPAL CAUSES OF FOOD INSECURITY AND RISKS TO LIVELIHOODS

Contextual data is gathered from both secondary and primary sources and continually updated and refined throughout the assessment, thereby contributing to a broad understanding of the crisis. A sound knowledge of the context is essential for understanding the factors underlying malnutrition and food insecurity in the surveyed area and the linkages that exist between the broad environment, the vulnerability context and nutrition, food security and livelihoods outcomes.

5.2.1 SYNTHESIZING CONTEXTUAL INFORMATION

A careful and thorough synthesis of the data gathered on broad structures, processes and vulnerability contexts helps to support more comprehensive analysis and allows ACF to move towards more integrated programming.

While acute shocks and hazards and related impacts on food security are most obviously apparent, it is essential to go beyond and also identify other types of structural, seasonal and chronic stressors imbedded in the broad sociocultural, policy and institutional environment.

A grid of analysis is proposed below illustrating the relationships between food insecurity and a range of **livelihoods stressors** (including structural stressors related to the institutional and policy environment, acute and seasonal stressors related to shocks and hazards, and longer-term stressors such as climate change) in the specific local context. Once clearly identified and analyzed, these individual stressors can then be addressed through integrated programming such as safety nets and disaster risk reduction. The grid needs to be adapted to reflect analysis of the context at hand.

Table 22: Integrated analysis grid of livelihoods stressors, outcomes & responses

Livelihoods stressors	Illustrations	Some outcomes	Local responses	External responses
Structural stressors	Poor social protection policies; no access to assets	Under-development, poverty	Livelihood strategies	"Development"
Seasonal stressors	Hunger, Pasture depletion before rainy season	Hunger gap	Seasonal livelihood & coping strategies	Safety nets
Shocks/hazards	Conflict, natural disaster	Loss of assets, food insecurity, malnutrition	Coping strategies	DRR, rapid response & recovery
Trends/changes	Higher food prices, climate change, financial crisis	Increased vulnerability, food insecurity, malnutrition	Coping strategies/ adaptation strategies	Supporting adaptation processes/ climate change adaptation

A **livelihood matrix** by major livelihood/access group or zone is a useful output of contextual analysis. Information on the key livelihood characteristics of each group or zone can be placed into a summary matrix. Key identifiers to include in the matrix are: main sources of food and income, main strategies, ethnic/religious identity, political status, displacement status, sources of vulnerability, etc. Livelihood profiling is typically done early on in the stage of secondary data review and informs the development of the sampling approach and assessment tools. Compiling the data in a livelihood matrix at the analysis stage assists in the synthesis of key information about the vulnerabilities of and impact of crisis on various groups and the identification of appropriate responses. See Appendix 21 for an example of a livelihood matrix.

5.2.2 IDENTIFYING UNDERLYING CAUSES

Informed by an integrated analysis of the context and the identification of broad livelihoods stressors, it becomes possible to pinpoint one or more significant **shocks** that have affected food availability, food access or food utilisation and entailed significant risks to livelihoods for some or all population groups. Examples of such shocks are floods, drought or civil conflict.

Shocks are associated with a series of acute risk factors that have led to deterioration in the food and security situation. For example, floods will have displaced households away from their food and income sources; civil conflict will have disrupted trade routes and increased prices; drought will have upset local food production. Shocks – which may be multiple – and **acute risk factors** leading to food insecurity need to be identified during the analytic process, and their relative importance determined.

In the analysis, it is also necessary to distinguish acute factors from **chronic factors** affecting a population's baseline level of food and livelihood security. Chronic factors are long-term, structural, seasonal or recurrent stresses that contribute to a population's underlying vulnerability and condition its exposure to shock. The presence of chronic stresses affect people's **resilience** to new and acute stress, as their coping strategies may already be stretched thin by their pre-crisis situation. Examples of chronic factors include HIV/AIDS, persistent political instability, recurrent drought and macroeconomic policies. If baseline food and livelihood insecurity already exists in the region, it is important to identify its causal factors.

Different responses to chronic and acute food insecurity are likely to be required in terms of intervention design and duration. Responses to chronic food insecurity can last several years and focus on basic and underlying causes of food and livelihood security, while interventions addressing acute food and livelihood insecurity are generally short-term and tackle immediate (as well as underlying) causes. In order for responses to acute food and livelihood insecurity to be sustainable – that is, for chronic factors not to undermine or prevent recovery from acute stress situations – short-term interventions will occasionally seek to also address basic causes.

5.3 DETERMINING THE SEVERITY OF FOOD AND LIVELIHOOD INSECURITY

Contextual analysis supports the identification of livelihood groups or zones in the area and the broad risk factors for food and livelihood insecurity across the population. The next step is to **analyze the impacts of the crisis by livelihood/access group** in order to conclude on the relative severity of food and livelihood insecurity for each group. This part seeks to answer the question: who is worst affected by the current crisis or situation?

Severity of food and livelihood insecurity is determined by **cross-tabulating** the core FSL indicators to determine how seriously individual groups are affected by the current situation (refer to the Food & Livelihood Insecurity Severity Scale, Table 1). Special attention needs to be paid to changes in household food and income sources, types of coping strategies employed and variation in household food consumption patterns. Key indicators include:

- Market survey data showing price movements for key commodities, impacts on labour markets and terms of trade
- Significant reduction in food availability in local markets
- Effects of the crisis on household-level food production and livelihood assets, including loss of major productive assets, seed stores, access to water and access to land
- Seasonal risks that may compound problems of food supply and food access in the local area
- Large reductions in household food access and changes to sources of income and employment
- Severity of coping strategies employed by households
- Decline/breakdown in social networks; significantly heightened social exclusion
- Changes in patterns of household consumption/utilisation, as measured by reductions in meal frequency and dietary diversity and changes in food sources
- High prevalence of malnutrition not attributable to health and care factors

Coping Strategies
It is important to know the extent to which large portions of the population are relying on crisis, distress or survival strategies that put them at risk of permanently undermining their future food security and livelihoods (refer to Coping Strategies by Severity Level, Table 18). When results from a severity-weighted CSI are available, it is useful to assess the percentage of the population engaging in the most severe (highest-weighted) coping strategies. If a broad share of the population is engaging in such strategies, then it is clear that a large-scale crisis is underway. Agencies have a responsibility to include an investigation and analysis of coping mechanisms in assessments, recognize the use of crisis strategies, and act to protect and support populations before they exhaust all available non-damaging options.

Food Consumption Patterns

Indicators of household consumption are useful for assessing the severity of a crisis by livelihood group mainly when an affected population shows wide variance with respect to diet diversity, meal frequency or food sources. Relative levels of food insecurity for different livelihood/access groups can be judged based on this variance. This will be difficult to do in places where food choice is limited for most of the population, e.g. geographically remote areas or isolated camp settings.

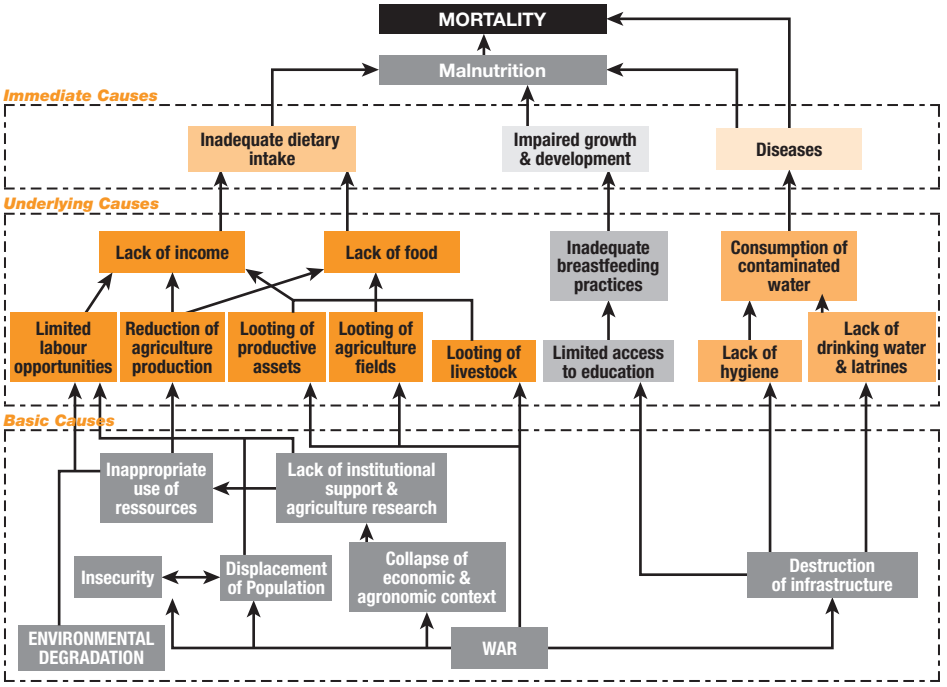
Using HDDS or FCS to assess the prevalence of the population lying at the extreme end of the diet diversity spectrum (regular consumption of 3 or fewer main food groups or scores below the FCS 'Poor' threshold) provides information on the global severity of the food security situation.

Malnutrition Prevalence

Special attention needs to be paid to the global health environment, especially factors related to health care access and quality, recent history of disease outbreak and major changes in the care environment such as those brought about by forced migration. Only if the global health and care environment is reported to be stable, and malnutrition is found to be high or increasing, is it then possible to identify household food insecurity as a leading cause of acute malnutrition in the area.

It can be useful to fill out a malnutrition framework detailing the range of underlying and basic causes of malnutrition relevant to the local context. The example below graphically represents a causal factor analysis for malnutrition done by ACF in South Kivu, DRC.

Figure 11: Causal study of malnutrition



Source: ACF, 2007: Socio-economic study in the ACF intervention zones, Territories of Fizi and Uvira, Sud Kivu, Democratic Republic of Congo.

A basic severity analysis distinguishes between three stages of severity: Food Insecure/Vulnerable, Food and Livelihood Crisis, and Famine.

5.4 ESTABLISHING A VULNERABILITY RANKING

Vulnerability rankings are useful for identifying and prioritising groups or zones for future interventions. While an entire population is affected by an acute crisis, not all groups will experience the same severity of impact or recover at the same rate. Differences in the **vulnerability profile** of various groups will determine their resilience and recovery in the face of crisis.

Vulnerability is defined in relation to the principal cause(s) of food insecurity and risks to livelihood (refer to section 5.2.2). Ranking groups/zones according to their relative vulnerability involves consideration of:

1. Key vulnerability criteria identified by communities during community-level exercises for assessing vulnerability (refer to Participatory Vulnerability and Capacity Analysis, 4.9.2)

2. Key 'external' indicators of vulnerability used by ACF to assess severity of food insecurity across groups and zones (such as CSI and HDDS)

Establishing a vulnerability ranking that reflects both community and agency concerns is a challenging exercise that requires: i) crossing and triangulating different sources of information and different formulations of vulnerability across a range of locations, ii) arriving at a core set of indicators that are common and relevant to all locations and number no more than 6 or 8, but ideally as few as 3 to 5, and iii) using this reduced set of indicators to compare and rank vulnerability across groups and zones.

In the best of worlds, the chosen set of indicators will confirm and corroborate the same 'story' of vulnerability – that is, indicators will correlate with each other and suggest a similar ordering of groups and zones. Where indicators tell very different stories from each other, it is often because they describe vulnerability to different and unrelated shocks. For example, settled farm groups in parts of Darfur may be relatively protected from the hunger gap, but remain exceedingly vulnerable to armed attack. It will be necessary to select the most robust set of indicators based on triangulation and cross-tabulation, and to ensure that they are all closely linked to the principal risk factors for food & livelihood insecurity identified previously.

In the Table below, five livelihood zones across South Darfur are ranked according to different indicators of vulnerability, of which a majority are related to security and climate risks and impacts on strategies (violence, looting, drought) and one to livelihood outcomes (food consumption).

Zone or group-specific vulnerabilities, hazards and strategies can be summarized in a matrix, as in the example below.

Table 23: Example of a vulnerability ranking by zone in South Darfur

Rank	Zone	Conflict effects	IDP Return	Drought effects	Hunger gap start	Husbandry	IGA	Food consumption
1	Marla, north Donkey Derissa, Yassine	Village destruction	20 to 30%	50%	Dec (No harvest)	80% looted	No activities	Poor
2	Donkey Derissa south, Gos Koala, Senia Afendu	Countryside looting	60 to 100%	50%	February	All looted	Normal	50% decrease
3	Ed al Fursan	No effects	IDP: plus 20%	10-20%	February	No looting	Normal	50% decrease
4	Sane Delebah, Abu Ajura, Katila	Targeted attacks	No return	25-50%	February	No looting	Normal	Normal
5	Um Gonia, Ladob, Rigela	No effects	IDP: plus 30%	50%	?	No looting	Normal	?

Source: ACF Sudan FSL Dept., 2005. Rapid Food Aid and Food Security Assessment, South Darfur.

Coping strategies from the pastoral zones of North Darfur are presented alongside hazards and vulnerabilities. In this context, hazards and vulnerabilities are closely linked to drought and availability of pasture and water. Insecurity and government policies affecting prices and trade also figure prominently.

Refer also to section 4.9.2 and the Livelihood Matrix in Appendix 21.

Table 24: Example of Vulnerability and Capacity Analysis in pastoral zones of North Darfur

Vulnerability of the Area	Vulnerability of the Poor	Hazards	Coping Strategies
• Environmental degradation • Insufficient pasture • Insufficient access to water • Remoteness limits access to market • Poor access to basic services • High percentage of female headed households	• Low livestock holdings specifically for the poor household • Regular consumption of wild foods e.g. Mukhait, in a bad year • Dependency on migration • Dependency on collection • Chronic food insecurity	• Drought locally and in migration areas • Poor harvest in most of Darfur • Loss of livestock markets • Insecurity/reduced road access • Government policies in regard to currency control, livestock import & export • Sharp rise of cereal prices • Animal disease	• Building stocks of wild foods • Increase consumption of wild foods • Livestock migration • Female migration • Develop new alliances • Diversification: family split, some cultivate in the south or trade in large towns • Move from camel and cattle to sheep

Source: ACF Sudan, May 2005. Food Security Assessment, North Darfur.

5.5 ESTIMATING THE SCALE OF FOOD AND LIVELIHOOD INSECURITY

Number of households unable to cope with a shock can be estimated using total population numbers for the surveyed area and information about the proportion falling into vulnerable categories. Using the demographic information collected as part of secondary data review, it is possible to estimate how many households and individuals fall into different categories of vulnerability. This calculation can be used to provide a justification to donors for the numbers of beneficiaries that the agency proposes to assist and the level of resources required.

Deciding which households or which zones are *most vulnerable and in need of assistance* will depend on the nature of the risks that people are facing and ACF's strategic orientation in the country as well as the objectives of a potential response: whether to respond to emergency needs only, whether to protect livelihoods in addition to addressing emergency needs, whether to address chronic underlying vulnerabilities, etc.

For example, 3 zones out of a total 5 surveyed in Kirotshe, North Kivu, DRC are ranked most vulnerable. Across these zones, displaced groups are considered most at-risk according to various criteria. They total 13,580 persons. Other agencies are servicing the camp population. As a result, ACF identifies as needing priority assistance the hosted displaced population numbering 9,909, combined with other forms of support to the resident population of Bweremana, Kituva and Macha numbering 45,544– for a total estimated 55,435 persons (see highlighted portion in Table below).

Table 25: Example of a scale estimation of food & livelihood insecurity by zone in North Kivu

Rank	Zone	Resident population	Displaced population (host families)	Displaced population (camp)	TOTAL (individuals)	TOTAL (households)
1	Bweremana	9 879	5 919		15 798	2 633
2	Kituva	5 471	450	1 531	7 452	1 242
3	Macha	30 194	3 540	2 140	35 874	5 979
Total		45 544	9 909	3 671	59 124	9 854

Chapter 6
IDENTIFYING SOLUTIONS

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The process of assessment is carried out in order to make recommendations for relevant actions. Appropriate responses depend on need but also on local priorities and resources, capacity of ACF to respond, available budgetary and human resources, logistical constraints and security risks for staff (to name a few).

The process of identifying solutions involves several steps:

a. Reviewing the main factors related to vulnerability as well as the locally expressed need priorities, and determining that a response is in fact needed and desired

b. Identifying the intervention plans and capacities of other stakeholders to cover needs, and gaps in these plans

c. Using zoning to spatially prioritize affected areas according to level of vulnerability and the coverage of needs by other actors. Refining this zoning according to operational strategies and institutional priorities

d. Identifying the range of possible interventions, taking into consideration the 'do no harm' principle and other humanitarian standards such as SPHERE

e. Anticipating scenarios regarding the development of the situation and the actions to be undertaken in each case

f. Selecting the most appropriate response or combination of responses

g. Preparing recommendations that include targeting criteria, timing, scale, duration and exit strategies

h. Sharing results and recommendations with affected communities and getting their feedback

6.1 EXAMINING INTERVENTIONS AND CAPACITIES OF OTHER STAKEHOLDERS

Stakeholder analysis followed by consultation with various stakeholders should enable the assessment team to gather updated information about who is working where and doing what. Other sources of information include the local OCHA office, agencies such as FAO and UNICEF, coordination and cluster meetings, ministry meetings, and websites that centralize resources on humanitarian crises such as Relief Web. Data tables or maps that represent the collected information according to intervention sector and geographic location are useful to assist in identifying gaps in humanitarian assistance across the affected areas and to assist in preventing duplication.

Governments and national armies may be involved in the relief effort depending on capacity and context. The contribution of state actors should not be neglected when identifying and examining the range of stakeholders active in relief and likely to be active in the future.

Likewise, civil society can be responsible for mobilizing significant resources and delivering vital assistance to affected communities. One notable but under-reported example is the role played by Buddhist monks following the passage of Cyclone Nargis in Myanmar in May 2008. While many INGOs were denied access to the country for several weeks following the disaster, thousands of monks across urban and rural areas mobilized to serve on the front lines of the crisis. Similarly, the Indian civil society role in the tsunami response was notable.

Compiling information on the activities of other actors allows the assessment team to carry out a **gap analysis**, both by sector and geographic area. Normally, the bulk of the gap analysis will have been carried out as part of contextual analysis prior to the field portion of the assessment, and will have informed the choice about where to conduct the assessment (see section 4.1).

6.2 ZONING THE AFFECTED AREAS ACCORDING TO VULNERABILITY LEVEL & NEEDS COVERAGE

Most often, humanitarian actors and assistance tend to be concentrated in or around urban centres and areas with good geographical access, at least in the initial stages of an emergency. Gaps will tend to exist in more remote and physically inaccessible or insecure places, where logistical constraints to delivering assistance may be considerable. Needs in remote crisis-affected areas are more likely to be unmet simply by virtue of geographical isolation and the corresponding "bias" of humanitarian actors.

Zoning is used to cross information about humanitarian needs coverage with information about the vulnerability of affected populations, and to spatially prioritize affected areas. The results of vulnerability ranking and mapping exercises carried out by zone and livelihood/access group can be used here.

The zoning exercise is refined by factoring in ACF operational strategies and priorities. This takes into account questions of sectoral expertise, capacity and resources as well as country strategy, overall mandate and institutional priorities guiding intervention.

6.3 IDENTIFYING THE RANGE OF POSSIBLE FSL INTERVENTIONS

Response options are examined for groups requiring assistance that is not being provided by other actors, taking into account local capacities and resources and tailoring options to the identified needs. Involving communities in planning the response is important. Where appropriate responses are identified that fall outside of the ACF mandate (e.g. mine clearance or education), these still need to be discussed in the assessment report for dissemination and lobby with other actors.

Types of food security and livelihood interventions which ACFIN undertakes in response to food and livelihood crises, including situations of protracted crisis, are:

1. Assessment and surveillance interventions
2. Food assistance interventions
3. Cash-based interventions
4. Agro-sylvo-pastoral interventions
5. Income generating interventions
6. Applied research interventions
7. Advocacy interventions

Interventions addressing acute food crisis include food assistance and non-food alternatives such as cash-based and market support interventions. These have the purpose of filling a food gap and primarily address food availability and food access problems on the household level.

Interventions addressing livelihood crisis include food assistance as a livelihood support, cash-based and market support interventions, agro-sylvo-pastoral interventions that support primary production, and interventions that support income-generating activities. These mainly address food access and income/employment access issues.

There are also a range of interventions addressing the specific impacts of food crisis on vulnerable groups. These can focus on providing support to child and maternal health and nutrition or target groups such as people living with HIV/AIDS, and address food utilisation problems related to care

practices, nutrition, health and WASH.

Finally, other types of interventions such as those addressing broader contextual issues include

Table 26: Response options by risk factor

Response type	Examples	Description
Responses to underelying contextual issues affecting vulnerability		
Food assistance Interventions	• General food distributions • Supplementary feeding • Food for work • Cash based interventions	Food Assistance Interventions ensure sufficient food to people affected by an acute crisis. The main objective for these interventions is to save lives and prevent the degradation of beneficiaries' nutritional and health status while protecting livelihood assets. This type of programme is a response to a lack of food availability, which may also be hidden behind an access problem caused by high food prices, during or following a crisis situation. Local procurement and the use of voucher systems are encouraged. Market Support Interventions promote local economic recovery by addressing market and trade route infrastructure, such as road repair, and supporting traders to restore their activity. This can take the form of easing bottlenecks in supply by providing capital to traders; or promoting demand among the population through cash-based and voucher interventions.
Market support Interventions	• Support to traders • Cash based interventions	Market Support Interventions promote local economic recovery by addressing market and trade route infrastructure, such as road repair, and supporting traders to restore their activity. This can take the form of easing bottlenecks in supply by providing capital to traders; or promoting demand among the population through cash-based and voucher interventions.
Responses to underelying contextual issues affecting vulnerability		
Cash-based Interventions (CBI)	• Cash grants • Cash for work • Voucher programs • Linked to IGA • Linked to ASPI	Cash-Based Interventions can be implemented in various contexts during or after an acute or chronic crisis situation. They include free or conditional cash transfers, vouchers and cash-for-work programmes. The general objective of CBIs is to support an immediate increase in purchasing and/or investment power, enabling the beneficiary population to access basic necessities, including food and non food items, and/or to invest in the protection, recovery and strengthening of livelihood assets. CBIs can also take the form of social protection or safety net programmes, with the aim of providing predictable transfers to vulnerable populations over a given period of time. These programmes may also be food-based or combine both food and cash.
Agro-sylvo-pastoral Interventions (ASPI)	• Provision of productive assets/ inputs • Seed banks • Cereal banks • Crop diversification • Destocking programs • Fodder banks	Agro-Sylvo-Pastoral Interventions reinforce a household's livelihood assets and its capacities to meet food security needs through production, resource management, and exchange. These types of programs are used in early recovery, post-crisis, chronic crisis and development stages. Programs aim at re-establishing production and production-based entitlements through the provision of inputs needed in agriculture, fishing or livestock (seeds, tools, fertilizer, nets, boats, cages, traps, water, fodder, veterinary care); capacity-building; promotion of trade; extension work; irrigation repair; water harvesting; access to land, fishing water and rights; livestock off-take or restocking; livestock shelter, etc.
Income generating activities (IGA)	• Provision or loan of capital assets • Skills trainings • Financial management trainings	Income Generating Activities promote the creation of income to improve vulnerable households' purchasing power for food and non-food necessities, and to strengthen livelihood assets in a sustainable manner. IGAs can be carried out immediately after a shock and focus on livelihood recovery. Alternatively, they can be implemented any time after the shock, during a chronic crisis, or as part of a long-term development project. They can take place in urban or rural areas. Participatory market analysis and a socio-economic assessment are key preparatory elements, as they help identify marketable services and products as well as describe existing demand for these products.

Table 26: Response options by risk factor *(continued)*

Response type	Examples	Description
Responses to underelying contextual issues affecting vulnerability		
Interventions supporting child and maternal health & nutrition	• Supplementary feeding program • Fresh food vouchers • Kitchen gardens • Food conservation • Nutrition education • Child-friendly spaces • WASH programs	Interventions focusing on the improvement of care and feeding practices will usually target women. They will aim to change behaviour around infant and young child feeding with child-friendly spaces and programs promoting psycho-social health, exclusive breastfeeding and hygiene education. They can also aim to support healthy food preparation practices with the provision of cooking equipment and fuel-efficient stoves, diet diversification with fresh food vouchers and kitchen gardens; and skills trainings on food processing and preservation such as pickling and drying techniques. These interventions can be tied into traditional supplementary feeding programs.
Responses to underelying contextual issues affecting vulnerability		
Surveillance Interventions	• Sentinel sites	Surveillance systems continuously follow and analyze a specific contextual situation, enabling timely and adequate responses to emerging critical situations. Findings and recommendations are shared with responsible stakeholders and actors to enable decision makers to adapt ongoing programs, define adequate strategies and necessary responses, and contribute to national early warning systems.
Applied Research Interventions	• Field studies	Applied research and innovative programs that help to identify and implement long-lasting solutions and appropriate responses to the identified needs of affected populations are a key commitment for ACF. They include field studies, documentation of ongoing projects, and research partnerships.
Advocacy Interventions	• Press releases • Publications • ACF HungerWatch	ACF advocates and lobbies for the needs and rights of crisis-affected populations, alerting of needs in the field, and ensuring awareness and information among various population groups, as well as between populations and stakeholders such as governments, administrators, humanitarian actors, etc.

advocacy, surveillance and applied research interventions. See Table below for a summary of ACF FSL response options organized by risk factor.

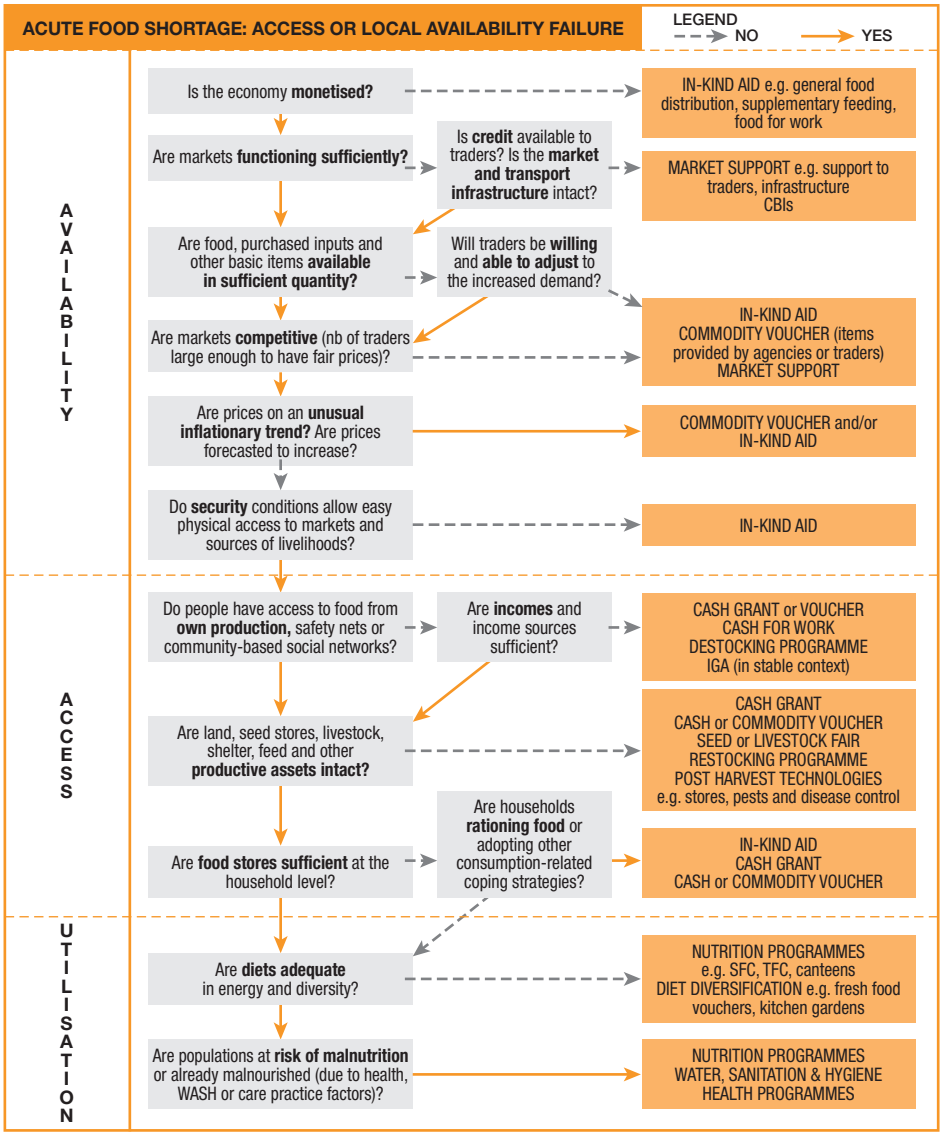
6.4 DECIDING ON AN APPROPRIATE INTERVENTION STRATEGY

There are a range of actions possible to address food and livelihood crisis. Appropriate responses are highly context-specific and will depend on the stage, severity and scale of the crisis; the type of crisis (whether rapid or slow-onset, protracted); and the quality of the infrastructure/degree of access to the affected area. Food availability and market conditions will determine the feasibility of cash-based and market-based interventions. The political, economic and security environment will determine the level of access to vulnerable and marginalized groups.

Decision trees showing decision-making criteria for selecting interventions are a useful tool. Generally, food assistance responses such as general food distributions are only appropriate in the initial acute stage of sudden-onset emergencies with the objective of saving lives when people are cut off from normal sources of food. Supplementary feeding programs can be paired with general food distributions to address high rates of moderate malnutrition in the area. Where food availability and market conditions are good, cash transfers are increasingly used in place of food aid to allow households to meet their immediate emergency needs according to their own priorities.

Food distributions can be rapidly phased out depending on market functioning, to be replaced with livelihood support interventions such as asset replacement and public works. Asset replacement through voucher programs, fairs or in-kind distribution is appropriate where loss of productive assets has occurred and is hindering the return to productive activities. Public work programs in the form of cash-for-work are appropriate where food insecurity is the result of loss of employment or fall in wages. Livelihood interventions such as support to income-generating activities require stable environments to implement and are most appropriate in recovery and development phases. In settings of chronic instability and crisis, livelihood interventions need to be carefully considered and explicitly tailored to the context while following the policy and intervention principles of ACF.

Figure 12: Decision tree for acute food crisis



A decision tree that is focused on response options to an acute food crisis is shown here.

Disaster risk reduction and climate change adaptation are principles increasingly gaining traction in humanitarian response and ACF is striving to mainstream them into its programming. Analysis of local capacities, strategies and assets is a critical step in reducing disaster risk and building adaptive capacity to climate change and other long-term change processes. Communities should be viewed as partners in the recovery process and wherever the context permits, fully involved in the choice, design and implementation of interventions following a participatory assessment of local vulnerabilities and capacities (see section 4.9).

Table 27: Entry points for mainstreaming of DRR and climate change adaptation

Area of Intervention	Examples
Resilient Livelihoods	• Promoting disaster- and climate-resilient agricultural practices • Supporting diversification of livelihoods, including non-agricultural livelihoods strategies • Building capacity to analyze risks • Promoting savings and building capacity to plan for risk management
Disaster Risk Reduction	• Establishing food and seed banks in places safe from hazards • Improving shelter to withstand hazards • Strengthening access to early warnings • Facilitating evacuation planning • Protection of assets
Capacity Development	• Strengthening social protection schemes • Facilitating access to financial services • Building knowledge and skills on adaptation strategies • Facilitating access to disaster and climate information
Addressing Underlying Causes of Vulnerability	• Empowerment of women and other marginalized groups • Promoting equitable division of labour within households • Advocacy on rights to livelihoods resources

*Adapted from: CARE, 2009. Climate Vulnerability and Capacity Analysis

Entry points for the mainstreaming of DRR and Climate Change Adaptation principles into Food Security and Livelihoods programs are suggested in the table below.

'DO NO HARM'

The "Do No Harm" project was initially set up in the early 1990's to learn how assistance provided in conflict situations interacts with conflict conditions and can be used and/or misused in the pursuit of political or military advantage. The concept of "Do No Harm" has evolved to guard against the undesired effects of aid interventions, such as creation of social tensions, changing cultural or local habits, or negatively impacting the environment.

ACF food security and livelihoods programming minimises these undesired consequences through thorough contextual analysis conducted during the development stages of a project, as well as ongoing monitoring during program implementation, in order to make the necessary adjustments should negative consequences be observed.

What are the risks of negative impacts of a program?

➜ Consider potential risks at the time of program identification

➜ Consider activities and programs that will counter these negative effects

➜ Integrate any changes of context that could occur during or after the realization of the program.

For more information and the DNH handbook visit:
http://www.cdainc.com/dnh/docs/DoNoHarmHandbook.pdf

In addition, it is necessary to consider the principle of Do No Harm when examining the appropriateness and relevance of different interventions.

6.5 FORMULATING RECOMMENDATIONS

Being able to synthesize the results of the analysis and convincingly formulate detailed, feasible and appropriate recommendations is crucial, as the main purpose of the assessment is to orient future strategic action by ACF.

Recommendations should include:

- The type of intervention(s) recommended
- Priority geographical areas
- Target groups, including targeting criteria and numbers of beneficiaries
- Level of assistance required: quantities of resources and frequency of provision
- Partnerships and coordination strategies
- Monitoring frameworks
- Duration of the intervention and proposed exit strategies

Deciding whether or not targeting is needed, and if so how it should be done, can be a contentious process that requires careful attention. Targeting can be done based on geography (choosing one or more vulnerable zones where needs coverage by other agencies is insufficient) and or based on target groups within the affected population (for example, choosing households with children enrolled in therapeutic feeding centres). Targeting criteria must be clearly specified and easy to apply in the field. They must also be accepted by program staff and communities.

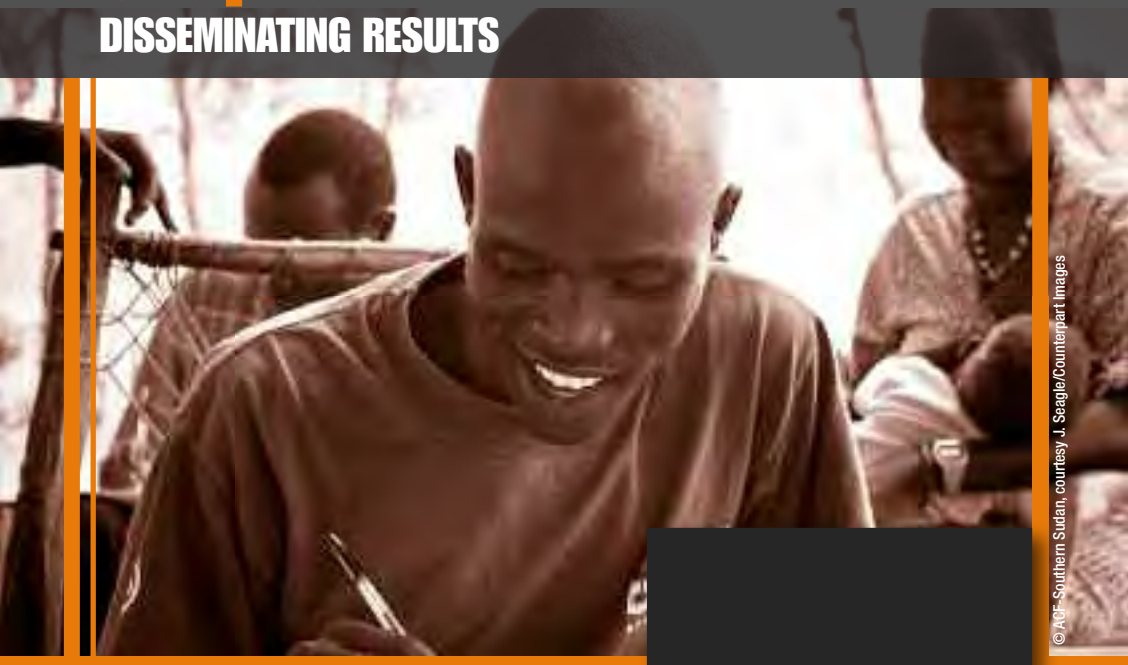
Methods for elaborating targeting criteria in a participatory manner have been developed in recent

years to address the often significant opposition that aid agencies encounter when they attempt to apply criteria in the field without prior consultation with local communities. **Community-based targeting** and **self-targeting** have proved useful in reducing the costs and complications that can be associated with providing targeted assistance, as has **blanket assistance** when it is needed. In many places, aid will tend to be redistributed if communities do not agree with targeting criteria, so it makes sense to consult and adapt criteria according to local notions of vulnerability whenever possible.

Meanwhile it is important to be vigilant about the ability of elites and powerful interest groups within the community to intercept aid and exclude marginal groups and households from receiving assistance[12]. Where community representatives are given responsibility for deciding criteria, it is important to ensure that they actually represent the range of ethnicities, religions and political affiliations present locally. Finally, cultures that place a strong value on equality may outright reject the concept of household targeting. In such cases targeting communities – for example, in collective work programs – or targeting based on geographic zoning may need to be considered as alternatives.

[12] This references the principle of "do no harm" as well as people's access to social networks.

Chapter 7
DISSEMINATING RESULTS



© ACF- Southern Sudan, courtesy J. Seagle/Counterpart Images

Results will be disseminated to a variety of stakeholders. While the donor community is an obvious stakeholder, it is essential to also share findings with communities and authorities as well as other humanitarian actors active on the ground.

Table 28: Method of information dissemination by stakeholder

Stakeholder	Restitution	Condition
• Community	• Oral presentation • Discussion groups	• Even if there is no project on going
• Authority	• Meetings • Report in official language	• Be careful with your remarks on government capacity
• Other humanitarian actors	• Coordination meetings • Reports	• Can be a basis for lobby
• Donors	• Meetings • (Concept paper, Needs assessment reports)	• Including financing opportunity and strategy
• Coordination mechanisms	• Reports following approved indicators	• Formats approved previously

A suggested report structure is given here. Not all assessment reports will follow the same structure and the proposed framework should be adapted to include only relevant issues. It can be useful to include a logical framework as part of the recommendations.

Findings and conclusions can be illustrated as appropriate with tables, maps and graphs to clarify the presentation of quantitative results. It is best to write the final report immediately upon completion of the fieldwork, to allow for timely dissemination and follow-up.

Table 29: Suggested report structure

	Contents of each section
Executive Summary	• Concise summary of main issues (2-3 pages)
Table of Contents	
List of Abbreviations, Tables & Figures	
Introduction	• Broad context • Objectives • Map of the surveyed area • Geographic and demographic situation of surveyed zone
Methodology	• Study team, sites and schedule • Sampling approach • Methods & tools • Constraints
Livelihoods	• Transforming structures & processes • Vulnerability context • Assets & strategies (agriculture, fisheries, livestock, mining, etc.) • Livelihood zoning
Findings	• Overall nature and impact of the crisis • Nutrition status, health status, water access, shelter condition, food availability • Demography and household profile • Market functioning, price trends & terms of trade • Impact on sources of income and assets • Impact on sources of food & patterns of household consumption • Impact on care practices • Other impacts • Coping strategies • Locally expressed vulnerabilities and capacities • Transversal issues (HIV/AIDS, gender, environment, protection, etc.)
Conclusions	• Principal causes of food insecurity and risks to livelihoods • Severity of food & livelihood insecurity • Scale of food & livelihood insecurity • Groups and zones most affected (vulnerability ranking & zoning)
Recommendations	• Type of intervention(s) proposed, if any • Priority geographic areas • Target groups • Resources required • Duration and exit strategies
Appendices	• References • Questionnaires • Other data collection tools • Summary of stakeholder consultations

Appendices
DISSEMINATING RESULTS

Appendix 1: Core food security & livelihood indicators

Area of Inquiry	Core Indicator	Description	
LIVELIHOODS	1. Livelihood assets	• Access to 6 capitals by livelihood group • Land tenure, fishery access and pasture access arrangements • Type and number of productive & non-productive assets	• Impact of crisis on assets (scale of loss, sale, destruction) • Social networks
	2. Vulnerability context	• Climate, geography, environment • Physical infrastructure • Nature, intensity, frequency and seasonality of hazards	• Impact of hazards on livelihood resources • Impact of hazards by social group
	3. Broad institutional and policy environment	• Socio-political context • Past crises and conflict • Demographic breakdown	• Ethnic groups, intra-group linkages • Social organization, local leadership and authority
AVAILABILITY	4. Food stocks	• Sufficiency and diversity of food products available at local level	• Self-sufficiency at household level
	5. Food imports	• Main markets • Origin of food in the market • Diversity • Availability	• Location of markets • Change in quantity & availability of local food sources and imports • Proximity of markets to affected population
	6. Market prices	• Prices of staple food, cash crop, livestock, fuel commodities • Price differences between regions • Terms of Trade	• Price variation and trends over recent weeks or months • Impact of food assistance on prices
ACCESS	7. Food sources	• Diversity of food sources • Changes to food sources	• Seasonality
	8. Income sources	• Diversity of income & livelihood sources • Remittances • Labour migration	• Changes to income & livelihood sources • Seasonality
	9. Coping strategies	• Range of food consumption strategies employed by households (adaptive, coping, crisis, survival)	• Impact of Crisis
UTILIZATION	10. Dietary diversity	• Diversity of foods consumed over a 24-hrs period	• Meal frequency • Micronutrient deficiency
	11. Malnutrition prevalence	• GAM/SAM rates • Aggravating factors & contextual elements	• Caseload • Coverage and Scale
	12. Water access & availability	• Sources • Quality	• Quantity • Cost
	13. Public health	• Changes in access to or quality of health care • Incidence and severity of major disease outbreaks	
	14. Care practices	• Prevalence of breastfeeding in children 0-1 yr • Changes in the number of women breastfeeding since crisis	• Food sharing practices based on age, gender, health or working status

Appendix 2: Nutrition indicators

ACF relies largely on the analysis of aggravating factors, population density (caseload) and broad contextual elements (e.g. insecurity and displacement) as key indicators for deciding on action, rather than specific thresholds of malnutrition prevalence per se. Other agencies have developed approaches and thresholds for action that similarly take into account a number of indicators including GAM/SAM, food security and public health indicators. See table below.

Table 30: Decision-making framework for selective feeding programmes

Oxfam	MSF	WHO	Action required
	General rations < 2,100 kcals/person/day	Food availability at household level < 2,100 kcal/p/day	Unsatisfactory situation: • Improve general rations until local food availability and access can be made adequate
Less than 10% malnourished (less than 2% severely malnourished)	Malnutrition rate < 10% without aggravating factors	Malnutrition rate* under 10% with no aggravating factors	Acceptable situation: • No need for population interventions • Attention to malnourished individuals through regular community services
10–20% malnourished (other factors: general ration less than 1,750 kcals/day, severe public health hazard, significant diseases – especially measles)	Malnutrition rate 10–19% or malnutrition rates 5–9% plus aggravating factors (see above)	Malnutrition rate* 10–14% or 5–9% with aggravating factors (see above)	Risky situation: • No general rations, but: • Supplementary feeding targeted to individuals identified as malnourished in vulnerable groups • Therapeutic feeding for severely malnourished individuals
Over 20% malnourished (other factors: poor general ration)	Malnutrition rate over 20%, or malnutrition 10–19% with aggravating factors (CMR >1/10,000/day; inadequate general ration, epidemic of measles, shigella or other communicable diseases,severe cold or inadequate shelter)	Malnutrition rate* 15% or more or 10–14% with aggravating factors (general food ration below mean energy requirement, CMR > 1/10,000/day, epidemic of measles or whooping cough)	Serious situation: • General rations (unless situation is limited to vulnerable groups), plus: • Supplementary feeding generalised for all members of vulnerable groups, especially children and pregnant and lactating women • Therapeutic feeding for severely malnourished individuals

* Malnutrition rate is defined as the percentage of the child population (6 months to 5 years) below either the reference median weight for height –2SD or 80% of reference weight-for-height. Adapted from: *Young and Jaspers, 2006. The meaning and measurement of acute malnutrition in emergencies: A primer for decision-makers. Humanitarian Practice Network, ODI, No. 56*

Appendix 3: MUAC methodology

MUAC measurement in emergencies has three main uses:

1. To estimate the prevalence of acute malnutrition as a rapid alternative to W/H

2. As a first-stage screening and referral tool

3. To admit children to therapeutic feeding programs

MUAC is a simple tool that involves a single, non age-related measurement. It requires the use of an elastic band to systematically measure the mid-upper arm circumference of children between 6 and 59 months of age, using sample sizes of 900 children or more for full surveys. MUAC is often used in emergencies to estimate the prevalence of wasting across a population. For results to be valid, enumerators must be carefully trained by qualified staff on proper usage of the armband to ensure that errors in measurement due to technique and variance between enumerators are minimized. Nutrition staff must also support FSL teams on designing the sampling approach and analyzing results. Note that there is still significant controversy over whether MUAC or W/H is the best indicator of acute malnutrition for use in surveys.

MUAC is also often used as a **referral or screening tool** in the field to identify children who are at risk of malnutrition. To date there are no standard MUAC cut-offs for initial first-stage field screening and FSL teams need to consult with nutrition teams on the ground to identify acceptable thresholds in collaboration with Ministry of Health officials and other agencies. Cut-offs in the range of 130 or 135mm have been used.

Children with a measurement below the agreed cut-off are referred to a nutrition centre where a weight-for-height measurement and/or a new MUAC measurement is taken. **Admission criteria** to feeding centres until recently had been solely based on weight-for-height Z scores (WHZ) but MUAC is now a considered indicator for case definitions of acute malnutrition based on a cut-off of 115mm (as recommended by WHO/ UNICEF, measured against the WHO growth curves).

Example of a rapid MUAC screening methodology for screening in Jebel Mana on next page:

Approach	Rapid MUAC screening for 768 children 6-59 months of age, using a non-scientific sample.
Material	One 110cm stick; MUAC bracelets; MUAC record sheets; clipboard & pen; random table.
Selection of communities	Purposive selection of 24 communities considering security and logistic issues, and so that to cross the range of situations prevailing in Jebel Marra. Purposively selected communities all had more than 20 households. Habitats were generally grouped within villages or camps for selected communities. (N1)
Selection of compounds & households within compounds	Random selection of compounds in selected communities. More specifically selected communities were divided into 4 clusters. From the centre of each cluster, a direction was selected randomly ("spinning pen" technique); the first compound was selected along this direction using a random number table; remaining compounds were taken successively by proximity, always taking the compounds on the right hand side from the entrance of the former. HHs living in these compounds were selected. If more than one HH resided in the compound, identification was made according to the residential status (resident/ IDP); if the HHs were all residents or all IDPs, a random choice was made to select 1 HH; if IDPs were living with residents, one HH from each residential status was randomly selected. (N2)
Selection of children	Systematic selection of children between 6 months & 59 months within selected households. All children between 6 months & 59 months/110 cm and living in selected houses are screened, so that to reach 32 children per community (equivalent to 8 children per cluster). Children higher than 110 cm/ reference stick were systematically removed, and age was requested to mothers before including very young children (6 months-old children were those born after August 2007). If a child was not present in the compound but was in the close surroundings, MUAC team managed to measure the child; if child was not present in the compound randomly selected and was not in the close surroundings (away for the village & practically difficult to meet him/her), the child was replaced.
Information recorded	All the following information was recorded in a MUAC record sheet: For each community: name of community; date; screener; methodology used; household number. For each household: status (resident; IDP); date of arrival (if displaced); origins (is displaced). For each child: age (N3); months; sex; MUAC (mm); presence of oedema (N4); presence of ARI in the past 15 days; presence of diarrhoea in the past 15 days; any additional comments.
Data storage & analysis	MUAC record sheets were entered in a MS Excel database. In the frame of the analysis, MUAC were disaggregated into the following MUAC categories: < 110; 110 - 119; 120 - 135; > 135; children were as well disaggregated in 5 age groups: > 6 & <=12 months; > 12 & <= 24 months; > 24 & <= 36 months; > 36 & <= 48 months; > 48 & <= 59 months.
Miscellaneous	In order to find caretakers/heads of households in the houses, the MUAC screening was conducted early morning, after having informed local authorities the former evening.
Notes	(N1) Except in the case of Huera Farik community, which was composed of one village (grouped habitat) surrounded by IDP living along the wadi (diffused habitat). (N2) For 3 smaller communities, another methodological approach was used: all compounds were visited with all eligible children screening (referred in the database as the exhaustive approach); if the number of children exceeded the amount desired, 32 children were than randomly within the MUAC record sheet (the case of Dulda, Tabasa Garib West & Marra). In the case of Huera Farik mentioned in (N1), compounds within the grouped habitat were randomly selected, so that to screen 16 children (2 clusters were defined); IDP households living along the wadi/ diffused habitat were systematically selected, so that to screen as well 16 children. (N3) Age - If the mother knew the birth date, determination of the age is simple: in such case, the age was recorded into the questionnaire in month; when birth dates were unknown, mothers were asked about the approximate age using the local events calendar. (N4) Oedema - In order to determine the presence of oedema, normal thumb pressure was applied to both feet for 3 seconds; if a shallow print persisted on the both feet, then the child was presenting oedema; only children with bilateral oedema were recorded as having nutritional oedema.

Appendix 4: WASH indicators

Indicators	Emergency	Stable Situation
Minimum quantity for human consumption (drinking + cooking + hygiene)	15 liters/person/day	National standard 30-60 liters/person/day
Nutrition centers Health centers	30 liters/patient/day 50 liters/patient/day	50-220 liters/patient/day
Maximum distance from water point	500 meters	50 meters
Number of people per water point	15 liters person/day 8 hours of supply: • 500people per hand pump (16.6 l/min) • 400 people per open well (12.5 l/min) • 250 people per _' tap (7.5 l/min)	50 liters person/day hours of supply • 150 people per hand pump (16.6 l/min) • 120 people per open well (12.5 l/min) • 75 people per tap (7.5 l/min) Household connection
Maximum waiting time	15 minutes	No waiting time, or few minutes
Water quality	0 coli forms/100 ml Sanitation survey indicates a low risk of possible fecal contamination For populations of more than 10,000 people, in locations where there is a high risk of epidemics, or where there is a high occurrence of diarrheas, it is recommended to chlorinate the water and ensure a residual chlorine level of 0.5 mg per liter and less than 5 NTU turbidity.	
	Emergency	Stable Situation
Water quality	For physic-chemical parameters, use the WHO guideline values and assess the danger of consuming the water for a short period (in emergencies), thus opening up the possibility of using other water sources. If the danger is deemed very high, the water should not be used. Total dissolved solids should not exceed 1,000 mg/liter, or a conductivity of 2,000 µs/cm In order to avoid negative health effects, the water should not contain chemical or radioactive contamination	
Defecation areas	At least 50 m away from the nearest water point. Trenches: 2.5 m x 0.3 m x 1 m for 100 people	No defecation areas
Latrines	First phase: 1 public latrine per 50 people Second Phase: 1 public latrine used per 20 people Third phase: 1 family latrine used per family	1 Latrine per family
Access to latrines	More than 50 m from the nearest water point Less than 50 m from the house	

Appendix 5: Guidelines for Rapid Assessments

5.1. ACF RAPID ASSESSMENT KIT

1. Rapid assessment kit components

Definition of rapid assessment: a type of investigation designed to be implemented quickly, with the aim of obtaining a fast and clear vision of a specific context in a specific moment.

Includes:

- Sources of Secondary Information
- Sources of Primary Information
- Methods
- Reference manuals and decision taking guide
- Final report guide

2. Sources of secondary information

Secondary information includes all knowledge that can be obtained without being on the field. This information should be gathered and analyzed before going to the place where the crisis has taken place, within our own office and from other stakeholders and partners.

Not only regarding the emergency situation but also all basic information:

- Country's structures, statistics of all kinds
- Maps (access, water sources, Pcode…)
- Census
- Weather
- Food production and cereal balance
- Health statistics and endemic zone
- Official reports, NGO reports
- People to contact and sources of information… (List of contacts)

Key informants:

- Government representatives and ministers
- City council members (municipalities)
- UN delegates and workers, NGO employees
- Local associations
- Coordination mechanisms leaders

Documents:

- Government documents
- Official statistics and other statistics
- National and international institutions reports
- Projects evaluations
- Humanitarian and research organizations
- Mission reports of joint assessments
- UN

Webs

GENERAL SOURCES	
Name	Web address
Reliefweb	www.reliefweb.int
IRIN	http://www.irinnews.org/
Redhum	http://www.redhum.org/
Reuters	http://www.alertnet.org/
Global Disaster Early Warning System	http://www.gdacs.org
Humanitarian Reform (Global Cluster projects)	http://ocha.unog.ch/humanitarianreform/
Famine Early Warning Systems (FEWS) Network	http://www.fews.net/
World Health Organization in the country	http://www.who.int/countries/
OCHA in the country	http://ochaonline.un.org/Geographic/tabid/1084/Default.aspx
Government and Geographic information and Data services	http://www.library.northwestern.edu/govinfo/resource/internat/foreign.html
NGO guide	http://www.guiaongs.org/directorio/ongs/
Geohive, global statistics and link to statistic departments	http://www.geohive.com/default1.aspx
FSL	
FAO	http://www.fao.org
World Food Programme	http://www.wfp.org/aid-professionals
Oxfam	http://www.oxfam.org.uk/resources/
Humanitarian Practice Network	http://www.odihpn.org
Save the cChildren	http://www.savethechildren.org/publications/
ICRC	http://www.icrc.org/web/eng/siteeng0.nsf/iwpList2/Info_resources
Humanitarian Information Centres	http://www.humanitarianinfo.org
UNHCR	http://www.unhcr.org
West Africa Humanitarian Information	http://www.humanitarianinfo.org/westafrica/
Southern Africa Humanitarian Information Network	http://www.sahims.net/
HEALTH AND NUTRITION	
Emergency Nutrition Network	http://www.ennonline.net
Core Group	http://www.coregroup.org
Unicef	http://www.unicef.org
UNAIDS	http://www.unaids.org/en/KnowledgeCentre/HIVData/EpiUpdate/EpiUpdArchive/2006/Default.asp
Fanta Project	http://www.fantaproject.org
UN Standing Committee on Nutrition	http://www.unscn.org/
World Health Organisation	http://www.who.org
CDC, Centres for Disease Control	http://www.cdc.gov/
WASH (See HEALTH WEBSITE)	
Publications of Action Contre la Faim (ACF) French version	http://www.actioncontrelafaim.org/publications/technique-et-recherche/ouvrages-et-fascicules-techniques/

3. Sources of primary information

Macro Level (country scale):

Political situation, national and international support, infrastructure, demographic and socio-cultural data, physical and agricultural components and economic activities

ALL THAT CAN BE FOUND IN THE CAPITAL CITY

Micro Level (the field):

Political and humanitarian situation, social and demographic organization, demography, food sources access, access to social structures and state services, farming, fisheries, livestockand other economic activities

ALL THAT CAN BE FOUND ON THE FIELD

4. Method

General

- Group discussion (community, key groups)
- Household interview
- Single interviews with sectoral specialists and key informants: Health workers, people responsible for epidemic watch, for food security or for nutrition, they can supply statistical data
- Direct observation on the field

Food Security and livelihoods

- Market study (weekly or monthly pricelists, comparison with other markets)
- Household surveys

Nutrition and Health

- Assessment of health and/or nutrition centres

WASH

- Community mapping
- Sanitary survey
- Environmental health walk
- Household surveys (SPHINX version)

5. Reference manuals

They are support documents that are needed to conduct the Rapid Assessment.

- e.g. “Manual de técnicas de medidas antropométricas” or “Manual de entrevistas de grupos focales”

The person in charge of the Assessment will refer to these documents when getting ready for training and for field assessments.

- DECISION MAKING GUIDE

Once the results of the Rapid Assessment are obtained in form of Indicators, a diagnosis of the situation is made, the needs are determined and, with them, the actions required to satisfy them.

Certain activities have already been associated with the corresponding results (QIA's)

- Ex: if MAG > 14 %
- Action: Install CNT and field programs

6. Final report

Once all data have been collected, a final report is prepared

It is designed to list and analyze all the information generated by the forms and the vulnerability indicators corresponding to the Rapid Assessment

It includes as well all recommendations derived from the Decision Matrix

7. AS A CONCLUSION…

The assessment must allow us to get information on:

- Problems: Vulnerability Indicators obtained by surveys FS, WASH, CAP, SMART, MUAC, etc.
- Causes: background of the crisis or disaster
- Effects: Impact of the crisis on health, sceneries depicting the evolution of the crisis without external aid, copying mechanism, observed changes…
- Expected results: Impact of the proposed activities in the short term and in the long term, the humanitarian situation is evaluated by means of:
    - Vulnerability indicators measured before and after the crisis and comparison of the evolution
    - Analyze of the impact and potential evolution/deterioration of the humanitarian situation

Assessments are led at different level:

- Infrastructures (crops, latrines, wells, health centres)
- Families (amount of food, debts, purchase power, etc...)
- Environment (Security, market, access, other intervention, etc…)

The indicators required to yield a good picture of vulnerability must be clearly identified prior to the field work.

5.2. RAPID ASSESSMENT GUIDELINE, AN EXAMPLE

Aceh, Indonesia, February 2005

General objectives:

- Assess the impact of the tsunami/earthquake on food security of the populations and their capacity of recovery
- Contribute to defining a mid-term food security strategy for ACF in Aceh (phasing out of general food distributions, targeting of food aid, reconstruction/rehabilitation strategy and identification of potential FS activities – first step, more detailed assessments will be necessary)

Specific objectives:

- Identify a typology of populations depending on their vulnerability
- Evaluate the population structure and availability of labour force, and the existence of traditional social organisation and leadership
- Identify the on-going population movements and their causes
- Analyse how people meet their food needs, through an understanding of their household economy:
    - Assess the availability of, and access to, food
    - Identify the main sources of income and food and their current viability
    - Understand the existing coping mechanisms
    - Evaluate the different opportunities to access income and food in the short– and medium-term
- Determine the type and access to external aid
- Assess the existing commercial networks and supply channels
- Evaluate the nutritional status of the population and the impact of the tsunami/earthquake on the care practices
- Assess the access to potable water

Methodology:

- Semi-structured interviews with local and displaced populations and key informants
- Observation (esp. nut status, if screening not organised)
- Market survey/Food basket price survey

Identification of assessed areas:

The assessment will be done in ACF food aid intervention areas in Aceh Jaya and Aceh Barat districts. Sub-districts along the coast in Aceh Jaya have been equally affected by the tsunami, but a typology can be distinguished moving inland from the coast, using two main indicators: (i) destruction, and (ii) types of population, as synthesised in the table below.

Level of destruction	Type of population
Totally destroyed	Only IDPs
Partially destroyed	IDPs and local population
Not affected	Only local population

Nine theoretical situations can be identified (3 levels of destruction*3 types of population), but only four are commonly in the field:

➜ Totally destroyed areas with only IDPs (including resettled and returnees[13])

➜ Partially destroyed areas with both IDPs and local population

➜ Non-destroyed areas with both IDPs and local population

➜ Non-destroyed areas with only local population

One representative village will be visited in each of the four zones in Jaya, Krueng Sabe and Teunom sub-districts (4 per sub-district in 3 sub-districts, total 12 villages). Calang area (district administrative centre, totally destroyed) and the village in Teunom, where there are only returnees, will be assessed separately as special cases (Total: 14 villages). An assessment will also be conducted in Samatiga or Wyola sub-districts. These areas are more peri-urban and less isolated (road access to Meulaboh) and may represent other problematiques than the zones mentioned above, and hence an assessment is needed.

Note:

Some questions are pertinent for IDPs, some for returnees, some for host communities.*

INTERVIEW GUIDELINE

1. General

❑ Name of village, sub-district, district

❑ Relative wealth of village before tsunami/earthquake

❑ Date

❑ Topography

❑ Type of focus group

2. Demography and social organisation

❑ Current population

❑ Population before tsunami/earthquake

❑ Current number of HH

❑ Number of HH before tsunami/earthquake

❑ Gender and age distribution. How did the tsunami/earthquake affect this?

❑ Current proportion of working aged population

❑ Proportion of working aged population before tsunami/earthquake

❑ Community hierarchy or organisation (How are community decisions made, are there any user committees established etc?) Impact of the tsunami/earthquake?

[13][14]"Returnee" will be defined as people who have returned to their village of origin (even if they do not live in their own house). "Resettled" will be defined as people who have resettled/relocated to a new location after the initial displacement.

❑ Are there many orphans? How are they taken care of?

3. General impact of the tsunami/earthquake

❑ Estimate roughly the level of destruction (25%, 75%, totally destroyed…)

❑ Which assets remain?

❑ What type of populations were the most affected? Why?

❑ Proportion affected vs. non-affected population (%)

- Loss of housing
- Loss of main livelihood (main source of income)
- Loss of head of family
- Loss of working aged people
- % HH affected by all these (e.g. HH with destructed housing and main livelihoods, and loss of working aged people and head of family
- % HH affected by two of the first three

❑ % of population

- living in own houses (without IDPs)
- temporary shelters/camps
- with host families (not host families themselves)
- host families

4. Population movements

❑ What were the population movements immediately after the tsunami/earthquake?

❑ Currently, are there any population movements taking place? If yes, what? From where to where? Who is moving? Why? For how long do you think these movements will take place (projections?)? Why?

❑ Make a map of population movement since the tsunami/earthquake and distinguish times (see example of thematic map in annex. Idea is to understand the global picture (e.g. all village names are not needed) in the whole sub-district by combining the information obtained in different villages).

❑ Have you already visited your village of origin? If so, describe.

❑ Resettlement camps?

5. Sources of food

❑ How do you normally get food? Through own production, purchase, gathering/wild foods etc? (All sources, e.g. veggies from own production, noodles through purchase, rice from neighbouring villages…)

❑ How do you get food now? (All sources as above, e.g. noodles from distributions, vegetables from own production, bananas through purchase from neighbouring villages etc) What are the main difficulties to get food at the moment?

❑ Have any new ways to get food emerged after the tsunami/earthquake (coping mechanisms)? If yes, what? Do they have negative effects? What? On who?

❑ During a normal year, is access to food affected seasonally? If yes, how and why? What are the 'lean' months? (Make a seasonal calendar if it helps you)

6. External aid

❑ Have you received any aid during the last month (food, NFI, medical…)? What? From who? For how long? When did you last receive aid? (List organisation, type of assistance and number of beneficiaries)

7. Trade, markets and supply of food (focus on staple foods)

❑ Is there any trade in the village, especially food and other basic items? Since when? If not, where is the closest market?

❑ Is the supply adequate? If not, why? What is available?

❑ Where do the foods come from? Where are the main markets in the area? Make a map of current and pre-tsunami/earthquake food supply/trade links (Note reasons for rupture). See example in annex.

❑ Current and pre-tsunami/earthquake prices of basic food items, availability and origin

❑ If produce of the village is sold: producer prices (farm-gate prices)

❑ During a normal year, is trade affected seasonally? How, when and why?

8. Sources of income

❑ What are the main sources of income normally? Rank in order of importance and establish % of population involved.

- Agriculture
- Livestock
- Fishing

- Debt (from who, how to pay back, interest, guarantee?)
- Sale of assets (what, how often, to who, why?)
- IGA/industry (specify type)
- Trade
- Remittance/migration labour (how many times/year, destination?)
- Wage/labour contracts (specify type)
- Other

❑ Do HH normally have more than one source income? If yes, what and how?

❑ How did the tsunami/earthquake affect the sources of income/food? (Differentiate between immediate impact and a mid/long term impact on each source – note impact on productive capital/means of production) Which sources are the most affected? How? Why? What kind of populations are the most affected?

❑ Are you going to re-establish the affected sources? How? How long will this take? What are the main constraints to re-establish the activity? If some sources of income will not be re-established, why?

❑ Have new sources of income emerged? What? Who benefits of these? Do these have any negative effects? What? Who is affected?

❑ How is the work traditionally divided (including household tasks) among men, women, children and the elderly (who does what)? Has this been affected by the tsunami/earthquake? How?

❑ During a normal year, are the sources of income affected seasonally? How, when and why? (Make a seasonal calendar.)

9. Specifics for agriculture

❑ What proportion of the population was involved in agriculture before the tsunami/earthquake?

❑ How is access to land assured? (own through hereditary rights, rented…)

❑ Where is the land located?

❑ How much was irrigated? How much is irrigated?

❑ What do you cultivate normally? Make agric calendar of main crops, including cash crops. See example of agric calendar in annex.

❑ How are the crops used (own consumption, sales, saved for seed…)

❑ How was agriculture affected by the tsunami/earthquake? % of crops destroyed? % of land destroyed?

❑ What kind of harvest do you expect? List all main crops (including cash crops) and estimate in % the harvest as compared to last year.

10. Specifics for fishing

❑ What proportion of the population was involved in fishing before the tsunami/earthquake?

❑ What type of fishing is normally practiced (close to the shore, out in the sea, big boats, small boats, in a group, individually…)?

❑ How is the fish used (sold, eaten, processed…? If processed, how and for what? If sold, where and to who?

❑ What types of boats are used? How do fishermen get access to boats (e.g. are there big boat owners who rent their boats to fishermen, own their boats…)?

❑ How was fishing affected by the tsunami?

❑ Has fishing restarted? If yes, how? To what extent? If not, why? When will it be restarted?

❑ Make a seasonal calendar of fishing (seasonal variations in the intensity of fishing, place and type of fishing)

11. Expenditures

❑ What are your biggest expenditures normally (rank in order of importance)?

- Food (Within food expenditure, differentiate and rank in order of importance: staple, pulses, oil, meat/fish, dairy)
- Hygiene
- Health care, medicines
- Education
- Reconstruction (of what?)
- Purchase of productive capital (e.g. boats)
- Ceremonies (e.g. burial)
- etc

❑ Now, what are the main expenditures (broad categories as above) e.g. has the tsunami affected the expenditures and if so, how?

12. Water

❑ How do you get drinking water now?

❑ How did you get drinking water before the tsunami/earthquake?

❑ No and type of functional water points before the tsunami/earthquake

❑ No and type of functional water points now

13. Health

❑ What are the most common illnesses? When do they occur and why (seasonality)? Who is affected (gender, age specific illnesses)?

❑ Has the tsunami/earthquake affected health? How? Who is the most affected?

❑ Has the tsunami/earthquake affected the nutrition of infants and care practices?

14. Problem ranking and solutions

❑ What are the main problems faced by your village (list in order of importance)?

❑ What can you do about these problems? What solutions do you propose?

❑ What different potentialities currently exist in your village? How could these be used to re-establish livelihoods?

15. Future plans

❑ What are your future plans? Where will you go (return to village of origin, remain in current place, go to camp…)? How will you survive?

Appendix 6: Triangulation

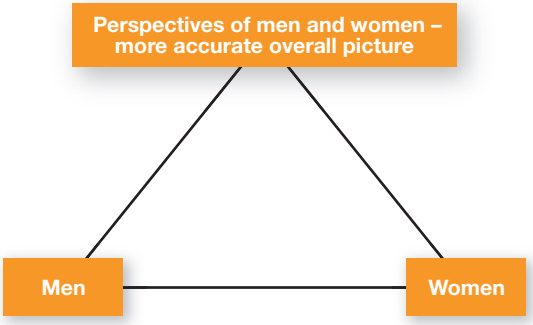
1. **Triangulation** can be used at different levels of the FSL assessment.

Purpose: to increase the accuracy (reduce bias) of the information gathered and analysis by cross-checking data.

Objective: to ensure that the information and analysis of data used in a FSL assessment is accurate and complete.

Process: use different data collection methods to gather information from different sources on the same or similar aspects of food security and livelihoods. Triangulation sometimes includes having different ACF staff collect the same data. Staff that consist of different disciplines (e.g., a team comprised of a sociologist, water engineer, and medical examiner) will add to the overall collection of complete data.

Triangulation Perspective of men and women on livelihoods



For example, if you are trying to ascertain specific aspects of livelihoods in a community, it might be helpful to cross-check information with men and women separately. Various sources often complement each other and fill gaps in knowledge or answer questions that one group could not. The Figure above is a very simplified version of triangulation. Data from men and women would likely be collected separately through various methods such as key informant interviews, focus groups and a combination of participatory rapid appraisal methods such as mapping or proportional piling.

Appendix 7: Secondary data review

Purpose: to explore existing data for information relevant to the current FSL assessment.

Objective: to obtain relevant data about key components and contextual information for the FSL assessment that has already been collected and / or may be too expensive or time consuming to collect during an FSL assessment.

Process: Ask technical and local/regional experts about what information may exist that would inform or provide essential background for the current FSL assessment. Review published and unpublished reports, maps and articles from institutions such as government agencies, health centres, NGOs.

Common mistakes:

➜ Moving to quickly through the process thereby missing important pieces of information

➜ Missing key representatives or data collection

Checklist of issues to be considered during review of secondary data

- What were different people doing for a living before the disaster?
- What were the main ways that people got food and income before the disaster?
- How did those differ between geographical areas (livelihood zones)?
- How did those differ between richer and poorer people (wealth groups)?
- What was the relative importance of each of those activities (e.g. their contribution to total food access and to total food income)?
- Were all groups getting enough food of the right quality to be well nourished?
- Were all groups earning enough income by non-harmful ways to afford their basic needs (including food, education, healthcare, soap and other household items, clothing and productive inputs such as seeds and tools)?
- (The latter two questions will indicate whether there were chronic problems or not; these may be exacerbated by a disaster, or may be unaffected; but the appropriate response is influenced by whether the problem is chronic or acute)
- What is the normal seasonal pattern of activities, and where in the seasonal calendar are we now?

Suggested sources of secondary data

- National level assessments by Government Ministries/ agencies, VACs, WFP, FAO, World Bank, UNDP
- Existing Household Economy Assessments
- Food security or livelihoods assessments by agencies using a livelihoods approach, e.g. FEWS-NET, Oxfam, ACF or CARE.
- Malnutrition data can often be found from: Demographic & Health Surveys (DHS); Ministry of Health; Unicef
- Telephone or face-to-face Interviews/ discussions with experienced government and international agency staff

Checklist of issues to be considered when examining the effects of the hazard/shock

- How has the shock affected the ability of the household to engage in each activity?
- Have there been any deaths or injuries to those who did the activity?
- Is the household pre-occupied with other priorities such that they cannot work? (e.g. reconstructing shelters, attending funerals, caring for sick or injured or bereaved relatives, dealing with own trauma)
- Have any key productive assets been lost or damaged? (Note that this could include physical assets such as tools, and natural assets such as land.)

(continued on page 147)

(continued from page 146)

- Has there been any loss of stocks or saving? (e.g. food stocks being destroyed; stocks of inputs being lost (e.g. a carpenter's wood, or a shopkeeper's stock of goods); cash savings being lost; bank savings being inaccessible…)
- If livelihoods depend on selling a good or a service, has the market for the good or service been physically affected? (e.g. physical destruction of shops or marketplaces; roads to markets being damaged and impassable;
- Has the market for the good or service been economically affected?
- Has the market for the good or service been affected in any other way? (e.g. insecurity preventing access to markets; psychological or health concerns.) Has the policy environment changed in a way that might affect livelihoods? (e.g. bans of movements of food or livestock; restrictions on where people can live

Additional Issues in Conflict Situations

- Does the conflict put any population group at particularly risk of food insecurity (e.g. on the grounds of nationality, ethnicity, religion, wealth, etc.)?
- How might economic relationships between groups be affected by conflict?
- Is the conflict intentionally targeting particular livelihood strategies?
- Are any groups likely to profit from the conflict?
- Would any of our intended interventions exacerbate tensions or put any group at risk of violence?

Source: Save the Children HEA Toolkit

Appendix 8: Key informant interview guideline & templates

Purpose: to interview community members who have knowledge or unique perspectives on an important aspect of the FSL assessment.

Objective: to obtain local information on facts, attitudes and beliefs related to the FSL assessment from individual community members that are in the best position to provide the desired information.

Process:
Preparing for a key informant interview:

➜ Identify the necessary data that would be best obtained through interview with a set of individual community members - often conducted as one-on-one interviews.

➜ Create a semi-structured questionnaire that asks open-ended questions to obtain the information. Be sure to leave room to follow up on unexpected answers. Interviews should be relatively short (generally about an hour or two hours maximum).

➜ Identify Key Informants within a community based who are most likely to have the information sought, often chosen based on his or her position, experience or responsibilities. Let key informants know the approximate time it will take to complete the interview.

➜ Choose an interview location that will be informative (e.g., on agricultural land being discussed) but also puts the interviewee at ease. Also need to balance the location with the potential for interruption to the flow of the survey.

During a key informant interview:

➜ Establish rapport, use the traditional introductions and greetings

➜ Present goals of the visit, the general information sought in terms that are easily understood by someone outside of the FSL assessment field.

➜ Ask if it is OK to take notes during the interview and be discriminating on what you write down. If it is not OK to take notes, then remember key points and write them out directly after leaving the room.

➜ Listen attentively and guide the interview back to the topic at hand being sure to allow adequate time for follow-up of unexpected but relevant information.

➜ If more than one staff will be at the interview, be sure to let the interviewee know a head of time, introduce team members and be sure each member of the team has a well defined role and intervenes in an orderly fashion.

➜ Finish the conversation by asking if there is anything the key informant would like to add.

After the interview:

➜ Organize and condense notes as soon after the interview as possible, be sure to record your general impressions of the data (such as facts, perspectives, opinions) and places to follow up with other community members.

Common mistakes:

➜ Starting the interview before building rapport

➜ Taking notes on everything said

➜ Not following up on unexpected data

➜ Letting a tangent go on for too long without redirecting back to the conversation

➜ Interviewing for too long

➜ Waiting to compile notes

SECTION 8.01 DISTRICT KEY INFORMANT INTERVIEW GUIDE TEMPLATE.

District	District	Interviewer(s)

I. Details of Key Informants

Name	Position/Organisation

II. Description of Livelihood Zones in the District

Main Livelihood Category	FILL IN AS APPROPRIATE] 1. Agro-pastoral 3. Trade/small business 2. Pastoral
Main Characteristics (production system, topography, vegetation, natural resources, population density, soils, rainfall)	
Main Crops Consumed: Rank in order of importance for home consumption	1
	2
	3
Main Crops Sold (food or cash crops): Rank in order of importance for household cash income	1
	2
	3
Main Livestock & Livestock Products Consumed: Rank in order of importance for home consumption	1
	2
	3
Main Livestock & Livestock Products Sold: Rank in order of importance for cash income	1
	2
	3

III. Population

Livelihood zone	Population
1. Agro-pastoral	
2. Pastoral	
3. Traders/Small business	
4. Etc.	

1. Labour

Local rural area	Local towns	Outside zone	Total
			100%

If outside zone, where do people go and how much money is needed to go away?

How much is cost of labour per person-day

2. Market Price Data (District Office)

Items [FILL IN AS APPROPRIATE]	Unit	2005	2006	2007	2008	2009
1. Crop						
1.1 Main Food Crops						
1.1.1 Sorghum						
1.1.2 P. Millet						
1.1.3 F. Millet						
1.1.4 Maize						
1.1.5 Beans						
1.1.6 Peas						
1.1.7 Cassava						
1.1.8 Sweet Potato						
1.2 Cash Crops						
1.2.1 Oil crops						
1.2.1.1 Groundnut						
1.2.1.2 Sunflowers						
1.2.1.3 Sesame						
1.2.1.4 Cotton						
1.2.2 Vegetables						
1.2.2.1 Pumpkins						
1.2.2.2 Cucumber						
1.2.2.3 Bitter melons						
2. Livestock						
2.1 Live animals						
2.1.1 Cow						
2.1.2 Ox/Bull						
2.1.3 Calf						
2.1.4 Sheep						
2.1.5 Goat						
2.1.6 Camel						
2.17 Chicken						
2.2 Animal product						
2.2.1 Milk						
2.2.2 Butter						
2.2.3 Ghee						
2.2.4 Hide						
2.2.5 Egg						
2.2.6 Honey						

3.1 Agricultural Production

3.1.1 Land Tenure System

Tenure System	Local Name	Management/Policy	Access/Use right	Remark
Traditional • Grazing • Farming				
Modern/Land Tenure Policy • Grazing • Farming				

3.2 Livestock Production

3.2.1 Livestock Sale Volume

Livestock	2004	2005	2006	2007	2008
1.1 Cow					
1.2 Ox					
1.3 Calf					
1.4 Goat					
1.5 Sheep					
1.6 Camel					
1.7 Other					

3.2.2 Livestock Migration (Outward or Inward)

District/Clan		
	From:	To:
	When:	When:
	From:	To:
	When:	When:
	From:	To:
	When:	When:

3.3 Crop Production

3.3.1 Cereals, Pulses and vegetables Yield

Crop Type	2004		2005		2006		2007		2008	
	Acre	Qt	Acre	Qt	Acre	Qt	Acre	Qt	Acre	Qt
1. Cereals										
1.1 Sorghum										
1.2 P. Millet										
1.3 F. Millet										
1.4 Maize										
1.5										
2. Pulses + Tubers										
2.1 Beans										
2.2 Peas										
2.3 Cassava										
2.4 S. Potato										
3. Oil Crops										
3.1 Groundnut										
3.2 Sunflowers										
3.3 Sesame										
3.4 Cotton										
4. Vegetables										
4.1 Pumpkins										
4.2 Cucumber										
4.3 Bitter melons										

3.3.2 Explain extent of agricultural inputs utilization:

Type	Remark
Hybrid Seeds	
Fertilizers	
Pesticides	

3.4 Disarmament

Effects of Disarmament on Production System/Livelihoods of the population

4. HIV/AIDS

Has HIV / AIDS affected food security in the zone? Since when has this been a problem? What coping strategies have people adopted to address HIV / AIDS?

5. Interventions

5.1 Food Assistance Distribution

Sub-County	Village	No. beneficiaries	2004	2005	2006	2007	2008

5.2 Other Types of Interventions by UN/NGOs, CSO's & Government (OCHA District Office)

Agency	District/Sub-county/Parish	Activities/Sector	
		Current	Planned

6. Seasonal Calendar (District Agricultural Officers)

Rainfall Crops: • Main crops grown for consumption • Main crops grown for sale *Livestock*: • Migration • Milk production • Livestock sales • 'Heat' and Births	Employment: • Local labour (e.g. on farms) • Off-farm employment (e.g. brick-making) • Labour migration (where to?) Wild foods/Game: • Collection and consumption, by type	Food purchases: • Timing of purchases and prices (highest/lowest) Annual 'hunger' season: • Timing Mining • Peak periods	For crops, indicate the timing of the following: • LP (land preparation) • P (planting) • CG (consumption green) • H (harvesting) Indicate variations in access with arrows: ↑ to indicate peak access and ↓ to indicate minimal access

Month (start with month of first crop production (eating green): write in months																	
	Who?																
Food source/ Income activity																	

7. Seasonality: Early Warning Indicators (District Agricultural Officers)

What are the important signs of possible impending food crisis resulting from the main periodic hazard?

Month	Early Warning Signs	Key Indicators to Monitor
January		
February		
March		
April		
May		
June		
July		
August		
September		
October		
November		
December		

8. Infrastructure & Institutions (District local Government office)

Type	District	Sub-county	Parish	Distance	Coverage (%)
Education					
Primary					
Secondary					
Territory					
Technical					
Health					
HC					
Hospital					
Source of Drinking water					
Borehole (pump)					
Stream/river bed					
Communication					
Road Transport					
Road network					
Availability of Electricity					
Agr. Extension Services					
Dev. Staff					
Vet shops					
Market Centres					
Local government office					
others					

SECTION 8.02 : SAMPLE MARKET VISIT AND TRADER INTERVIEW QUESTIONNAIRE TEMPLATE

District	Market	Date	Interviewers

Observations of The Market (Size, frequency, variety, quantity of goods being sold)

1. Markets

Main livestock sold	Trade route

Main crops sold	Trade route

Main foods bought	Trade route

Market Access	Remark
Is market access good or bad in this LZ?	
Why? (e.g. good/bad roads, close to/far from an urban centre), security,	
Availability of main food and non-food items	
Capacity of traders to respond to increased demands	

2. Prices of Main Products in Local Market

Market Price Data	Description of item	Unit	Price/Unit
a) Main types of livestock and livestock products			
b) Main food & cash crops			
c) Other Include: expenditure items income items relief food items handicrafts others			

3. Livestock and Livestock Products

Description	Main type of livestock or livestock product	Second type of livestock or livestock product
Name of livestock		
Seasonality in the reference year a) Months of maximum trade volume b) Months of minimum trade volume In each case, give average prices		
Identify main source and destination markets in the reference year, together with any important intermediate markets to indicate a trade route. Record names and locations of markets, which can include "local markets".	Season traded:	
	Source market:	
	Intermediate market:	
	Destination market:	
Main trade routes in a "bad" year, if different from the reference year. Give reasons for differences.		
Reasons for recent price trends		

4. Food Crop Trade

Description	Main food crop traded	Second food crop traded
Name of food crop		
Seasonality in the reference year a) Months of maximum trade volume b) Months of minimum trade volume In each case, give average prices		
IMPORTED FOODS: Identify main supply source in the reference year, together with any important intermediate markets to indicate a trade route. Record names and locations of markets, which can include “local markets”.	Season imported:	
	Source market outside LZ::	
	Intermediate market::	
	Destination within LZ::	
EXPORTED FOODS: Identify main destination markets in the reference year, together with any important intermediate markets to indicate a trade route. Record names and locations of markets, which can include “local markets”.	Season exported:	
	Source market within LZ:	
	Intermediate market:	
	Destination outside LZ:	
Main trade routes in a “bad” year, if different from the reference year. Give reasons for differences.		
Reasons for recent price trends		

5. Cash Crop Trade

Description	Main cash crop traded	Second cash crop traded
Name of cash crop		
Seasonality in the reference year a) Months of maximum trade volume b) Months of minimum trade volume In each case, give average prices		
Identify main source and destination markets in the reference year, together with any important intermediate markets to indicate a trade route. Record names and locations of markets, which can include “local markets”.	Season exported:	
	Source market within LZ:	
	Intermediate market:	
	Destination outside LZ:	
Main trade routes in a “bad” year, if different from the reference year. Give reasons for differences.		
Reasons for recent price trends		

Appendix 9: Focus Group Discussions guideline & templates

Purpose: to conduct a small group discussion (6 to 10 participants) that allows for participant interactions to provide a better understanding and description of several local perspectives in a community or local organization.

Objective: to cover maximum range of relevant topics of the context, or less topics but in detail gathering concrete and detailed accounts of participants' experiences and exploring participants' feelings and opinions in depth.

Process:
Preparing for the focus group discussion

- ➜ Define key issues you want to discuss and develop open-ended questions for an unstructured discussion around those issues (e.g., locally defined priorities, resource awareness and environmental interests, gender perspectives).
- ➜ Prepare in advance the questions you want to ask being sure to have follow-up questions that are related if the initial question does not receive a response.
- ➜ Decide the best demographics of the focus group given the information sought. In most cultures a single gender group is recommended if you want women to speak about specific topics. The same is true for social issues with respect to creating groups of the same age, caste, religious and ethnic groups.

During the focus group discussion:

- ➜ Introduce the focus group team and the process that will follow, emphasize that participants' experiences, opinions, and perspectives are sought to understand the current situation.
- ➜ Set ground rules for the focus group (e.g., each person's opinion is valid and that there may be agreement and disagreement among the group – an open exchange of ideas is being sought).
- ➜ Be appreciative of participation yet clear that participating in the focus group does not translate into receiving assistance.
- ➜ Sometimes it is good to have each participant make an individual, uninterrupted statement of introduction in the beginning to help less talkative participants bring his or her voice into the group and have more talkative participants spend time listening.
- ➜ Introduce the first topic with an open-ended question, followed by unstructured discussion
- ➜ Introduce additional topics based mainly on points made during the focus group discussion
- ➜ End the focus group discussion with a general summary of what was discussed and by asking if there is anything else participants would like to add
- ➜ Thank participants for being part of the focus group

After the focus group discussion:

- ➜ Write a report summarizing results, being sure to highlight any unexpected information or gaps that need to be filled.

SECTION 9.01 : SAMPLE COMMUNITY REPRESENTATIVE INTERVIEW GUIDE TEMPLATE

1. General Information

District	Livelihood Zone	Village / sub-county
Interviewers	Date	Number of participants Men _____ Women _____

2. Land Tenure System (Grazing and Farming Land)

Tenure System	Local Name	Management	Access/Use right	Remark
Traditional • Grazing • Farming				

3. Agricultural Production

3.1 Livestock Production

3.1.1 Milk and Milk Product Production

Type of Animal	Milk production per day		Meat Production		Skin	
	Normal year	Current year	Normal year	Current year	Normal year	Current year
Cows						
Goat						
Sheep						
Camel						

3.1.2 Adaptation Strategies

Strategy	Route	Season	Decision
1. Seasonal Migration			
2. Species Diversification		(Species)	
3. Herd Splitting			
4. Wealth (Livestock) Redistribution • Raiding • Peaceful	Internal/External		
5.			

3.1.3 Threat for different Adaptation Strategies

Strategy	Problem
1. Seasonal Migration	
2. Species Diversification	
3. Herd Splitting	
4. Livestock Redistribution • Raiding • Peaceful	
5.	

3.2 Crop Production

3.2.1 Cereals, Pulses and Vegetables Yield

Main food & cash crops	Unit	Yield/unit (With Inputs)		Yield/unit (Without Inputs)		Seed Requirement	
		Normal	Current	Normal	Current	Source	Qty/Unit

3.2.2 Inputs Utilization

Type of Inputs	% of pop. Uses inputs		Place/Market bought	

3.2.3 Cultural Practices

Practices	Description

4. HAZARDS

Drought	Conflict	Flood	Livestock disease	Crop disease	Wild Animals	Market events	Others

Year	**Season Performance (1-5*)**	**Event(s) And their relationships**	**Response**: What did people do themselves to cope with the problem? Was there any outside assistance?
2009			
2008			
2007			
2006			
2005			

*** Rank** all the seasons relative to each other:

5 = an excellent season for household food security
(e.g. due to bumper yields, good rains, good prices, etc)

4 = a good season or above average season for household food security

3 = an average season in terms of household food security

2 = a below average season for household food security

1 = a poor season (e.g. due to drought, flooding, pest attack) for household food security

Please rank the three main ***chronic hazards*** affecting households in this area. (Note: A chronic hazard is one that significantly affects crop or livestock production/other livelihoods almost every year.)		
1.	2.	3.

5. Population movements

5.1 Returns & displacements

N	Movements	Priority	Description & importance	Former/next locations	Reasons for movements
1	Returns of residents of community in the past year	○			
2	Departures of residents of community in the past year	○			
3	Arrivals of displaced persons in community in the past year	○			
4	Departures of displaced persons from community	○			

5.2 Seasonal movements & Economic Migration

N	Movements	Description	Former/next locations	Reasons for movements
1	Residents			
2	IDPs			
3	Nomads			

5.3 Description of IDPs (living place; relationships with host community)

5.4 Recent arrivals of IDPs in community or neighbourhood:

➜ **Importance & description (# of displaced persons arriving per week; nb of additional persons who could come)**

➜ **Description of how they are arriving (scattered individuals or families or clans; tribal, ethnic, or village groups; means are they travelling; average family size, etc.)**

5.5 Key issues (e.g. IDP pressure on host communities, settlement, etc)

6. Vulnerable Group Descriptions and Ranking

6.1 Vulnerability ranking NOW, considering all households & sources of food/ income (use of % piling)

N	Vulnerability	%	Definition	LIVELIHOODS	
				Main income sources	Main food sources
1	Extremely vulnerable			(a)	(a)
				(b)	(b)
				(c)	(c)
2	Very vulnerable			(a)	(a)
				(b)	(b)
				(c)	(c)
3	Vulnerable			(a)	(a)
				(b)	(b)
				(c)	(c)
4	Less vulnerable			(a)	(a)
				(b)	(b)
				(c)	(c)

Notes: Consider as well status (IDPs, etc.)

6.2 Vulnerability ranking BC, considering all households & sources of food/ income (use of % piling)

N	Vulnerability	%	Definition	LIVELIHOODS	
				Main income sources	Main food sources
1				(a)	(a)
				(b)	(b)
				(c)	(c)
2				(a)	(a)
				(b)	(b)
				(c)	(c)
3				(a)	(a)
				(b)	(b)
				(c)	(c)
4				(a)	(a)
				(b)	(b)
				(c)	(c)

SECTION 9.02. SAMPLE CARE PRACTICES INTERVIEW GUIDE TEMPLATE

Overall guidelines

- ➜ Conduct FGD with women (ideally caretakers) & SSI with key-informants to complete/cross-check the information;
- ➜ Conduct direct observations through household visits;
- ➜ Put DNW when respondents cannot provide requested information.

1. General Information

District	Livelihood Zone	Village / sub-county
Interviewers	Date	Number of participants

2. Population

For specific site/ visited area ONLY

2.1 Total estimated population of site: _____ persons

2.2 Total estimated # of children below 5: _____ children below 5

2.3 Total estimated # of households: _____ HHs

2.4 Average household size: _____ avg. HH size

2.5 Total estimated # of female-headed HHs: _____ female-headed HHs

2.6 Total estimated # of pregnant/lactating women:_____ pregnant/lactating women

2.7 Total # orphaned or separated children: _____ orphaned/separated children

3. Care Practices

Caretakers

3.1 Who are generally the PRIMARY caretakers of the children below 5 in your community NOW; select the 2 most common options:

❍ Mother

❍ Grand-mother

❍ Sister/brother; ***specify range of ages***: from _____years old to _____years old

❍ Father

❍ Grandfather

❍ Uncle/aunt

❍ Other; specify:_____

3.2 Who are generally the SECONDARY caretakers of the children below 5 in your community NOW; select the 2 most common options:

❍ Mother

❍ Grand-mother

❍ Sister/brother; ***specify range of ages***: from _____years old to _____years old

❍ Father

❍ Grandfather

❍ Uncle/aunt

❍ Other; specify: _____

3.3 Were primary/ secondary caretakers generally the same persons before the crisis? Yes/No

3.4 If no, describe the changes & explain why changes occurred (e.g. migration, displacement, conflict):

_____

_____

_____

3.5 In your community, are mothers generally available to look after children below 5? Yes/No

3.6 If no, explain why mothers are not available (in which others types of activities are they involved?), specify for which period of the year it applies and describe if this situation was similar before conflict:

_____

_____

_____

Breastfeeding & infant feeding

3.7 In your community, how do caretakers generally feed children:

N	Feeding	Less than 6 months	6 months – 12 months	12 months – 24 months	24 months – 59 months
1	Breastfeeding only	Yes/Sometimes/No	Yes/Sometimes/No	Yes/Sometimes/No	Yes/Sometimes/No
2	Breastfeeding + food	Yes/Sometimes/No	Yes/Sometimes/No	Yes/Sometimes/No	Yes/Sometimes/No
3	Food only	Yes/Sometimes/No	Yes/Sometimes/No	Yes/Sometimes/No	Yes/Sometimes/No

3.8 In your community, do mothers generally give colostrum after birth? Yes/No

3.9 At what age do exclusive breastfeeding generally stop completely?

- ❍ **< 4 months**
- ❍ **4-6 months**
- ❍ **7-12 months**

3.10 Explain the reasons why exclusive breastfeeding stop completely at this age:

_____

_____

_____

3.11 In your community, when food is generally first introduced:

- ❍ **Before 2 months**
- ❍ **2-4 months**
- ❍ **4-6 months**
- ❍ **6-12 months**

If food is generally introduced before 6 months, explain the reasons:

_____

_____

_____

3.13 Are children below 6 months sometimes separated from their mothers in your community? **Yes/No**

3.14 If yes, explain:

_____

_____

_____

3.15 Do mothers from your community have problems with breastfeeding? **Yes/No**

3.16 If yes, explain in details *(if answer is "not enough milk", ask why)*:

_____

_____

_____

3.17 In your community, describe the typical food generally provided NOW to:

N	Children	Type of food outside breastfeeding (be specific about the individual foods that are given; e.g. water, milk, egg, oil + type porridge)	# of meals per day only for children
1	Less than 6 months		
2	6 months – 12 months		
3	12 months – 24 months		
4	24 months – 59 months		

3.18 In your community, do you observe any changes in relation to breastfeeding or infant feeding compared to before the conflict? **Yes/No**

3.19 If yes, explain:

_____

_____

_____

3.20 In your community, which water do children below 5 years old generally drink; describe if any water treatment is conducted:

_____

_____

_____

3.21 Did you observe a change in relation to drinking water quality compared to before the crisis? **Yes/No**

3.22 If yes, explain which changes you could observe:

_____

_____

_____

Social structures & networks

3.23 In your community, which social support is important for women (e.g. family, organizations, mutual aid systems, etc.):

_____

_____

_____

3.24 Did some of these social support systems break-up compared to before the conflict? **Yes/No**

3.25 If yes, explain which social support system break-up and why:

_____

_____

_____

Programming

3.26 When households in the community faced food shortages, how do they cope to feed their young children; give the 5 main coping strategies:

1. _____

2. _____

3. _____

4. _____

5. _____

3.27 Which young children among the community particularly lack a good care environment; explain:

_____

_____

_____

3.28 What are the 2 main infant and young child feeding concerns of mothers & caretakers in your community:

1. _____

2. _____

Additional comments

3.29 Additional comments related to care practices at this site:

_____

_____

4. Women's roles & needs

4.1 Do women in your community have the same roles & responsibilities now compared to before the crisis? **Yes/No**

4.2 If no, explain the main changes:

_____

_____

_____

4.3 Do women in your community usually do any work to earn money for the household? **Yes/No**

4.4 If yes, describe the types of work:

_____

_____

_____

4.5 Did women in your community have similar types of work before the crisis: **Yes/No**

4.6 If no, explain the changes:

_____

_____

_____

4.7 In your community, do women generally participate in deciding how the money is spent? **Yes/No**

4.8 PRA activity profile

Activities & responsibilities	Activities all year	Activities only in dry season	Activities only in rainy season
Children			
Women			
Men			

4.9 PRA need ranking:

1. _____

2. _____

3. _____

4. _____

5. _____

4.10 Further comments on programming

Appendix 10: Household Questionnaire guidance & template

Purpose: to interview one or more household members using a structured questionnaire to gather detailed and quantitative information.

Objective: to understand intra-household functioning or the functioning of individual households as a part of the larger community.

Process:

Preparing for the household questionnaire:

➜ Identify the necessary information that would best be obtained at the household level through quantitative methods.

➜ Design a structured question to gather relevant information (may also use or adapt an existing household questionnaire) that is relatively short (less than 1 hour to administer) and captures relevant information

➜ Pre-test the questionnaire to be sure the questions are providing the information sought and is clear to respondents.

➜ Decide on the most relevant household member(s) to be interviewed.

➜ Train enumerators to administer questionnaire in a standardized way that follows questionnaire exactly

➜ Decide on an appropriate sampling strategy to select a representative sample of households.

During the household questionnaire:

➜ Introduce yourself and allow for traditional greetings

➜ Present objectives of the interview, being clear that participating in the household questionnaire does not translate into receiving assistance.

➜ Answer questions that household member(s) have.

➜ Ask to ensure that time and location are suitable.

➜ Administer questionnaire in a standardized way that follows questionnaire exactly

After the household questionnaire:

➜ Check questionnaires for completeness

➜ Analyze results quantitatively

➜ Use qualitative data to elucidate quantitative results

Common mistakes:

➜ Waiting to check the questionnaires for completeness.

➜ Administering questionnaire before pre-testing.

➜ Creating a questionnaire that is too detailed and / or takes a long time to administer.

Household questionnaires can be combined with other data collection methods to obtain more qualitative information about the households. Household questionnaire design, implementation (including sampling strategies) and analysis are specific skills that can be guided by technical staff.

SECTION 10.01 HOUSEHOLD QUESTIONNAIRE TEMPLATE

Livelihood Zone	District	County/sub-county
Parish/Village	Livelihood group	Reference year
Type of year	Interviewers	Number of participants in interview Men _____ Women _____

1.1 Household/Family size and composition

Number of people in HH living/eating at home daily (include extra dependents)		Number of children at school (boys / girls)	

1.2 Livestock profile

Livestock Type	Quantity	Remark
Cattle		
Cow		
Ox/bull		
Sheep		
Goat		
Camel		
Donkey		
Poultry		
Beehives		

1.3 Land holdings profile

Land owned		Land cultivated - total (owned +/- rented / grazing land)	
Unit for measuring land		Land cultivated – food crops	
Any irrigated land?		Land cultivated – cash crops	

1.4 Other comments on the household and asset profile

Are there any other productive assets (ploughs and any other assets)?

2. Food Sources (in % prop. piling)

What foods have been eaten in the household in the **last 24 hours**? 1=yes 0=no		Score (0 or 1)	Main Food Source	
A	**Cereals** – corn soy blend, pasta, rice, ugali, chapatti, sorghum, biscuit, bread etc.			
B	**Roots and tubers** – potato, cassava, sweet potato etc.			
C	**Vegetables** – sukma wiki, sombe, spinach, pumpkin, cabbage, tomato, onion, hoho etc.			
D	**Fruits** – mango, papaya, guava, banana, watermelon, avocado, orange, lemon etc.			**Food Source codes** 1 = Own production (crops, animals) 2 = hunting, fishing 3 = gathering 4 = borrowed 5 = purchase 6 = exchange labour for food 7 = exchange items for food 8 = gift (food) from family relatives 9 = food aid (NGOs etc.) 10 = Other specify:
E	**Meat, poultry, offal** - goat, camel, sheep, cow, chicken, liver, kidney, heart etc.			
F	**Eggs**			
G	**Fish and seafood** – dried or fresh			
H	**Pulses/ legumes/ nuts** – beans, lentils, nuts, peas, nuts, seeds etc.			
I	**Milk and milk products** – fresh, powdered, yogurt etc.			
J	**Oil/ fats** – oil, fat, butter, ghee etc.			
K	**Sugar** – sugar, honey, sweets etc.			
L	**Miscellaneous** – tea, coffee, chat, condiments (royco) etc.			
TOTAL HDDS SCORE (0-12)				

3. Income Sources (in %)

1. How many household members currently earn income for the household?	
2. How many different sources of income does your household currently have?	
3. How many different sources of income did your household have in an earlier reference period?	

4. What is each of these income sources? How much did each source contribute to total household income in the last month, and in the earlier reference period? *[Use proportional piling to represent the contribution of each source. Record score below. Note incomes that are purely seasonal or temporary.]*

Income source	**Reference period** (PP score)	**Current** (PP score)
Own Production		
• Livestock (live animal, milk, butter, honey, hides, ox rental)		
• Fishing (fish, crab, shrimp)		
• Crop (Cereals, Pulses, Oil seeds & Vegetables)		
Self-employment (small business)		
Petty trade		
Sale of charcoal/ firewood		
Casual labour		
Remittance		
Loan		
…		

4. Expenditure Pattern (in %)

Of total household expenditure, what was the share of each item in the last month, and in the earlier reference period? *[Use proportional piling to represent the share of each item. Record score below. Note expenditures that are seasonal or exceptional.]*		
Items	**Reference period** (PP score)	**Current** (PP score)
Food*		
Fuel		
Water		
Education		
Health		
Transport		
Purchase of productive assets		
Community obligations		
…		

* Within food expenditure, differentiate and rank: staple cereal/tuber, pulse, oil, animal product

5. Expenditure Pattern (in %)

1. Does your household currently have any outstanding food or money debts?		
If yes, to whom do you owe money or food? *(tick all that apply)*		
a. Bank/ other formal financial institution		
b. Informal money lender		
c. Local shop		
d. Landlord		
e. Family, friends or community members		
2. Of these sources, are there any who will no longer lend to you? If so which ones? (note the letter of the source)		
3. What are the primary uses for the credit? *(tick all that apply)*		
a. Food		
b. Health		
c. Water		
d. Other (specify)		
4. What is the amount of your debt liability currently and in an earlier reference period?	**Reference period**	**Current**

6. Agricultural Production

6.1 Livestock Production

6.1.1 Milk Production

Type	# of milking animals	Production per animal per day	HH Consumption	Quantity sold	Other use (e.g. gifts, payment for labour)
Cows					
Goats					
Sheep					
Camel					

6.1.2 Sale of Livestock and Livestock Products

Type	Quantity	When?	Price per unit sold

6.1.3 Source of animal feed/water

Description	Management/Utilization	Access/use right (Market source)
Communal/clan Grazing land		
Crop residue • Own production • Purchase		
Green forage production • Own production • Purchase		
Concentrates (Purchase) • Cereals • Molasses • Salt		

Water Source for Animal

Type	Access	Payment/unit
1. Stream/rivers beds		
2. Trough/Borehole		

6.1.4 Animal Health

Main Diseases (Rank according to Importance)

Diseases	Season	Remark
1.		
2.		
3.		
4.		

Veterinary Drugs

Description	Remark
% of Population	
Market source	
Prices	

Veterinary Services

Vet. Services	Remark
District/Sub-county level	
Payment	
Population Coverage (%)	

Veterinary Services

Challenges	Solutions

6.2 Crop Production

6.2.1 Cereals, Pulses and vegetables Production

Crop Type	Cultivated area (acre)	Yield/acre (kg/acre)	Total (quintal)
Sorghum			
P. Millet			
F. Millet			
Maize			
Cassava			

6.2.2 Utilization

Crop Type	Consumption (in kg))	Quantity sold / exch. (in kg))	Price/kg	Total (quintal)
Sorghum				
P. Millet				
F. Millet				
Maize				
Cassava				

6.2.3 Agricultural Inputs Utilization

Description	Remark
1. Type of Inputs	
2. Quantity/Unit	
3. % of population	
4. Market source	
5. Prices	

6.2.4 Main Crop Pests and response of farmers (Rank according to importance)

Pests	Remark
1.	
2.	
3.	
4.	
5.	

6.2.5 Main Challenges/constraints for Crop production (Rank according to importance)

Challenges	Solutions
1.	
2.	
3.	
4.	

7. Coping Strategies [A CONTEXT-SPECIFIC CSI CAN ALSO BE ELABORATED]

No.	Question	Frequency score: Number of days out of the past seven (0 -7).
	In the past 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:	
1		
2		
3		
4		
5		
	TOTAL HOUSEHOLD SCORE:	

SECTION 10.02 – WATER, SANITATION AND HYGIENE HOUSEHOLD QUESTIONNAIRE TEMPLATE

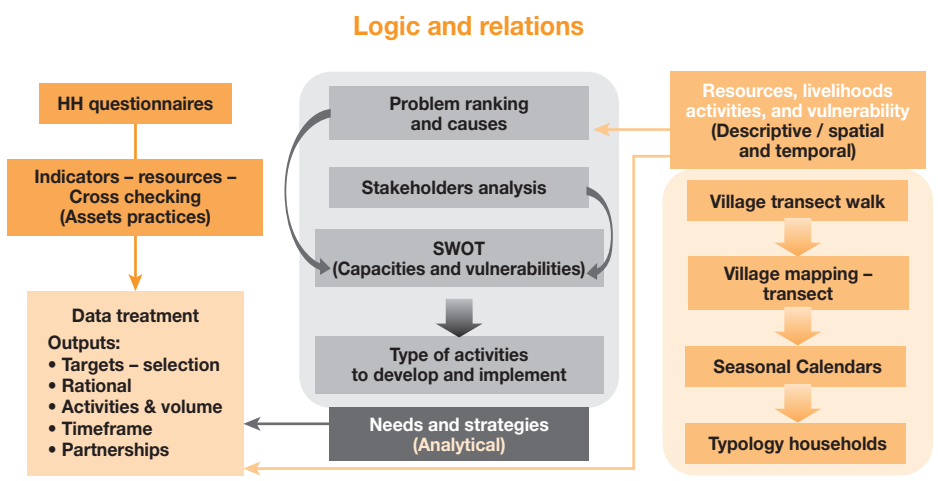
	Homestead	**Pasture**
First water source type:		
Use:	Drinking/Cooking/Washing/ Bathing/Agriculture/Livestock	Drinking/Cooking/Washing/ Bathing/Agriculture/Livestock
What volume do you collect (specify litres per day or week):		
Distance/reliability (seasonal?):		
Second drinking water source, if no water at first.		
How maintained?		
Do you treat drinking water (boil, filter, etc.)?		
Defecation place:		
If no household latrine, why?		
When do you wash your hands?		
Prevalence of diarrhoea/ malaria/ other waterborne diseases (# people in household in last 2 weeks, # of children <5):		
	Source(s)	**Distance/Reliability**
Who disseminates health/ hygiene information		
What are the key messages		
Needs/ constraints (water, sanitation, hygiene)		

Appendix 11: Participatory and Rapid Appraisal Methods

The Participatory and Rapid Appraisal Methods (PRA) Appendix is divided into separate sections for each of the PRA methods presented in Chapter 2 (i.e., Transect Walk, Mapping, Seasonal Calendars, Venn Diagram, Proportional Piling, Ranking, Capacity and Vulnerability Analysis). Each section includes an overview of the specific PRA method, general process for conducting the PRA method, common mistakes and how to avoid them, applications and examples. The PRA Appendix is not intended to be a comprehensive instructional guide on PRA methodology but rather to provide an overview with special consideration of how to incorporate PRA methods into food security and livelihood assessments. Facilitation skills such as listening, encouraging all the participants to actively participate, particularly by commenting on variations (different possibilities reflecting different perspectives), allowing time for participants to consult and change if they find it necessary are important for all PRA methods.

PRA methods are a critical component of food security and livelihood assessments and offer rich qualitative data about the environmental and social context. Flexibility is a basic principle of PRA. Some of the information collected or the way it is collected may change as the food security and livelihood assessment proceeds. Referring back to the food security and livelihood assessment objectives will keep the assessment on track. PRA methods are often used together or in a specific sequence to provide a more complete picture of the overall current conditions and if possible changes over time.

PRA Logical Framework



The logical framework above demonstrates how PRA methodology combined with other aspects of data collection such as household questionnaires work together to inform food security and livelihood assessments. In the lower right-hand side, highlighted in orange, are a collection of PRA methods – the village transect walk informs a village mapping session to create a map using both sources of information. Seasonal calendars are then used to help describe the household typology. This combination of PRA tools provide information on descriptive, spatial and temporal, that is community-specific and more detailed, aspects of food security and livelihoods in the community than the more general household questionnaires. The descriptive PRA methods inform both additional PRA methods (i.e., problem ranking sessions) and feed directly into forming outputs. Problem ranking and stakeholder analysis inform capability and vulnerability analysis and are more

analytical components of the PRA methods which also directly inform outputs. In addition, other information gathering techniques such as household questionnaires inform the outputs. The logical framework presented here is for illustration only. The correct combination of PRA methods will depend on the specific food security and livelihood assessment objectives that are set.

11.1 Transect walk

Transect walks take ACF staff members through a specified area – region, village or smaller area such as a farm or market – in order to gain a sense of the overall landscape and points of interest such as locations of agricultural activity, water sources, schools, markets, and health centres. To a lesser or greater extent, observation is an important part of all information gathering methods and in particular PRA methods. Transect walks lend themselves to direct observation of specific physical conditions of the environmental and social context to intentionally observe especially those that may be sensitive in nature. Sensitive topics may include conditions of crops and livestock, physical appearance of people and living conditions, and interactions between people.

Purpose: to explore an area such as a region or village or a more contained, smaller area such as a market or farm with the help of specific guides who know the area in great detail.

Objective: to provide important contextual information – physical and social - about the specified area including points of interest and sensitive topics that is important to the food security and livelihoods assessment.

Process:

Preparing for a transect walk:

- Decide on the necessary information to be collected based on food security and livelihood assessment objectives. Transect walks are particularly useful tools for collecting information on:

➜ The types of vegetation and animals both wild and domesticated that exist in the area;

➜ Signs of agricultural activity such as cultivated or maintained land, pastures, crops, livestock, harvests drying in trees or being prepared for storage or use, locations of barns and water sources to crops, livestock and housing;

➜ Living conditions such as location of dwellings (clustered or dispersed), abandoned areas, physical conditions of houses, WASH, and physical appearance of people;

➜ Access to specific locations such as proximity of houses to markets, road conditions, proximity of social centres, religious centres, health centres or hospitals, schools;

➜ Sensitive topics such as conditions of crops and livestock, physical appearance of people and living conditions, and interactions between people.

- Locate a map of the area from secondary sources and define the parameters of the area. Large areas such as a region or disperse village may need to be divided into sections.

- Identifying one or more guides (e.g., women, farmers, representatives from different religious orders) from the area to accompany you. Guides may be chosen based on the necessary information to be collected, and the guides detailed knowledge of the area and the people.

During a transect walk:

- Walk the periphery of an area to help identify marginalized sections, give a sense of the overall size, points in and out of an area, and connections to other places.

- Walk in circles and zigzags to help find routes that are less travelled.

- Talk to people along the way.

- Look carefully, listen, observe and record information along the way.

- Cross-check information in different locations during the transect walk.

After a transect walk:

- Write up findings directly after completing the walk.

- Follow up on any data that was unexpected or any gaps in information.

Note: those being observed may change behaviours in the presence of an observer. Being as discrete and casual as possible and / or having ACF country staff conduct the transect walk will help decrease changes in the environmental or social conditions.

Common mistakes and how to avoid them:

➜ *Choosing convenient sites and paths* (e.g., walking in a straight line). Follow a sampling strategy to capture representative areas and people as well as walking on less common paths.

➜ *Looking for specific behaviours or conditions* based on preconceived ideas. Create a structured checklist of environmental characteristics or specific questions rather than specific behaviours before heading out into the field. Data collection sheets with a section for notes of unexpected observations of interest will allow for collection of additional relevant but unplanned information.

➜ *Walking quickly or talking too much* gives a rushed feel that may encourage people to usher you away or feel uncomfortable. Plan your time accordingly. Develop a priority list of necessary information based on food security and livelihood assessment objectives. If you do not have time to gather all the relevant information, choose the priorities that need to happen during a specific visit.

➜ *Writing everything observed down* will attract attention and is likely to change behaviours. Refer back to the food security and livelihood assessment objectives and keep focused on the necessary information you have decided to obtain.

Application: Village transect walks provide the initial context of the food security and livelihoods assessment. Transect walks offer the first pictures, identification of different areas and visualization of conditions, constraints, and opportunities. Information gathered from observation of the landscape is triangulated during semi-structured interviews with key informants and focus groups on aspects of food security and livelihoods such as the way the land is used, types of vegetation and soils, cultural practices of farming and livestock-raising, types and location of water resources. A schematic synthesis of this information can form the basis for the identification of livelihood zones. Transect walks may also be used to gather information on how things change during different times of the year and may be combined with seasonal calendars as well as mapping sessions.

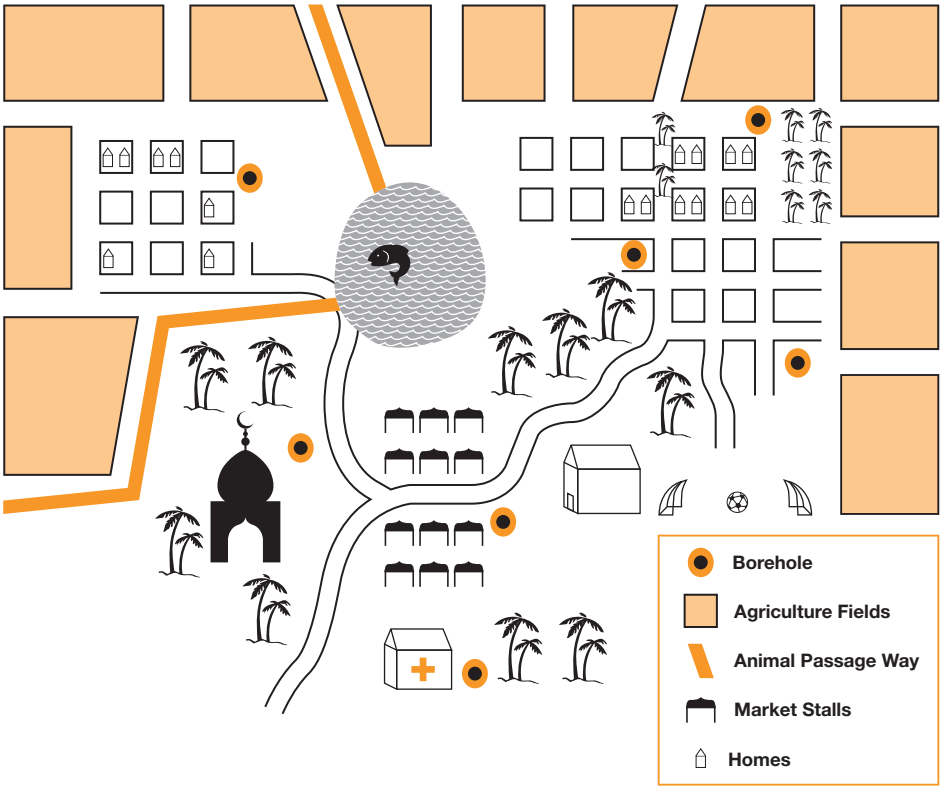
Examples: Transect Walks

Information gathered during a Transect walk

The geography, animals, annual and perennial crops are identified as important aspects of the area. Problems and opportunities regarding these specific aspects have also been identified.

More detailed map combining data from Transect Walk and Mapping session

Transect Walk



Resources and Social Mapping session were informed by the Transect Walk. Information collected during the mapping session included:
Resources mapping: Natural, Productive, Market, WASH
Social mapping: Health structures, Education, Economic structures, Poverty/vulnerability areas

11.2 Resources, Social and Hazard Mapping

Maps from secondary sources are useful tools for planning an FSL assessment – identifying regions that are most likely to experience the impact of a shock, planning the logistics of travelling to specific locations and starting to determine the most useful information to gather. If relevant information on the current situation exists, maps can also be used to compare changes between two time periods. Mapping as a PRA tool, on the other hand, provides essential detailed information directly from the people most affected by the current environmental or social conditions. Transect walks are useful complements to creating and interpreting results from mapping sessions. Mapping as a PRA tool is essential for developing and implementing short-term interventions and longer-term programs that most appropriately and efficiently address the current situation.

Purpose: to engage community members in identifying the resources and infrastructures that support food security and livelihoods and the dynamics of an area such as the flow of people within and between communities, the interactions between different groups living within or surrounding an area.

Objective: to describe the layout of an area – a region, village, or specific smaller location (e.g., farm, market) – by identifying key community centres and landmarks such as churches or schools and infrastructure that impact food insecurity and livelihoods directly or indirectly such as pastures, cultivable land, health centres, WASH, and locations of specific groups defined by characteristics such as wealth.

Mapping may be used to group areas within a village or region that have similar characteristics – keeping in mind that no two areas are identical. Grouping areas with similar characteristics is useful for targeting interventions.

Process:

Preparing for a mapping session:

- Decide on the necessary information to be collected based on the food security and livelihoods assessment objectives

➜ Social factors such as housing conditions, family structure, group dynamics;

➜ Access such as proximity to markets, schools and other education centres, health centres, work opportunities, water, roads, transportation;

➜ Geographical characteristics such as plateau, valley, mountainous, coastal;

➜ Agronomic factors such as cultivable land, irrigation systems in place, drought levels, type of agronomic activities (e.g., farming, animal husbandry);

➜ Economic activities such as subsistence production, cash crops, livestock, fishery, off farm income generation.

- Decide on the types of mapping to use based on the necessary information:

➜ Social mapping: infrastructures (e.g., health centers, education and schools, markets, roads), livelihoods, vulnerabilities (e.g., poorest, marginalized, least healthy groups or areas most prone to floods, droughts and least likely to be able to cope with those changing conditions)

➜ Resource mapping: natural resources, productive resources (e.g., irrigation networks, waterholes for livestock, harvest stores, processing infrastructure, mines), WASH

➜ Temporal mapping: pre- and post-shock, intergenerational

➜ Hazards mapping to identify areas, resources and groups at risk from climate and other hazards and to analyse potential or actual changes in hazards and plan for risk reduction.

➜ Market mapping: (see Appendix 23)

- Decide on the methods that will be used to gather the necessary information, a combination of transect walks, interviews, and focus groups are common information gathering methods used to create maps – keeping in mind triangulation is an essential component of mapping.

- Decide on the specific individuals or group(s) who would provide a range of perspectives on the necessary information. Key informants should know the geographical area in great detail.

- Decide on the areas to map based on the necessary information to be collected.

- Gather materials based on the individuals or group(s) to be interviewed. Mapping may be done using a variety of materials such as on the ground using stones or other objects to represent different aspects of the community, a sheet of paper along with different colored pens and stickers, or on a chalk or white board.

During a mapping session:

- Clearly identify the objectives of the mapping exercise in broad terms to participants (e.g., we want to identify aspects of the farm that impact food production, access and utilization). Being specific will make it easier for participants to answer the questions at the same being too specific may limit ideas and leave out important information. Finding the correct balance between being specific and being open is important and is best determined during the interaction with participants when the facilitator has as sense of how much guidance the group needs to participate and to provide the necessary information without going too far afield.

- Hazard Mapping is an extension of creating a representative map of the community. When participants have finished the physical map of the community, ask participants to identify areas that are at risk of specific hazards such as natural disasters (e.g. low lying areas that flood easily, areas prone to drought), higher health risks (e.g., malaria) and social and political issues such as conflict or land tenure or distribution. Note these hazards on the map in a different colour market to distinguish them from other community characteristics. Hazards that are not part of the map should be noted on the side. Then ask participants to identify which areas on the map have few or no hazards.

- Hazards are likely to affect different groups in different ways. Results from hazard mapping can inform Venn diagrams and ranking to identify who has the resources and capacity to help in the planning process to reduce risks around hazards and who has access on a regular basis or in emergencies to places where hazards are fewer or non-existent.

After a mapping session:

- Use triangulation to integrate knowledge from different social groups such as wealth, gender and age thereby reducing bias and increasing accuracy.

- Synthesize the data that has been collected from various sources.

- Identify any gaps in information and follow-up to close those gaps.

- Identify inconsistencies in data and determine why these inconsistencies exist. If it is essential to have more accurate information where inconsistencies exist, then conduct direct observation, transect walks or additional key informant interviews to clarify.

Common mistakes and how to avoid them:

➜ *Overlooking areas of marginalized groups.*

Ask about areas of the village that do not have the main activities, along with incorporating transect walks into the food security and livelihoods assessment will increase the likelihood of including marginalized groups.

➜ *Mapping an entire region or village* when a smaller area would provide the appropriate amount of information. Refer back to the food security and livelihood assessment objectives.

➜ *Leaving the time frame or questions too open ended.*

Set a time limit for completing the mapping session. Focus the questions and be as specific as possible about the outcomes for the mapping session. Base questions on the food security and livelihood objectives being met through mapping.

Application: Illustrations of the cultivation systems (crop rotation by illustrating the percentages of the surface are concentrated to each cultivation system or crop rotations during the year) and breeding/herding systems (pastoral activities around water points or diagrams concerning the paths of seasonal migration) can be extremely useful for food security and livelihood assessments.

Example: Resources and social mapping – Philippines

The resources and social map identifies locations of churches and other structures (along with building material – concrete, semi-concrete, light material), infrastructure (e.g., roads), environmental characteristics (e.g., seashore, swaps, streams), food sources (e.g., coconut plantations, rice fields, pigs) and water sources (e.g., wells). The mapping provides a picture of the proximity of village characteristics to each other.

11.3 Seasonal Calendar and Historical Timeline

Seasonal calendars are one of the most commonly used tools for gathering information quickly and accurately and helping to understand seasonal patterns related to community conditions such as specific activities (related to activity profiling, which are often for shorter time periods than an entire year), weather patterns, production, income, credit, markets and morbidity. Seasonal calendars are a useful tool to assess conditions and changes in conditions over an entire year or portion of a year that influence food security and livelihoods. Seasonal calendars are also useful for designing intervention timeframes and program monitoring.

Purpose: to engage community members (individuals or small groups) in discussions about traditional planning of activities, and seasonal variations in environmental, social and health conditions.

Objective: to identify the time of the year that agricultural, economic, social and other activities are undertaken; the hunger gap and food surplus occur; other aspects of the community that influence food security and livelihoods occur (e.g., disease cycles) in order to understand and compare seasonal changes of these conditions over a one year time span within a specific community or between different years.

Seasonal calendars are also used to compare how different people during the same time of year (e.g., men and women) or the same people during different times of the year or before and after a shock allocate time to specific activities.

Process:

Preparing for seasonal calendars:

➜ Decide on the necessary information based on the food security and livelihood assessment objectives that is best obtained through seasonal calendars

➜ Decide which community members will provide the necessary information (e.g., individuals or small groups – who to include in the small groups) based on time, other resources and detail of information needed.

➜ Identify the best practices to engage chosen community members in creating a seasonal calendar such as pictures of certain conditions to post or written words or combination of both.

➜ Decide whether seasonal calendar session will be focused solely on creating the calendar or part of a more extensive interview. Seasonal calendars may be integrated into a more extensive key informant interview or as the sole purpose for the interview. However, for group sessions to have the seasonal calendar as the only outcome generally works best.

➜ Obtain materials to conduct seasonal calendar sessions.

During a seasonal calendar session:

➜ Ask participants to list all the activities that are done throughout the year.

➜ When the list is completed, ask if there are any other activities that precede or come after the activities currently listed.

➜ Then ask when during the year the various activities are achieved.

➜ Ask who generally does each type of activity (e.g., men, women, eldest male child, daughter-in-law, caste).

➜ Repeat a similar process with other community conditions such as weather patterns, periods of hunger and food surplus, disease cycles – keeping each condition on the same overall chart but in separate sections (see Figure below). Note: discussion on specific conditions may trigger information on other conditions it is important to jot these down as they come up and return to them if more information is necessary.

➜ Review calendar for completeness and clarity.

➜ Ask about any additional information if it would be useful for the food security and livelihoods assessment such as how much time is spent on each activity and are there competing activities.

The calendar can be on a monthly scale or a relative scale without months at first to uncover how activities or conditions relate to each other. The relative calendar may be easier to complete. Then estimates of months can be filled in later to give a better sense of seasonal vulnerability. - record the answers in a chart form that represents a 12 month calendar. The calendar should follow local traditions and not necessarily start with January.

After a seasonal calendar session:

➜ Transfer data from posters (if used) to smaller paper or computer, on the same day as collection, if at all possible.

➜ Clarify any statements or data that is inconsistent or unclear during transfer.

Common mistakes and how to avoid them:

➜ *Including only food production systems*

Food production systems are a major component of seasonal calendars in food security and livelihoods assessments. Food production systems include agricultural calendars, fishing seasons, livestock grazing and fodder availability, most common disease patterns of plants and animals, labour demands for specific tasks, seasonal migration for work, peak workloads. However, as noted earlier and seen in seasonal calendars examples below, ACF methodology underscores the importance of creating a holistic and integrated calendar of significant activities and conditions into a single calendar. In addition to food production systems, ACF seasonal calendar include components such as coping strategies (e.g., time periods of wild foods collection, use of credit, loans and borrowing), weather patterns and morbidity. Sometimes it will be useful to create a separate food production calendar and then integrate it with another calendar that provides other information on food security and livelihoods.

➜ *Collecting too much information*

At the same time, there is the temptation to collect as much information as possible. However, creating a seasonal calendar can be extremely time-consuming. Focus the discussion on specific information that is useful for decision making helps increase the efficiency of the process. Deciding beforehand and returning to the food security and livelihoods assessment objectives will help guide the correct information to collect.

➜ *Utilizing seasonal calendars only in the village setting*

The seasonal calendar methods described here are easily adapted to the urban and peri-urban context. In an urban and peri-urban setting there is likely more variation in the community conditions between community groups and specific land areas. The urban calendar will have more focus on labour markets and diversity and seasonality of income sources.

Applications:
Besides providing general contextual information, seasonal calendars also support the use of specific assessment tools by specifying the seasonal dimension of phenomena such as: Markets, Hazards, Food and Income Sources, Patterns of Expenditure, Meal Frequency, Dietary Diversity and Water Access and Availability. Because of the integrated nature of the seasonal calendars they may provide important data for other information gathering methods. For example, weather patterns such as droughts, floods and typhoons identified in seasonal calendars can be linked to hazard mapping. Seasonal calendars can also provide information on how time allocations for one activity (e.g., land cultivation) may compete with other activities (e.g., child caring practices).

Examples: Seasonal Calendars

Seasonal calendar - Philippines

Seasonal Calendar

		Jan	Feb	Mar	Apr	Jun	Jul	Aug
	Weather / Season							
Cultivation	Land Preparation	X						
	Sawing	X X						
	Weeding			X	X	X		
	Harvesting						X	
	Threashing						X X	
Cereal Storage	Storage Repair					X X		
	Storage Filling						X X	X X
	Storage Closure							
Chores	Housekeeping	X	X X X X	X X X	X X X	X		X X
	Community Activities	X	X X	X				X X
Others	Meal Frequency	2. 5	2	2	1. 5	1	4	3
	Natural Hazards	C, L, F	C, L, F	L, F	D	D	D	

C = Cyclone L = Landslides F = Floods D = Drought

Community members created seasonal calendars to describe important components of the community that impact food security and livelihoods such as weather and calamities, agricultural production and work, animal production, fishing, food substitutions (wild food gathering), migration, daily work and income opportunities, workload, maximum and minimum income and expenditures, social events, and diseases.

Seasonal calendar transferred from group participation poster to smaller chart

		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
General																									
	High rain																								
	Medium rain																								
	Low Rain																								
	Landslide, flood & typhon																								
Diarrhea																									
Production activities																									
F- Field work	Rice rainfed	H	H	H	H	H	H	H	H												H	S	S	S	S
S- Sowing	Rice irrigated	S	S	F	F	F	F	H	H					S	S	S	S	F	F	H	H	H	H		
H- harvesting	Corn	H	H		F	S	S	S	S	F	F	F	F	H	H	H	H	H	S	S	S	F	F	H	H
	Potatoes	H	H							S	S	S	S	H	H	H	H	H	H	H	H	H	H	H	H
Livestock	Reproduction (goat)																								
	Chicken																								
	Pork, cattle																								
	Sale																								
Fishery	High Season fish																								
	Low season																								
Income and credit																									
	Daily Work opportunities																								
	Low general income																								
	High general income																								
	Indebt credit																								
	Low general expenditures																								
	High general expenditures																								
General level of workload																									
	High																								
	Medium																								
	Low																								

ACF staff will often be responsible for transferring the large poster-type calendar as seen above into a table for program planning and reports. During the transfer the information should be identical even if information is represented by different ways. For example, the rain clouds and smiling suns in the first figure may be translated to periods of high, medium and low rain in a corresponding table. (Note: these Figures represent two different areas in the Philippines so the transfer is not identical from one figure to the other and are provided here for purposes of illustration only). Transferring the information from the poster to a table is best done on the same day while you can enlist participants to help clarify any aspects that are unclear.

Agricultural seasonal calendar - Indonesia

The seasonal calendar below focuses specifically on agricultural production and uses different colours and indicators (high, low or I, II) to provide more detailed information about agricultural production within a single calendar. The agricultural seasonal calendar can be combined with other seasonal calendars describing community activities to provide a more complete picture of contributors to food security and livelihoods.

Agricultural calendar for Mugu (around 2000 metres altitude)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Cropping calendar												
						TP						
					Lower	Higher						
											end	
Potato		I		II		I				II		
Corn												
Chino (paddy like)					Higher		Lower		Lower	Higher		
Kaaguno (millet)												
Amaranth												
Beans												
Soybean												
Apple												
Climate												
Rainfall												
Seasons	winter									winter	winter	winter

Harvest Sowing/transplanting (TP) Main monsoon

I = first possible set of planting/harvest II = second possible set of planting/harvest
Cropping cycle for vegetables is 60-90 days.
'Lower' and 'higher' refer to low and high altitude, respectively.

Historical Timelines

Closely linked to seasonal calendars is the concept of timelines. In a sense a seasonal calendar is a timeline that is limited to one year (or a comparison between two years) which records weather patterns, responses to those weather patterns by farmers and other workers, among other things. Historical timelines provide insight into changes over longer periods of time and allows participants to uncover trends. Historical timelines are particularly useful for tracking trends and characteristics (e.g., nature and intensity) of hazards. The process for creating a historical timeline is similar to that for creating a seasonal calendar. The differences are easy to identify and alter.

The process includes asking participants to recall key events over a certain time period (e.g., since 1960, or the great flood of 1974, or over the past 20 years), then placing each event on a line relative to when the event current in time to other events. Participants are more likely to recall recent events. Asking participants to tell stories about specific time periods may help trigger memories as well as asking about times prior to or directly after the event.

Example: Timeline of production and major events 1993/4 – 2003/4

Year	Description	Factors impacting on household access to food and income
1994/5	Poor	Poor rain, poor harvest, relief distribution.
1995/6	Good	Heavy rainfall/floods, surplus food production, cereal prices very low, no relief
1996/7	Medium	Medium rain, poor/medium harvest due to pest infestation, food stocks carried over, no relief
1997/8	Medium	Poor rainfall, exhaustion of carried over food stocks, limited relief was distributed
1998/9	Poor	Poor medium rainfall, food socks exhausted and in security (Zaghawa & Arab)
1999/0	Good	Heavy rain with floods & birds, surplus food production and low grain prices.
2000/1	Poor	Good rain, medium harvest, food stock carried over, insecurity: Fur/Arab conflict
2001/2	Poor	Drought, conflict continued. Relief distributed, SFP and TFC.
2002/3	Poor	Poor rains, conflict (Fur & Arab), relief, SFP and TFC.
2003/4	Medium	Moderate cereal production, conflict (Fighting between Government and Sudan Liberation Army started).

N.B. The baseline information is October 1996 to September 1997. It was a poor/medium year in terms of rainfall, insecurity and cereal production.

11.4 Venn Diagrams

Purpose: to engage small groups of community members in discussions about the role of diverse entities and the relationships between them.

Objective: to identify the informal and formal institutions which influence a specific aspect of the food security and livelihoods assessment, the relative importance of institutions to each other and the interactions between entities for decision-making, cooperation and problem solving and the disconnections and gaps between institutions.

Process:

Preparing for a Venn diagram session:

➜ Decide on the necessary information based on the food security and livelihoods assessment objectives that is best obtained through Venn diagrams including, social capital, social networks, institutional and policy environments

➜ Decide which community groups will provide the necessary information (e.g., men and women together, or separately, elders, younger generations, better-off, poor)

➜ Obtain materials to conduct Venn diagram session. Different coloured paper, scissors, a large piece of paper or board to serve as the base or background. Venn diagram sessions can also be done with markers and a paper or white board. However, paper can be cut out by participants to different sizes (showing relative importance) and shapes (to distinguish between types of groups) and a unique advantage of paper cut-outs over markers is that the cut-outs can be moved around easily to reflect changes in thinking as the discussion evolves.

During a Venn diagram session:

➜ Clearly state that the objective of the session is to identify the institutions, relative importance (influence) of institutions to each other, and relationships between institutions around the food security and livelihoods topic of interest

➜ Ask participants to list all the formal and informal institutions within the village that may have influence over the topic of interest

➜ When the list is completed, ask participants to list any institutions outside of the village that may have influence over the topic of interest. Indicate that the list of outside institutions will be put aside for a moment but want to come back to them after discussing the within village institutions.

➜ Ask participants to estimate the relative importance (how much influence) each institution within the village has on the topic of interest.

➜ Ask participants to put institutions into specific categories (local groups like the solo parents organization, international groups like the Red Cross, government, informal institutions). There will likely be different categorizations in different villages. The important task is to put institutions that have similar characteristics together.

➜ Choose a separate colour for each category. Cut different size circles in each colour to represent the relative importance of different entities. Some institutions will have equal influence and therefore should have the same size circle.

➜ Ask participates to write the name of an entity on each circle. (NOTE: shapes may be used instead of colours or a combination of shapes and colours. Also, cut-outs can be made beforehand to save time).

➜ Place a large circle (fixed) in the center of the base to represent the topic of interest. Ask participants to place circles (or movable cut-outs) on a base relative to the fixed circle and to one another. The closer a circle is to the fixed circle the more important it is. Overlap represents interactions between entities and the degree of overlap represents the amount or intensity of interactions. Note: that while some entities have very little direct influence on the topic of interest (and would therefore be far from the center) but have overlap with an organization that has a lot of influence that is close to the fixed circle (forces the non-influential entity closer to the fixed circle by virtue of having to overlap with the influential one) and therefore gains importance. Also remember that the Venn diagram session is not to obtain definitive influences or importance of entities but rather provide an overall schematic of how participants view these relationships.

➜ Review the Venn diagram for completeness and clarity.

➜ Ask participants about any additional information that would be useful regarding the relationships of village institutions for the food security and livelihoods assessment

➜ Remind participants about the list of institutions outside of the village. Ask about the relative size (influence) of these institutions and the overlap or gaps between the current list of within village institutions. Providing on overview but not the level of detail obtained from the within village Venn diagram session.

After a Venn diagram session:

➜ Transfer data from posters (if used) to smaller paper or computer, on the same day as collection, if at all possible. Venn diagram data is slightly more difficult to transfer and interpret than other types of PRA methods. However, copying the schematic may not be necessary or a rough drawing will do. Recording the names of specific entities, relative influence, the interactions between them and gaps is important information to integrate into a food security and livelihoods assessment.

➜ Clarify any statements or data that is inconsistent or unclear during transfer

Common mistakes and how to avoid them:

➜ *Too many sizes, shapes or colours become confusing*

Venn diagrams rely on having a visual variety of choices. However, this variety can also be controlled so that the diagram is informative and not overwhelming because too many choices may make the results less useful. It may be beneficial to limit the number of sizes to four: Very Important, Important, Less Important, Minimally Important. The same limits can be places on shapes or colours, such as having five or ten categories of institutions: Governmental, NGOs, Local Community Groups, Other Formal Institutions, Informal Institutions. It is also important to list all relevant individual institutions to create an overall picture and then cluster them into categories of similar institutions where possible. Venn diagrams for food security and livelihoods projects can also more traditional approaches by just using only overlapping circles. The decision on which Venn diagram materials to use depends on how much detail is required to meet the food security and livelihood assessment objectives being addressed through the session.

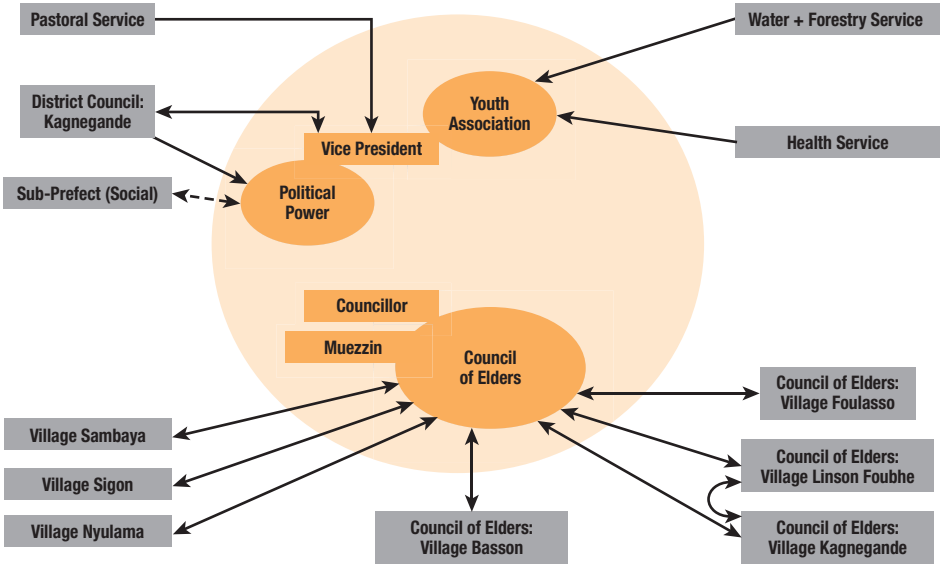
Applications:
Venn diagrams are often an early step in PRA methods and can inform which key informants to interview, integrating transect walks and observations as a means of triangulation. Information gathered through Venn diagrams and confirmed by other PRA methods can be used to identify important communication gaps and areas to foster communication when developing and implementing an intervention.

Examples: Venn Diagrams

Community members used a Venn diagram session to identify key stakeholders and describe the relationship of these important groups (e.g., women, senior citizens, pastoral group, solo parenting organization, the dynamic club, the Red Cross) in relative terms to the central issue. Different shapes and colours symbolize the variety of influences on the central issue. Allowing participants to see pictorially how groups or influences of a specific type cluster together and or overlap. The proximity of each symbol to the central issue represents the amount of influence on the central issue (sometimes the size of the shape is used to convey importance).

Venn Diagram - Example

Venn Diagram



The Venn diagram directly above provided information on stakeholders (public & private), activities and services, means and relations, presence and usefulness, and identified gaps and difficulties to address.

Outputs: Identification stakeholders, relationships within communities

11.5 Proportional piling

Proportional piling involves asking a specific question and allowing community members to answer by showing the relative importance of different categorical choices through a visual aid that can be translated into percentages. Participants are asked to allocate all the counters (e.g., stones, beans, bottle tops) to represent piles of a specific aspect of the food security and livelihoods assessment such as each food source. The end result is a few piles each representing a different food source. The pile size corresponds to the relative importance of that food source. The importance or weight of each activity or item is determined by comparing the different activities or items to each other.

Purpose: to engage community members who may not have the skills in formal numeracy in estimating proportions on specific community or household characteristics, where numbers are needed to quantify trends.

Objective: to obtain quantitative data in the form of proportions on specific community or household characteristics related to food security and livelihoods such as relative production of crops, food sources, income sources, household expenditures, time allocations, or population characteristics (e.g., wealth status).

Proportional piling may also be used to assess changes in the relative importance of community or household characteristics over a specific time period.

Process:

Preparing for a proportional piling session:

➜ Decide on the necessary information to be collected based on food security and livelihood assessment objectives. Proportional piling is useful for collecting information on:

- Food sources such as own production, market, gifts from family, neighbours or other friends, wild foods, food aid, theft;
- Household expenditures such as staple foods, non-food items, health, education, debt, rent;
- Household incomes such as selling crops, casual labour, sale of non-food items, work in industry, mines, crafts, or commerce;
- Time allocations (within a specific time period) such as caring for children, tending to crops, cooking, collecting water.

➜ Decide on which individuals or groups (e.g., livelihood groups, women) to include based on the necessary information to be collected.

➜ Gather materials to conduct proportional piling session. The basic materials include counters (e.g., stones, beans or bottle caps) and sticks, paper or other material to create distinct areas for each categorical choice. Provide an adequate number of stones to give participants the flexibility to establish the most accurate estimates of proportions. The basis of the calculation is 100%. The number of stones will determine how much each stone is worth proportionally. For example, for 20 stones, each has a 5% value, for 10 stones, each as a 10% value.

During a proportional piling session:

➜ Clearly identify the objectives of the proportional piling session. For example, we want to get a sense of the food sources and if people rely on some food sources over others.

➜ Clarify the steps in the proportional piling session. First, we will identify the different food sources. Second, we will determine the relative importance of food sources by placing stones in each food source category. The more stones, the more important, that is the more often people rely on that food source.

➜ Ask participants to list all the specific categories relevant to the necessary information to be collected. For example, list all of the food sources. If there are specific categories missing, follow up by asking participants if there are additional (list missing sources) food sources such as borrowing or receiving food from family.

➜ Give participants the stones and ask them to divide the stones into each category (separate piles) according to the total amount of food accessed through that source. Emphasize that the stones represent the relevant importance or overall community (or a specific group within the community (e.g., poor households) and not individual community members. For example, the stones represent all the food that a household obtains during the dry season or all the people in the community (not any specific individuals).

➜ Repeat the process for each community or household characteristic relevant to the individual or group participating. Note: some characteristics are preferential to be asked about first while others may be done together. For example, it is often easier for participants to answer questions regarding expenses rather than resources or incomes and asking about food and income sources during the same round can be beneficial.

After a proportional piling session:

➜ Calculate percentages from the proportion in each categorical choice (pile).

➜ Transfer information from temporary materials, such as on the ground with stones, to paper for reports.

➜ For graphic displays, put percentages into pie charts or bar graphs that are useful to include in reports or presentations.

Common mistakes and how to avoid them:

➜ *Participants divide piles up evenly between categories*

Clarify with participants that proportional piling is a two step process. The first step is to identify the choices for each condition (identification of piles). The second step is to put the relative number of stones into the appropriate pile (proportional attribution). Determining which of the choices are most important relative to the others is the aim of proportional piling.

➜ *Too many piles, too many choices lead to confusion*.

If there are too many choices, ask participants to identify the top five to eight choices that are most used and used by almost all participants. Also ask if there are any choices that are essentially the same or similar to other choices and can be combined. Be sure to note the choices that were removed or combined. Also consider separating the group into two based on common characteristics such as gender or income level.

➜ *Participants have some counters left over* to illustrate that the current year is a bad year without much food.

Split the exercise into 2 steps and first ask them to show you how many counters would represent a normal year and how many would represent current conditions. Visually you can see their reduced income. Then try the exercise again. The aim is to measure if there are changes between the two years

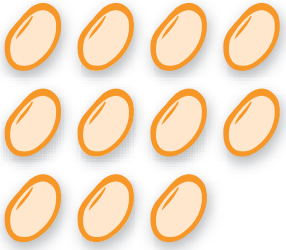
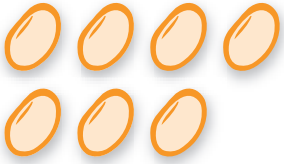
➜ *Interpretation of the results as absolute values* (instead of relative) or attempts to quantify information to draw statistically significant conclusions.

The information gathered during proportional piling are subjective estimates based on a limited number of choices. While the information provides additional insights into current (or past) conditions, it is not collected in a manner nor is it possible to draw absolute or statistically significant conclusions. That is not the purpose of proportional piling. Reports and presentations by ACF staff should clearly state the relative nature of proportional piling results as is true of PRA methods in general.

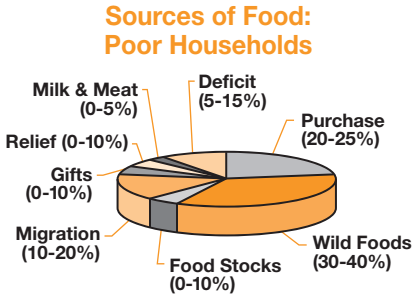
Application: The significance of the diverse agricultural and non-agricultural activities, work or incomes sources can add important information to better understand the importance of each type of activity. The weights assigned during proportional piling can then be graphically illustrated through pie charts allowing the assessment team to understand the relative importance of diverse agricultural and non-agricultural activities, household and community characteristics (e.g., wealth).

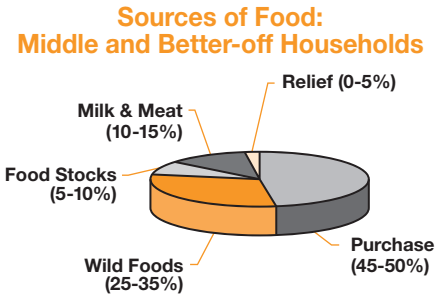
Examples: Proportional piling

Proportional piling of wealth groups within a community

Poor	Middle	Better-off
		
55%	35%	10%

Pie chart of food sources by Poor, Middle and Better-off Households





As seen in the pie charts (above) there is a diversity of food sources accessed by poor, middle and better-off households. The poor households access more relief (0-10%) and a wider diversity of sources (i.e., gifts, migration) or going without (deficient) compared to the middle and better-off households. Having this sort of background knowledge may help in conducting proportional piling sessions with each group separately or asking if food sources are the same for all households in the area. If the food sources are different, follow up by asking more specifically how and which types of households.

11.6 Pairwise and Ordered Ranking, including Wealth Ranking

Ranking is used to assess the preferences, priorities, importance, dominance or influence regarding community or household characteristics, food sources, income sources, hazards, vulnerabilities, wealth groups and other information relevant to food security and livelihoods assessments. Ranking can also be used to identify areas or population groups within a village or region to be most at risk. Ranking is often used as part of, or done before and used to inform, vulnerability and capacity analysis.

Purpose: to engage small groups to understand community characteristics, preferences and priorities.

Objective: to identify locally defined (criteria) of specific community characteristics (e.g., social or economic characteristics), the proportion of the population in each category, and community preferences and priorities. To identify locally defined vulnerabilities and ways to address specific vulnerabilities according to community priorities and solutions.

Process:

Preparing for a ranking session:

➜ Decide on the necessary information to be collected based on food security and livelihood assessment objectives. Ranking is a particularly useful tool for collecting information on:

• Wealth ranking to assess wealth status or changes in wealth status;

• Problem ranking;

• Community priorities;

• Community preferences;

• Vulnerabilities and capacities.

During a ranking session:

There are two general types of ranking methods: pair wise and ordered.

Pair wise ranking:

➜ Ask participants to list areas of concern or other relevant information (e.g. all food sources, causes of food insecurity, animal preferences) to be collected.

➜ Create a matrix by asking participants to choose the four to ten most important concerns (or other components of a relevant topic e.g., food sources) and list each of these along the horizontal and vertical axes.

➜ Ask participants to compare the urgency of the first issue listed on the horizontal axis with issues on the vertical. Write a letter, symbol or write the concern in each box that corresponds to the most important issue of the two which are being compared.

➜ Add the number of times each letter or symbol appears in the matrix. The more times the area of concern appears, the higher its rank.

Ordered ranking:

➜ Ask participants to identify areas of concern or other relevant information to be collected.

➜ Ask participants to identify the most important concern, the second most important and so on until all the items have been ranked by importance level.

➜ Different ordering referencing can be used such as from most problematic to least problematic, more to least preferred or highest to lowest priorities.

➜ For wealth ranking, participants are asked to identify the local economic and social indicators of wealth, such as number and type of productive asset and ethnicity

➜ Then 3 to 5 wealth categories are identified such as Destitute, Very Poor, Poor, Middle and Better-off depending on the degree of wealth variation in the local area.

➜ Participants are asked to describe each indicator for each wealth category as well as to estimate the proportion of the population falling into each wealth category. Wealth is almost never distributed evenly, and the broad majority of the population lies in the lower wealth groups.

➜ The poorest classes will include traditionally weak or marginalized people, but also newly vulnerable groups such as female-headed households, orphans, unaccompanied minors and disabled people.

Ranking sessions can also be held as breakout sessions by breaking a larger group into several smaller groups (4-6 people). Once the small groups have ranked the created lists, then the entire group reforms and each smaller group presents the list of ranked priorities to the larger group. Discuss similarities and differences in the problems and priorities of each group.

After a ranking session:

➜ Create a list of community characteristics or problems listed in priority order. Note differences between groups.

Common mistakes and how to avoid them:

Wealth ranking leads to spurious results

While wealth ranking has become standard in most food security and livelihood assessments, it is difficult to accomplish and more so in pastoral communities than in agricultural ones. Using wealth ranking to measure changes over time may be seen as less invasive and easier to give information for some participants. Using different classifications of wealth such as less well off, middle and better-off may help as well, though it is important to remember for comparisons between different areas or time periods, consistency in terms is necessary (e.g., less well off does not necessarily translate to poor). Alternatively, ask a key informant with detail information about the community to provide wealth ranking information.

Application: Ranking should be used with other PRA methods to probe for reasons for putting certain concerns or items before others. Ranking may be used to identify preferred crops, animals, and other aspects of food security and livelihoods and then combined with key informant interviews and focus group discussions to gain more clarity on why certain choices were made. The importance of possible coping strategies adopted for procuring food during or post-shocks or preferences for types of assistance programs can also be assessed using ranking.

Examples: Ranking

Pair wise ranking of community vulnerabilities

	Lack of water	Hunger	Disease	Lack of school
Lack of water	X	Hunger	Water	Water
Hunger	Hunger	X	Hunger	Hunger
Disease	Water	Hunger	X	Disease
Lack of school	Water	Hunger	Disease	X

Scores: Hunger 6, Water 4, Lack of water 1, Disease 2, Lack of school 0

Participants chose water, hunger, disease risk and education as the four main community vulnerabilities. When comparing vulnerabilities listed in the rows with the second column (Lack of water), we observe that hunger is thought to be a greater vulnerability than lack of water, however, lack of water is regarded as a greater vulnerability than disease risk and lack of school. Taking the entire matrix into consideration, hunger (chosen 6 times in these comparisons) is ranked as the greatest vulnerability when compared to the others.

Pairwise ranking of community problems – Philippines

The matrix below reproduces the results of the community-made matrix in the village (on a flip chart).

	No Market	Lack of Farm Tools	Lack of Food Security	No Flood Control	Lack of Meds	No portable water	Lack of sanitary toilet	Lack of Law implementation	Illegal fishing	Illegal logging	No unity	Score	Rank
No Market	x	1	1	4	1	1	1	8	9	1	11	6	5
Lack of Farm Tools	x	x	2	4	2	2	2	8	9	2	11	5	6
Lack of Food Security	x	x	x	4	3	6	3	8	9	3	11	3	7->9
No Flood Control	x	x	x	x	4	4	4	4	4	4	11	9	2
Lack of Meds	x	x	x	x	x	5	5	8	9	5	11	3	7->9
No portable water	x	x	x	x	x	x	6	8	9	6	11	3	7->9
Lack of sanitary toilet	x	x	x	x	x	x	x	8	9	10	11	0	11
Lack of Law implementation	x	x	x	x	x	x	x	x	8	8	11	8	3
Illegal fishing	x	x	x	x	x	x	x	x	x	9	11	7	4
Illegal logging	x	x	x	x	x	x	x	x	x	x	11	1	10
No unity	x	x	x	x	x	x	x	x	x	x	x	10	1

When the number of indicators is large, pairwise ranking may also use a scoring system that counts the number of times an indicator ranks higher than its pair across all the rows (see Matrix above). The highest scoring indicator is then assigned a rank of 1, the second highest a rank of 2, and so on.

Wealth ranking – North Darfur, Sudan

Wealth group	Poor	Middle	Better-off
% of population	45-55%	25-35%	15-25%
Agriculture – land area	0 – 1.6 Mukhamas	1.6 - 3.2 Mukhamas	2.4 - 8 Mukhamas
Livestock – size herds	20 – 25 shoats, 0 – 2 cattle	40 – 50 shoats, 10 –15 cattle	80 – 100 shoats, 8 – 20 cattle
Water pump ownership	0	0 - 1	1

Source: ACF Sudan, Food Security Assessment, North Darfur, May 2005.

11.7 Capacity and Vulnerability Analysis

Capacity and vulnerability analysis is a PRA tool used to assess the capacity of a community to cope with shocks and changes. Vulnerabilities are related to significant hazards such as low livestock holdings, insufficient access to water, seasonality of labour, dependency on migration, high transport costs; specific groups such as livelihood group, wealth group, caste, ethnicity, gender, disability and health status, age, nature and extent of social networks; and infrastructure and livelihoods resources such as dwellings, access roads, production facilities, markets, pasture areas, specific cropping systems. Vulnerability to food insecurity and compromised livelihoods is dependent on internal factors at the household level and external factors at the structural level and these are amplified by a shock.

Purpose: to engage community members in small group discussions to identify and describe local perspectives of community capabilities and vulnerabilities related to food security and livelihoods.

Objective: to identify specific capabilities and vulnerabilities, strengths and opportunities of a community related to food insecurity and livelihoods and to outline local priorities in addressing vulnerabilities.

Process:

Preparing for a capacity and vulnerability analysis session:

- Decide on the necessary information to be collected based on the food security and livelihoods assessment objectives. Capacity and vulnerability analysis is useful for:
    - Adaptive capacity such as access to and control over natural, human, social, physical, financial and political resources;
    - Vulnerabilities such as hazards, special groups, infrastructure;
    - Opportunities and solutions to address vulnerabilities;
- Decide on the type of capacity and vulnerability analysis to use based on the necessary information:
    - Strengths, weaknesses, opportunities, threats (SWOT) - useful for developing action or intervention plans by using existing opportunities.
- Gather materials based on the data to be collected including a sheet of poster paper along with different colored pens or on a chalk board.

During a capacity and vulnerability analysis session:

- Ask participants to list the various aspects of food security and livelihoods.
- Ask participants to discuss specific capacities in terms of what they have.
- Ask participants to discuss specific vulnerabilities (what they lack or puts strain on capacities) in terms of both skills and resources (e.g., people, time, equipments, inputs).
- Ask participants to identify specific capacities that may help address some of the vulnerabilities.

For SWOT analysis

- Ask participants to list the various aspects of food security and livelihoods. If the list is extremely long, ask which aspects are similar enough to group together. Also ask to prioritize them in terms of overall impact on food security and livelihoods. Begin with priority items.

- Ask participants to list strengths, weaknesses, opportunities and threats for each of the food security and livelihoods aspects.

After a capacity and vulnerability analysis session:

- Record comments from capacity and vulnerability analysis and follow-up on any comments that were unclear.

Common mistakes and how to avoid them:

Neglecting marginalized groups who are often at the greatest risk.

Integrating transect walks and key informant interviews with the explicit purpose of identifying marginalized groups and then following up with those groups to conduct ranking and capability and vulnerability analysis. Members of marginalized groups may have more time constraints in participation and therefore a greater effort may need to be made in when and where sessions are held to encourage participation.

Applications:
Capacity and vulnerability analysis can be used at the end of a focus group discussion to summarize findings. Venn diagrams and ranking may be used to assess the relative importance of social supports such as close family or kin, clan or tribe, religious, political or military organization, livelihood or trade group, government, NGO or charity group and the available social networks and interactions between groups. Capabilities and vulnerability analysis is often used to develop action plans by building on strengths and opportunities and address threats.

Examples: Capacities and vulnerabilities analysis

SWOT analysis

Characteristics	Strengths	Weaknesses	Opportunities	Threats
Local material	Forests	2 hours away	Motor transport	Logging
Labor	Young men	Not organized	Approachable	Migration
Local management	Influential chief	Poor communication	Local structures	Migration
Farming skills	Traditional	Not updated	Training	Environmental changes
Psychosocial situation	Information sharing	Lack of recreation	Psychologist present	Constant insecurity

Appendix 12: Steps to assessment planning checklist

Checklist: Steps to assessment planning
☑ Define the objectives and establish the ToR for the assessment (see Chapter 2)
☑ Establish the geographic area and target population group(s) of concern
☑ Gather and review all available secondary data and contextual information (see Appendix 8)
☑ Engage stakeholders including local authorities and international actors
☑ Determine and develop assessment timeline
☑ Decide which information to collect and which tools will be utilized (see Chapter 2)
☑ Determine and organize the resources needed for the assessment
☑ Develop budget
☑ Design and/or adapt the tools/questionnaires (see Chapters 2 & 4)
☑ Select the sampling methodologies and/or clusters (see Chapter 3)
☑ Obtain and prepare equipment, supplies and survey materials.
☑ Translate the tools into local languages as necessary and possible
☑ Field test questionnaires
☑ Select the survey team
☑ Train assessment teams
☑ Establish protocols and daily plans for field work, assessment management and monitoring
☑ Implement the Assessment
☑ Data entry and Management Resources and Protocols
☑ Analyze and interpret your findings (see Chapter 5 & 6)
☑ Write up the report of the Assessment (see Chapter 7)

Appendix 13: Notes on Bias

Sampling error is not the only source of difference between a survey's result and the actual population value. Sampling error is due to the random selection of households from the population; it cannot be eliminated, but it can be minimized by selecting a larger sample.

Bias is anything, other than sampling error, which causes the results of the survey to be different from the actual population prevalence or rate. Bias cannot be calculated and its effect upon the result assessed. It is the main reason why surveys may not give an accurate answer. The fact that the results are biased is usually not appreciated by those doing the survey; it is usually not apparent from the results and its extent cannot be judged by those reading standard reports.

Readers may distrust the results of a survey if the results differ greatly from those expected. The reader will examine a survey particularly closely if the results do not "triangulate". For example, if the food security and mortality data do not indicate that there is a crisis when the nutritional status is reported to be very poor, the reader will suspect that the nutritional data is incorrect because of bias. This uncertainty can lead to relief being delayed or even denied by donors when it is urgently needed. Alternatively, it can lead to waste of supplies and resources if a relief operation is mounted when the situation is thought to be much worse than it actually is. The reader must be able to rely on the results of a survey for there is a great deal at stake. A careful and full description of the methods and precautions taken to minimize bias is essential to give the reader sufficient confidence in the results to lead to action. If precautions to minimize bias are not taken, and fully described in the report, a sceptical reader will assume that a mistake has been made and that the results can be discounted.

Bias is minimized by using good technique. This is the main reason why the supervisor has to be experienced, why adequate training is critical and why the report has to document all the steps taken to eliminate or minimize bias.

Shortcuts are likely to be taken if the survey teams are required to work too hard, if there is inadequate time allocated to rest periods and refreshments, or if the time that can be spent in a particular household, to administer the mortality questionnaire and measure the children properly, is not sufficient. These "shortcuts" can take many forms. The team members are usually aware that they have deviated from the standard method, but through solidarity will not inform the supervisor.

For example:

1) The team may "rush" the interview or the measurements. They should be able to spend sufficient time in each house to complete their tasks properly and complete a cluster within one day. Most teams try to complete at least one cluster each day. The data may be much more accurate if the sample size is sufficiently low to have 20 or 25 households in each cluster instead of 30 households. By provoking "shortcuts" increasing the sample size may introduce substantial bias, leading to an inaccurate result, in an effort to achieve a higher precision.

2) A team may not select the households at random when they reach a cluster site. They may go to the village and take a "convenience" sample of some sort because of tiredness, heat, hunger, and harassment or because they have insufficient time to select the sample correctly. This tends to be more common in rough terrain of when there is a long distance to walk to the edge of the cluster.

3) Survey respondents misunderstand questions about mortality in their households and tell survey interviewers, for example, that persons who left the household are dead. This would lead to an overestimate of the death rate, thus increasing the difference between the death rates calculated from the survey results and the actual population death rates.

4) The following are some of the sources of non-sampling error that occur particularly during the interview.

a. “Recall” error: Respondents often fail to recall all deaths during a given recall period. Infant deaths, in particular those within a short time of birth, are particularly under-reported. Respondents may also report ages, dates, and salient events wrongly.

b. “Calendar” error: Respondents may report events as happening within the recall period when they did not (or vice versa) due to lack of clarity about dates.

c. “Age heaping”/digit preference: Respondents may round ages to a number ending in a 0 or 5. This can be a problem with 0-5DR or other age-specific death rates.

d. Sensitivity/taboos about death: In general, the death of a household member is not a subject discussed readily with a stranger. In some cultures, taboos about death may hinder discussion if the subject is not broached with tact and understanding.

e. Deliberate misleading: In some populations, with experience of relief operations, some of the respondents may deliberately give incorrect answers in the expectation of continuing or increased aid. This can even be orchestrated by local people with authority.

f. Mistranslation: Questionnaires may contain mistranslated key terms and concepts (a common example is what constitutes a family vs. household). Interpreters may misunderstand questions or mistranslate answers.

g. Interviewer error: Enumerators may ask questions and/or write down answers incorrectly, skip questions, or rush respondents in an effort to get done quickly.

h. Data-entry error: In the process of data entry, answers can be miscoded or entered incorrectly.

i. Analytic error: In the manipulation of any data, especially quantitative data requiring statistical analysis, mathematical and conceptual errors can generate faulty results or explanations

Because bias cannot usually be calculated or corrected by the computer after data collection is finished it is critical to avoid bias during sampling and data collection. However, we can examine the quantitative data to see if there is likely to be some form of systematic bias. The teams should be aware that such techniques will be applied during the analysis in order to avoid succumbing to any temptation to take shortcuts.

Examining the quantitative data for “digit preference”. That is the data having an excess of particular digits as the last digit in the measurements of height or weight. This is done overall and for each individual team. Such “rounding” by the measurer of the team usually results in an excess of “0” or “5” as the last digit. The data obtained during training should also be examined for evidence of digit preference.

It is also frequent for teams to get tired during the day. The data gathered in the morning are often taken more carefully than that in the late afternoon. The data collected from the first and second half of each of the clusters is compared.

These tests can indicate the presence of some types of systematic bias and help to resolve the problem. Bias is particularly difficult to detect if all the teams have been trained to make the same mistake. Further, bias is more likely to go unnoticed in the interview than with the quantitative measurements. It is far better to take great care to avoid bias and to demonstrate to the teams, during training, the disastrous effects bias.

Bias is minimized by:

- Careful standardization of measurement techniques,
- Training survey workers well,
- Writing clear questions to be asked of survey respondents,
- Back-translation of all questionnaires,
- Using more than one translator and comparing their results when interviewing the same households,
- Careful choice of the start of a recall period, unusually high. If the second team's data are very different from the original data this confirms that there was a systematic bias in the work of the first team.
- Using local calendars,
- Using the minimum sample size that gives adequate results so that the teams are not stressed
- Providing comfortable transport for the staff
- Ensuring adequate rest and refreshment periods
- Making sure that the payment to the teams is adequate and agreed.
- Having motivated cohesive teams that participate fully in the daily meetings and report any difficulties promptly and faithfully. The teams must be trusted by the supervisor.
- And applying the other techniques mentioned in this manual.

Adapted from Handbook on SMART Protocols (2005)

Appendix 14: Protocols for Household Selection, an example

Ideally we the team will be able to obtain and utilize household (HH) lists for some or all sites. The selection of households will involve 3 steps. First, establish the number of HH on the list. Second divide the total number of HH by the 'estimated HH' the team expects to visit (in this case 15) – for example if there are 150 HH, you take 150 divided by 15, which gives you 10. This is an important number remember it. Third step, Choose a random start number from the number table – if you choose the number 17 for example, you will count 17 HH from the beginning of the list. This is your first HH. Next you would use the number you obtained earlier (in this case 10) and count that number till you reach the next HH on the list. Thus your HHs would be 17, 27, 37, 47…147…7, until you reach your start number. Once you have your HH list you will NOT visit them in the order you chose them, but visit them in a random order, by selecting them in a standard random procedure.

No Household List – Next Best Option, "Spin the Pen"

1. Spend the first 30 minutes of the day, during formalities, as a team, becoming familiar with the boundaries within which the days sample of HH will be drawn – The boundary should be delineated by relatively easy to recognize landmarks (streets, rivers, marsh boundary etc) and the team should become familiar with these boundaries. If no map is provided spend the first 30 minutes sketching a rough map from the "cluster" from which the sample with be drawn.

2. Using the map (or sketch), estimate the 'centre' of the 'cluster.' HH enumerators will start from this point and use the "spin the pen method" to determine their first direction. After spinning the pen the team should walk in that direction to the limit of the "cluster", in the direction indicated by the pen, or take a car if needed.

3. Once reaching the "cluster limit" chose the farthest dwelling from the centre within the "cluster", either a house, building, room or tent. This will be your first household. If it is a single HH dwelling, then you have your first household - if it is a multi-HH house dwelling space, you must randomly select a HH within the Dwelling. To do this you have various options depending on the situation.

   If the dwelling is a schoolroom – you may quickly make a list of households, number them and use a random selection procedure to choose a HH.

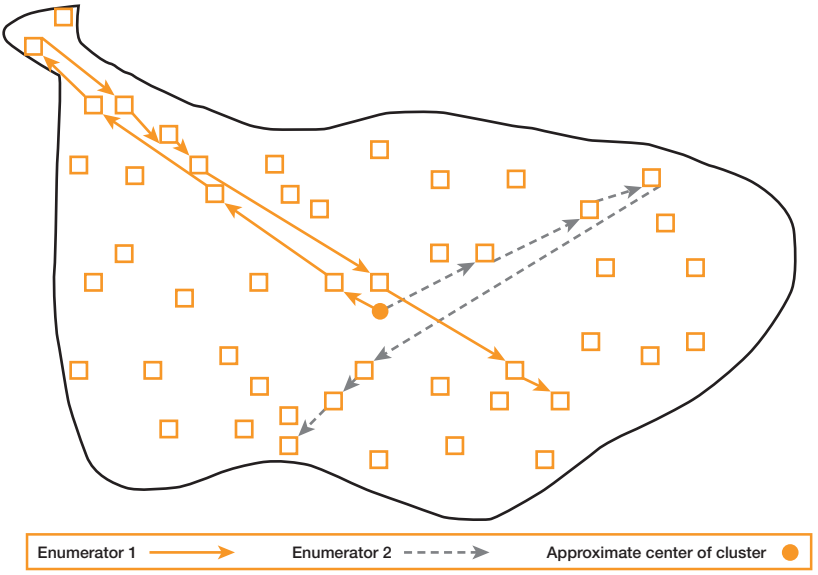
   When trying to choose a HH in a multi-story apartment building a random procedure must be used to select the floor - if there are 4 floors the team will choose randomly from chips 1-4; a similar procedure would be used to distinguish between rooms and families within a room

4. If working in a host community, try to take a community leader with you to help locate the HH who host IDPs – DO NOT just go to the HH suggested by the leader. This is ABSOLUTELY wrong and will hurt our work. When reaching the boundary point and choosing the dwelling, if the HH does not host IDPs, choose the next closest dwelling. If they do not host IDPs choose the next closest dwelling and so on until the HH is found.

5. After interviewing the first HH, the team returns to the centre and completes the procedure again – spinning the pen and finding the dwelling at the farthest limit of the "cluster" in the newly indicated direction. And then repeat all subsequent steps.

If Households are not at home remember ask neighbours when they will return and return to the HH before the end of the working day at the indicated time, before completing your sample. If time runs out near the end of the day and the family has not returned home, complete selection procedure again and chose a new HH.

Figure 13: Illustration of UNICEF Pencil Spin Method of Household Selection



Appendix 15: Protocols for Team Leaders Monitoring, an example

These reminders are not exhaustive. What is important is to develop written protocols for supervisors to refer to which will both guide their monitoring/supervision and hold them accountable. The specifics of these protocols will be determined in the field though some common components are listed below. Where pilot testing and training uncover team difficulties and weaknesses regarding the administration of certain tools, these should be highlighted as points where special attention should be given by the supervisors in the field.

In preparation for each day please make sure to:

1. Encourage the enumerators to read over the questions as many times as possible before going to the field.

2. Verify that all the team members have their questionnaires, equipment and other necessary information (maps, sampling materials, contact names etc) at the start of each day.

3. Make sure that each enumerator fills in ALL code information required in the top box on the cover page of each questionnaire – HH #s can be allocated later – The first HH's for sub-team one, the remainder for sub-team 2 – the final ones for the HH without children.

4. Try to be hard on the teams regarding the time it takes to do the survey. Each HH survey should not take longer than 45 min to 1 hour, as they become more familiar with the survey.

During the Survey the Team Leader should visit each 2 member team (2 HHA teams and the Host Family / HH without children Team) and critically review their selection procedure for households and the way they deliver the questionnaire:

Minimize Bias in Selection, ensure random selection of HHs. **Refer to sampling protocols for further guidance on supervision**.

- Ensure all questions are asked, that answers are not assumed.
- Pay attention to whether teams are filling in answers without asking the questions, assuming the answers would be the same for all HHs (some enumerators state that they knew the answers because they know the region and have done surveys before)
- Ensure questions are not asked in such a way that they are leading the respondent to give a certain answer. e.g, Do not say, "You ate potatoes yesterday, right? Every Day, right?"

Reviewing the Questionnaires

The team leader should, each day, look over the questionnaires to ensure they are filled in correctly, and, especially the first few days, brief the teams each day on the issues which come up. This process can begin while in the field and continue during travel. Potentially finishing after the daily briefing.

1. Ensure that the teams are consistently writing their data legibly so there will be no confusion for those who enter the data in the computer. Check daily to make sure numbers are legible for anthropometric measurements.
2. Ensure that questions are filled in systematically and that questions are not left blank or skipped. The only questions which should be left blank are those which are skipped as per the directions. **Internal Consistency**.
3. Especially during the first few days make sure all codes used are appropriate
4. Pay special attention to certain questions, on food consumption, land amounts, etc that the fields are being filled in correctly and that the protocols for asking the questions are understood.

After questionnaires have been reviewed they are submitted to the office the following morning for encoding.

Appendix 16: Daily Activity Plan, an example

Each 6-7 Member Team is in Two Cars:

One Team Leader = **TL**
Two 2 person Household Questionnaire Teams = **HH1 and HH2**
One 2 Person Team Responsible for Key Informants and Focus Groups= **KIFG**

Time	Activities
6:45	Meet at Departure Point
7:00	Depart for the Field Site
By 9:00	Arrive at Site and Introduction to Community Leaders Clarify assessment goals and protocols HH enumerators begin process of HH selection Obtain updated HH list Transect Walk and Observations site mapping Request Leaders to Arrange Focus Group Discussions
9:30 – 16:00 (30 min. lunch break)	**TL** = Supervises HH selection procedures = Gathers Community Profile with Community Leaders (30-45 Min) = Supervise the administration of Questionnaire and Focus Groups = Check to ensure all codes are correctly filled in, that questionnaires are filled in correctly and are internally consistent and Focus Group and Key Informant Interview write ups are extensive and exhaustive
	HH1 = Teams begin administering Questionnaire in following HH selection procedures in HH with Children (Approx 1 HH per hour, Total **6 HH per day** each for **HH1** and **HH2**)
	KIFG = Team conducts 2 Focus Group Discussions, one with women and one with men (1.5 hours each) and Conducts 4 Key Informant Interviews (2 per team member) as discussed in Training
16:00 – 18:00 Distance Dependant	**Leave Site** **HHA, FGKI – Continue checking questionnaires, discussing data and filling gaps** **TL – Continue to Check Questionnaires and FG/KI narratives, Diagrams etc**
By 18:00	**Arrival back at departure site/office**
18:00 – 19:00	**Debriefing**

Appendix 17: Mapping the market

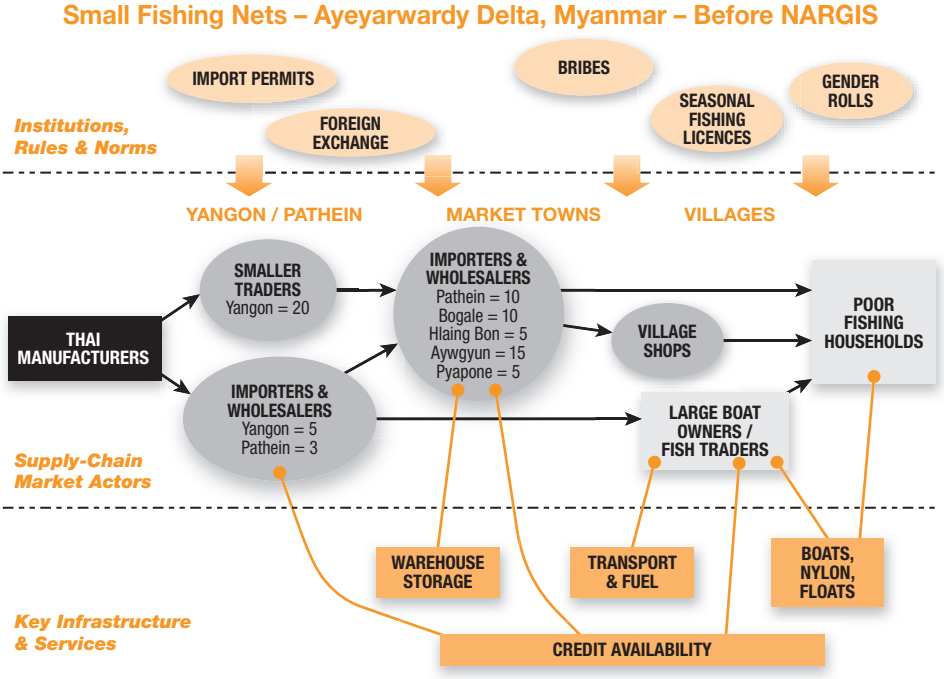
Creating a map of the markets as a participatory exercise with traders and households will provide a visual illustration of the geographic location of markets in a given zone, trade flows between markets and types of commodities traded pre- and post-crisis. Trade routes (road, river, and maritime networks) and current constraints on movement can also be illustrated.

The Arrow Diagram tool described in chapter 2 (Methods) provides useful guidance on how to create such a map. Two maps can be required: the first showing pre-crisis trade flows, and the second showing the post-crisis impacts on these flows, including the provision of humanitarian aid and the emergence of new market actors such as NGOs and government authorities.

To avoid overloading information, maps can focus on a single key objective and market sub-system, rather than showing the entire market network. For example, food availability may be best illustrated by mapping staple food flows. Impacts on a vulnerable livelihood group such as pastoralists may be best shown by focusing on the livestock trade.

Example: Impacts on the trade in fishing inputs in the Ayeyarwady River Delta, Myanmar[14]

The map below illustrates the market system involved in the annual acquisition of small fishing nets, a key asset for food security and income for most of the landless poor in the Ayeyarwady river delta of Myanmar. The first map shows key features of the basic structure of the market-system such as the relative importance of different routes by which poor households get fishing nets, the number of market traders at different locations and the most important services that support the value-chain.



[14] From: Introduction and Overview of Emergency Market Mapping Analytis (EMMA) Tool Kit. Practical Action, Oxfam and IRC, 2009.

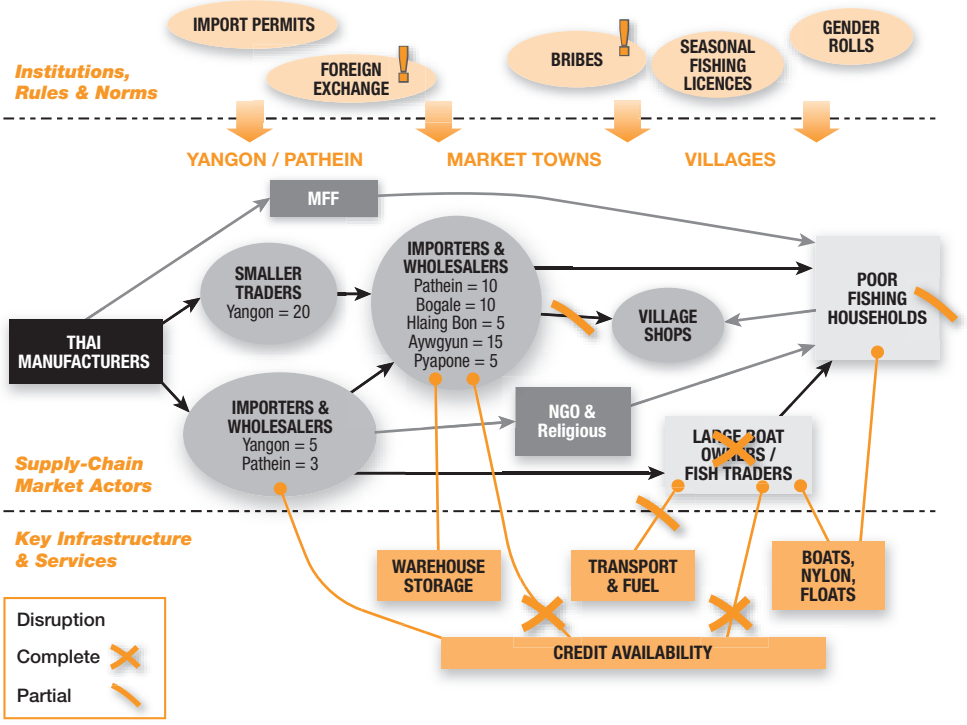
The second map illustrates the same market system two months after Cyclone Nargis devastated the river delta, destroying property including fishing nets. The map indicates which elements and linkages of the system were disrupted or destroyed by the cyclone in May 2008.

It also has been used to illustrate key features of the humanitarian response by local NGOs and religious associations:

- ➜ the way relief donations have substituted for the role played by large-boat owners, many of whom died or lost their vessels in the disaster
- ➜ how relief is bypassing the normal retailers and village traders
- ➜ the break-down of normal patterns of credit provision along the supply chain

The map also flags issues around access to foreign exchange and corruption that will be important to the recovery of this market system.

Small Fishing Nets – Ayeyarwardy Delta, Myanmar – After NARGIS

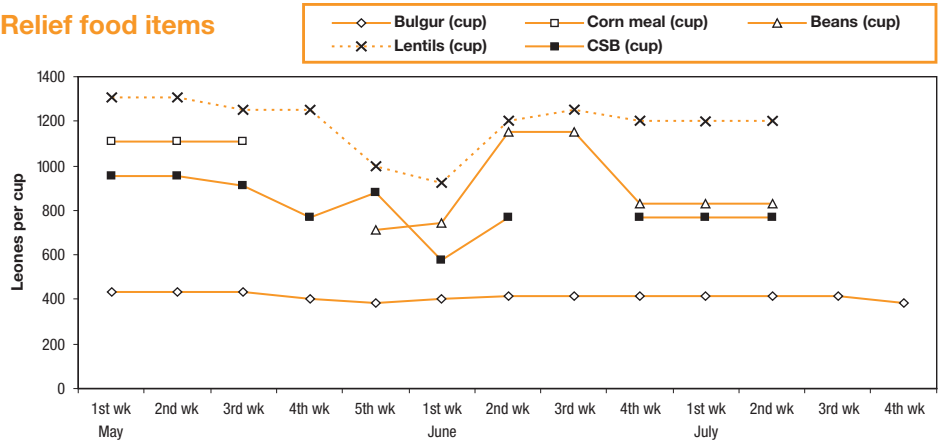


Appendix 18: Analysing market trends

Compiling quantitative information that has been collected in market visits into databases allows for easy analysis and establishes a vital baseline for future market monitoring in the area. Price trends are best analyzed graphically. In this case study from a Sierra Leone displaced persons camp, the impact of food distribution on availability and prices of market staples is monitored.

RELIEF FOOD ITEMS													
ailability of relief food items:	1=Plenty		2=Normal		3=Scarce		4=Absent						
	May '00					Jun '00				July '00			
	1st wk	2nd wk	3rd wk	4th wk	5th wk	1st wk	2nd wk	3rd wk	4th wk	1st wk	2nd wk	3rd wk	4th wk
Bulgur (cup)	2	2	2	2	2	2	2	2	2	2	2	2	2
Corn meal (cup)	3	3	3	4	4	4	4	4	4	4	4	3	4
Beans (cup)	4	4	4	4	3	3	3	3	3	3	3	4	4
Lentils(cup)	2	2	2	3	3	3	3	3	3	3	3	4	4
CSB (cup)	2	2	2	2	2	2	3	4	2	2	3	4	4

Relief food items



A general pattern of a reduction in prices at the end of each month, mirrors the camp distribution timetable. The availability of bulgur remained 'normal' throughout the period with only minor fluctuations in price. Corn meal became absent after the third week of May, after being dropped from some aid distributions. A small quantity was seen in the third week of July with a trader who was disposing of remaining stock.Beans were absent during the first four weeks in May, to be replaced by lentils. This is also a reflection of changes to the components of the food aid ration. The availability of CSB in the central market showed some fluctuation during the last three months. Interviews suggest that this is a result of the increased numbers of new IDPs arrving in Freetown. Those receiving food aid usually sell part of their CSB ration to established traders. As a result of the influx, some new IDPs also borrowed food aid from their hosts either to consume or to sell in the street, with the result that a smaller quantity was sold by the regular traders.

SALT & SUGAR													
Availability of salt and sugar:	1=Plenty		2=Normal		3=Scarce		4=Absent						
	May '00					Jun '00				July '00			
	1st wk	2nd wk	3rd wk	4th wk	5th wk	1st wk	2nd wk	3rd wk	4th wk	1st wk	2nd wk	3rd wk	4th wk
Local salt (cup)	2	2	2	2	2	2	2	2	2	2	2	2	2
Sugar (cup)	2	2	2	2	2	2	2	2	2	2	2	2	2

The supply and price of imported sugar and local salt remained stable during the reporting period (at Le 769 per kg for salt and Le 1154 for sugar). Port records indicate that a total of 671 MT of sugar arrived in May, and 22 MT in June. Total tonnage from January to June is 5,057 MT.

FUEL													
Availability of fuel:	1=Plenty		2=Normal		3=Scarce		4=Absent						

Appendix 19: Calculating Terms of Trade

Terms of trade (TOT) can be a powerful indicator of household food access by the main livelihood groups identified in the FSL assessment.

TOT is the ratio of two prices: e.g. livestock to food staple, cash crop to food staple, or daily wage to food staple. It can be tracked over time to establish trends in food access and compared with a benchmark level that indicates an acceptable threshold of food access. Measuring terms of trade in a food security and livelihoods assessment provides a baseline against which to measure future trends as part of surveillance or program monitoring activities. Declining terms of trade indicate a situation of declining access to food. Collapsing terms of trade for livestock and other assets indicate distress sales, a widely documented coping strategy in acute food crisis.

TOT can be compared among different sub-groups or across different geographical areas and used in ranking the relative vulnerability of groups or zones in the framework of the assessment.

Example: Terms of Trade in Burkina Faso
Market-purchased sorghum is the principal food staple of households in Tapoa, one of the eastern provinces of Burkina Faso. Livelihoods are based on small livestock herding, agriculture and trading. The rainy season runs between May/June and September. September and October harvests mark the end of the lean season and translate into marked improvements in food security in the rainfed agricultural zones and lower cereal prices benefiting primarily pastoral zones. Animal health notably improves during and following the rainy season as a result of increased forage availability.

For herders, animals are the main commodity sold for the purchase of the staple food. The number and composition of herds varies according to the wealth of the pastoral household. Livestock holdings of the poorest households are low and limited to small ruminants (e.g. one goat, poultry), while better-off households have larger and more diverse holdings (e.g. poultry, goats, sheep, the occasional head of cattle). The wealthiest households enjoy holdings numbering in the tens or hundreds of cattle and sheep. Pastoral and agropastoral households commonly sell poultry and small ruminant stock as needed to enable the purchase of food.

Terms of Trade
Terms of trade in the region are based on sacs of cereal that can be purchased with the sale of a particular breed of livestock. The most common TOT indicator compares the price of a ram or goat to a 100 kg bag of white sorghum. Pastoral and agropastoral communities, government structures and agencies responsible for surveillance of the pastoral zones routinely refer to the TOT indicator to judge the food security situation in the area.

A minimum livestock/cereal threshold is recognized below which household food access is considered insufficient. The threshold depends on the amount of cereal that the average household requires and other expenses that must be covered from the sale of livestock.

In Tapoa, the standard TOT threshold is expressed as 1:1 for goats to cereal, and 1:2 for rams to cereal. A 100 kg bag of sorghum or millet is considered sufficient for a household for a month. If the price of sorghum rises relative to livestock, this translates to worsening terms of trade forpastoralists.

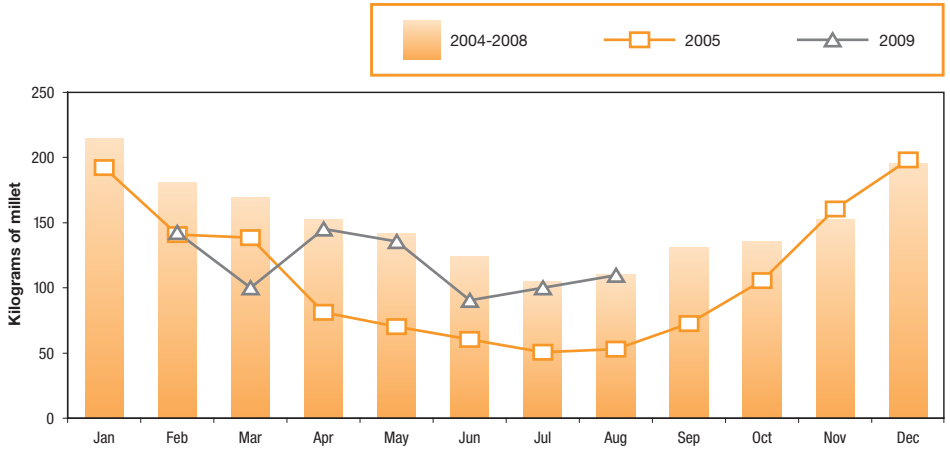
At the start of the lean season in February, the average price of a sac of sorghum across Tapoa was 11,200 XOF. Goat and ram prices were 16,417 XOF and 44,167 XOF, respectively. A household was able to purchase 1 _ sacs with the sale of a goat (TOT of 1:1.5), or 4 sacs of cereal with the sale of a ram (TOT of 1:4). Over the next months in keeping with seasonal patterns, livestock prices fell slightly relative to cereals and TOT for goat/sorghum and ram/sorghum deteriorated to 1:1.3 and 1:3, respectively.

TOT	Feb-09	Mar-09	Apr-09
Goat/sorghum	1.46	1.30	1.32
Ram/sorghum	3.94	2.76	2.82

Regional market dynamics

Livestock terms of trade in the Sahel showed unusual patterns in 2009. Livestock/millet trade was unfavourable to herders in the first trimester, and at times reached levels comparable to those prevalent during the 2005 food crisis. During the second and third trimesters, TOT stabilised and more closely reflected normal seasonal levels as dry cereal prices stabilized.

Terms of trade goat/millet – Gotheye (Niger)



Source: SIMA, SIMB Niger

These patterns are reflected in the figure above, which illustrates market dynamics in Gotheye, located in the agropastoral zone of western Niger. Food access was good in August 2009 compared with previous months resulting from favourable pasture conditions. The marked deterioration that occurred in TOT in the 2005 crisis is highlighted for comparison against larger multi-year seasonal trends.

Note that the CFA Franc has appreciated 26% compared to the Nigerian Naira since it was pegged to the Euro, inflating the price of livestock in the franc zone and making purchases by Nigerian buyers less competitive. The Nigerian market is the main market for trade in livestock in the Eastern Sahel.

Sources: Surveillance Program, ACF Burkina Faso, 2009 and FAO-WFP: Special Edition on the Pastoral Situation, Internal Note on Food Security and Humanitarian Implications, Oct 2009.

Appendix 20: Livelihood Zoning and Profiling

A livelihood zoning map is usually created in a workshop setting where participants have been invited. Depending on the complexity of the area being mapped, the quality of available data and the skill of the facilitator, mapping can be completed in as little as a morning's work. Technical staff from ACF who have a broad knowledge of the region in question should be qualified to carry out the livelihood zoning exercise.

Ideally, sufficient time will be budgeted to develop the map during the tool development stage of the FSL assessment so that it may serve as the sampling frame for the assessment, if one is needed. Alternatively, the mapping can be one of the outputs of the assessment after the necessary data on markets and production systems has been gathered.

KEY STEPS IN A LIVELIHOOD ZONING EXERCISE:

1. Listing and mapping productive systems

Enumerate the main productive systems in the geographic area e.g. agricultural, agropastoral, pastoral, labour-based, fishing, hunting. Refine these categories once the main groupings are identified. Topographical maps and reference tables listing production-related statistics can serve as useful materials at this stage. Sketch maps can also be used if topographic and other official maps are not available.

On a large map showing the basic administrative boundaries and the main geographical features of the area (mountains, rivers, lakes), *draw the productive systems* just listed. Name the groups on the map.

2. Introducing market access

Overlay major towns, roads and communication routes on the production system map considering the main sources of household income for each zone and markets for products sold and purchased. Outline key trade routes and employment markets. Consider whether market access differs significantly within any of the productive systems that have been outlined, and if so whether these zones need to be subdivided.

3. Developing profiles of the livelihood zones

Describe the main characteristics of each livelihood zone including the main categories of livelihood, the main characteristics of the production system, topography, vegetation, other natural resource features, climate, market access, hazards (droughts, floods) and household level coping strategies.

Globally, zones are described by the varying roles that farm production, seasonal labour, remittances and trade play in influencing the availability and access to food in different parts of the mapped region. The role of factors other than food production that influence food insecurity should be highlighted, including disruption in labour markets, blockage of crossborder trade and changes in terms of trade.

4. Refining livelihood zone boundaries

Using a map of the lowest available administrative level and the most recent census of population by administrative level, *assign each administrative unit to a livelihood zone*. This will allow for a precise map to be drawn and population figures calculated for each livelihood zone. Name each zone with a unique name using identifiers such as location, topography, vegetation or dominant economic activity.

* Material from this section drawn in part from Save the Children's A Practitioner's Guide to HEA: Livelihood Zoning.

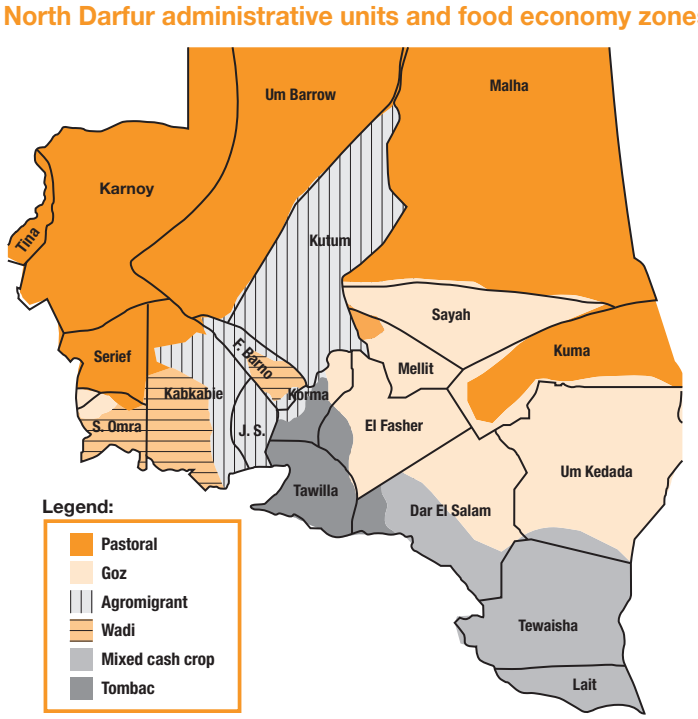
See examples below from the North Darfur region for: i) a Livelihood Zoning map of the area, and ii) an in-depth Livelihood Profile of the Agro-Migrant zone, one of the zones identified in the mapping exercise.

Example: Zoning Livelihoods in North Darfur State

North Darfur State in Sudan is chronically food insecure and relies on the neighbouring surplus-producing West and South Darfur states. The population is mainly agro-pastoralist and spread over six livelihood zones. Tobacco growing is a major cash crop for populations around El Fasher. Millet is the main staple crop and is planted by most of the population and intercropped with fruit and vegetables. In the Pastoral zone, livestock sale remains the main source of income, and is sold or exchanged for grain.

See the Figure below illustrating the distribution of 6 main livelihood zones across the region. *

Figure 14: Zoning Map of production systems in North Darfur, Sudan

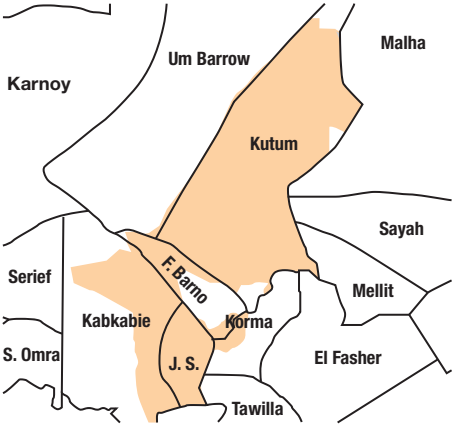


Goz is an area in Eastern Darfur of plains and low hills with sandy soils. Tombac is a type of chewing tobacco. Wadi is an area of seasonal watercourses that floods in the wet season.

Source: ACF Sudan, Food Security Assessment, North Darfur, May 2005.

Example: Developing a Livelihood Profile for the Agro-Migrant Zone in North Darfur State

1. Description of the Agro–Migrant Zone



Admin Unit	AU Population	LZ Population	LZ % of AU
Tawilla	87,539	13,131	15%
Korma	58,433	18,114	31%
Kutum	69,955	45,471	65%
Fatabarno	63,822	31,911	50%
Kebkabiya	58,023	6,960	12%
Jebel Si	70,768	70,768	100%
Total	408516	186355	46%

Sources: 1993 Population census + 3.14 annual growth

The Agro-migrant Livelihood Zone (LZ) extends from the non-wadi areas of Kutum and Fata Barno administrative unit in Kutum locality to the Jebel Si/Kebkabiya administrative unit (the northern extension of Jebel Mara) in Kebkabiya locality. The predominant tribes of Kutum, Fata Barno and Jebel Si are the Fur and Tunjur. The dominant soil types are stony hills and hard sandy clay soils. The people of this LZ are millet farmers and have limited land holdings and keep small to medium size herds of mainly sheep, goats and few cattle. The men in this LZ tend to migrate to central Sudan or (less commonly) to Gulf States in search of work. Women tend to migrate to South/West Darfur in search of agricultural employment. Wild food consumption is another feature of this LZ. The annual rainfall is between 200 – 250 mm. This LZ forms the transition between the Wadi, Goz and Pastoral LZ.

2. Timeline of production and major events 1993/4 – 2003/4

The baseline information for this LZ is October 1996 to September 1997. It was a poor/medium year in terms of rainfall, insecurity and cereal production.

Year	Description	Factors impacting on household access to food and income
1994/5	Poor	Poor rain, poor harvest, relief distribution.
1995/6	Good	Heavy rainfall/floods, surplus food production, cereal prices very low, no relief
1996/7	Medium	Medium rain, poor/medium harvest due to pest infestation, food stocks carried over, no relief
1997/8	Medium	Poor rainfall, exhaustion of carried over food stocks, limited relief was distributed
1998/9	Poor	Poor medium rainfall, food socks exhausted and in security (Zaghawa & Arab)
1999/0	Good	Heavy rain with floods & birds, surplus food production and low grain prices.
2000/1	Poor	Good rain, medium harvest, food stock carried over, insecurity: Fur/Arab conflict
2001/2	Poor	Drought, conflict continued. Relief distributed, SFP and TFC.
2002/3	Poor	Poor rains, conflict (Fur & Arab), relief, SFP and TFC.
2003/4	Medium	Moderate cereal production, conflict (Fighting between Government and Sudan Liberation Army started).

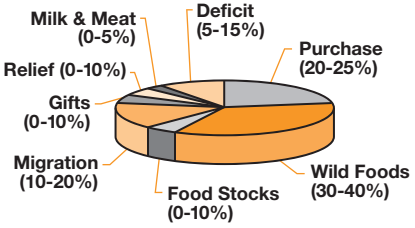
3. Wealth Groups

Wealth group	Poor	Middle
% of the population	45-55%	25-35%
Agriculture – Area planted	1 – 2 Mukhamas	1 – 3 Mukhamas
Livestock – size herds	0 – 10 Shoats[3]	5 – 20 Shoats 0 –5 cattle
Other income sources	Remittances from Central Sudan	Remittances from Central Sudan

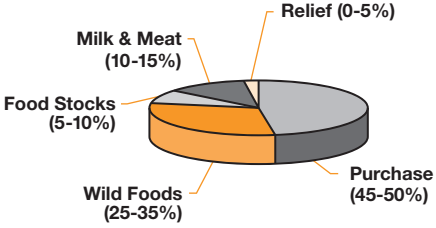
[3] Shoats = sheep and goats

4. Food sources

Sources of Food: Poor Households



Sources of Food: Middle and Better-off Households



Purchase is the most important source of food for the poor wealth groups. The ability of households to purchase food is determined by level of remittances and livestock holdings. Migration and the "in-kind" payment of women's agricultural labour in south/west Darfur provides a substantial part of the household's food. In the baseline year, crop production only provided 1/10 of the food basket due to consecutive bad years in the area exacerbated by the need to hire out part of the family labour to secure food for the family's immediate needs. Mukhait is the most dominant wild food consumed in the area. Gifts/relief to poor households from the better off households in the form of food items, an invitation to join the better-off households for a meal, is very common especially in bad years. Dara, a system whereby people eat collectively also exists. Milk/meat contributes few calories due to low level of income and limited holdings of animals.

For the middle income group, about half of the food basket in the baseline year is obtained through market purchase. To maximize calories, middle households resorted to sorghum and mukhait, instead of millet because sorghum and mukhait are cheaper. Middle income households are in a better position to secure family labour for cultivation and therefore have more opportunities to maximize their own farm output. It is also common that a woman from the middle income household migrates for agricultural labour. This may supply 1/3 of the food basket. Access to milk and meat is greater for the middle income and better off households because of higher livestock holdings and greater purchasing power in comparison to the poor households.

5. Income sources

The poor households obtain their income from migration. The poor of Kutum and Fata Barno are highly dependent on male migration to central Sudan, while the poor of Jebel Si tend to depend on female migration to southwest Darfur. Providing local labour during the cultivation season contributes about 1/10 of the income for the poor households. The most common work is agricultural labour. Livestock sales are the smallest income source due to low animals' holdings for this group. It is common for boys of poor households particularly from Kutum and Fata Barno, to work as herders for the pastoral group. Collection and sale of firewood and building materials are very common for those near the main urban centres. In the baseline year the total annual income for poor group was found to be SDD 33,000 (US$ 226) for S. Kutum and SDD 19,700 (US$ 135) for Jebel Si.

The annual income for middle households in the baseline year was SDD 60,000 (US$ 460). Livestock sales represent the most important source of income for middle households because of relatively better holding. Remittances are the second most important source of income for middle-income households. The migration of women for agricultural employment in southwest Darfur contributes to cash income in addition to food. These households also supplement their income with petty trade while the better-off households were in a position to supplement their income with trade activities such as livestock and butchering.

6. Vulnerability, hazards and coping mechanisms

Vulnerability of the Area	Vulnerability of the Poor	Hazards	Coping mechanisms
• Limited land holding • Type of soil • Poor breed of animals • Limited options of livelihood diversification • Marginalization	• High dependency on migration • Seasonality of labour • High number of female head HH • Irregular remittances • High transport costs for female migrant workers returning home with in-kind payment	• Drought locally and in migration areas • Insecurity and access to traditional migration areas • Limited labour opportunities in central Sudan	• Drought locally and in migration areas • Insecurity and access to traditional migration areas • Limited labour opportunities in central Sudan

Source: ACF Sudan, Food Security Assessment, North Darfur, May 2005.

Appendix 21: Sample Livelihood Matrix

Summary Findings of livelihood changes following Post Election Violence in Kenya

	IDP SLUM	IDP CAMP	Resident
Human	• Elderly have limited livelihood opportunities • Reduced disposable money for school fees. • Crowded schools • Limited access to health-care/medical facilities • HIV/AIDS and other diseases • Limited access to secondary/tertiary education • Orphans	• Elderly have limited livelihood opportunities • Reduced disposable money for school fees. • Crowded schools • HIV/AIDS and other diseases • Limited access to secondary/tertiary education • Orphans	• Elderly have limited livelihood opportunities • Reduced disposable money for school fees • Crowded schools • Limited access to health-care/medical facilities • HIV/AIDS and other diseases • Limited access to secondary/tertiary education • Orphans
Social	• Main assistance in slums only through religious institutions • Advanced crisis strategy stage • Limited membership to Self Help • Groups due to lack of trust and tribal differences. • Tribalism: Marginalisation of some tribes. • Limited access to basic services. • Single headed households	• Advanced crisis strategy stage • Limited membership to Self Health Groups due to lack of trust and tribal differences. • Tribalism: Marginalisation of some tribes. • Limited kinship support. • Single headed households	• No formal assistance programs • Tribalism: Marginalisation of some tribes. • Single headed households • Limited access to basic services.
Physical	• Poorly developed infrastructure • Limited access to water and sanitation facilities • Crowded poorly constructed housing • Limited access to business/ enterprise	• Crowded basic living conditions • Limited access to business/ enterprise	• Poorly developed infrastructure • Limited access to water and sanitation facilities • Crowded poorly constructed housing • Destruction of market centres.
Financial	• Limited access to Credit – formal, informal • Debt • Destruction of household/ productive assets • Limited livelihood opportunities • Informal/casual labour • Lack of access to financial services • Limited financial access to markets • High unemployment among the youth	• Limited access to Credit – formal, informal • Debt • Destruction of household/ productive assets • Limited livelihood opportunities • High levels of unemployment • Lack of access to financial services • Limited financial access to markets • High unemployment especially among the youth	• Limited access to Credit – formal, informal • Debt • Destruction of household/ productive assets • Limited funds to rehabilitate livelihood – reliance on petty trading • Reduced Income • High unemployment especially among the youth
Environmental	• Limited land access/availability	• Limited and access/availability	• Limited land access/availability

Source: ACF 2007 Rapid Assessment, Nakuru, Rift Valley, Kenya: Following Kenyan Post Election Violence.

Appendix 22: Seed Security Interview Guide

An assessment of seed security can be included in the larger assessment of local production systems in order to anticipate needs beyond immediate food security concerns. *Farmers' ability to secure seed, cuttings, tubers and other planting materials of adequate quantity, acceptable quality and in time for planting* is described as seed security.

- **Acute seed insecurity** is brought on by distinct, short-duration events that often affect a broad range of the population and may be spurred by the failure to plant in a single season, the loss of a harvest, or by high levels of infestation of stored seed stocks.

- **Chronic seed insecurity** is independent of acute stress or disaster, although it may be exacerbated by it. Populations suffering from chronic seed insecurity tend to be marginalized and are characterized by continual shortages of adequate seed to plant, difficulties in acquiring seed off-farm due to lack of funds, and the routine use of low quality seed and unwanted varieties*

Food security and seed security are linked but different concepts. A person can have adequate seed to sow a plot but lack sufficient food to eat and vice versa. If the FSL assessment is used to determine whether a population needs seeds& tools, then the assessment needs to explicitly consider seed security. *Under no circumstances* should the seeds and tools response be considered an obvious and/or systematic intervention. Even if this type of operation has become a classic in humanitarian programs, it should only be initiated after a thorough evaluation of the situation that would point to the lack of seeds and/or tools as the principle limiting factor for agricultural production.

The evaluation should contain a detailed and thorough study of the quantity and access of seed supplies BEFORE the crisis and currently. Six fundamental questions can guide the assessment:

1. How do farmers normally obtain seed for their most important staple food and cash crops? What are the preferred varieties? Common seed sources are own production, social networks, local markets, and the formal sector.

2. Did the crisis bring about a situation of acute seed insecurity? We need to distinguish between 'lack of seed available' (a rare case) and 'lack of access'.

3. What are farmer demands, needs and goals for seed relief and recovery? Restoring a system that is gradually deteriorating may reinforce vulnerability and further stress affected populations. Meanwhile, there are significant risks associated with introducing new varieties/crops.

4. What is the capacity of local seed/grain markets and home production to meet seed demand? A production shortfall does not necessarily imply a seed shortfall. If it does, traders may still be able to source seed from outside the area – but its quality and accessibility should remain key concerns of the assessment.

5. Are there indications of longer-term chronic seed stress? Indicators include seed aid being given season after season, cyclical crop failure, dramatic declines in seed quality and viability, changing crop profiles due to a lack of seed and sharp increases in use of non-preferred varieties. Here we need to identify chronic stresses.

6. What are possible responses to priority constraints, opportunities and demand? Analysis of the causes of seed insecurity will lead us to propose more adapted solutions e.g. vouchers and seed fairs in the case of acute seed access problems; or development of income-generating activities and agro-enterprises where seed stress is chronic.

* Adapted from Seed Aid for Seed Security: Advice for Practitioners, CIAT and CRS, 2006.

Appendix 23: Calculating Individual and Household Dietary Diversity Scores

The Household Dietary Diversity Score (HDDS) is a tool used to measure the diversity of household diets. It is used as a proxy indicator of the household's economic access to food. It is generated by calculating the number of different food groups consumed over the course of a given period.

Objective: to measure the dietary diversity of households

Time to administer: 5 to 10 minutes

Method (preparing the questionnaire): The recommended reference time period is the last 24 hours, as longer reference periods result in less accurate information due to imperfect recall. The following set of 12 food groups is commonly used to calculate the HDDS:

1. Cereals
2. Roots and tubers
3. Vegetables
4. Fruits
5. Meat, poultry, offal
6. Eggs
7. Fish and seafood
8. Pulses/ legumes/ nuts
9. Milk and milk products
10. Oil/ fats
11. Sugar/ honey
12. Condiments[4]

Items in each food group should be modified to include only those foods that are locally available and/or consumed in country. Local terms should be used. The person who works to adapt the questionnaire should consult the enumeration team and key informants to make the food group descriptions as concrete and specific to the area as possible. The template (below) gives a number of examples in each category. These are only examples, and the exact list for each category should reflect locally available foods.

[4] The Food and Nutrition Technical Assistance (FANTA) Project and FAO propose 12 food groups to measure household diet diversity.

3 steps are recommended to review and refine the food group descriptions and translations:

- Basic translation to the most appropriate major language

- First review of the translated questionnaire by the enumeration team to agree on appropriate wording, fill food group lists with all locally available foods and identify typically fortified foods (cereals, oil).

- Second review by key informants and/or FGD in each locality to review/ add locally available food items to the food groups, identify local terms for 'food' and 'meal', discuss issues of availability of seasonal foods (fruits, insects, etc), identify locally available fortified foods such as iodized salt and availability of red palm oil or nuts, gather information on ingredients used in local dishes as well as local meal customs, etc.

Method (administering the questionnaire): Avoid administering the questionnaire on feast days and during celebration periods such as Ramadan as consumption patterns may be atypical.

Some foods in the list are listed as a single item – for example, beans – but may usually be eaten in a sauce, soup or stew. If a mixed food like a sauce, soup, or stew has been eaten in the household, record all the food groups in the mixed food. For example, if the household consumed a stew of beans, tomatoes, and green leaves, there should be a score of 1 recorded for each of the three food groups that contain these foods.

Note that very small amounts of food (garlic, pickle, chilli, fish paste, milk in tea, etc.) should be placed in the condiment or miscellaneous group when conducting the survey. This should be done consistently by all enumerators. Foods purchased and consumed outside the home should not be included.

A score of 1 is assigned if an item from that food group was consumed at least once in the reference period, and 0 is assigned if it was not. Score will be either 0 or 1. An additional column is often added asking the source of the different foods consumed.

Instead of reading off the questionnaire, it is more effective to allow the respondent to freely recall what was eaten the previous day:

- Ask the respondent to list all the foods (meals and snacks) eaten yesterday during the day and night. Start with the first food/drink consumed yesterday morning.

- As the respondent recalls the foods, underline the corresponding foods in the list under the appropriate food group and write "1" in the column next to the food group if at least one food in this group has been underlined. If the food is not listed in any group, write it in the margin and discuss it with the supervisor.

- Probe for snacks eaten between main meals, for special foods given to children or lactating/ pregnant women, and for added foods such as sugar in tea, oil in mixed dishes or fried foods.

- If a mixed dish was eaten, ask about it and underline all the ingredients of the dish.

- Once the recall is finished, probe for food groups where no food was underlined. Write "0" in the right hand column of the questionnaire when it is ascertained that no foods in that group were eaten.

HDDS Template

What foods have been eaten in the household in the **last 24 hours**? 1=yes 0=no		Score (0 or 1)	Main Food Source	**Food Source codes** 1 = Own production (crops, animals) 2 = hunting, fishing 3 = gathering 4 = borrowed 5 = purchase 6 = exchange labour for food 7 = exchange items for food 8 = gift (food) from family relatives 9 = food aid (NGOs etc.) 10 = Other specify:
A	**Cereals** – corn soy blend, pasta, rice, ugali, chapatti, sorghum, biscuit, bread etc.			
B	**Roots and tubers** – potato, cassava, sweet potato etc.			
C	**Vegetables** – sukma wiki, sombe, spinach, pumpkin, cabbage, tomato, onion, hoho etc.			
D	**Fruits** – mango, papaya, guava, banana, watermelon, avocado, orange, lemon etc.			
E	**Meat, poultry, offal** - goat, camel, sheep, cow, chicken, liver, kidney, heart etc.			
F	**Eggs**			
G	**Fish and seafood** – dried or fresh			
H	**Pulses/ legumes/ nuts** – beans, lentils, nuts, peas, nuts, seeds etc.			
I	**Milk and milk products** – fresh, powdered, yogurt etc.			
J	**Oil/ fats** – oil, fat, butter, ghee etc.			
K	**Sugar** – sugar, honey, sweets etc.			
L	**Miscellaneous** – tea, coffee, chat, condiments (royco) etc.			
TOTAL HDDS SCORE (0-12)				

NB. Beware of the confounding effect of **food aid** on dietary diversity scores.

The Individual Dietary Diversity Score (IDDS) is used as a proxy indicator of the nutritional adequacy of an individual's diet. It is most often used to measure the quality of diet of young children and women of reproductive age.

Objective: to measure the dietary diversity of individuals of interest within the household

Time to administer: 5 to 10 minutes

Method (preparing the questionnaire): The recommended reference time period is the last 24 hours. The following sets of food groups are used to construct the IDDS:

	IDDS (adults)		**IDDS (children)**
1	Cereals	1	Grains, roots or tubers
2	Vitamin A-rich vegetables and tubers	2	Vitamin A-rich plant foods
3	White tubers	3	Other fruits or vegetables
4	Dark green leafy vegetables	4	Meat, poultry, fish, seafood
5	Other vegetables	5	Eggs
6	Vitamin A-rich fruits	6	Pulses/legumes/nuts
7	Other fruits	7	Milk and milk products
8	Organ meat (iron rich)	8	Foods cooked in oil/fat
9	Flesh meat	9	
10	Eggs	10	
11	Fish	11	
12	Legumes, nuts and seeds	12	
13	Milk and milk products	13	
14	Oils and fats (and red palm oil if applicable)	14	

Follow the same steps used in preparing the HDDS questionnaire. Do not leave categories abstract or vague and list all foods that are commonly eaten in the area.

Method (administering the questionnaire): Do not check off foods that have been added in very small amounts, or for seasoning. For example, if a spoon of fish powder is added to a pot of stew, do not record that the person has eaten fish. If one chilli pepper is included in the family pot, do not record that as an "other fruit or vegetable." Aside from the treatment of condiments, follow the same steps used in administering the HDDS questionnaire.

If it is planned to collect data on HDDS and IDDS in the same instrument, data collection may become confusing because of the similarities of the questions. It is important to train the enumerators to help the respondent to transition from thinking about food groups consumed by the household to thinking in greater detail about the food groups consumed by the individual.

A score of 1 is assigned if an item from that food group was consumed at least once in the reference period, and 0 is assigned if it was not. A template for measuring diet diversity in young children is below:

IDDS (Children) Template:

(Ask the mother or caregiver) What foods has the child eaten yesterday during the day or night? 1=yes 0=no		Score (0 or 1)	Main Food Source	
A	**Infant formula**, **milk** other than breast milk, cheese or yoghurt such as tinned, powdered, or fresh animal milk			
B	**Foods made from grains, roots and tubers** – porridge, gruel, fortified baby food from grains (millet, sorghum, maize, other local grains), bread, rice, noodles, white potatoes, white yams, manioc, cassava, etc			
C	**Vitamin A-rich fruits and vegetables (and red palm oil)** – yellow and orange foods e.g. pumpkin, carrot, squash, sweet potato, ripe mango, ripe papaya; dark, green, leafy vegetables e.g. cassava leaves, bean leaves, kale, spinach, pepper leaves, taro leaves, amaranth leaves; foods made with red palm oil, palm nut, palm nut pulp sauce[5]			**Food Source codes** 1 = Own production (crops, animals) 2 = hunting, fishing 3 = gathering 4 = borrowed 5 = purchase 6 = exchange labour for food 7 = exchange items for food 8 = gift (food) from family relatives 9 = food aid (NGOs etc.) 10 = Other specify:
D	**Other fruits and vegetables** [FILL IN WITH LOCALLY AVAILABLE FOODS]			
E	Eggs [FILL IN WITH LOCALLY AVAILABLE FOODS]			
F	**Meat, poultry, fish, shellfish and organ meats** - goat, camel, sheep, cow, chicken, liver, kidney, heart, fresh or dried fish or shellfish, grubs, snails, insects or other small protein foods etc.			
G	**Legumes and nuts** – beans, lentils, nuts, peas, nuts, seeds etc.			
H	**Foods made with oil, fat, butter** [FILL IN WITH LOCALLY AVAILABLE FOODS]			
TOTAL SCORE (0-8)				

[5] Items in this category should be modified to include only vitamin A-rich tubers, starches, or vitamin A-rich red, orange, or yellow vegetables that are consumed in the country.

N.B. Beware of the confounding effect of **breast-feeding** on dietary diversity scores. Children who are breast-feeding should be excluded from the IDDS measurement.

ADAPTING THE HDDS AND IDDS TEMPLATES ACCORDING TO CONTEXT AND OBJECTIVES

Lengthening reference period: Both the HDDS and IDDS methodology can be adapted according to objective. While the recommended reference time period is the last 24 hours, a period of up to 7 days can be used. This can be appropriate if different food patterns are associated with specific days of the week in the local culture e.g. market days or feast days, which can bias results upwards or downwards depending on the particular day of the week that the enumerator visits the household. However, beware of recall bias as accuracy will inevitably be lower when the recall period is extended.

Altering food grouping: Likewise, food grouping for the HDDS can be different according to objectives, putting emphasis on energy-dense foods or micronutrient-rich foods. In most cases, the final number of food groups varies from 5 to 16, depending on the main characteristic of the diet that the score intends to reflect.

Method (tabulating results): Tabulation of the HDDS and IDDS can be done by hand or with a database or spreadsheet. First, the HDDS/ IDDS variable is calculated for each household or individual. Sum up the values in the score column to get a frequency score. The value of this variable will range from 0 to 12 for the HDDS and 0 to 8 for the IDDS.

HDDS (0-12)	Total number of food groups consumed by members of the household. Values for groups A through L will be either "0" or "1". Sum (A + B + C + D + E + F + G + H + I + J + K + L)
IDDS (0-8)	Total number of food groups consumed by the individual. Values for groups A through H will be either "0" or "1". Sum (A + B + C + D + E + F + G + H)

Then, the average HDDS and IDDS score is calculated for the sample population by summing all the scores and dividing by the total number of households or individuals.

Average HDDS	Sum (HDDS) _____ Total Number of Households
Average IDDS	Sum (IDDS) _____ Total Number of Individuals

Method (interpreting results): Interpretation of the scores will vary according to objective. As assessment tools, HDDS and IDDS can be used to compare between groups or zones or against a pre-established threshold of dietary adequacy. As surveillance tools, early warning indicators or impact indicators, HDDS and IDDS are used to monitor trends across time. Baseline levels for trends can be established in the framework of the assessment.

The population-level statistics of interest for dietary diversity are the *mean dietary diversity score* and a *measure of distribution of the scores*, such as terciles. Looking at the percent of households/ individuals consuming each food group is another important analytical strategy.

To compare between groups and zones:
The HDDS can be used to rank the dietary diversity of livelihood groups and zones identified in the assessment using the mean score for each group or zone. Where diet diversity is well correlated with income, the HDDS can be helpful in wealth ranking and vulnerability ranking exercises and can be used to distinguish the food security of a range of groups and zones.

To compare against a pre-established threshold:
HDDS: Where target thresholds for adequate levels of dietary diversity are pre-established in the geographic region or can be reliably developed, HDDS results can be measured against this threshold in order to determine the percent of respondents that meet the cut-off. Again, relative rankings of groups and geographic areas by % that meet the threshold provide insight into the different levels of food access in the surveyed area.

IDDS: WHO guidelines consider 4 food groups to be a minimum standard for non-breastfed children age 6-23 months (using the 8-group system). To calculate the % of non-breastfed children who meet the minimum standard, divide the number of children with a diversity of 4 or more food groups by the total number of non-breastfed children who were surveyed.

Minimum dietary diversity for non-breastfed children 6-23 months	Percent of non-breastfed children aged 6-23 months who received minimum dietary diversity in 24 hours preceding survey # non-breastfed children aged 6-23 months with dietary diversity of 4 or more food groups _____ x 100 Total # non-breastfed children aged 6-23 months

To measure the share of the population consuming micronutrient-rich foods:

At the population level, calculate the percentage of households or individuals who consume food groups that are good sources of individual micronutrients. Key food groups of interest for Vitamin A and iron rich foods are:

- *Vitamin A plant-based food groups*: vitamin A-rich vegetables or tubers, dark green leafy vegetables, vitamin A-rich fruits (e.g. mangoes, apricots), red palm oil and its products
- *Vitamin A animal-based food groups*: organ meat, eggs, milk and milk products
- *Iron-rich food groups*: organ meat, flesh meat, fish

The following indicators can be derived for consumption of vitamin A rich food groups:

- Percent of individuals/households consuming plant foods rich in vitamin A (vitamin A rich vegetables and tubers, dark green leafy vegetables, or vitamin A rich fruits)
- Percent of individuals/households consuming vitamin A rich animal source foods (organ meat, eggs or milk and milk products)
- Percent of individuals/households consuming either a plant or animal source of vitamin A (vitamin A rich vegetables and tubers or dark green leafy vegetables or vitamin A rich fruits or organ meat, or eggs or milk and milk products)

The following indicator can be derived for consumption of iron rich food groups

- Percent of individuals/households consuming organ meat, flesh meat, or fish

The indicators above are calculated by summing the number of households or individuals who consumed ANY of the food groups listed in the questionnaire that contain the foods of interest, then dividing by the total sample size of the survey.

Example: Percent of households or individuals who consumed plant foods rich in vitamin A during the last 24 hrs:

Sum of households/individuals who consumed vitamin A rich vegetables and tubers OR dark green leafy vegetables OR vitamin A rich fruits

$$\frac{\text{Sum of households/individuals who consumed vitamin A rich vegetables and tubers OR dark green leafy vegetables OR vitamin A rich fruits}}{\text{Total number of respondents}} \times 100$$

Globally, the HDDS and IDDS are calculated and interpreted differently because the scores are used for different purposes. The HDDS is meant to provide an indication of household economic access to food, thus items that require household resources to obtain, such as condiments, sugar and sugary foods, and beverages are included in the score. The Individual Dietary Diversity Score (IDDS) reflects the nutrient adequacy of the diet and the food groups considered in this score place more emphasis on micronutrient intake.

EXAMPLE OF GROUPING HDDS INTO DIETARY DIVERSITY TERCILES

In Mozambique, dietary diversity scores were analyzed to identify which food groups were predominately consumed at different levels of the score. This provided information on the kinds of foods eaten by households with the lowest diversity, and those foods that were added by households with higher diversity [and higher income]. Scores were grouped into terciles to reflect what diets look like in Central Mozambique (during mango season).

Food groups consumed by >50% of households by dietary diversity tercile

Lowest dietary diversity (=< 3 food groups)	**Medium dietary diversity (4 and 5 food groups)**	**High dietary diversity (=> 6 food groups)**
Cereals	Cereals	Cereals
Green leafy vegetables	Green leafy vegetables	Green leafy vegetables
Vitamin A-rich fruit	Vitamin A-rich fruit	Vitamin A-rich fruit
	Oil	Oil
		Other vegetables
		Fish
		Legumes, nuts and seeds

Source: FAO. 2006. Baseline Survey Report Protecting and Improving Household Food Security and Nutrition in HIV/AIDS Affected Areas in Manica and Sofala Province, Maputo, Mozambique

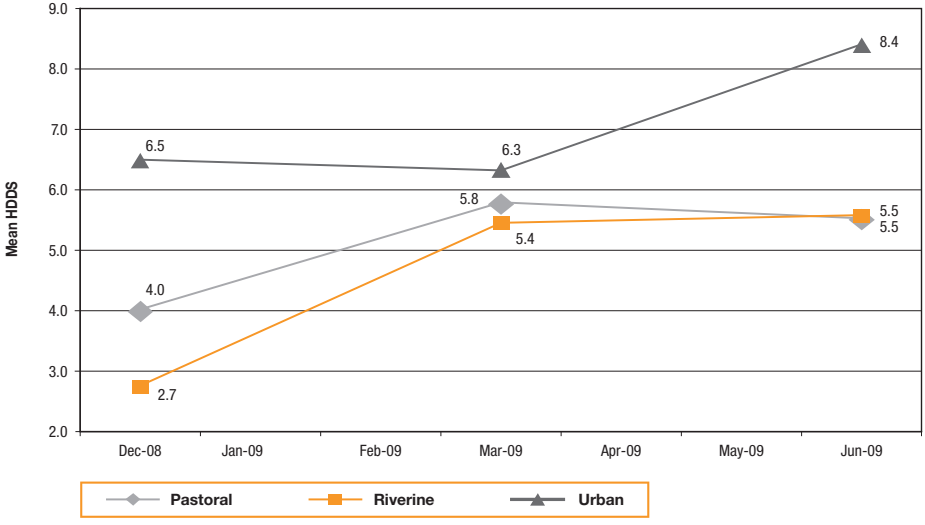
EXAMPLE OF HDDS ACROSS LIVELIHOOD ZONES IN MANDERA, NORTHERN KENYA

The study area is composed of 3 livelihood zones: pastoral, riverine, and urban or so-called drop-out pastoralist.

The population in the pastoral zone traditionally depends on livestock production as the main source of livelihood, with increasing sedentarization in recent decades. The population in the riverine zone are agriculturalists and cultivate maize as the staple food crop complemented by cash crop cultivation. In the urban zone, principal sources of livelihood are casual labor, firewood collection and charcoal production.

In total 198 households across the three zones were interviewed at the beginning of shortage of food items (December 2008), shortage of casual labor and return of livestock from migration (March 2009) and migration of livestock in search of pasture (June 2009). These points coincide with the long rain season (March-June) and short rain season (Oct.-Dec.). Twelve food groups were used as recommended by FANTA.

Significant differences in dietary diversity between the three zones were observed, in particular between the urban population and the pastoral/ riverine populations, who suffer greater seasonal extremes due to their increased dependence on own production (milk, cereals) (see Graph below). Riverine populations systematically ranked lower in diet diversity than the other populations and can be considered to have the least secure food access due to their chronic exposure and vulnerability to drought and absence of alternative livelihood options. Prevalence of malnutrition across the three populations was found to be unrelated to diet diversity and is is more likely linked to WASH factors and care practices in the area.



Source: FS&L Dept., ACF Kenya, 2009.

*This material was drawn in part from: Food and Nutrition Technical Assistance Project (FANTA)'s Household Dietary Diversity (HDDS) for Measurement of Household Food Access Indicator Guide, 2006; Knowledge, Practices and Coverage KPC2000+ Field Guide 2006 Module 2: Breastfeeding and Young Child Feeding, 2006; and FAO's Guidelines for Measuring Household and Individual Dietary Diversity, 2008.

Appendix 24: Calculating the Food Consumption Score

The Food Consumption Score (FCS) is a score calculated using the frequency of consumption of different food groups consumed by a household during the 7 days preceding the survey. It is used as a proxy indicator of household dietary adequacy focusing principally on macronutrients and energy.

Objective: to measure the frequency-weighted dietary diversity of households

Time to administer: 10 minutes

Method (preparing the questionnaire): A disaggregated list of food items is prepared that will serve as the basis of the questionnaire. Generally, the list of food items surveyed is between 10 and 25. The food item list should be customized paying particular attention to cereals/grains, cereal-made food like bread or couscous, or other staples which have important economic meaning in the local culture. Knowledge of the local food habits as well as nutritional considerations must inform the creation of the list of foods, and local terms should be used. The person who works to adapt the questionnaire should consult the enumeration team and key informants to make the food class descriptions as concrete and specific to the area as possible. The template (below) gives an example of a food item list. This is only an example, and the exact list of foods should reflect local food patterns.

4 steps are recommended to review and refine the food group descriptions and translations:

- Identification of major food classes according to local food habits and nutritional considerations, with examples of typical foods listed for each class
- **Basic translation** to the most appropriate major language
- First review of the translated questionnaire by the enumeration team to agree on appropriate wording, fill food class lists with all locally available foods and identify typically fortified foods (cereals, oil).
- Second review by key informants and/or FGD in each locality to review/ add locally available food items to the food classes, identify local terms for 'food' and 'meal', discuss issues of availability of seasonal foods (fruits, insects, wild foods etc), discuss foods typically used as condiments, gather information on ingredients used in local dishes as well as local meal customs, etc.

Method (administering the questionnaire): The recommended reference time period is the last 7 days. To measure sufficiency of food consumption, households are asked to recall the foods that they consumed in the previous seven days. Each item is given a score of 0 to 7, depending on the number of days on which it was consumed.

Foods consumed as condiments or in small quantities (such as milk or sugar in tea) should be noted only in the last category, and will later be excluded from calculation.

Avoid administering the questionnaire on feast days and during celebration periods such as Ramadan, as consumption patterns may be atypical.

Use the recall method to administer the questionnaire, instead of reading off the individual food items (see method outlined for administration of the HDDS tool). Underline individual foods in each group, note then sum together the total number of days for which foods were consumed for each food class. Probe for snacks between main meals, special foods given to children or lactating/ pregnant women, and for added foods such as oil in mixed dishes.

The following table presents an EXAMPLE of the Food Consumption Score module. The list of food items must be adapted to capture the differences in diet pattern across various countries with regard to specific cereal consumption (rice vs. maize vs. sorghum vs. wheat…).

FCS Module Example:

What foods have been eaten in the household in the last 7 days? On how many days in the last 7 days was the food eaten?

	Food Item*	Number of days eaten last 7 days (0-7)	Main Food Source over the past 7 days	
A	Rice			
B	Maize			
C	Cassava			
D	Other roots and tubers (potatoes, yam)			**Food Source codes** 1 = Own production (crops, animals) 2 = hunting, fishing 3 = gathering 4 = borrowed 5 = purchase 6 = exchange labour for food 7 = exchange items for food 8 = gift (food) from family relatives 9 = food aid (NGOs etc.) 10 = Other specify:
E	Fish			
F	White meat – poultry			
G	Pork			
H	Red meat			
I	Wild meat			
J	Eggs			
K	Pulses/ lentils/ bean curd			
L	Vegetables (carrots, onions, tomatoes, etc.)			
M	Green, leafy vegetables			
N	Oil/ butter			
O	Fresh fruits			
P	Sugar / sugar products			
Q	Milk / milk products			
R	Condiments			

*Names of food items relevant to the local context should be inserted.

NB. Beware of the confounding effect of **food aid** on food consumption scores.

Method (tabulating results): Food items are aggregated into food groups. The following set of 8 food groups is commonly used to calculate the FCS, with condiments as a blank category:

1. Main staples
2. Legumes/ pulses/ nuts
3. Vegetables
4. Fruits
5. Meat and fish
6. Milk and milk products
7. Sugar
8. Oil
9. (Condiments)

Each food group is assigned a weight, reflecting its nutrient density (the food group's quality in terms of caloric density, macro and micro nutrient content taking into account the actual quantities typically eaten). For example:

- Meat and fish are assigned a weight of 4, reflecting their high protein quality, easily absorbable micronutrients, energy density and the fact they significantly raise the quality of the diet even when consumed in small quantities;

- Pulses are given a weight of 3, reflecting the high protein content of beans and peas and the high fat content of nuts;

- Sugar is given a weight of 0.5, reflecting the absence of micronutrients and the fact that it is usually eaten in relatively small quantities.

The household FCS is calculated for each household by:

1. Summing all the consumption frequencies of food items of the same group, and recoding the value of each group that is more than 7 as 7,

2. Multiplying each food group frequency by each food group weight,

3. Summing the weighed food group scores into one composite score, thus creating the Food Consumption Score (see Template below). The household FCS score can have a maximum value of 112

4. Using the appropriate thresholds, recode the FCS into categories (poor, borderline or acceptable Food Consumption Groups), as indicated below.

FCS Tabulation Template:

No	Food group	Items consumed by the household	Weight (A)	Frequency Score (B)	Total Score (A x B)
1	Main staples	Maize, rice, sorghum, millet, wheat and other cereals/ grains			
		Cassava, potatoes, taro, sweet potatoes and other root crops/ tubers			
2	Legumes and pulses	Beans, peas, lentils, groundnuts, cashew nuts, etc	3		
3	Vegetables	Vegetables, relish and leaves	1		
4	Fruit	Fruits	1		
5	Meat and fish	Beef, goat, poultry, pork, wild meat, eggs, fish, insects etc.	4		
6	Milk	Milk, yoghurt, and other dairy products	4		
7	Sugar	Sugar and sugar products, honey	0.5		
8	Oil	Oils, fats, ghee and butter	0.5		
9	Condiments	Spices, tea, coffee, salt, fish powder, small amounts of milk for tea, etc	0		

Method (interpreting results): Interpretation of the scores will vary according to objective. As an assessment tool, FCS can be used to compare between groups or zones or against pre-established thresholds of dietary adequacy. As a surveillance tool, early warning indicator or impact indicator, FCS can be used to monitor trends across time. Baseline levels for trends can be established in the framework of the assessment.

The population-level statistics of interest are the mean Food Consumption Scores, a measure of distribution of the scores, such as terciles, and the share of households falling into poor, borderline and acceptable groups.

To compare between groups and zones:
The FCS can be used to rank the dietary diversity of livelihood groups and zones identified in the assessment using the mean score for each group or zone. As the FCS is correlated with nutrition security and food access more generally, it can be serve as one of the indicators in wealth ranking and vulnerability ranking exercises in order to distinguish the food security of groups and zones.

To compare against pre-established thresholds:
The household Food Consumption Score is compared with pre-established thresholds that indicate the household's food security status. Thresholds have been developed by WFP for three so-called Food Consumption Groups (defined as "poor", "borderline" and "acceptable").

The typical thresholds used by WFP are:

FCS	Food Consumption Groups [typical]
0 – 21	Poor
21.5 – 35	Borderline
> 35	Acceptable

In populations that have a high frequency consumption of oil and sugar (daily or almost daily), alternate cut-offs are proposed:

FCS	Food Consumption Groups [high sugar/oil consumption]
0 – 28	Poor
28.5 – 42	Borderline
> 42	Acceptable

Populations are classified into Poor, Borderline, and Acceptable reflecting their food security status. The share of the population with poor and borderline food security reflects the prevalence of food insecurity in the area.

The proposed scoring cut-offs are known to be conservative, and may still not be applicable across all contexts, especially as it relates to caloric adequacy[6]. Evidence suggests the FCS is more closely correlated with diet quality than calorie consumption. Locally-specific thresholds for the household FCS can be developed, tested and defined based on the frequency of scores and knowledge of consumption behaviour in the region, but this requires advanced statistical analysis. It is recommended to consult with the WFP office in-country about appropriate thresholds for analysis.

*This material was mostly drawn from: WFP Vulnerability Analysis and Mapping Branch Food Consumption Analysis – Calculation and use of the Food Consumption Score in food consumption and food security analysis, 2008.

[6] An IFPRI validation study of the FCS found that the present cut-off points lead to serious underestimates of food insecurity when compared to calorie consumption per capita. No evidence was found for the existence of universal cut-offs.

EXAMPLE OF FCS ACROSS GROUPS IN KIROTSCHE, DRC

The study area in North Kivu is broadly characterized by large population movements and the influx of IDPs from mountainous areas in Masisi to the relatively secure lakeside areas of Kirotsche as a result of recurrent armed conflict between insurgent groups. The displaced population is living with host families or in camps around Goma, Minova, Shasha, Kirotsche and Sake.

The chronic insecurity and large-scale population influx has led to an increase in casual labor supply on local markets, pressure on local resources (water, fuel, agriculture, livestock), poorly supplied food markets (as a result of road blockage) and price inflation.

421 households across Kirotsche were surveyed using the FCS tool. 24 food items were grouped into 8 food groups to measure household frequency of consumption. Cereals and tubers were grouped separately to account for frequent consumption of tubers in the population; while milk products were eliminated entirely as a group due to the universally very low consumption of milk or cheese. Out of a total possible score of 98, households were classified by food security status using FCS thresholds of 24 and 38. The cut-offs were borrowed from a recent Vulnerability Analysis and Mapping (VAM) survey conducted by WFP in the region that utilized the FCS tool.

Displaced households living in camp situations were found to be most food insecure relative to IDPs in host families or residents. The findings (below) mirrored the results from the VAM survey.

Food Consumption Groups by Displacement Status

Source: FSL Dept., ACF DR Congo, 2008.

Appendix 25: FCS, HDDS and IDDS comparison matrix

Table 31: Comparison matrix

	Key Questions	Food Consumption Method/Score	Household Dietary Diversity	Individual Dietary Diversity
1	CONSTRUCTION What information is collected in the method?	7 day recall of the consumption of 8 food groups eaten by the household (score based on weighted sum of food groups)	24 hour recall of the consumption of 12 food groups eaten by the household (score based on simple sum of food groups).	24 hour recall of the consumption of 14 food groups eaten by an individual, most often vulnerable groups (women or young children).(score based on simple sum of food groups)
2	MEANING What is the meaning of the indicators derived from this method?	Proxy indicator of HH food access/ consumption, focusing principally on macronutrients and energy. (caution in extrapolating from HH to individual)	Proxy indicator of HH food access/ consumption, including access to Vitamin A and iron rich foods. (caution in extrapolating from HH to individual)	Proxy indicator of micronutrient/ dietary adequacy (research looking at micronutrient adequacy ongoing), also a proxy for food access/ consumption
3	REQUIREMENTS What are the practical requirements to use the method?	Adaptation (local foods and food names need to be included as examples for each food group in the questionnaire.) Enumerator training required. Basic analytical skills required to calculate score and prevalence. More advanced skills to do further analysis.		
4	REFERENCES How are the indicators/ scores interpreted?	Cut-points of 21 and 35 reflect three levels of food security. Higher cut-points used if oil and sugar are consumed in the area. Means are used for monitoring. Interpretation: Prevalence of population with score of 21 or less reflects prevalence of very poor consumption.	No standard cut-point. Means or terciles used for comparison between areas/groups, and trends over time. Interpretation: lowest terciles reflects the lowest diversity for that area. Best used to follow trends over time. Individual food groups also used.	No standardized cut-point for IDDS in adults. Same as HDDS (adults), analyse by distribution of scores into terciles (or quartiles) and also by prevalence of consumption of individual food groups. A cut-off for minimum acceptable diversity has been defined for children 6-23.9 months of age.
5	LIMITATIONS What are the main limitations of the method?	Works less well in urban areas. Does not capture intra-HH distribution. Questionable standard cut-offs. Communication of results is harder than with HDDS. Potential double counting of groups when food items are aggregated into food groups. Moderate correlation with energy intake. Works less well for upper end of the spectrum. More recall bias due to recall period of 7 days. Does not capture food eaten outside home.	Works less well in urban areas. Does not capture intra-HH distribution. Currently no standard cut-offs. Less information captured due to shorter recall period. Weak correlation with energy intake. Does not capture food eaten outside home.	Less information on household food consumption. Cannot extrapolate individual consumption to household level. No standard cut-offs for adults.
6	STRENGTHS What are the main strengths of the method?	Positive correlation with energy and other HH FS indicators. Allows for a good description of dietary patterns. Works better at the lower end of the spectrum (which is the group of interest). Lots of experience in the field, wide use in assessments and countries. Technical guidance available. Wide range of possible values. Recall covers a longer period, hence more information is provided.	Positive correlation with energy and other HH FS indicators. Allows for a good description of dietary patterns. Captures access to vitamin A and iron rich foods. Easy to explain the score. Less recall bias than scores derived from longer recall periods. Technical guidance available. Simple and quick to administer and easy to calculate the score.	Works well in urban and rural areas. Can account for food eaten outside of home. Can capture Intra-HH distribution of food. Correlated with micronutrient intake/ adequacy. Easy for respondent and interviewers. Provides a good description of diet patterns.

Table adapted from: WFP – FAO, 2008. Interagency Workshop Report: Measures of Food Consumption Harmonizing Methodologies. Rome.

Appendix 26: Calculating the Coping Strategy Index

The **Coping Strategy Index (CSI)** is a tool strategy for rapid measurement of household food security in humanitarian strategy emergencies.

Objective: to measure the coping strategies of households as a proxy indicator of food access and livelihood security

The CSI is composed of a series of questions that typically measure people's responses to food shortage. Four general categories of consumption coping are measured, with individual strategies defined specifically according to location and culture:

5. Dietary change (e.g. eating less preferred but less expensive food)

6. Increasing short-term food access (e.g. borrowing, gifts, wild foods, consuming seed stock)

7. Decreasing the numbers of people to feed (e.g. short-term migration)

8. Rationing strategies (e.g. mothers prioritizing children/men, limiting portion size, skipping meals, skipping eating for whole days)

Responses will vary in relation to the scope and magnitude of a shock or strained situation. Questions are typically grouped according to the perceived seriousness or severity of the coping response and assigned a weight in proportion to the *severity*.

A 5-question "Universal Index" related to responses to food shortage has been tested across several countries and is considered *universally applicable*. It represents the mandatory minimum set of questions to be included in any CSI, and can be reliably used to compare changes in food access across regions and countries. It uses a standard set of five individual coping behaviours that can be employed by any household, anywhere. A universal set of severity weightings for the behaviours has also been developed.

The five standard coping strategies and their severity weightings are:[7]
- eating less-preferred foods (1.0)
- limiting portions at mealtime (1.0)
- limiting adult intake (3.0)
- reducing the number of meals per day (1.0)
- borrowing food/ money from friends and relatives (2.0)

A "Full" or context-specific CSI can also be developed by adding-on to the 5 universal questions by consulting with community-level focus groups and key informants. This allows for widening the scope beyond consumption coping to livelihood coping strategies that address risks to livelihoods, or for use in highly specific contexts e.g. examining food access in HIV/AIDS-affected communities.

[7] While the first 4 strategies are clear consumption strategies, the fifth strategy (borrow food) is sometimes considered a livelihood strategy, as the ability to engage this strategy varies depending on a household's social capital and access to social networks.

Deciding between a universal and a context-specific CSI

* Where the assessment objective is to measure and compare food security across different locations and contexts for the purpose of geographic targeting, the 5 questions in the universal CSI are sufficient and appropriate.
* Where the assessment objective is to identify the most vulnerable households in a given location for the purpose of vulnerable group targeting, additional context-specific questions can be added to the CSI in order to assist in flagging extreme behaviours that are associated with high levels of food insecurity in the local area.

Method (preparing the questionnaire): If the assessment objective is primarily for geographic targeting of food insecure zones, it is appropriate to rely solely on the universal CSI tool. The template can be found below.

Universal CSI Template:

No.	Question	Frequency score: Number of days out of the past seven (0 -7).
In the past 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:		
1	Rely on less preferred and less expensive foods?	
2	Borrow food, or rely on help from a friend or relative?	
3	Limit portion size at mealtimes?	
4	Restrict consumption by adults in order for small children to eat?	
5	Reduce number of meals eaten in a day?	
	TOTAL HOUSEHOLD SCORE:	

In other cases, a context-specific CSI will be considered important to administer to better support the identification of vulnerable households in the population. The process to develop a context-specific CSI is intensive and requires a substantial amount of upfront work.

5 steps are recommended to construct a context-specific CSI:

- Generate a comprehensive list of locally relevant strategies by key informants and/or FGD in each locality, to be triangulated across livelihood/population groups. General questions should be asked such as “what do people do in response to food shortage”. Identify strategies undertaken in response to crisis rather than seasonally e.g. gathering wild foods. Ensure women are included in the group.

- Group strategies of similar severity by assisting the group to rank the identified strategies into 3 or 4 levels of perceived severity. See detailed instructions below.

- Narrow down the list to only those strategies that are exceptional (not seasonal), short-term, reflect a broad consensus of opinion, apply to all groups equally and represent the same severity level of food & livelihood insecurity for each of these groups[8]. Where strategies vary by group, omit these questions if the objective of the CSI is to compare between groups. If a single livelihood group is being assessed, then it is possible to include strategies specific to that group.

- Basic translation to the most appropriate major language

- Review of the translated questionnaire by the enumeration team and a group of local informants to agree on and adapt meanings and phrases to the local context, identify examples of 'less-preferred foods', 'undesirable foods', etc.

The list should be the main set of coping strategies—it doesn't need to include every single strategy mentioned (some are very rare), but should represent the consensus view of all the groups interviewed. Try to keep the list down to a feasible number (perhaps 12–15 at most). It should not include any similar or overlapping coping strategies (e.g. different ways of describing the same basic behavior).

Caution: Consumption-related questions should be the focus of the CSI[9]. Care should be taken with regard to questions about:
- Taking loans
- Selling assets
- Liquidating savings
- Distress migration

These or other strategies to augment the household resource base should not be included, as not all livelihood coping strategies are accessible or available to all people. For example, taking a loan or selling off assets may not be an option for extremely poor households, to whom moneylenders will not lend and who may not own any assets to sell. Responses to these questions are misleading because a negative response does not necessarily indicate the household is food secure.

Procedure for Grouping Strategies of Similar Severity

A series of focus group discussions should be held to ask questions about the perceived severity of all the coping behaviors that end up on the list.

- The first step is to group the strategies into categories that are of roughly the same level of severity. Since this task is carried out with different groups, it is useful to impose some structure from the outset. For example, one could divide them into four different categories: very severe, severe, moderate, and least severe.

[8] Irreversible strategies are defined as behaviours that have a negative impact on the long-term livelihoods of affected populations. Irreversible strategies should be distinguished from adaptive mechanisms, which are measures used to manage and minimize the risk from chronic food insecurity and recurring situations. Adaptation is a process of adjustment to a longer-term solution, for instance pastoralists moving to areas of better rainfall and pasture growth, and can lead to new livelihood strategies. The CSI is not well adapted to capture long-term adaptation to chronic shock; questions should be limited to short-term reversible and irreversible strategies.

[8] Food security is clearly related to factors besides just short-term consumption, including longer-term livelihood strategies, labor opportunities, alternative income-generating strategies, levels of physical and financial assets and one-off asset sales. Research shows that households tend to use both consumption coping strategies and longer-term livelihood strategies simultaneously. Therefore restricting the CSI to short-term consumption behaviors – which are comparable across social groups – is adequate as a rapid indicator of both food and livelihood security at the household level.

- It is always easiest to establish the extreme types of coping strategy, so ask the group to select the most severe and least severe individual strategies first.

- Then ask if there are other individual strategies that are more or less the equivalent of these two in terms of how severe they are perceived to be. When those two extreme categories are established, it is easier to group the remaining behaviors into intermediate categories.

- This must be done with enough groups representing enough diversity within the location or culture to ensure that a reasonable consensus has emerged. Weighting the individual strategies on an insufficient number of focus groups risks errors in the analysis.

- Although there is no hard and fast rule on how many focus groups is "enough," a minimum of six to eight is recommended for each culture or location, with the main different social groups represented. Women are likely to be the most knowledgeable informants, but men should be consulted as well.

- Tabulate results by strategy and by focus group into a grid that will allow for calculating the consensus severity weight for each strategy (see Example at end of Appendix section)

Method (administering the questionnaire): The CSI is based on a 7-day recall period and asks about the number of days in the past seven days that the particular strategy was used in the household. The frequency score varies from 0 to 7.

1. Note the way in which the question is worded. Repeat the main question for each behavior to remind the respondent that the question is referring to times when they did not have enough food or enough money to buy food. Be sure the question includes the recall period.

2. Note that you are always asking about some time period beginning from today and counting backwards (e.g., "the last seven days" not "the past week," or "last week"). People get confused if you are not specific about this.

3. If a respondent answers "all the time," be sure to clarify if that means each day for the past seven days, and if so, record the answer as seven. If s/he says "never," be sure to clarify if this means zero days, and if so record the answer as zero. If it is something that the household never does, a "not applicable" answer should be given.

4. Results tabulation is explained below.

Method (tabulating results): The CSI tool relies on counting coping strategies that are not equal in severity. Different strategies are "weighed" differently, depending on how severe they are considered to be by the people who rely on them.

The CSI score is calculated in 3 steps:
1. Summing the frequency of the strategies for each household
2. Categorizing and weighting the strategies by severity
3. Combining the frequency and severity scores to calculate a weighted score for that household.

Tabulation template (universal CSI)

No.	Question	Frequency score (0-7)	Severity score (1-3)	Weighted Score = Frequency x Weight
1	Rely on less preferred and less expensive foods?		1	
2	Borrow food, or rely on help from a friend or relative?		2	
3	Limit portion size at mealtimes?		1	
4	Restrict consumption by adults in order for small children to eat?		3	
5	Reduce number of meals eaten in a day?		1	
	TOTAL HOUSEHOLD SCORE:			

Method (interpreting results): The higher the CSI score, the more food insecure the household. CSI data is most powerful if it is analyzed and interpreted over multiple time periods, across multiple locations, and/or across specific groups.

The CSI correlates well with food security measures (e.g. food frequency, diet diversity, meal frequency, caloric intake) as well as livelihood measures (e.g. assets and expenditures). CSI results should be triangulated with more than one indicator - for example, HDDS and food sources.

To target households:
The context-specific CSI is developed based on local contexts and yields very detailed information about the localized food security situation. Within a specific location, the context-specific CSI will be useful for identifying food insecure households. CSI data from individual households can be aggregated into mean scores by sub-group or location to reveal information on the relative food security of a range of livelihood groups or zones. Location or group-specific severity scores can then be used to contribute to vulnerability rankings of individual populations.

To target geographic areas:
The universal CSI is useful in comparing mean scores across regions that may be significantly different from each other, and in assisting with geographical targeting of humanitarian assistance.

To use as a PRA tool in qualitative analysis:
The CSI can also be adapted as a qualitative tool (applicable to Participatory Rapid Appraisal or PRA). The tool can be used in focus group discussions in which community averages are the topic of the discussion, rather than individual household scores. The CSI tool can be used in conjunction with a proportional piling exercise to obtain the relative proportions of groups in the community relying on various coping strategies. Using the CSI as a PRA tool gives some level of information about the average impact at the village or community level, and can be a useful cross-check on household level information.

The qualitative tool looks similar to the set of questions about individual coping strategies for the household survey, but rather than inquiring about the relative frequency of relying on those strategies at the household level, the question is about the relative proportions of households in the village or community employing the strategy. Beans or stones can be used by a group of informants to depict the proportions of households in the community that are regularly relying on a given strategy or behavior. If ten beans or stones are provided to depict the answer in each case, you will get rough estimates of the proportion of the village population in tenths (or ten percent of the population) that do/ do not rely on various coping strategies.

Be aware about the potential impact of social bias on the findings – as open discussion of shameful or illicit behaviors in a public forum may not always lead to reliable findings.

*This material was in part drawn from: CARE USA The Coping Strategies Index Field Methods Manual, Second Edition, 2008.

Example of Coping Strategies Grouped and Ranked by Focus Group

To be noted about the matrix below:

- The individual strategies listed have been grouped into four categories, where 1 indicates the least severe category, 4 indicates the most severe, and 2 and 3 are intermediate.
- Twelve different focus groups were consulted about their perceptions of the severity of the various individual strategies.
- There was not complete consensus except that limiting portion size was the least severe and skipping entire days or begging were the most severe. However, a quick glance will indicate that there was fairly good consensus on the severity of most of the strategies.
- In general, the consensus ranking should be a whole number that is the most frequent response.

No.	Question	Focus Group Ranking for Each Individual Behaviour													
		FG1	FG2	FG3	FG4	FG5	FG6	FG7	FG8	FG9	FG10	FG11	FG12	Mean	Consensus Ranking
1	Less preferred	1	1	1	1	1	1	1	1	1	1	1	1	1.01	1
2	Borrow	2	2	2	2	2	3	2	2	2	2	2	2	2.1	2
3	Buy on credit	2	2	1	2	1	3		2	2	2	2	3	2.0	2
4	Wild foods	5	5	3	3	3	4	4	4	4	5	4	4	4.0	4
5	Eat seed stock	-	-	3	3	3	4	2	3	4	2	4	4	3.2	3
6	HH members go elsewhere	-	-	2	2	2	1	3	2	2	3	2	3	2.2	2
7	Beg	5	5	4	4	3	3	2	4	4	5	5	5	4.1	4
8	Limit portions	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1
9	Restrict adult intake	3	2	2	-	-	2	3	1	3	-	-	2	2.3	2
10	Feed workers	3	3	2	-	2	2	3	1	3	3	3	2	2.5	3
11	Reduce meals	1	1	2	1	1	1	1	2		-	3	1	1.4	1
12	Skip meals	4	4	3	3	4	4	4	3	4	4	3	4	3.7	4

Appendix 27: Tools and considerations for Data Analysis

Data analysis is undertaken in 2 main ways:

(i) Use of software packages

(ii) Team de-briefings and analytical workshops

Analysis will usually comprise a mixture of the two. Comprehensive FSL assessments will rely more heavily on **statistical analysis using a database** while rapid assessments have a greater emphasis on qualitative data collection and will **favor analytical workshops with the assessment team**. The analytical workshops can and should also take place with those who were involved in providing the information.

The analytical method and the database that is selected will depend on the staff available, their time and their capacities. Up until now ACF has largely relied on each individual food security and livelihood officer to develop his or her own analytical system based on the use of Excel, EPIinfo and in certain cases, Access. This has led to constant changes in the analytical system and a lack of continuity.

Currently ACF is promoting the use of the 'Sphinx' software package which is intended to improve continuity in data analysis methods.

Software and Hardware
Sphinx19 is user-friendly for data entry but may be limited for output when compared to other software. It is however possible to export data from Sphinx to Excel in order to carry out other analyses if necessary. While it is relatively new within ACFIN, it has been piloted and adopted operationally. SPHINX is a software package for survey design and data analysis that can analyze qualitative and quantitative data and automatically produce graphic tables from the data. It is based on Microsoft products and is user-friendly and flexible. The questionnaire is developed using the software (in a way similar to that of EPIinfo) but it is more innovative and complete. It is easily accessible for those less experienced in data entry. The software is available in French, English and Spanish. Whichever software is selected, it must offer user-friendly cross tabulation.

Cross Tabulation
Cross-tabulation displays the joint distribution of two or more variables, most often in a matrix format. Whereas frequency distributions show the distribution of a single variable (e.g. settlement status), cross tabulations describe the distribution of two or more variables simultaneously (e.g. settlement status and geographical zone). The tool establishes an interdependent relationship between two variables but does not establish causality.

Individual cells can be highlighted in order to draw out specific information in the table, for example the destination of refugees who return to DRC's South Kivu from camps in Tanzania (see table below).

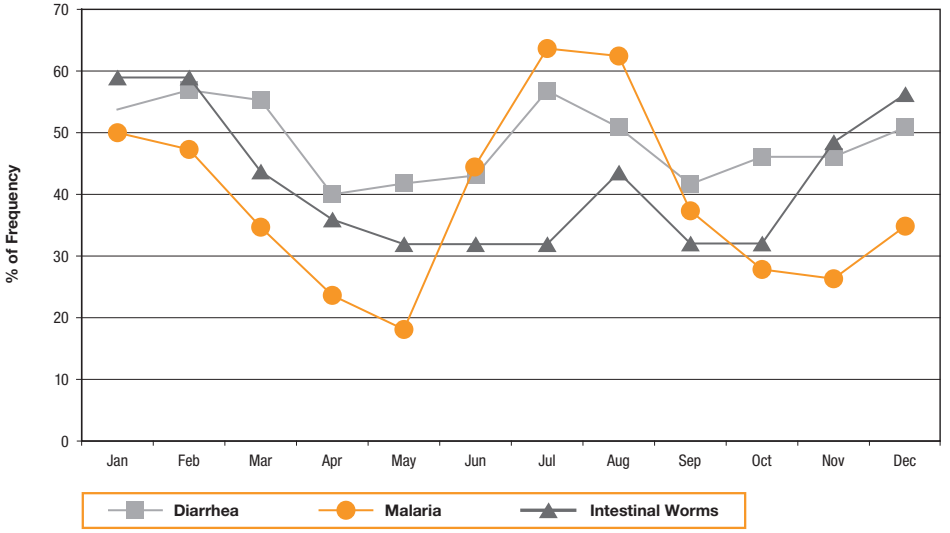
Table 32: Geographical zone by % settlement status

Status	Basin	Littoral	Hills	Plains
Displaced	2	4	2	1
Repatriated (UNHCR)	2	6	2	1
Repatriated (independent)	1	2	0	0
Refugee	0	0	1	0
Resident	92	85	93	97
Internal returnee	3	3	1	1

Time Trends

Time trends are important analytical tools for surveillance, program monitoring and impact monitoring purposes. The software must be trend-friendly. Data file structure needs to be set up in advance with this in mind and data archiving also needs to be considered. Changes in indicators need to be made with care. Even for new programs, it is important to remember that somebody one or two years ahead will want to ask the question "How does it compare with last year at this time?" See figure below illustrating time trends for infectious disease in DRC.

Figure 15: Disease trends in South Kivu DRC



Analysis as a Bottleneck

A bottleneck is often created by analysis – teams collect information and it is often the food security and livelihoodofficer who takes the responsibility for data analysis. To analyze and write reports is time consuming and this aspect must be taken into consideration when planning the work of the whole surveillance team. Unanalyzed data must not be allowed to accumulate and there must be someone in the team other than the officer who can do the analysis and even with that it always takes longer than expected. If not properly planned and organized, serious delays can occur which invalidate the information and thus a lot of time and effort has been put in for very limited output. This is a major frustration for everyone in the chain and must be avoided. To recruit a database analyst specifically dedicated to such issues is essential. Eventually this person may train other staff in the use of the tool and the main objectives.

Geographic Information Systems (GIS)

Maps can be an excellent way to visualize data analysis. Some such systems have been developed and used with success in ACF but others have failed. Many of the reasons for past failures have included lack of training, training of personnel who subsequently leave the mission without transferring their knowledge, or the development of databases that are too large and complicated. However, it has met with great success in some missions where crossing indicators visually using maps has greatly helped to facilitate understanding of the context and developing crises in the country. For example, information on water points, pasture availability, normal and abnormal movements of animals and humans have been crossed to understand the potential water and food availability for nomadic populations.

Sustainability
It is absolutely vital to leave behind a detailed description of the analysis method concerning indicators that will be monitored over time. This description will serve subsequent teams to be able to compare information from one year to another or to make appropriate changes according to the evolving context. This description should include:

- detailed information on the methodology and indicators
- instructions on software selection and use
- staff training
- procedures for report dissemination
- internal and external coordination mechanisms

Appendix 28: Write-up of Assessment Methods, an example

The below sample methodology is from a joint food security and nutrition assessment. While FSL assessments will often not include a nutrition component, this write up demonstrates the exhaustive nature with which the assessment methodology should be conveyed in the final report. The reader of the report should be left with as few questions as possible as to the assessment methodology thus giving them as little room as possible to criticize the methods and thus results.

Assessment Design and Sampling
Prior to undertaking the assessment in the field the joint team undertook an extensive review of existing literature and data on the food security and nutrition situation in Mindanao. Consultations were held with various stakeholders and cluster members in both Manila and Mindanao in order to receive feedback on the assessment tools and methodology and to incorporate the concerns and needs of all partners. All processes were designed and implemented on the ground by the nutrition consultant, nutritionist, and Regional and Country staff with the support of government agencies including HEMS-DOH, ARMM-DOH and CHD X and XII and food and nutrition cluster members.

The Joint Emergency Nutrition and Food Security Assessment was designed as a two-stage cluster survey and the population of concern was defined as the entire IDP population, e.g. EC and home-based, currently displaced in the five crisis-affected provinces of Lanao Del Norte, Lanao Del Sur, Maguindanao, North Cotabato and Sultan Kudarat. The choice of the two-stage cluster survey was useful given the complexity of the IDP context in Mindanao in which families are spread over a wide geographic area, mobile and living both inside evacuation centres and with relatives. The sampling frame of the assessment was composed of updated validation lists of IDP households by province and barangay – the smallest administrative division in the Philippines - which were obtained by staff from provincial government centres. The validation lists indicated that 45,612 households would be covered in the assessment. Using the local estimate of an average of 6 people per household the total population covered in the assessment was estimated at 275,472 IDPs. Given the fluidity of the situation and other constraints in profiling IDP populations, this population figure is not exact but represents a best estimate (See limitations below).

The methodology and sample size for the joint assessment was designed around the need to gain statistically strong data on the nutritional status of children from 6 through 59 months of age in the displaced population. The sample size was calculated using the formula below where:

p = estimated prevalence of malnutrition at 13%

d = estimated precision of .03

deff = design effect of 1.5

$$1.96^2 * \frac{p \times (1 - p)}{d^2} * deff$$

$$1.96^2 * \frac{.13 \times (1 - .13)}{.03^2} * 1.5 = 724$$

The total estimated sample size needed for the above criteria was 724 children. Taking into consideration constraints related to logistics, time-duration, team composition and the wide geographic area under concern, as well as the likelihood of lower design effect in the assessment, the team determined that a 36x20 design, with a total of 720 children, would be the best suited to maintain an acceptable degree of precision and tight 95% confidence intervals with the expected GAM prevalence of 10 – 15%.

For the first stage of cluster sampling, lists and population figures of all evacuation centres and barangays hosting IDPs were compiled from the validation lists obtained by Mindanao office staff. A number of barangays, especially in Lanao Del Sur, were pre-excluded from the assessment due to problems with access, including logistics, insecurity and/or flooding. Thus the final results do not represent the whole of the IDP population in ARMM, Region XII and Region X but only the population which was accessible. 36 clusters were randomly selected proportional to population size (See Cluster List in Annex) using the Emergency Nutrition Assessment (ENA) software. As the IDP context in Mindanao was very fluid throughout the assessment, it was necessary to randomly choose additional replacement clusters which would be assigned to teams in the even that the IDPs in a chosen site had returned home or were for some reason inaccessible. Finally, the chosen clusters were divided between the three assessment teams, with two teams based in Cotabato City and one in Marawi.

In the second stage of cluster sampling, households were randomly selected from the 'master lists' of all IDP households living in the selected evacuation centres or home-based sites/barangays. These 'master lists' were obtained by staff prior to undertaking the field assessment and represented the most up to date population data available.. Upon the arrival of the team at the daily assessment site, evacuation centre or barangay, the team leaders confirmed changes in IDP numbers with the community leaders and updated the 'master lists' in order not to exclude recent arrivals. Next, the teams utilized random start numbers obtained from a random number table in order to determine their first selected household from the list. Successive households were chosen using a sampling interval determined by dividing the total number of households by the number of households the teams expected to interview in order to reach the target of 20 children and 15 households. While it was projected that around 15 households would need to be interviewed in one day, it was expected that some selected households would not be available to be interviewed and that replacements would be needed. Therefore, each team initially selected 20-25 households from this list. Thus, for example, if 20 households were to be selected in a cluster in which 200 households resided, and the team obtained a random start of 15, the first selected household would be number 15 and the sampling interval would be 10. The next households would be obtained by adding the sampling interval to the previous selected household number, resulting in the selection of household numbers 25, 35, 45 and so on until the target of 20 households is obtained.

After selecting the households, the Team Leaders confirmed the presence or absence of these households in the community. If more than 10% of the selected households were no longer in the community, the household list was considered too inaccurate for use and a variation of the "spin the pen" method was employed. In the case where the list was considered valid for use, the selected households from the list were visited in a random order, to account for spatial and other bias that may have arisen from visiting a limited number of households in the order found on the master lists. Most clusters in the assessment were in fact able to make use of the 'master lists.'

Within each cluster, selected households were interviewed on both the food security and child health/nutrition questionnaire until anthropometric data was collected on the target number of 20 children ages 6-59 months. All children in a given household were measured and in clusters with less than 20 children 6-59 months, all households with eligible children were sampled. In order to ensure strong food security data, teams were instructed to sample a minimum of 15 households per cluster, regardless of how many households were needed to reach the 20 children target.

Team Composition and Training of Enumerators

Team size and composition was guided by the assessment's need to cover the necessary number of 36 clusters in a reasonable time-period, as well as to obtain the target sample of 20 children per cluster, with each cluster being completed by one team each day. In order to meet these needs, three (3) teams, consisting of seven people each worked to collect data in over a period of 16 days. These teams consisted of one team leader (drawn from regional office staff); two (2) Anthropometry/Food Security sub-teams composed of 2 people each; and one two-person Food Security team which served to administer the household questionnaire in selected households without eligible children as well as administering the host family questionnaires in home-based IDP contexts (see Assessment Participant List in Annex). This allowed the teams collecting anthropometric data to focus on households with children to ensure meeting the target of 20 children per cluster while still administering the food security and livelihoods questionnaire to all selected households.

The team leaders were responsible for ensuring that teams adhered to strict household selection protocols. They also worked closely with teams in the field during and after each day's work to ensure all questionnaires were completed appropriately and consistently. During the course of the training and assessment, Team Three, which worked in Lanao del Sur and Lanao del Norte, was fortunate to have extra "back-up" enumerators thus increasing their team size above seven for much of the data collection process. On the other hand, Team One, which was based out of Cotabato City, suffered from limitations in team size, working as a team of six, after losing one enumerator due to emergency circumstances. In the latter case, the integrity of the team and their data was ensured as the fully trained team leader undertook additional work as an enumerator.

In preparation for data collection in the field, enumerators were recruited from the Regional and Central Health Departments, Provincial Health Office, the Provincial DSWD, and local and international organizations participating in the nutrition cluster. A five-day training for all survey team members was held in Cotabato City. The objective of the training was to ensure that all enumerators and team leaders understood the assessment tools as well as the assessment background, objectives, conceptual frameworks for food security, livelihoods and malnutrition and anthropometric theory and practice.

The entire questionnaire was thoroughly discussed so that all enumerators both understood the questions and how to administer them in an unbiased manner. The training included a standardization test for anthropometric measurements and two days of on-site field testing and training. The teams' feedback from the field testing was integrated into the final version of the questionnaire. As the assessment was carried out in a region in which multiple languages and dialects are spoken, significant time was dedicated during the training to discuss the nuances of each question and how they should be asked appropriately in the local languages. Finally, team leaders attended an additional day of training to discuss their numerous roles and accountabilities.

Assessment Tools

Household survey
A standard questionnaire covering demographic information, crop and animal productions, income and food sources, food consumption and expenditures, coping strategies and assistance received was developed utilizing the agency's Emergency Food Security Assessment tools. The nutritional status of all children ages 6 months to 5 years old children was also assessed by measuring the height and weight of all eligible children in selected households. The mother of each child under 5 years of age was interviewed regarding a number of issues related to the underlying causes of malnutrition. The questions concerned issues of child health, measles vaccination, de-worming and vitamin A supplementation child feeding practices and hand washing behaviors. The questions on food security were asked to the head of the household while the questions on the child's health and food consumption were asked to the mother or child care-taker if he/she was not the household head. Households were informed of the assessment purpose and content and consent was sought prior to administering the questionnaire. For the purposes of the survey, a household was defined as a group of people who consistently share food and resources for meals together (ie. 'eat from the same pot'). The Household Nutrition and Food Security Questionnaire can be found in annex of this report. A total of 580 household questionnaires were obtained, including valid anthropometric and health data on 717 children 6-months to 5 years of age.

Key Informants interviews
In each evacuation centre or barangay, a short questionnaire was administered to the local leaders to enquire about the situation in which the IDPs were living and the extent to which community resources were impacted by the presence of the IDPs. The comparison was sought by asking leaders whether they thought key resources and services (shelter, food, cooking fuel, water, land, health facilities, toilet facilities and education facilities) were adequate "before" and "during" the time IDPs settled in the area.. A total of 36 key-informant forms were completed, one for each cluster.

Home Based Questionnaire
The survey also administered questionnaires to non-IDPs households which hosted IDPs. The questionnaire was administered in selected clusters in which IDPs were "home-bases" and was intended to assess the impact of the IDP presence on their hosts. There had been speculations that IDP presence would impact negatively on host resources because IDPs were supported by relatives or friends hosting them. This impact would expect to be greater in absence of any humanitarian assistance to the IDPs living among host communities. The questionnaire sought to establish household profiles, the duration of hosting IDPs and their relationship with these IDPs. It also sought to establish the extent of resource sharing and whether or not these resources were adequate in meeting both their needs and those of the IDPs. Overall, 69 host household questionnaires were administered in 16 municipalities across the four provinces participated.

Anthropometric Methodology
Enumerators collected the measurements of weight, height/length, and assessed the presence of bipedal oedema. Children were weighed to the nearest 100 grams with a UNICEF Electronic Mother-Child Scale. Height was measured using the Shorr height/length board and by following standard procedures. For children younger than 2 years of age or less than 85 centimeters (cm), length was measured to the nearest millimeter in the recumbent position. Children 85 to 110 cm were measured in a standing position. The presence of nutritional oedema was assessed by applying thumb pressure to the feet for approximately 3 seconds and then examining for the sustained presence of a shallow print or pit. Numerical MUAC measurements were not recorded. Mid Upper Arm Circumference was recorded using the current color-coded MUAC cut-offs for risk of malnutrition

Prior to the assessment, enumerators foresaw potential problems in gathering precise ages as many mothers were reported to not know their children's birthday. To estimate age in months a calendar of events was developed which included important religious, political and environmental events for the various Muslim and Christian communities in different localities over the last 5 years. Special attention was given to establishing events necessary for estimating age around the cut-offs of 6 months to 5 years of age.

In each randomly selected household all children 6-59 months of age were measured, including all children in the last household even if the target of 20 children was achieved. Thus, more than 20 children were often measured in any given cluster. If a child was absent from the household at the time of the interview, enumerators were instructed to return to the household later in the day to collect the measurements. In nine (9) cases, children could not be located, thus measurements were not taken and they were excluded from the analysis. Other data was excluded due to issues concerning age (3), lack of data on the sex of the child (8), and the feasibility of certain measurements (3). After these exclusions, a total 717 children provided valid anthropometric and health data for analysis.

Data Entry and Analysis
After attending the five- day enumerator training, the four data encoders from DoH ARMM and Bangsamoro Development Agency were trained by WFP regional staff on the data entry software. The regional officer spent ten days supervising the data entry and training the encoders on procedures for checking the data daily for mistakes and inconsistencies related to missing entries and feasibility/outliers. Potentially problematic entries were then double checked by the encoders by referring to the hard copy questionnaires. Data entry took place simultaneous with the data collection process, with data being entered the day after it was collected in the field. This allowed for the data to be immediately available for cleaning analysis the day after data collection was finished in the field. Data was cleaned by regional staff in Bangkok. Analysis of the anthropometric data was done using ENA Smart software and reported in reference to both the 1977 NCHS reference and new WHO growth standards. The NCHS reference was preferred for purposes of comparison with baseline data and for interpreting and analyzing the results in the emergency context given the widely accepted thresholds for analysis based on the NCHS reference and lack thereof for the 2006 WHO growth standards. These results were then fed back into the integrated database and analyzed along with all other variables - including those on child health, food security, consumption, and expenditure using SPSS.

Limitations and Potential Bias

Conducting an assessment in a displacement context such as the one in Mindanao presents a number of constraints with regards to identifying, locating and accessing the population of concern. A number of limitations and complications arose during the course of the assessment which should be taken into consideration both in interpreting the current findings and especially in undertaking similar assessments in the Mindanao IDP context in the future.

- Prior to selecting the clusters, the assessment team excluded a number of sites which were deemed either too far to visit in one day, too insecure for the assessment team to work in, or were inaccessible due to flooding or other logistical constraints. Due to the security situation, permissible times for travel were restricted, and a few sites over two and a half hours travel-time from base (Cotabato City for Teams 1 and 2 and Marawi for Team 3) were excluded. The travel time exclusion concerned a small number of areas primarily in Sultan Kudarat. Most other excluded sites were located in Lanao Del Sur and suffered from insecurity due to clan/family feuds and criminal activity. The exclusions due to security in Lanao del Sur were significant in number and this constraint is typical of the assessments conducted in this context in the past. Overall excluded barangays were minimal when considering the total population size but do lend potential bias as those communities which are most isolated and most insecure could not be included in the assessment.

- The context of displacement is constantly changing and IDPs are a highly mobile population. Though inevitable, movements of IDP households are not easily monitored and it is often difficult to pinpoint exact population numbers or location of some families at any one time. Some IDPs are able to return to their land during the day to care for their livelihoods and return to the town centres to sleep at night. Others try to return home, only to face shelling one or two days later and thus return to the evacuation sites in fear. Still others reportedly maintain multiple locations so as not to burden one set of relatives. Additionally, during the assessment new displacement was seen in a number of barangays. Because little information was known as to the new arrivals location, numbers or names, these arrivals were not included in the survey. This number is very small with regards to the total population under consideration, however it is nevertheless important to recognize the challenge and limitations ongoing movements and displacements pose in such an assessment. These represent a number of causes for movement in, out and between evacuation centres and homes during the assessment and the complexity this poses to random sampling procedures.

- During the assessment, the situation was delicate as the government was in the process of discussing the closure of the majority of evacuation centres and encouraging the IDPs to return to their place of origin, given adequate security was in place. While visiting evacuation centres prior to the assessment, the team received anecdotal reports from many families expressing their fear of returning while the military elements were still in their barangay or its vicinity as this lends the possibility of further confrontations between AFP and the MILF forces. Families thus gave mixed responses as to whether they would follow the orders and return home or whether they would leave to another evacuation centre or seek out private accommodation until they felt it was safe to return.

- The assessment also uncovered systematic problems with the official validation lists. In many clusters nobody, including the centre leader could identify or had heard of a number of selected households. In two cases, selected clusters which were still on the validation lists were empty or nearly empty upon arrival. Thus, while in IDPs in Mindanao are, for the most part, more than willing to identify as such in order to be registered and obtain assistance, it is at times difficult to determine exactly who is and who is not displaced and which lists are 'valid.'

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