Emergency Food Security Assessment Handbook

second edition

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World Food Programme
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vam wfp food security analysis

**Emergency Food Security Assessment Handbook - second edition**


**United Nations World Food Programme**
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# Foreword

For decades, WFP has been on the frontline of the fight against hunger. But today, the global context in which WFP operates is rapidly changing. New challenges are emerging. High commodity prices, the increasing number of natural disasters, and the rapid urbanization of populations are leading to higher levels of food insecurity, but also to more complex and multi-faceted emergencies.

To address the changing nature of food insecurity and its nutritional outcomes, WFP has shifted from a food aid to a food assistance agency and developed a more diverse and innovative set of tools.

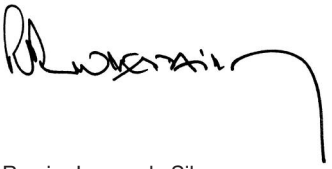
Food Security Assessments are one of the fundamental tools of the organization. They provide the analysis to make well informed decisions on the most appropriate type and scale of interventions. They determine who are the food insecure people, how many they are, where they live and why they are food insecure. They also make recommendations on what needs to be done to assist them.

WFP is committed to excellence in the field of food security analysis. In the last three years, through an ambitious project to strengthen WFP's needs assessment practice, needs assessments have become the backbone of WFP's operations. Every year WFP conducts more than 90 assessments in partnership with governments, United Nations Agencies, national and international non-governmental organizations (NGOs), and donors. WFP's assessments inform not only WFP but also the wider humanitarian community.

This commitment to excellence is reflected in the Emergency Food Security Assessment (EFSA) Handbook. This second edition has benefited from all the latest methodological advances made by WFP under the guidance of leading food security experts from academia, NGOs and United Nations organizations, and building on decades of field practice and lessons learned from major assessments ranging from the yearly in-depth assessments in Darfur to the rapid assessments conducted after the floods in West Africa in 2007. It has been made possible thanks to the generous support from the European Commission's Humanitarian Aid department (ECHO).

This edition contains information on the latest progress made to understand how markets impact on household food security, to identify chronic and transitory food insecurity, and measure food insecurity. It integrates food security and nutrition analysis and explores the population's vulnerability and risks to livelihoods. It also facilitates the analysis of response options, looking at food and non-food options.

The EFSA Handbook provides WFP staff and partners with the most up-to-date and advanced guidance on how to conduct accurate, timely and transparent food security assessments. This will enable us to address the new hunger challenges of this century.



Ramiro Lopes da Silva
Deputy Chief Operating Officer and Director of Operations

# Acknowledgements

The Emergency Food Security Assessment (EFSA) Handbook was made possible thanks to the generous support of the European Commission's Humanitarian Aid department (ECHO). The German Government supported a preparatory technical meeting.

The Handbook was written under the umbrella of the Strengthening Emergency Needs Assessment Implementation Plan (SENAIP). The purpose of the Plan (2004-2007) was to reinforce WFP's capacity to assess humanitarian needs in the food sector during emergencies and their aftermath through accurate and impartial needs assessments. The Plan and complementary projects were funded from internal and external sources, including ECHO, the Canadian International Development Agency (CIDA), the Citigroup Foundation, the Department for International Development, United Kingdom (DFID), the French, Danish, and German Governments.

This Handbook benefited from several peer review and consultation mechanisms. Valuable comments and feedback were received from WFP staff members and partners consulted through an email-based discussion involving more than 150 people including the Food and Agriculture Organization of the United Nations (FAO), World Vision International, *Action contre la Faim (ACF)*, the Famine Early Warning Systems Network (FEWS NET), the Office for the Coordination of Humanitarian Affairs (OCHA), the United Nations Development Programme (UNDP), *Système d'Information sur les Marchés Agricoles (SIMA)* Niger, Catholic Relief Services (CRS) Niger, *Direction Régionale de Développement Agricole (DRDA)* Niger, *Service des statistiques de l'élevage (SIM BETAIL)* Niger, CARE Niger, *Comité Permanent inter-Etats de lutte contre la sécheresse dans le Sahel (CILSS), Médecins d'Afrique*, Agro-Action Allemande (AAA) DRC, *El Centro Latinoamericano de Medicina de desastres (CLAMED)*, *Oficina Nacional de Estadísticas de Cuba (ONE), Instituto de Investigaciones de Riego y Drenaje, (IIRD)* Cuba, *Instituto de Planificación Fisica (IPF)* Cuba, Adventist Development and Relief Agency (ADRA), the Nepal Red Cross Society (NRCS) and HelpAge International.

The SENAC[1] Advisory group of experts was also invited to be part of a working group established for the preparation of the Handbook. Valuable advice was received from the Institute of Development Studies (University of Sussex), the Michigan State University, the International Food Policy Research Institute (IFPRI), Tulane University, the European Commission Joint Research Centre, and the Feinstein International Centre (Tufts University).

The working group also included a number of WFP staff members, including the Regional Assessment Officers, VAM (vulnerability analysis and mapping) and programme staff from several regional bureaux and country offices, and staff from Headquarters – especially the Food Security Analysis Service, the Policy, Planning and Strategy Division and Service, and the Programme Design and Support Division.

WFP also thanks the VAM officers and Regional Assessment Officers who provided additional inputs and contributed to the consolidation of the Handbook after a final workshop in April 2008.

WFP expresses special thanks to Agnès Dhur and Jeremy Loveless for their substantial contribution to the development of the Handbook and to the consulting group, Technical Assistance to Non-Governmental Organizations (TANGO), for consolidating the final draft.

All these contributions are gratefully acknowledged although responsibility for the present text, including errors, remains with WFP.

1. Strengthening Emergency Needs Assessments Capacity (SENAC), which is the main component of SENAIP.

# Contents

# Acronyms

| | |
|---|---|
| **ACF** | *Action contre la Faim* (Action Against Hunger) |
| **AIDS** | acquired immunodeficiency syndrome |
| **BMI** | body mass index |
| **CAP** | Consolidated Appeal Process |
| **CARE** | Cooperative for Assistance and Relief Everywhere |
| **CDC** | United States Centers for Disease Control and Prevention |
| **CFSAM** | crop and food security assessment mission |
| **CFSVA** | comprehensive food security and vulnerability analysis |
| **CFW** | cash for work |
| **CIDA** | Canadian International Development Agency |
| **CMR** | child mortality rate |
| **CSI** | coping strategy index |
| **DFID** | Department for Intenational Development (United Kingdom) |
| **ECHO** | European Commission's Humanitarian Aid department |
| **EFSA** | emergency food security assessment |
| **EMOP** | emergency operation |
| **FAO** | Food and Agriculture Organization of the United Nations |
| **FCS** | food consumption score |
| **FEWS NET** | Famine Early Warning Systems Network |
| **FFR** | food for recovery |
| **FFW** | food for work |
| **GAM** | global acute malnutrition |
| **GDP** | gross domestic product |
| **GNI** | gross national income |
| **H/A** | height-for-age |
| **HC** | Humanitarian Coordinator |
| **HH** | household |
| **HIV** | human immunodeficiency virus |
| **IASC** | Inter Agency Standing Committee |
| **ICRC** | International Committee of the Red Cross |
| **IDP** | internally displaced person |

| | |
|---|---|
| **IFPRI** | International Food Policy Research Institute |
| **IFRC** | International Federation of Red Cross and Red Crescent Societies |
| **IOM** | International Organization for Migration |
| **IPC** | Integrated Food Security Phase Classification |
| **IRA** | Immediate Response Account |
| **JAM** | joint assessment mission |
| **MUAC** | mid-upper arm circumference |
| **NGO** | non-governmental organization |
| **OCHA** | Office for the Coordination of Humanitarian Affairs |
| **ODI** | Overseas Development Institute (United Kingdom) |
| **PCNA** | post-conflict needs assessment |
| **PDA** | personal digital assistant |
| **PPS** | probability proportional to size |
| **PRRO** | protracted relief and recovery operation |
| **QMC** | quality monitoring checklist |
| **SENAC** | Strenghthening Emergency Needs Assessment Capacity |
| **SENAIP** | Strenghthening Emergency Needs Assessment Implementation Plan |
| **SWOT** | strengths, weaknesses, opportunities and threats analysis |
| **U5MR** | under-5 mortality rate |
| **UNCT** | United Nations country team |
| **UNDAC** | United Nations Disaster Assessment and Coordination Team |
| **UNDP** | United Nations Development Programme |
| **UNHCR** | Office of the United Nations High Commissioner for Refugees |
| **UNICEF** | United Nations Children's Fund |
| **USAID** | United States Agency for International Development |
| **VAM** | vulnerability analysis and mapping |
| **W/A** | weight-for-age |
| **WFP** | World Food Programme |
| **W/H** | weight-for-height |
| **WHO** | World Health Organization |

# Introduction

This Handbook is intended for use in emergency situations or protracted crises, whether due to sudden natural disaster, drought, disease, economic collapse or conflict, and to address the needs of both resident and displaced persons.

The Handbook is intended for WFP VAM and food security analysts but it will also be useful for programme staff as well as for the governmental, NGO and United Nations partners with whom WFP collaborates in emergency food security assessments (EFSAs).

## Background

Since 2003, through the support of the European Commission's Humanitarian Aid department (ECHO), WFP has made particular efforts to improve its capacity for EFSA. In the first edition of the EFSA Handbook, WFP sought to catalogue the different types of assessment approaches and methodologies undertaken in emergencies and provide normative guidance to staff on conducting food security assessments in the field.

This second edition is a continuation of a process through which WFP intends to improve its capacity to accurately identify and measure food insecurity, as well as formulate appropriate responses. The second edition of the EFSA Handbook moves beyond describing the various approaches to measuring food insecurity among households and populations affected by natural and man-made emergencies. It complements the first edition by providing guidance for collecting and analysing both rapid and in-depth emergency assessment data and for formulating recommendations for effective programming response.

This second edition represents WFP's corporate approach to assessing food insecurity at the household and community levels and should be used as a companion to the first edition of the EFSA Handbook. It will be useful to both WFP and partner staff who have a firm grasp of the concepts introduced in the first edition and their practical application. Given the five years and continued technical

development that has occurred between the two editions, some terms and tools have been refined. In cases where differences exist, the most recent guidance should be employed.

## Complementary guidelines

The EFSA Handbook (second edition) is complemented by the Comprehensive Food Security and Vulnerability Assessment (CFSVA) Guidelines. A CFSVA provides an in-depth picture of the food security situation and the vulnerability of households in a given country during "normal times" and serves as such as the foundation for WFP programming at the country level. The Conceptual Food and Nutrition Security Framework for EFSA and CFSVA is identical and the analytical approach for the different types of EFSA and the CFSVA is consistent: effort has been made to harmonize sampling approaches, define indicators and follow a similar logic of analysis. An in-depth EFSA uses a very similar approach to the CFSVA to analyse food security in a crisis situation. The CFSVA guidelines will therefore assist with the conduct of in-depth EFSA. Moreover, any type of EFSA can draw on the data of the information base of a previously conducted CFSVA in the same country through understanding the deeper causes of chronic food insecurity and vulnerability and comparing the standardized crisis indicators with pre-crisis levels.

The upcoming UNHCR / WFP Joint Assessment Missions (JAM) guidelines, which guide the assessment of the situation of refugees, returnees and internally displaced persons are consistent with the new EFSA guidance. Specific guidelines exist for joint FAO / WFP Crop and Food Security Assessment Missions (CFSAMs) and these are also consistent with the EFSA Handbook.

## Structure of the Handbook

The Handbook comprises five parts.

Part I presents the purpose and objectives of an EFSA, the Conceptual Framework, key food security concepts and the different types of EFSA.

Part II focuses on information requirements and indicators. More precisely it covers the analysis plan, explaining its purpose and components; the information needs; the requirements for the contextual information; the indicators and data necessary to estimate food insecurity and consequences to lives and livelihoods; and what sources of data to use.

Part III focuses on planning an assessment and collecting primary data. It presents the planning steps to undertake prior to fieldwork, logistics considerations for

fieldwork, and approaches and tools for primary data collection, with particular emphasis on the importance of good-quality primary data.

Part IV explains how to conduct a situation analysis, forecast and response analysis and then how to formulate recommendations for interventions.

Part V outlines the EFSA report structure, explains the EFSA quality monitoring system that builds on the EFSA; and provides guidelines for communicating EFSA conclusions and recommendations to decision-makers.

The Annexes provide supplementary tools such as standard questionnaires, templates and additional guidance and reference documents for food security analysis and response.

It should be noted that in January 2008 WFP's Emergency Needs Assessment Service (ODAN) and the Vulnerability Analysis and Mapping Branch (VAM) were merged into the Food Security Analysis Service (OMXF). The acronym VAM is still commonly used to refer to this service.

# Part I
# Conceptual Framework, objectives and types of EFSAs

## Contents of Part I

chapter 1

# Introduction

The purpose of an emergency food security assessment (EFSA) is to assess the impact of shock on the food security of households and communities within the affected area. An emergency is a situation that causes widespread human, material, economic or environmental damage, threatening human lives and livelihoods and exceeding the coping capacities of the affected communities and/or government.[2]

An EFSA combines primary and secondary information to inform the decision-making process during rapid- and slow-onset emergencies. This Handbook provides guidance on analysing the food security and nutrition situation within a framework, and examines the linkages between them. Key outputs of an EFSA include:

- description of the current food and nutrition security situation;
- analysis of the ways in which the affected population, the government and other stakeholders are responding to the emergency;
- forecast of the future evolution of food and nutrition security;
- identification of response options, and recommendations for intervention or non-intervention.

An EFSA may be conducted as a rapid assessment or an in-depth assessment. A sequential EFSA is a series of rapid assessments, or a rapid assessment followed by in-depth assessments.

Part I of this Handbook provides an overview of the objectives and conceptual basis of an EFSA. It covers:

- the objectives of an EFSA and the questions that an EFSA should answer;
- the concepts that underlie EFSA analysis, and the ways in which these are combined within the Food and Nutrition Security Conceptual Framework.

Each section of the Handbook includes references to detailed coverage provided in other sections and other documents, including Technical Guidance Sheets.

2. The WFP corporate definition of emergencies, adopted in February 2005, is as follows: "For purposes of WFP emergency projects, emergencies are defined as urgent situations in which there is clear evidence that an event or series of events has occurred which causes human suffering or imminently threatens human lives or livelihoods, and which the government concerned has not the means to remedy; and it is a demonstrably abnormal event or series of events which produces dislocation in the life of a community on an exceptional scale." WFP/EB.1/2005/4-A

chapter 2

# Key questions that an EFSA should answer

Although EFSAs differ according to the context and nature of the emergency concerned, each should answer a series of core questions. These focus on measuring the impact of a shock in terms of the potential change in food security status among affected households.

## Does the shock have an impact on food security?

- How does the crisis situation compare with pre-crisis? Is the population food-insecure?

## Has the level of malnutrition among the affected population been exacerbated by the shock?[3]

- Is the population likely to remain or become food-insecure or malnourished in the future?

## How severe is the problem?

- How severe is food insecurity and/or malnutrition?

## How do people cope?

- Are the affected people able to cope with the problems on their own, without becoming more food-insecure and malnourished?

## Who? How many? Where?

- Which population groups are food-insecure and/or malnourished now? Which groups may become so in the future?
- How many people are affected now? How many may be affected in the future?
- Where are these people located?

3. In most EFSAs, the primary concern is undernutrition, i.e. the form of malnutrition associated with poor growth, loss of weight and/or vitamin and mineral deficiencies. Overnutrition is another form of malnutrition, which is increasing in many contexts and can also affect food security, but it is rarely a primary concern in an emergency.

### Why?

- What are the causes of present and future food insecurity and malnutrition?

### What is needed?

- Can the affected people cope with and recover unaided? Are they already receiving assistance?
- Is additional assistance needed? If so, what type? For whom? When? Where? How much? For how long?
- Can the government and national organizations provide this assistance or is international assistance required?
- What is the most appropriate response?

Within this outline, a more detailed set of questions is developed for each assessment (see **Part III, Chapter 4**), according to the nature of the emergency, the type of EFSA and the time and resources available.

chapter 3

# Conceptual framework of an EFSA

An EFSA may be undertaken in response to a rapid- or a slow-onset emergency. In either case, **food and nutrition security** is analysed to determine the nature of the risks faced by individuals and households.

This section explains three core concepts – livelihoods, food security and nutrition – and examines these within the Food and Nutrition Security Conceptual Framework presented in **Section 3.4.**

## 3.1 Livelihoods[4]

### 3.1.1 Livelihood components

**Livelihoods** are defined in the Sphere Standards as: "Livelihoods comprise the capabilities, assets (including both material and social resources) and activities required for a means of living linked to survival and future well-being." See: "Humanitarian Charter and Minimum Standards in Disaster Response", The Sphere Project, Geneva, 2004.

An EFSA examines the **livelihoods** of households and individuals, and the ways in which these withstand problems or shocks. Analysis of livelihood security begins with examination of household **assets** and **livelihood strategies**.

**Box 1.1: Assets and strategies**

An **asset** can be defined as "anything that is considered valuable or useful, such as a skill, a quality, a person, etc."[5] In the Sustainable Livelihoods Framework, assets are defined under six categories:

- human: health and nutrition status, physical capacity, skills, level of education, etc.;
- social: household, gender, kinship and other networks, community groups, values and attitudes, etc.;
- financial: income, credit and loans, savings, liquid assets, etc.;

4. The description of livelihoods presented in this section is based on the Sustainable Livelihoods Approach (SLA). See: www.livelihoods.org/info/info_guidancesheets.html for more details.

5. Chambers Compact Dictionary, Chambers Harrap Publishers Ltd, Edinburgh, UK, 2005.

- physical: productive assets such as tools and equipment, stores, housing, livestock, infrastructure, etc.;
- natural: land, water, forests, etc.;
- political: power relationships, access to – and influence over – local and higher-level government processes.

**Strategies** are the ways in which households utilize and combine their assets to obtain food, income and other goods and services, in the context in which they live. This is explained in the Sustainable Livelihoods Guidance Sheets as: "People's choice of livelihood strategies, as well as the degree of influence they have over policy, institutions and processes, depends partly upon the nature and mix of the assets they have available to them. Some combination of them is required by people to achieve positive livelihood outcomes – that is, to improve their quality of life significantly on a sustainable basis."

Example 1.1 gives a simplified illustration of how assets might be utilized within a household livelihood strategy.

### Example 1.1: Assets and strategies

A household has the following **asset profile**:
- human: healthy and able-bodied men and women of working age; good knowledge of agriculture.
- social: well connected within the community.
- financial: low cash reserves.
- physical: few productive assets.
- natural: no land.
- political: no local representatives at the national level.

Assets are used to form a **livelihood strategy**:
- The household might use its strong **social** assets to obtain loans with which to rent land and buy tools and agricultural inputs. This enables it to utilize its human assets to cultivate and compensate for the low levels of financial and natural assets.

The assets to which a household has access and the strategies that it can employ are affected by the **context**, as follows:
- **Policies** may affect access to natural assets, through laws governing land tenure and property rights; the use of economic and physical assets, through trade policy; and the development of human assets, through payment for education and health services.
- **Institutions** include formal services, such as health, education and agricultural extension, and informal or customary institutions, such as those governing participation in the workforce for both men and women, the natural resource management of forests, pastureland and water, and conflict resolution.
- **Processes** are the ways in which actions take place and change occurs. They are affected by power relations and, in turn, affect the range of strategies available to a household. For example, access to influential people enhances livelihood strategies; informal relationships, such as traditions of trust and reciprocal support, are crucial to them.

**Note:** There are overlaps between some types of *assets* and *contexts*. For example, reciprocal support relationships could be categorized as "social assets" or "processes". In such cases, categorization is less important than *understanding* and *including* the issue in the analysis.

### 3.1.2 Resilience, vulnerability and coping

When a shock occurs, households and individuals within a community react in different ways. The extent to which they can withstand shocks without excessive disruption of their livelihoods depends on their *resilience* or *vulnerability*. **Vulnerability** is defined as exposure to risk and the lack of ability to cope with its consequences. **Resilience** refers to a person's or a community's "ability to bounce back or recover after adversity or hard times, and to be capable of building positively on these adversities".[6]

A household or individual with low resilience is considered to be vulnerable (see **Part IV, Chapter 2**). Resilience and vulnerability are determined by:

- the type of **shocks** that people are exposed to, for example, disease, economic problems such as unemployment, adverse climate, or conflict;
- the degree to which households and individuals can recover from shocks without compromising their long-term livelihood security.

When shocks push households beyond the difficulties faced in normal times, households and individuals employ **coping strategies**. Some of these may damage lives and livelihoods, thereby reducing resilience and increasing vulnerability.

**In general, the more assets a household has and the more varied the strategies available to it, the more resilient that household will be**. However, households with many physical, financial or natural assets may be targeted during conflict or civil unrest. In these cases, a strong asset profile increases vulnerability.

## 3.2 Food security

At the World Food Summit in 1996, **food security** was defined as: "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs, and food preferences for an active and healthy life."

In an EFSA, the analysis of food security is based on three pillars: (i) **food availability**; (ii) **food access**; (iii) and **food utilization**. Indicators for analysis of the three pillars are provided in Part II.

6. Mission Australia Research and Social Policy, 2005.

### 3.2.1 Food availability

Food availability is the **physical presence of food** in the area of concern through all forms of domestic production, commercial imports and food aid. Food availability might be aggregated at the regional, national, district or community level. In an EFSA, food availability is usually analysed at the district and community levels; national and regional food availability may be considered when developing future scenarios and discussing response options. Food availability is determined by:

- *production*: food produced in the area;
- *trade*: food brought into the area through market mechanisms;
- *stocks*: food held by traders and in government reserves;
- *transfers*: food supplied by the government and/or aid agencies.

### 3.2.2 Food access

Food access concerns a **household's** ability to **acquire** adequate amounts of food, through one or a combination of own home production and stocks, purchases, barter, gifts, borrowing and food aid. The following are some examples:

- own production – crops, livestock, etc.;
- hunting, fishing and gathering of wild foods;
- purchase at markets, shops, etc.;
- barter – exchange of items for food;
- gifts from friends/relatives, community, government, aid agencies, etc.

Food may be *available* but not *accessible* to certain households if they cannot acquire a sufficient quantity or diversity of food through these mechanisms.

### 3.2.3 Food utilization

Food utilization refers to **households'** use of the food to which they have access, and **individuals'** ability to absorb and metabolize the nutrients – the conversion efficiency of the body. Food utilization includes:

- the ways in which food is stored, processed and prepared, including the water and cooking fuel used, and hygiene conditions;
- feeding practices, particularly for individuals with special nutrition needs, such as babies, young children, the elderly, sick people, and pregnant or lactating women;
- the sharing of food within the household, and the extent to which this corresponds to individuals' nutrition needs - growth, pregnancy, lactation, etc.;
- the health status of each member of the household.

Food may be *available* and *accessible* but certain household members may not benefit fully if they do not receive an adequate share of the food in terms of quantity and diversity, or if their bodies are unable to absorb food because of poor food preparation or sickness.

## 3.3 Nutrition security

Assessing the nutrition situation is an integral part of an EFSA.[7] In addition to identifying the obvious health risks and problems affecting malnourished people, information on nutrition status provides objective and comparable indications of the extent of risks to lives and livelihoods. In particular:

- **acute malnutrition** is a clear sign that lives are in danger;
- **chronic malnutrition** indicates that there are long-standing problems in terms of food, health or care, generally related to poor livelihoods or deterioration of livelihoods.

The causes of malnutrition are summarized in the Sphere Standards as: "Food insecurity is one of three underlying causes of malnutrition [the others being health and care practices], and therefore wherever there is food insecurity there is a risk of malnutrition, including micronutrient deficiencies. Consideration of the impact of food insecurity on the nutrition situation is an essential part of food security assessment. However, it should not be assumed that food insecurity is the sole cause of malnutrition, without considering possible health and care causal factors."

### 3.3.1 Food security

Food security is defined in **Section 3.2**.

### 3.3.2 Health status and the public health environment

In relation to nutrition status outcomes:

- the **health status** refers to the body's ability to absorb and use the nutrients that are consumed; sickness, such as diarrhoea, can cause food to pass through the body without being absorbed;
- the **public health environment** refers to the conditions in which people live and the conduciveness or otherwise of these conditions to human health; water, sanitation, waste disposal systems and type of housing are key determinants of the public health environment.

### 3.3.3 Care practices

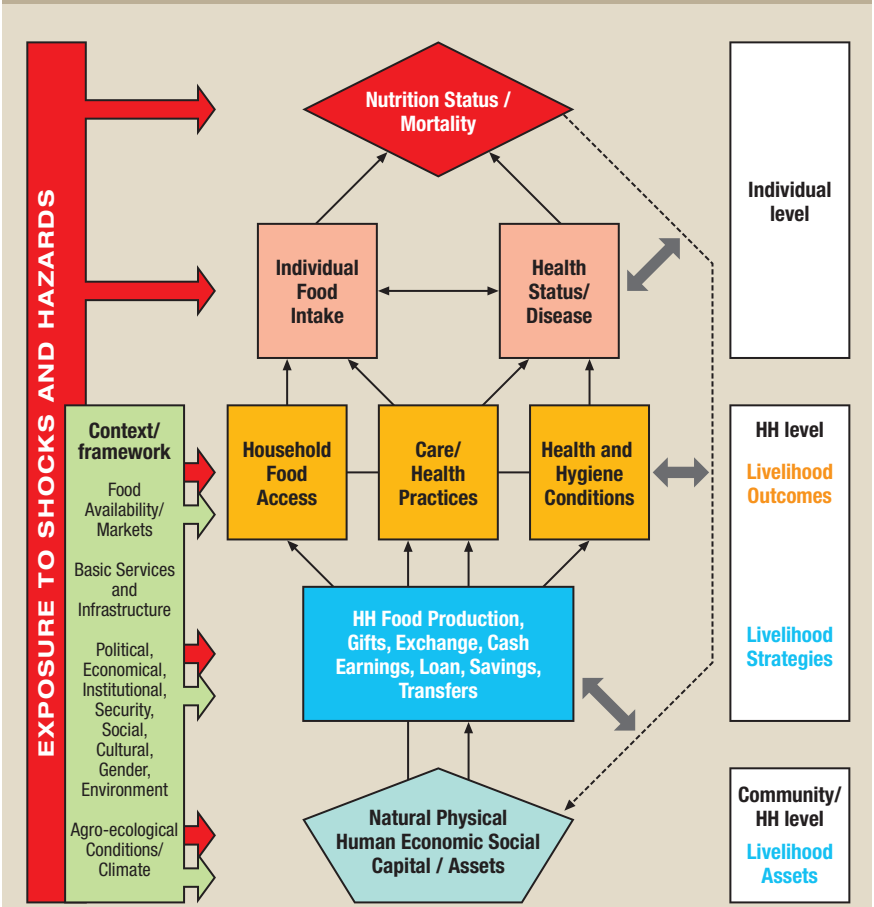
These are the ways in which dependent members of a household are looked after and fed. Among other factors, they include feeding practices for babies and young children, particularly breastfeeding and complementary feeding; food distribution priorities within the household, for example, children or adults first; and practices for the care of sick children and adults and the elderly. If care practices are inadequate, individual malnutrition can exist in households with good food access and a healthy environment.

7. This does not necessarily mean that an EFSA must always carry out direct measurement of the nutrition status, such as through collecting anthropometric data.

## 3.4 The Food and Nutrition Security Conceptual Framework

The EFSA analysis is based on an understanding of food security and vulnerability. The Food and Nutrition Security Conceptual Framework informs not only the selection of indicators for analysis and use in geographical targeting, but also the design of field assessment instruments and the organization of standardized reporting formats. The household food security conceptual framework adopted by EFSAs considers food availability, food access and food utilization as core determinants of food security, and links these to households' asset endowments, livelihood strategies, and political, social, institutional and economic environment.

**Figure 1.1: The Food and Nutrition Security Conceptual Framework**



During an EFSA, the conceptual framework serves two purposes by providing:

- a basis for developing initial hypotheses on the emergency, its causes and effects;
- a way of visualizing the relationships among factors that affect food and nutrition security, which is helpful during data collection and analysis.

The food security status of any household or individual is typically determined by the interaction of a broad range of agro-environmental, socio-economic and biological factors. As with the concepts of health or social welfare, there is no single, direct measure of food security. However, the complexity of the food security problem can be simplified by focusing on three distinct but interrelated dimensions: aggregate food availability, household food access, and individual food utilization.

Vulnerability is a forward-looking concept for assessing community and household exposure and sensitivity to future shocks. Ultimately, the vulnerability of a household or community depends on its ability to cope with exposure to the risks associated with shocks such as drought, flood, crop blight or infestation, economic fluctuation and conflict. The ability to manage these risks is determined largely by the characteristics of a household or community, particularly its asset base and the livelihood and food security strategies it pursues.

The framework shows that exposure to risk is determined by the frequency and severity of natural and human-induced hazards, and by their socio-economic and geographical scope. The determinants of coping capacity include the levels of a household's natural, physical, economic, human, social and political assets, the levels of its production, income and consumption, and its ability to diversify its income sources and consumption to mitigate the effects of the risks it may face at any moment.

Coping behaviour often involves activities such as the sale of land or other productive assets, the cutting of trees for sale as fuelwood or, in extreme cases, the sale of girls into prostitution. These practices can undermine not only the long-term productive potential of vulnerable households, but also important social institutions and relationships. The extent of reliance on destructive practices is an indicator of vulnerability levels during a crisis.

An understanding of *how* households cope is an important aspect of analysis, but an understanding of *how well* they cope, or of their resilience, is even more important. How well the local economy can absorb the additional labour or products – such as livestock or fuelwood – that come on the market as the result of coping behaviour during a disaster, and the stability of wages and prices for these products are critical factors in understanding vulnerability.

Food security analysis is a static view of food access and household constraints

to food access, from either a short- or a long-term perspective. In contrast, vulnerability analysis views food access from a more dynamic, forward-looking perspective, because it includes the element of risk that households face in their day-to-day decision-making, and their capacity to respond effectively over time.

There is a significant overlap between households that are currently food-insecure and those who are at risk to the severe fluctuations in food access that threaten human well-being. Although all households may be considered vulnerable, from an operational perspective the primary emphasis of vulnerability analysis should always be on those households that are nearly or already food-insecure.

Early identification of problems clearly reduces the likelihood of malnutrition and excess mortality. Prompt action at the lower levels of the Conceptual Framework is therefore highly desirable. An EFSA should be undertaken as soon as potential problems are identified (see **Part III, Section 2.1**).

Two simplified ways in which the Conceptual Framework can guide EFSA analysis are given in Example 1.2.

**Example 1.2: The EFSA analytical approach**

1. Poor **financial assets** lead a household to adopt damaging **livelihood strategies**, whereby all employable household members seek paid work. The mother is forced to leave her baby with the older children, who feed the baby irregularly using powdered milk mixed with contaminated water. These poor **care practices** create **food utilization** problems for the baby, who cannot absorb nutrients properly, even when the mother is present. The baby's condition worsens.

2. Weak health service **institutions** mean that when people become sick they are unable to get help. Poor **health** means that **human assets** deteriorate. Household productivity declines, with consequent reductions in **economic assets** and **food access**. Reduced food quantity and diversity exacerbate **health** and **nutrition** problems.

These examples demonstrate some of the ways in which problems in one component - livelihoods, food security or nutrition - can lead to problems in another. In other words, there are causal linkages among the factors. Causal linkages can also be two-way, as shown in Example 1.3.

**Example 1.3: Two-way causal linkages**

**Food insecurity can cause malnutrition**. For example:
- poor access to food may lead to inadequate dietary diversity and insufficient consumption of micronutrients;
- the use of dirty water in cooking may cause diarrhoea, and hence poor absorption of nutrients.

*(cont…)*

*(…cont)*

**Malnutrition can cause food insecurity**. For example:

- malnourishment diminishes a child's learning capacity, which may limit his/her ability to find well-paid work in the future;
- malnourishment in adults can lead to poor productive capacity and frequent sickness; these have severe economic effects on the household, leading to poor food access.

## 3.5 Local adaptation of the Conceptual Framework

All EFSAs should draw on the Food and Nutrition Security Conceptual Framework to answer each of the core questions identified in **Section 2**, but the relative significance of each element of the Framework depends on the region and the country, the nature of the crisis, and the groups that are affected. The Framework and questions must therefore be **adapted** to reflect the context of each EFSA. This is done **in the country**, based on consultations with as wide a spectrum of stakeholders as possible.

The Conceptual Framework *is adapted, prior to primary data collection in the field*, by carrying out the following steps:

- review of secondary information and discussion with key informants (see **Part III, Section 2.5**);
- identification of the factors most likely to affect food security and nutrition within the current context;
- identification of possible linkages among the factors affecting food security and nutrition.

Adapting the Conceptual Framework to the local context allows the formulation of **initial hypotheses** regarding the probable effects of the crisis and the issues to examine in the food and nutrition security assessment. These hypotheses also provide a basis for defining the **information requirements** (see **Part II**), inform the selection of assessment methodology (see **Part III**), and enable development of a preliminary analysis plan (see **Part III, Section 2.4**). Initial hypotheses may be *confirmed, refuted or adapted* during the course of the assessment.

chapter 4

# Objectives of an EFSA

The objectives define the outputs the EFSA is expected to generate. General objectives are similar for all EFSAs, and encompass the core questions outlined in **Chapter 2**. As with the Conceptual Framework, however, these essentially standard objectives can be adapted to local circumstances. Context-specific details that may be added include the names of affected areas and an indication of priority population groups. It may also be necessary to insert additional objectives, depending on the context.

Objectives should be:

- as **specific** as possible: expectations should be clear;
- **realistic**: expectations should be feasible given the available time and resources, and the existing constraints.

Example 1.4 provides a set of general objectives that can be applied to most EFSAs.

**Example 1.4: EFSA objectives**

- Identify the prevalence and severity of food insecurity and malnutrition in the area.
- Estimate how many people are affected.
- Determine where the affected people are located.
- Describe the coping strategies utilized by the various population groups, and identify any that may have a negative impact on lives or livelihoods.
- Describe the food-insecure and/or malnourished population in terms of their individual and socio-economic characteristics – gender, ethnicity, etc. - and livelihoods.
- Establish the reasons why people are food-insecure and/or malnourished by identifying factors that are associated with food insecurity and malnutrition.
- Determine whether food insecurity and nutrition problems are chronic or transitory.
- Develop scenarios for the next three, six and twelve months, and use these to forecast the evolution of the food security and nutrition situation *if no intervention is made*. Consider:
  - the severity of current food insecurity and malnutrition;
  - factors associated with food insecurity and malnutrition;
  - chronic and transitory issues;
  - the likelihood of future shocks;
  - the resilience and vulnerability of individuals and households to future shocks.

*(cont…)*

*(…cont)*

- Evaluate the need or otherwise for external assistance - food or non-food. Consider:
  - ongoing and planned interventions by government or other agencies;
  - the role of food aid and whether or not it is appropriate in this situation;
  - the strengths, weaknesses, opportunities and threats (SWOT) analysis of various response options.
- Make recommendations for interventions, including: What? How much? For whom? When? For how long?

More details on the definition of objectives are given in **Part III, Section 2.2**.

chapter 5

# Types of EFSA and partnerships

There are numerous ways of conducting an EFSA. The most appropriate approach depends on the objectives of the EFSA; the type of emergency; the stage in the emergency – early, late, etc.; the time available; access to the affected area; logistics; security; resources, especially human; and many other factors. The following sections present three types of EFSA. **In real situations, distinctions may not be as clear** as these categories imply, and it is not always possible to assign an EFSA precisely to one of the three types.

## 5.1 Types of EFSA

The three types of EFSA can be broadly summarized as:
- initial assessment;
- rapid assessment;
- in-depth assessment.

The analytical basis is the same for each type of EFSA. The essential differences lie in the time available for the assessment and the constraints to access to the areas concerned. These factors affect the scope of information that can be collected and the depth of the analysis.

**In general**, the three EFSA types can be categorized as follows:
- An initial assessment provides rough information quickly.
- A rapid assessment provides information that is collected and analysed using rigorous procedures, but time and access constraints lead to substantial reliance on assumptions, estimates and approximations.
- An in-depth assessment is based on a rigorous methodology, and collects a more substantial body of quantified information. The approach is time-consuming and generally inappropriate for sudden-onset crises.

Characteristics of each type of EFSA are summarized in the following sections.

### 5.1.1 Initial assessment[8]

An initial assessment is undertaken promptly following: (i) a sudden crisis; (ii) reports of deterioration in a long-term crisis; or (iii) improved physical access to an area experiencing an ongoing crisis.

The primary purpose of an initial assessment is to provide critical information for the formulation of emergency assistance plans, funding appeals and the design of more detailed follow-up assessments.Typically, all aspects of an initial assessment – from fieldwork in affected areas to production of the final report – should be completed within six to ten days. Decisions regarding where to carry out an initial assessment and which agencies to involve will usually be taken at the country level, through discussion between the United Nations country team (UNCT), led by the Humanitarian Coordinator (HC) or the United Nations Resident Representative, and the government concerned. Initial assessments are usually based on secondary data and key informant interviews, but some quick field visits may be undertaken.

The initial assessment addresses the following priority questions:
- Is there a food security and/or nutrition problem that poses an immediate threat to life? If so, what types of intervention should be launched immediately?
- Is there need for a more thorough – rapid – assessment? If so, when should this take place and what should its focus be?

### 5.1.2 Rapid assessment

A rapid assessment is undertaken following an initial assessment in a sudden crisis, or as a component of a reassessment. It provides more details than the initial assessment, and is based on a combination of secondary and primary data. Formal surveys and interviews may be used. Both quantitative and qualitative data may be collected. The rapid assessment typically provides information on:
- the nature and scale of the crisis: effects on food security, nutrition, and livelihoods;
- the affected population: estimated numbers and locations;
- access constraints: logistics, security, etc.;
- recommendations for immediate, short-term and, possibly, longer-term interventions.

A rapid assessment often takes place in a fast-changing context where results are needed quickly for decision-making, hence the need to compromise between information accuracy and timeliness.

### 5.1.3 In-depth assessment

An in-depth assessment is undertaken when more time, access and resources are available. It provides detailed and often statistically representative information that

8. For more information, see: Technical Guidance Sheet No. 6, Initial Emergency Food Security Assessments, WFP Emergency Needs Assessment Service, September 2007.

can be extrapolated to wider population groups and areas. An in-depth assessment may be carried out when:

- the situation seems to be deteriorating slowly, and detailed information is required to inform programming decisions;
- an emergency has stabilized, and detailed analysis is necessary and feasible;
- baseline information needs to be created or updated for monitoring purposes.

In-depth assessments use rigorous methodologies that are adapted to the context and that include random-sampled, large-scale household food security and nutrition surveys (see **Part III**) and household economy baseline surveys[9].

## 5.2 Partnerships and inter-agency assessments

### 5.2.1 Partnerships

As far as possible, assessments should be planned and implemented through partnerships involving multiple stakeholders; for example, WFP working with the national government, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Children's Fund (UNICEF), the Famine Early Warning Systems Network (FEWS NET) and other agencies. Partnerships have the following **advantages**:

- The involvement of numerous stakeholders helps to ensure that many perspectives are taken into account.
- Collaboration in defining assessment objectives and analysing information ensures comprehensive ownership of the assessment conclusions and recommendations.
- The incorporation of different agencies can broaden the skills available to the assessment team.
- Transparency of the process enhances the acceptability of the conclusions. For example, when affected communities are included, they are more likely to understand the basis for recommendations.
- Assessment fatigue among affected communities is reduced, because they are subjected to questioning by one assessment team instead of several separate teams.

Potential **disadvantages** of partnerships include the following:

- It may take a long time to coordinate stakeholders, which is problematic in initial and rapid assessments.
- The incorporation of too many perspectives may compromise the methodology; if too many issues are included, the assessment may lose focus.

9. For more information, see: Comprehensive Food Security and Vulnerability Analysis Guidelines, WFP, January 2009; and Technical Guidance Sheet No. 12, Complementary Methods and Tools for Emergency Food Security Assessment, WFP Emergency Needs Assessment Service, December 2007.

- Particularly in conflicts, the inclusion of certain partners may compromise the neutrality of the assessment team and affect informants' willingness to talk openly.

In most situations, however, the benefits of partnerships outweigh the drawbacks.

When a variety of partner agencies are to be included in the **field assessment team**, two points should be borne in mind:

1. Ensure that each member of the team has something to contribute to primary data collection. The inclusion of individuals for purely political reasons is counter-productive.
2. Do not make the team too large. An overlarge team can be difficult to manage and may pose a security problem and affect relationships with communities and the quality of the information collected. The arrival of a fleet of vehicles in a small village can accentuate the differences between the community and the team, making it impossible to develop dialogue.

### 5.2.2 Inter-agency assessments

Partnerships often take the form of inter-agency assessments, and are organized according to the context and objectives of the assessment. In general, all the key agencies should be involved in planning the assessment, and a range of agency representatives with complementary skills should be included in the assessment team.

WFP regularly participates in several inter-agency assessments in numerous countries. Some of these are listed in Table 1.1.

**Table 1.1: Inter-agency assessments**

| Assessment | Main partners | Context |
|---|---|---|
| Joint assessment mission (JAM) | WFP – UNHCR | Refugee and IDP situations |
| Crop and food security assessment mission (CFSAM) | WFP – FAO | Agricultural areas affected by crisis |
| United Nations Disaster Assessment and Coordination Team (UNDAC) | WFP – governments – other United Nations agencies – NGOs | Large-scale natural disasters |
| Consolidated Appeal Process (CAP) | WFP – OCHA – governments – other United Nations agencies – governments – NGOs | Large-scale natural or human-induced disasters |
| Post-conflict needs assessment (PCNA) | WFP – World Bank – UNDP – other United Nations agencies – governments | Post-conflict recovery and reconstruction |

There are detailed guidelines for some of these partnership assessments, such as JAMs, CFSAMs and CAPs.

# Part II
# Data, indicators and sources of information

## Contents of Part II

chapter 1

# Introduction



The first step in planning an EFSA is to define the objectives, as explained in **Part I**. The next step is to determine what information is required and what will have to be collected to achieve the objectives. This is covered in **Part II**.

An effective EFSA depends on defining information requirements early in the process. This ensures that data collection is focused and that only necessary information is collected and analysed. It minimizes the collection of redundant information that will not be used.

**Part II** covers:

- the **analysis plan**, explaining its purpose and components;
- **information needs**, using the Food and Nutrition Security Conceptual Framework to define broad information needs;
- the **contextual information** that is required to understand the background and causes of the crisis;
- **indicators and data**, introducing key concepts and presenting the indicators used in an EFSA to estimate food insecurity and risks to lives and livelihoods;
- **data sources**, both primary and secondary;
- **choice of data and indicators**, providing detailed guidance on how to choose indicators for a particular assessment.

chapter 2

# The analysis plan

The analysis plan guides many of the decisions made during an EFSA. It is based on key hypotheses to be tested, and provides guidance on what data to collect, how to collect them, and what types of analyses will be required to interpret them. It may also guide which data need to be collected from primary and which from secondary sources. The analysis plan is best developed at the beginning of an assessment, *prior* to designing questionnaires, checklists and other data collection tools; there are three main reasons for this:

- **Efficiency**: It ensures that only *useful* information is collected. Time is not wasted in collection of information that will not help achieve the assessment objectives and will not be used.
- **Thoroughness**: It ensures that *all* the necessary information is collected.
- **Feasibility**: When all the information needs and available resources have been considered, it is possible to decide whether or not the EFSA can be undertaken as planned.

Box 2.1 provides further information about feasibility.

**Box 2.1: Feasibility**

While the analysis plan is being developed, it may become clear that the assessment cannot be carried out as *originally intended*, for reasons that include the following:

- There is insufficient time to collect all the information required.
- Access constraints affect the intended sampling approach.
- Too few personnel are available, or personnel do not have the requisite skills.
- Logistics or budgetary constraints restrict the scope of the assessment.

If analysis of the constraints shows that the original scope of the assessment is unrealistic, the approach will need to be modified. Depending on the context, the following are two of the main ways of doing this:

- The assessment objectives can be changed to reflect practical realities.
- The methodological approach can be modified. For example, random sampling might be replaced by purposive sampling; in extreme cases it may be necessary to rely on secondary sources only.

When designing the analysis plan, each of the EFSA objectives (see **Part I**) is considered with regard to the following questions:

- What information is needed to meet the objective?
- How can this information be collected?
- From what source(s) can the information be collected?

Table 2.1 shows a format that can be used to develop the analysis plan.

**Table 2.1: Format for an analysis plan**

| Information needs | Contextual information | Indicator(s) | Data required | Data source(s) | Analysis type |
|---|---|---|---|---|---|
| **Objective 1:** | | | | | |
| | | Indicator 1.1 | | | |
| | | Indicator 1.2 | | | |
| | | etc. | | | |
| **Objective 2:** | | | | | |
| | | Indicator 2.1 | | | |
| | | Indicator 2.2 | | | |
| | | etc. | | | |
| **Objective 3:** | | | | | |
| | | Indicator 3.1 | | | |
| | | Indicator 3.2 | | | |
| | | etc. | | | |

The components of the analysis plan are defined in Box 2.2, and described in more detail in the following sections.

**Box 2.2: Definition of terms used to develop an EFSA analysis plan**

**Objectives**: The outputs expected from the assessment (see Part I), for example, an estimate of the impact of a conflict on food access.

**Information needs**: The range of information that is needed to answer the questions posed by the objectives. For the objective stated above, the following information requirements might be identified:

- Details of the conflict: What are the causes? Who are the protagonists? Who are the victims, direct and indirect?
- Details of the population: What are the main livelihoods in the area? How do people normally obtain access to food and income?
- Effect of the conflict: What is the likely impact of the conflict on the food access strategies identified?

*(cont…)*

*(…cont)*

**Contextual information**: Details of the processes that led to the current emergency and the reasons why they did so. Factors that help explain the emergency and identify potential responses.

**Indicator**: A specific variable or combination of variables that gives insight into an aspect of the objectives. For example, if a livelihood group is expected to obtain access to food through cash crop sales and market purchases, the following indicators might be defined:
- the area currently planted with selected cash crops, compared with that under normal circumstances;
- the ratios of selling prices of selected cash crops to the costs of staple foods, now and under normal circumstances.

**Data required**: The information that must be collected to satisfy the broad information needs and the indicators. Examples include:
- qualitative information about a conflict, its causes and effects;
- qualitative information about livelihoods, social structure and politics;
- quantitative information about areas of land planted, average yields and market prices of items bought and sold.

**Data sources**: Potential sources of information; others can be added as the assessment progresses. Examples include:
- sources of qualitative data: key informants, such as political analysts, the staff of local non-governmental organizations (NGOs), etc.; focus groups within communities; and household interviews;
- sources of quantitative data: household surveys; key informants, such as agricultural extension workers, farmers and market traders; and focus groups within communities.

**Analysis type**: The type of parametric or non-parametric analyses that can be used to explore and interpret the data, for example:
- non-parametric analyses of primarily qualitative data;
- parametric tests for testing statistical hypotheses, such as analysis of variance and regression.

Data and indicators must be selected carefully for each EFSA. If too much information is collected, time is wasted during the data collection and analysis stages. If too little information is collected, it may be impossible to answer the assessment's key questions.

chapter 3

# Information needs



Information needs are defined as **the data from primary and secondary sources that must be collected and processed in order to satisfy the assessment objectives**. As explained in **Part I**, the overall objectives of an EFSA are to measure the impact of a shock and the potential change this may have on households' food security situation.

**Primary information needs** are identified at the start of the assessment based on what secondary information is available. It is important to gather and review as much *relevant* secondary information as possible. This enhances understanding of the emergency and its consequences, and provides the basis for selecting data to be collected directly during the assessment.

**Analysis of secondary information** influences the choice of what primary information to collect in the following ways:

- When secondary information is recent, accurate and relevant, there may be less need to collect primary information. For example, if a well designed anthropometric survey has recently been undertaken, it is probably not necessary to repeat the exercise during the EFSA.[10]
- Secondary information provides a reference point. For example, if particular food access indicators were used in the past, it may be worthwhile to use the same indicators, so that the status of food security *now* can be compared with that in *the past*.
- There may be inconsistencies or gaps in the secondary information; one of the objectives of the EFSA may be to clarify the situation.

It is also necessary to decide how information may need to be *stratified*, i.e. collected in layers or classes. Stratification, or stratified sampling, involves dividing the population of interest into sub-groups – strata – that share something in common based on criteria related to the assessment objectives. Typical strata include geographical boundaries. Stratification is used when separate food security

10. The use of secondary data usually requires the assessment team to judge the quality of the data, its relevance to the geographic areas and populations covered in the assessment, and its relevance to addressing the information needs of the EFSA.

estimates are desired for each of the sub-groups, at a predefined, minimum level of precision. Stratification can also allow more precise estimates of overall food security for the population of interest. For example, female-headed households may use different coping strategies from male-headed households; gender-based analysis is therefore important.

When pre-crisis data are not available, it is crucial that the EFSA collect information on the food security situation prior to the shock. Table 2.2 gives an example of how this can be done. Similar pre-crisis information can be collected through focus group discussions.

**Table 2.2: Template for collecting pre-shock livelihood information**

| Activities | What were your household's main activities before the shock? (rank up to 3 income activities) | What percentage contribution did each activity make to total household income? | What activities are you able to carry out now, after the shock? | What percentage contribution does each activity make to total household income now? |
|---|---|---|---|---|
| Main | | % | | % |
| Secondary | | % | | % |
| Tertiary | | % | | % |
| **Total** | | 100% | | 100% |

Once the basic parameters of the crisis are understood, the factors that are likely to cause malnutrition and food insecurity are examined in more detail, to fine-tune the data collection requirements. The nature of the emergency and its possible impacts are considered. Tables 2.3 and 2.4 give examples of emergencies and their possible impacts.

**Table 2.3: Sudden-onset crises and their impacts on nutrition status and food security**

| Type of crisis | Impact |
|---|---|
| **Earthquake, flood, tsunami** | • Destruction of infrastructure and equipment; consequent disruption of food production, markets and transportation systems<br>• Mass mortality and injury, leading to reduced participation in food production and distribution<br>• Destruction of medical, water and sanitation systems and injury/death of staff; increased incidence of disease<br>• Destruction of food stocks and other assets<br>• Destruction of housing, leading to population displacement; poor sanitation and shelter, leading to disease and death<br>• Loss of economic infrastructure: workplaces, roads, other infrastructure |
| **Conflict: initiation or sudden escalation** | • All of the issues cited above<br>• Targeted attacks on food production facilities – farms – and distribution systems: aid convoys and commercial trucking operations<br>• Hoarding of food, leading to increased prices<br>• Forced displacement to insecure and unsanitary locations, leading to disease and starvation |

**Table 2.4: Slow-onset crises and their impacts on nutrition status and food security**

| Type of crisis | Impact |
|---|---|
| **Drought** | • Reduced food availability because of poor harvest<br>• Decline in assets such as livestock<br>• Decreased food access |
| **Environmental degradation** | • Reduced soil fertility, loss of topsoil and lowering of water table, leading to poor harvests and reduced food availability |
| **Economic decline** | • Reduced food access because of unemployment and declining terms of trade<br>• Deterioration in the nutrition status of poor people because of deterioration in diet |
| **Long-term conflict** | • Increased mortality<br>• Decline in food availability because agricultural land becomes unworkable and human assets are diverted towards the war<br>• Decline in food access because of rising prices and unemployment<br>• Deterioration of nutrition status because of poor food access, lack of health care, destruction of water/sanitation systems and absence of carers |

As mentioned in **Part I**, knowledge of the context and probable effects of the emergency should enable adaptation of the Food and Nutrition Security Conceptual Framework and allow the EFSA to identify each of the factors directly influencing food security at the individual and household levels, and the linkages among these factors.

Starting at the top of the Conceptual Framework (see **Part I, Section 3.4**), each of the boxes is considered in turn, as explained in Box 2.3.

**Box 2.3: Identification of priority information requirements using the Food and Nutrition Security Conceptual Framework**

The Conceptual Framework is used to identify the main factors that are likely to affect nutrition status and food security. It helps to prioritize the information to be collected in a given context, and to analyse linkages among factors.

The factors are considered from the top of the diagram, starting with the outcomes. If secondary data review indicates problems at the outcome level – e.g. mortality or malnutrition – these must be addressed immediately. If the crisis has not reached the status of mass mortality and/or malnutrition, attention should be given to the next level down: immediate causes.

Starting at the top of the diagram, the process proceeds as follows.

**Outcomes**

- **Mortality and nutrition status**; Is there evidence or suspicion of mass mortality and/or widespread malnutrition? If so, urgent action is required. Information needs focus on the most immediate questions: What are the causes? How many people are affected? Are particular age or sub-groups affected? Where are they?

*(cont…)*

*(…cont)*

**Immediate causes**

- **Individual dietary intake and disease**: These are considered from two perspectives: (i) secondary data – recent health and nutrition surveys, etc.; and (ii) knowledge of the context – is this type of emergency in this particular context likely to result in poor dietary intake and/or disease or a further erosion of the current food security status? If it seems likely that dietary intake problems and/or disease exist, appropriate indicators should be chosen.
- **Food utilization**: It is important to look for information on feeding patterns, care and health practices, sanitation and access to clean water before the crisis, and then estimate the impact of the crisis on these.

**Underlying causes: food security**

An understanding of food consumption, access and utilization within the specific context forms the basis for analysing risks to lives and livelihoods (see **Part IV**).

- **Household-level food consumption**: The basic indicator in most EFSAs is the food consumption score (FCS). Other context-specific indicators can be used. For example, variation from the usual diet might be explored and explained.
- **How households ensure access to food**: This is context-specific and requires a thorough understanding of the local economy. For example, in an urban area where people buy most of their food, indicators may focus on the terms of trade between commodities and wages; the availability of jobs, disaggregated according to job type and population group; and how efficiently the market functions. In a rural or agricultural area, indicators would cover both market/employment issues and agricultural production: quantity of own production consumed and food stocks; quantity sold; and market prices. Coping strategies and their sustainability should also be considered. A common indicator is the coping strategy index (CSI), but this is not always appropriate and other indicators can be used (see **Section 7**).
- **Livelihood assets and strategies**: These provide important insights into people's access to and use of food. For example, details of household food production and cash earnings give an indication of food access; and the quality and availability of education and health services affect the support and advice available for preventing and treating disease.

**Basic causes**

These are issues that are outside the control of individuals and households and that fundamentally influence food access, consumption and utilization. The nature of the emergency and the context must be carefully considered when defining indicators at this level. For example:

- when exploring food availability there is no point in developing long lists of agricultural indicators if agriculture does not play a significant role in the food economy of the area;
- the quality and availability of education services will not have an immediate impact on nutrition and food security after a sudden-onset crisis such as a flood, but should be considered in follow-up assessments and when analysing chronic problems, because education services play a crucial role in recovery from crisis;
- health services are of primary significance during rapid-onset acute nutrition crises, when indicators related to health service provision become essential, such as ratio of qualified medics to population size, and quality and quantity of drugs and medical equipment;
- the political system at the local and national levels affects livelihood strategies and access to assets, so it is important to identify political structures and the ways in which they influence different groups within the society.

**Linkages**
At each level, linkages among the factors are suggested. For example, in an urban area household food access – at the underlying causes level – might be affected by the following factors:
- underlying causes: gifts/transfers, cash earnings/loans, and education level;
- basic causes: markets, education services, and health services.

These linkages are helpful when identifying information requirements. In this example, information about the following issues would be required:
- the market for labour and goods;
- health and education services;
- access to credit.

The process described in Box 2.3 is most effective when implemented with partners such as the staff of humanitarian organizations and government counterparts. This enables knowledge and experience to be shared, and key stakeholders to agree on the initial hypotheses and priorities for data collection (see **Part III**).

Information needs are specified at two levels:
- **Contextual information**: This provides the background to and helps build understanding of the effects of the emergency on nutrition and food security. It is crucial when analysing the causes of food insecurity and malnutrition and developing response options (see **Part IV**).
- **Data and indicators**: These provide the basis for analysing the nutrition and food security status now and in the future (see **Part IV**).

chapter 4

# Contextual information

**Contextual information is a crucial component of the primary data collected in an EFSA**. As shown in **Part IV**, contextual information is essential to the interpretation of mortality, nutrition and food security data and the development of response options.

Ways of collecting contextual information include:
- observation;
- questionnaire-based household surveys and household interviews;
- key informant interviews;
- focus group discussions;
- secondary information review, at the outset and throughout the assessment.

It is best to use as many of these as possible.

Table 2.5 gives examples of contextual information that might be useful. The key issues should be selected with care, as not all will be relevant to every assessment. Additional issues should also be considered, as Table 2.5 does not cover every eventuality.

**Table 2.5: Examples of contextual information**

| Type of analysis | Key issues |
|---|---|
| **Current crisis** | • Is there a crisis? If so, what are its causes, nature and consequences?<br>• Who is most affected and why?<br>• What is likely to happen in the coming months? |
| **Historical** | • What factors led to the current crisis? How do factors related to the history of the area and population groups affect the crisis?<br>• Has the area faced similar crises in the past? What were the impacts, and what interventions were undertaken? Are these experiences documented? What lessons were learned? |
| **Conflict** | • Is the area affected by conflict? If so, what caused the conflict? What is its nature – civil war, international conflict, etc.? How long has it been ongoing? What are the expectations for the future? What groups are most affected by the conflict?<br>• What are the direct and indirect effects of the conflict on food and nutrition security?<br>• Who are the actual and/or potential winners and losers of the conflict? |

| Type of analysis | Key issues |
|---|---|
| **Security** | • Is the area secure or insecure? If insecure, why?<br>• Who is in danger – residents, visitors, etc.? Why?<br>• What impact might the security situation have on responding to a food security crisis? |
| **Political/ institutional** | • Which government policies affect food and nutrition security – land tenure, price controls, wage rates, import/export taxes, subsidies, etc.? What are the effects of these policies?<br>• Have any of these policies been changed recently? Are they likely to be changed in the near future?<br>• Do socio-political factors, such as power struggles between groups, land nationalization or privatization, affect the crisis?<br>• What is the status of government service provision, particularly health, education, social security and agricultural extension? Are services improving, deteriorating or staying the same? Why?<br>• Does the government provide social security support to people who are unemployed, sick, etc.? If so, who qualifies? How much is the allowance and how does it compare with average incomes? |
| **Social** | • How many people live in poverty and absolute poverty, and who are they?<br>• What administrative systems exist? For example, do traditional leaders exert significant influence, or are national/local government systems more powerful?<br>• Are some groups marginalized, for example, on the basis of ethnicity or relationship with local leaders?<br>• How are gender relationships characterized? How do men and women participate in decision-making processes?<br>• Are gender relationships changing?<br>• What respective roles do men and women have in controlling household assets, including land, crops, livestock, food and cash?<br>• Is local society stable? Are social institutions such as power relations changing rapidly? If so, why?<br>• What social support systems exist, traditional/non-formal and State? Who has access to social support, and who does not? What are the reasons for inclusion and exclusion? |
| **Agricultural** | • What are the main food and cash crops? What are the average production levels? Where are crops cultivated and under which farming system – small farms, commercial farms, etc.?<br>• What are the main livestock species raised? What are their main uses?<br>• What are the main risks to agriculture – drought, flood, crop disease, etc.?<br>• How important are fishing and aquaculture to people's livelihoods? |
| **Economy and markets** | • What is the basis of the regional/national/local economy?<br>• What is the status of the economy: good/bad, growing/declining?<br>• What is the inflation rate?<br>• What have been the trends in the consumer price index[11] over recent months and years?<br>• Are long-term changes taking place, for example, from dependence on subsistence agriculture to industry? If so, why?<br>• Where are the main markets located? How accessible are they to people affected by the crisis? Do men and women have equal access to markets?<br>• Before the crisis, did markets function well? Were they well integrated and competitive? What was the status of market food availability and access?<br>• Have markets been affected by the crisis? If so, how? |

*(cont…)*

11. Market Analysis in Emergency Food Security Assessments: Guidelines on Market Situation Analysis and Forecast and Response Protocol, WFP Emergency Needs Assessment Service, September 2007.

*(…cont)*

| Type of analysis | Key issues |
|---|---|
| **Education** | • What are the level and quality of the education services in the area?<br>• Who has access to education services? For example, do boys and girls have equal access?<br>• What impact has the crisis had on education infrastructure, services, enrolment, retention, etc.? |
| **Cultural** | • What are the main cultural factors that might affect food and nutrition security, for example, breastfeeding practices, food taboos? |
| **Environmental** | • Is the natural environment changing – deforestation, water resources, etc.? If so, what are the causes and what are the consequences?<br>• Are natural resources, or scarcity thereof, a cause of food and nutrition insecurity? If so, what is the nature of the problem? Is there conflict over natural resources?<br>• Are natural resources and/or health being affected by human activity, for example, industry? |
| **Geography and infrastructure** | • What transportation infrastructure is there – roads, railways, airports, etc.? Is infrastructure affected by the season?<br>• Where are services located – hospitals, clinics, schools, etc.?<br>• Where are government offices located – administrative, water board, etc.? |

chapter 5

# Indicators and data



## 5.1 Definitions

In an EFSA, indicators are used to describe and measure household food security status, individual nutrition status, and immediate and underlying causes of food insecurity, and to provide insights into the context.

For example:

- the prevalence of malnutrition among children 6 to 59 months of age gives an indication of the nutrition status of the population as a whole;
- the rate of unemployment indicates the state of the economy.

Indicators are distinct from data. **Data** are the pieces of information that are collected from primary or secondary sources. **Indicators** are *compiled from data* and are interpreted through comparison with standard or context-specific thresholds.

For example, terms of trade between the cost of wheat flour and the wage for daily labour might be used as an indicator of food access. This indicator is defined by combining two variables:[12] the cost of 1 kg of wheat flour and the wage for one day's labour. The indicator may be tracked over time to establish trends in food access, compared with a benchmark level that indicates an acceptable ratio between the two variables, and/or compared among different sub-groups or across different geographical areas.

Indicators are defined at the start of the assessment, and may be modified as information is collected and analysed. The data needed for compiling and interpreting indicators are collected during the assessment. The data used in an EFSA may be qualitative or quantitative, as explained in the following sections.

12. Market Analysis Tool: Terms of Trade, WFP Economic Analysis Unit, August 2007.

## 5.2 The three key sets of indicators used in an EFSA

In an EFSA, **three key sets of indicators are used to estimate the dimensions of the food security problem** caused by an emergency:

- **Mortality rates** give an indication of risks at the *population level*.
- **Nutrition indicators** are used to estimate nutrition status at the *individual level*.
- **Food security indicators** focus on assessing access to food and food consumption at the *household level*. The coping strategy index (CSI) is an important indicator of food security at the *household level*.

**Other data and indicators are used to construct and interpret the key indicators**, for example:

- market indicators, integrated with food security indicators (see **Chapter 7**);
- age and sex of individuals, used in the interpretation of mortality rates and nutrition status;
- household characteristics, used in the compilation and interpretation of nutrition, food security and coping strategy indicators. Common characteristics include households' size and composition, such as age and gender profiles and education level; their residential status, such as host population or displaced; and the presence of chronically sick individuals, such as those with HIV and AIDS.

## 5.3 Proxy indicators

Not all indicators provide a direct measurement of the factor to which they are related. Proxy indicators provide indirect information about a factor.

For example, the CSI (see **Section 7.3.4**) is sometimes used as a proxy indicator of household food security. The different coping strategies – behaviours – used by households in an emergency are used to estimate the severity of food insecurity. Extensive field testing has demonstrated that coping strategies correlate closely with food security. Box 2.4 describes proxy indicators that may prove useful in an EFSA.

### Box 2.4: Proxy indicators of food security

**Proxy indicators** to estimate the severity of food insecurity include the following:

- *The coping strategies that people and households adopt*: These may damage health, nutrition status, productive capacity, etc., such as through drastic changes in food consumption, depletion of assets or unusual migration.
- *Diversity of the food items consumed by households*: This is an indication of macro- and micronutrient intake.
- *The size of the food gap*: This measures the difference between households' food requirements and the food to which they have access.
- *Previous crises*: These might provide insights into the potential evolution of the crisis.

There are various ways of combining indicators to estimate severity. For example, the **Integrated Food Security Phase Classification** (IPC) system combines information from different sources to position a crisis on a scale of severity (see **Part IV, Chapter 3**).



## 5.4 Linking indicators to EFSA objectives

Indicators must be chosen carefully. They should provide information about the issues identified in the objectives, as described in Example 2.1.

### Example 2.1: Linking indicators to EFSA objectives

One objective of an EFSA is to identify the prevalence, as a percentage, and the degree – severe or moderate – of food insecurity and malnutrition in the area (see **Part I**).

The core EFSA indicators – mortality, nutrition, food security and coping strategies – are used to address this objective. For example:

- **nutrition**: mid-upper arm circumference (MUAC) measurement for children 6 to 59 months of age;
- **food availability**: food production in the district plus food imports from other districts minus food exports to other districts;
- **food access**: terms of trade between the costs of wheat and daily labour;
- **food utilization**: level of individual knowledge about the cooking of newly introduced relief food;
- **coping strategies**: type of coping strategies currently used, and the significance of these for food security.

All of these indicators are **context-specific**. In this example:

- MUAC measurements are taken if there is a reasonable expectation of malnutrition, or a need to ascertain the nutrition status of the affected population quickly but insufficient time or resources to undertake a full nutrition survey;
- the choice of food availability indicator in this example implies that the area is agricultural; it would not be useful in an urban setting;
- the choice of food access indicator implies that wheat is a main staple and daily labour is a significant source of livelihood;
- the food utilization indicator is used if recent food distributions have included foods with which people are unfamiliar.

## 5.5 Interpretation of indicators using thresholds

Indicators are compared with thresholds or pre-crisis information to estimate the current status of nutrition and food security.

Some thresholds are established internationally and are universally applicable, for example:

- wasting: a weight-for-height ratio of *minus 2 z-scores of the median of reference* is used as a threshold to define global acute malnutrition in children 6 to 59 months of age;

- crude mortality rate: a threshold of one death per 10,000 people per day denotes an alert; two deaths per 10,000 people per day indicates a critical emergency.

Other indicators and thresholds are context-specific and must be defined for each situation. For example:

- the ways in which people obtain access to food vary widely; indicators and thresholds for food access can be defined only when the local context is understood;
- coping strategies are also highly context-specific; for example, the collection of wild plants for eating might be a normal activity in one society, but indicates an extreme level of crisis in another.

Context-specific thresholds are defined through **value judgements**; much depends on the experience and knowledge of the people making the judgement. Thresholds can be defined in one or a combination of the following ways:

- using pre-crisis data[13], when knowledge of normal conditions forms the basis for comparison;
- using surveys carried out by other agencies in the same area and during the current crisis;
- based on the judgement of local key informants and/or experts; a group discussion with several informants facilitates consensus.

When establishing thresholds in any of these ways, **transparency** is paramount. The rationale for the threshold and the limitations to its application must be clearly stated in the assessment report.

### Example 2.2: Establishing thresholds

During the Darfur assessment in 2006, the following information was collected:

- Most people in the area under study depended primarily on their own agricultural production for food and income.
- According to FAO/WFP references, an average individual in Darfur required 150 kg of cereal per year for consumption.
- According to the 2005 EFSA, average yields of cereal were 450 kg/ha.
- To produce enough food, a household had therefore to cultivate at least 0.33 ha of cereal per household member.

On the basis of this analysis, simple thresholds can be established:
< 0.3 ha per household member = critical.
0.3 to 0.4 ha per household member = borderline.
> 0.5 ha per household member = satisfactory.

These thresholds are arbitrary and inserted for the purpose of illustration. In a real situation, numerous factors would be considered when assigning thresholds. For example, if rainfall is very unpredictable, the thresholds for borderline and satisfactory might be raised to provide a wider margin of safety.

13. For example, the comprehensive food security and vulnerability analysis (CFSVA) conducted by WFP.

**Notes:**
- This type of threshold must always be analysed within the broader context. On its own, the information these categories provide is insufficient. For example, a household with 0.5 ha per household member might have problems if the rains were less than usual, or if conflict restricted access to fields.
- Variations in the data also need to be considered. In this example, average yield is estimated at 450 kg/ha, but this could mask a wide variation: perhaps half the farms yield 750 kg/ha and the other half only 150 kg/ha.



## 5.6 Cross-tabulation and comparison of indicators

In cross-tabulation and comparison, two or more indicators are combined to gain insights into the prevalence and causes of malnutrition and food insecurity. Box 2.5 provides a summary of this process.

### Box 2.5: Cross-tabulation and comparison

Possible linkages among factors are identified during local adaptation of the Conceptual Framework. Indicators that are to be collected during fieldwork to investigate these linkages are defined. The following are some examples:

1. The link between main household income source(s) and household food security status: Do households with poor food security have specific income sources? Indicators to be collected for this analysis would be related to food access, food consumption and income sources.
2. The link between water source and malnutrition: Are malnourished individuals mainly found in households with poor access to water, in terms of quantity and/or quality? Data to be collected would include nutrition indicators, such as MUAC; water quality and source of water; water quantity in litres per person per day; and household water usage for storage, personal washing, etc.

Indicators are **cross-tabulated** during the analysis to provide insights into the factors that affect food security and nutrition status. The results are used in the response analysis (see **Part IV**).

When computerized statistics programmes and skills are available, regressions and multivariate analyses can be undertaken to combine numerous variables simultaneously. Principal component analysis is an example of this approach.[14]

When advanced computing capacity is lacking, simple cross-tabulation of two or three variables or indicators can yield valuable information.

**Note:** Cross-tabulation can only be applied to quantitative data from one sample. If qualitative data are used, or if information is collected from unrelated sources, *comparisons* can be made but will not have the same statistical validity as cross-tabulations. For example, the area planted from a household questionnaire survey can be *compared* with statements about seed availability from focus group discussions with people in the same community, but the two pieces of information cannot be *cross-tabulated*.

14. The 2009 Guidelines for Comprehensive Food Security and Vulnerability Analysis (CFSVA) (WFP Food Security Analysis Service) include guidance on principal component and cluster analysis.

## 5.7 Prioritization of indicators

An EFSA should not collect too many indicators. It is better to have a few carefully selected indicators than many, if some will not be useful for the analysis.

**Minimum information requirements** can be determined according to the following list, which should be reviewed for each context:

- **Mortality**: Mortality data should be used if they are available and/or highly relevant to the crisis being assessed. Consider the timeframe to which the data refer. For example, mortality rates compiled over the course of a year are not useful for estimating the impact of a tsunami a week after its occurrence.
- **Nutrition status**: If there is reason to believe that malnutrition exists, but a full nutrition survey, including weight and height measurements, cannot be carried out and is not available from other sources, MUAC measurements can be used instead.
- **Food security**: This is assessed from household food consumption, taking into account food access. The food consumption score (FCS) – see **Section 7.3** – should be calculated for each household interviewed. At least one relevant food access indicator should be defined and used for each livelihood or other group of households, such as refugees in camps. Selected coping strategies should be compiled, or the CSI adapted, for each household interviewed (see **Section 7.3.4**).

Each indicator should be supported by contextual and qualitative information gathered through focus group discussions, key informant interviews and observation.

Contextual information should always be presented to support the analysis. The depth and scope of this information depend on the time available and the objectives of the assessment.

chapter 6

# Data sources



The data sources are specified in the second to last column of the analysis plan (see **Table 2.1**). These may be secondary or primary:

- **Secondary data** have been collected prior to the EFSA, often by other people, and are used to inform the EFSA. They may come from baseline surveys, previous assessments, government information offices, such as for economic and agricultural data, or any other source that is not consulted directly during the assessment.
- **Primary data** are collected during the EFSA from key informant interviews, focus group discussions, observation, household interviews and/or household questionnaires.

Data sources should be identified in the analysis plan as village focus group, household survey, district agricultural officer, etc.

chapter 7

# Choice of data and indicators

**Chapter 3** described how to identify the broad information requirements based on the available secondary information and using the Food and Nutrition Security Conceptual Framework to identify key factors of food insecurity and the linkages among them. The next step is to define more precisely the data and indicators that will be used in the EFSA.

The assessment design should allow scope to adjust indicators if they prove to be inappropriate, or if additional indicators are identified during the course of the assessment:

- For a **questionnaire-based survey**, the questionnaire should be pre-tested before the assessment starts. This allows problems with the structure, questions and indicators to be corrected before the fieldwork begins (see **Part III**).
- For an EFSA based on **qualitative data**, the data and indicators can be adjusted as the assessment progresses. All field teams should be informed about changes and the reasons for making them.
- Indicators may be adjusted during the analysis stage, for example, by reorganizing the cross-tabulations among data or indicators.

Indicators are categorized into three sets (see **Section 5.4**):

- mortality;
- nutrition status;
- food security.

An additional set of indicators reflecting the *broader context* is also defined (see **Chapter 4**). The other three sets of indicators are described in the following subsections.

## 7.1 Mortality indicators

Mortality is measured at the *population level*. In rapid EFSAs, mortality data are often obtained from secondary sources, often local institutions such as hospitals, statistics offices, etc. Primary mortality data can also be collected, *but a representative random*

*sample must be used*. It is rarely possible to obtain accurate mortality data in the early stages of an emergency, owing to the lack of reliable data collection and reporting mechanisms, poor access and rapidly changing circumstances. Moreover, in many disaster-prone countries, reliable data for normal times do not exist.

Table 2.6 identifies the crude mortality rate thresholds that can be used.[15]

**Table 2.6: Crude mortality rate**

| Crude mortality rate | Significance |
|---|---|
| < 1 death per 10 000 people per day | Reasonable health situation |
| 1–2 deaths per 10 000 people per day | Elevated mortality |
| > 2 deaths per 10 000 people per day | Health emergency |

**Qualitative information** on mortality normally comes from local key informants sharing their perceptions of excess death in the area, or from direct observation of bodies, new graves, etc. This sort of information should be used with care, as it is highly susceptible to bias. For example, a member of a community that has been the target of a military attack will probably overstate the level of mortality in the region as a whole.

Qualitative information about mortality should be triangulated as widely as possible, and should not be extrapolated to make conclusions about overall mortality rates. Qualitative reports about high and unusual mortality rates provide support to other analyses of nutrition, food security and coping strategies. Alarming reports of mortality can also act as the trigger for a more rigorous assessment and the initiation of a response.

## 7.2 Nutrition status indicators

Weight, height and age, and micronutrient data are usually collected through random or census anthropometric surveys, covering children 6 to 59 months of age and/or adults, often women. It is possible to gather useful data on nutrition status *without* undertaking a full anthropometric survey, but the reliability of the analysis will be reduced.

The following are examples:

- MUAC measurements on a convenience sample of individuals might produce alarming results and trigger concerns about the nutrition situation, but

15. A Manual: Measuring and Interpreting Malnutrition and Mortality, United States Centers for Disease Control and Prevention (CDC) and WFP, July 2005.

extrapolation to the population as a whole would not be possible. In such cases, the assessment should be followed by a rigorous nutrition survey.
- Growth monitoring through the collection of weight-for-age data at a health clinic may show deteriorating trends, but the children measured may not be representative of the wider population.

As with mortality rates, there are internationally accepted thresholds for determining the extent to which nutrition status has deteriorated at the individual and population levels (see Table 2.7). As long as data have been collected properly, analysis of nutrition indicators is therefore relatively straightforward. Table 2.7 includes guidance on interpreting nutrition thresholds for risks to lives.

Three of the most useful indicators are weight-for-height of children 6 to 59 months of age, MUAC of children and adults, and body mass index (BMI) of adults, which is calculated as the ratio of weight to the square of height.

As a general guide, the following thresholds can be used to define risks to lives at the individual level:
- **Wasting**: There is risk to lives when weight-for-height scores are < -2 z for children.
- **MUAC**: There are risks to lives when MUAC is < 12.5 cm for children, and < 22.5 cm for women.

For adults, BMI thresholds indicative of risks to lives are less clear, but individuals' lives can be considered to be at risk if they have a **BMI below 16** combined with an infectious disease such as HIV/AIDS or tuberculosis.

The guidance note on "Strengthening Rapid Food and Nutrition Security Assessments"[16] provides additional advice on organizing an EFSA to ensure proper analysis of the nutrition situation, with or without anthropometric measurement. However, it is advisable to consult a nutritionist to identify the most appropriate nutrition indicators and interpret results.

16. Guidance Note, Strengthening Rapid Food and Nutrition Security Assessments, WFP Emergency Needs Assessment Service, July 2007

## Table 2.7: Anthropometric and clinical indicators of the nutrition situation

| Type of malnutrition | Indicators at the individual level | Public health significance |
|---|---|---|
| **Undernutrition** | **Wasting:**<br>**low weight for height (W/H)**<br>→ Global acute malnutrition (GAM):<br>W/H < -2 z-scores<br>→ Severe acute malnutrition:<br>W/H < -3 z-scores<br>→ Moderate acute malnutrition:<br>W/H between -3 and -2 z-scores | **Benchmarks of prevalence at the population level (WHO):**<br>GAM < 5%: acceptable<br>GAM 5-9%: poor<br>GAM 10-14%: serious<br>GAM ≥ 15%: critical<br>• Increased risk of morbidity<br>• Increased risk of mortality |
| | **Stunting: low height for age (H/A)**<br>→ Global chronic malnutrition:<br>H/A < -2 z-scores<br>→ Severe chronic malnutrition:<br>H/A < -3 z-scores<br>→ Moderate chronic malnutrition:<br>H/A between -3 and -2 z-scores | **Benchmarks of prevalence at the population level (WHO):**<br>Stunting < 20%: acceptable<br>Stunting 20-29%: poor<br>Stunting 30-39%: serious<br>Stunting ≥ 40%: critical<br>• Increased risk of morbidity<br>• Increased risk of mortality<br>• Decreased performance at school |
| | **Underweight:**<br>**low weight for age (W/A), combining wasting and stunting**<br>→ Global underweight:<br>W/A < -2 z-scores<br>→ Severe underweight:<br>W/A < -3 z-scores<br>→ Moderate underweight:<br>W/A between -3 and -2 z-scores | **Benchmarks of prevalence at the population level (WHO):**<br>Underweight < 10%: acceptable<br>Underweight 10-19%: poor<br>Underweight 20-29%: serious<br>Underweight ≥ 30%: critical<br>• Increased risk of morbidity |
| | **Underweight: MUAC**<br>• In children:<br>→ Global: MUAC < 12.5 cm<br>→ Severe: MUAC < 11.0 cm<br>→ Moderate: MUAC 11–12.5 cm<br>• In women:<br>→ Global: MUAC < 22.5 cm<br>→ Severe: MUAC < 21 cm<br>→ Moderate: MUAC 21–22.5 cm | • In children:<br>Increased risk of mortality<br>• In women:<br>Increased risk of low birthweight babies |
| | **BMI in adults: W/H$^2$**<br>→ Severe: BMI < 16.0<br>→ Moderate: BMI 16-16.9<br>→ Mild: BMI 17-18.4<br>→ Normal: BMI 18.5-24.9 | **Benchmarks of prevalence at the population level (WHO):**<br>BMI below 18.5 for 5-9%: low<br>BMI below 18.5 for 10-19%: mild<br>BMI below 18.5 for 20-39%: high<br>BMI below 18.5 for ≥ 40%: very high<br>• For women: Increased risk of low birthweight babies<br>• For all adults: Increased risk of mortality with very low BMI |

*(cont…)*

*(…cont)*

| Type of malnutrition | Indicators at the individual level | Public health significance |
|---|---|---|
| **Undernutrition** | **Anaemia:**<br>low blood haemoglobin<br>→ Standard thresholds available for adults and children | • For women: Increased risk of:<br>- mortality when giving birth<br>- low birthweight babies<br>• For children:<br>- increased risk of stunting<br>- decreased performance at school<br>• For all:<br>- decreased physical capacity<br>- decreased resistance to disease |
| | **Vitamin A deficiency:**<br>low serum retinol<br>→ Standard thresholds available for adults and children | • Decreased resistance to disease<br>• Impaired or loss of vision |
| | **Iodine deficiency:**<br>low urine iodine<br>→ Standard thresholds available | • Increased risk of mental and physical disabilities<br>• Decreased performance at school |
| **Overnutrition and obesity** | **BMI in adults: W/H²**<br>→ Overweight: BMI 25-29.9<br>→ Obese: BMI ≥ 30 | • Increased risk of chronic diseases: diabetes, cancer, hypertension<br>• Increased risk of mortality |

Additional data and indicators complement the indicators in Table 2.7 and provide further insights into nutrition status (see Table 2.8). These indicators serve two functions:

1. They provide possible explanations of the nutrition problems identified through the indicators in Table 2.7.
2. They act as proxies for the indicators in Table 2.7. If anthropometric and clinical information is not available, or measurements cannot be taken directly, proxy indicators can help determine whether or not the nutrition situation is hazardous.

**Table 2.8: Examples of additional indicators that inform about nutrition status**

| Category | Indicator |
|---|---|
| **Water access** | • Quality: potable/non-potable, treated/untreated<br>• Quantity: litres per person per day<br>• Distance to water source<br>• Time taken for round trip to collect water |
| **Water usage** | • Storage capacity in house: litres<br>• Type of storage: covered/uncovered |
| **Sanitation** | • Type of sanitation used: household latrine, communal latrine, etc.<br>• Hand washing: always, sometimes, never |
| **Health status** | • Prevalence of infectious disease: i.e. percentage of children who have been sick over the previous 2 weeks<br>• Prevalence of chronic diseases<br>• Trends in infectious and chronic diseases: seasonal and long-term |
| **Health care** | • Nearest staffed and equipped clinic or hospital: distance and time to reach it<br>• Presence of emergency health services: government, United Nations, NGO or other<br>• Immunization coverage, particularly measles |
| **Health practices** | • Food handling practices: hygienic/unhygienic<br>• Extent to which people seek professional health care when sick |
| **Care** | • Feeding practices: breastfeeding, complementary feeding, etc.<br>• Age and education level of child carers, i.e. mother<br>• Personal hygiene of children and their carers: acceptable/risky<br>• Relationship between children and their carers<br>• Relationship between heads of household and children<br>• Other occupations undertaken by carers: casual labour, collection of water, etc. |

It is difficult to analyse nutrition status using **qualitative data**. *Only highly experienced staff such as nutritionists or other health experts* may be able to make useful qualitative observations based on people's physical aspect or clinical status, including the extent of emaciation or weight loss and signs of micronutrient deficiency, such as scurvy, pellagra and night blindness. Such observations cannot be extrapolated to the wider population, but can be used as triggers for implementing a proper nutrition survey, including anthropometric measurements.

Qualitative information about health and nutrition status can also be obtained from key informants. For example, a focus group of mothers of young children might provide:

- descriptions of the illnesses and symptoms that affect children, and comparison with the past, particularly the same season in the previous year;
- information about the disease cycle using a historical timeline (see **Part III, Chapter 4**): major events – seasons, natural and human-induced disasters, etc. – are plotted on a timeline and disease outbreaks are inserted.

Information from focus groups can be shared with nutritionists and other health experts who may be able to develop hypotheses about nutrition problems and their causes, and to recommend a course of action, such as an anthropometric survey.

## 7.3 Food security status indicators

An EFSA should employ indicators of household food security status. These indicators will enable assessment of the *current* quality and quantity of food consumption, and of the household's access to adequate food and nutrition. Food security is a broad concept encompassing many factors, and there are currently no internationally recognized qualitative or quantitative indicators for most of these factors. There are however established quantitative and qualitative methods for obtaining reliable information on household food security status. Food consumption indicators, food access indicators and the CSI can all be considered proxy indicators for food security.

### 7.3.1 Food consumption indicators

Food consumption indicators are designed to reflect the quantity and/or quality of people's diets. In EFSAs, the most commonly used food consumption indicator is the **food consumption score (FCS)**. This is a proxy indicator that represents the dietary diversity, energy and macro and micro (content) value of the food that people eat. It is based on dietary diversity – the number of food groups a household consumes over a reference period; food frequency – the number of days on which a particular food group is consumed over a reference period, usually measured in days; and the relative nutritional importance of different food groups. The FCS is calculated from the types of foods and the frequencies with which they are consumed during a seven-day period.

Although it provides essential information on people's current diet, the FCS is of limited value for in-depth analysis of food consumption patterns, for the following reasons:

- It is based on a seven-day recall period only. This is insufficient for a full analysis of food consumption for longer periods, which is likely to vary by season, for example.
- It provides no indication of the quantity of each foodstuff consumed.
- It does not give information on intra-household food consumption, such as who eats first and last.
- It does not show how food consumption has changed as a result of the crisis, unless previous FCS for the same types of household are available.

More information is needed if food consumption practices and trends are to be fully understood. For example, questions on usual food consumption should complement the seven-day household FCS.

The calculation of the FCS is explained in Box 2.6[17] and Example 2.3.

## Box 2.6: Calculation of the FCS

**In the household questionnaire**
Households are asked to recall the **foods that they consumed in the previous seven days** (see the list of items in Table 2.9). Each item is given a score of 0 to 7, depending on the number of days on which it was consumed. For example:
- if potatoes were eaten on three of the last seven days, they are given a frequency score of 3;
- if potatoes were eaten on three of the last seven days, even if they were eaten twice on each of those days, at two meals, they are still given a frequency score of 3.

**In the analysis**
Food items are listed according to **food groups** (see Table 2.9), and the frequencies of all the food items surveyed in each food group are summed. Any summed food group frequency value over 7 is recoded as 7.

Each food group is assigned a **weight** (see Table 2.9 and its note), reflecting its **nutrient density**. For example:
- beans, peas, groundnuts and cashew nuts 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 its absence of micronutrients and the fact that it is usually eaten in relatively small quantities.

The household FCS is calculated for each household by multiplying each food group frequency by each food group weight, and then summing these scores into one composite score.
The household score can have a maximum value of 112, implying that each of the food groups was consumed every day for the last seven days.

The household score is compared with pre-established **thresholds** that indicate the status of the household's food consumption. WFP applies the following thresholds in a wide range of situations:
- poor food consumption: 0 to 21;
- borderline food consumption: 21.5 to 35;
- acceptable food consumption: > 35.

These thresholds can be adjusted if there is clear justification for doing so. For example, in some populations, consumption of sugar and/or oil may be frequent among nearly all households surveyed, even when consumption of other food groups is rare and the food score is otherwise low. In these cases, when the base diet of oil and sugar is combined with frequent (seven days) consumption of starch base only, the score already arrives at 21, but this clearly cannot be classified as even a borderline diet. The thresholds can therefore be raised from 21 and 35 to 28 and 42 – adding 7 to each threshold to account for the daily consumption of oil and sugar, which adds 7 points to the FCS.

When the overall population's consumption of oil and sugar is high, the FSC thresholds should be changed to:
- poor food consumption: 0 to 28;
- borderline food consumption: 28.5 to 42;
- acceptable food consumption: > 42.

17. For further information about application of the FCS, see: Food Consumption Analysis – Calculation and use of the Food Consumption Score in food consumption and food security analysis, WFP Vulnerability Analysis and Mapping Branch, January 2008.

Table 2.9 provides a template for calculating the FCS. Example 2.3 gives an example of a completed template.

**Table 2.9: Template for calculating the FCS**

| Food item (examples)* | Food group | Weight (A) | Days eaten in past 7 days (B) | Score A x B |
|---|---|---|---|---|
| Maize, rice, sorghum, millet, bread and other cereals | Cereals and tubers | 2 | | |
| Cassava, potatoes and sweet potatoes | | | | |
| Beans, peas, groundnuts and cashew nuts | Pulses | 3 | | |
| Vegetables, relish and leaves | Vegetables | 1 | | |
| Fruits | Fruit | 1 | | |
| Beef, goat, poultry, pork, eggs and fish | Meat and fish | 4 | | |
| Milk, yoghurt and other dairy products | Milk | 4 | | |
| Sugar and sugar products | Sugar | 0,5 | | |
| Oils, fats and butter | Oil | 0,5 | | |
| | | | **Composite score** | |

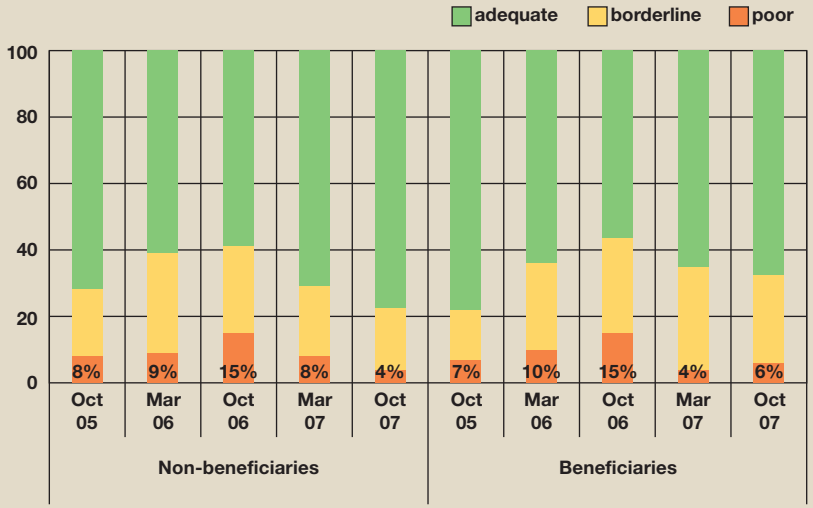
* Food items relevant to the context should be inserted.

**Example 2.3: A completed FCS template**

| Food item | Food group | Weight (A) | Days eaten in past 7 days (B) | Score A x B |
|---|---|---|---|---|
| Maize, rice, sorghum, millet, bread and other cereals | Cereals and tubers | 2 | 7 | 14 |
| Cassava, potatoes and sweet potatoes | | | | |
| Beans, peas, groundnuts and cashew nuts | Pulses | 3 | 1 | 3 |
| Vegetables, relish and leaves | Vegetables | 1 | 2 | 2 |
| Fruits | Fruit | 1 | 0 | 0 |
| Beef, goat, poultry, pork, eggs and fish | Meat and fish | 4 | 0 | 0 |
| Milk, yoghurt and other dairy products | Milk | 4 | 1 | 4 |
| Sugar and sugar products | Sugar | 0,5 | 4 | 2 |
| Oils, fats and butter | Oil | 0,5 | 2 | 1 |
| | | | **Composite score** | **26** |

The FCS is a continuous variable, so standard statistics such as the mean and variance can be calculated, and trends of means over time and across categories determined. Frequencies and cross-tabulations can be determined for food consumption groups. Example 2.4 shows a trend analysis for the FCS of non-beneficiaries and beneficiaries.

## Example 2.4: A trend analysis for food consumption scores




## Box 2.7: Validation of the FCS

Recent research by the International Food Policy Research Institute (IFPRI) attempted to validate the use of the FCS for classifying household food security status, based on survey data from three countries – Burundi, Haiti and Sri Lanka.

The study found the usefulness of the dietary diversity and food frequency indicators encouraging. There are positive and statistically significant associations with calorie consumption per capita, particularly when small quantities are excluded from food frequencies. However, the cut-off points currently used by WFP to define poor, borderline and adequate food consumption groups correspond with energy intake that is considerably below the usual average 2,100 kcal/capita/day benchmark used to define undernourishment. Hence, the poor food consumption group corresponds with extreme undernourishment, and some households in the acceptable food consumption group have consumption below 2,100 kcal/capita/day.

**Table 2.10: Food consumption groups and corresponding FCS thresholds and energy intake levels**

| Food consumption group | Burundi | | Haiti | |
|---|---|---|---|---|
| | FCS | Corresponding energy consumption in kcal/capita/day | FCS | Corresponding energy consumption in kcal/capita/day |
| Poor | ≤ 23 | ≤ 1 550 | ≤ 28 | ≤ 1 600 |
| Borderline | > 23 and ≤ 37 | > 1 550 and ≤ 1 800 | > 28 and ≤ 42 | > 1 600 and ≤ 1 900 |
| Acceptable | > 37 | > 1 800 | > 42 | > 1 900 |

These data reinforce the notion of context specificity in formulating FCS.
In EFSAs, it is recommended that the thresholds illustrated in Box 2.6 be used.

### 7.3.2 Food access indicators

Food access is a measure of a household's ability to acquire available food over a given period. People's access to food varies widely among and within areas; it is therefore impossible to define a single standard food access indicator that can be used in all situations. Food access indicators must be tailored to the livelihood strategies employed by the population of the area in which the EFSA takes place.

Food access indicators as measures of individuals' ability to acquire food are associated with livelihood activities, sources of food consumption, food stocks, food- or income-related coping strategies, asset wealth and expenditures.

Knowledge of livelihoods is used to identify the food access strategies of different livelihood groups.[18] For example:

- farming households might obtain their food from a combination of own production and purchases, using income from sales of their produce;
- pastoral households might consume animal products, such as milk, and sell animals to buy grain and other necessities;
- labouring households might buy all of their food at the market, using money that they have earned from a variety of jobs.

18. A livelihood group is a group of people who share the same basic means of livelihood and lifestyles – the same main subsistence and income activities, and the same social and cultural practices – and face similar risks of food and nutrition insecurity.

An example of defining food access indicators based on livelihood strategies is given in Example 2.5.

**Example 2.5: Definition of food access indicators associated with livelihoods**

In a certain area, some households depend on daily labour for their income. They use the money earned to buy food and other items at the market. All of their food is bought at the market.

Appropriate food access indicators in this case should reflect the purchasing power of households based on:
- prices of key commodities;
- wage rates;
- frequency with which labourers can find work.

Table 2.11 gives other examples of food access indicators and the circumstances in which they might be used.

**Table 2.11: Examples of food access indicators**

| Category | Indicator | Explanation | Circumstances and comments |
|---|---|---|---|
| **Food consumption** | **Sources of food and income** | Identifies the reliability and sustainability of food and income sources | All types of emergency |
| **Food consumption** | **Consumption of "famine foods"** | Within a society, some foodstuffs may be consumed only during periods of food insecurity; regular consumption of these indicates that there is a problem | Slow-onset emergencies that have reached a critical stage |
| **Food stocks** | **Diversity of food products available** | The variety of food items that are available and accessible will, in part, determine the quality of the diet | Stocks may be limited by production failures, transportation blockages, embargoes |

*(cont…)*

*(…cont)*

| Category | Indicator | Explanation | Circumstances and comments |
|---|---|---|---|
| **Food stocks** | **Food self-sufficiency** | Duration of staple food stocks for household's own consumption | Where agricultural production is an essential livelihood activity and food purchases are constrained by lack of access to markets or lack of income |
| **Income/ livelihood** | **Purchasing power** | Comparison of household income or expenditure with the minimum cost of living, for food and other essential expenditures | All types of emergency, but it is often difficult to obtain accurate estimates of income or expenditure, and costs of living may vary |
| **Income/ livelihood** | **Remittances** | The size and frequency of transfers from migrants may represent an important source of income for households, but it is usually difficult to quantify remittances.<br>The location of the person sending the remittance and her/his relationship to the household can sometimes act as proxy indicators | Situations in which significant numbers of people travel out of the area to find work |
| **Expenditures** | **Terms of trade**[19] | Comparison of, for example:<br>• cost of staple food with daily wage rate<br>• price of livestock with price of cereal<br>Relevant terms of trade need to be defined for each livelihood group | Any emergency in which economic exchange is significant:<br>i.e. most emergencies |
| **Asset wealth** | **Asset ownership** | Ownership of productive assets that facilitate food and income generation, i.e. land, animals, skills.<br>Relevant assets are identified from knowledge of livelihood groups and pre- and post-emergency economic activities | Any emergency, but depends on having a good knowledge of local livelihoods |
| **Coping strategies** | **Food-related** | The different coping strategies (behaviours) adopted by households in an emergency are used to estimate the severity of food insecurity | Some behaviours are highly reversible, others are not |

19. Market Analysis Tool: Terms of Trade, WFP Economic Analysis Unit, August 2007; Market Analysis in Emergency Food Security Assessments: Guidelines on Market Situation Analysis and Forecast and Response Protocol, WFP Emergency Needs Assessment Service, September 2007.

Examples of food access indicators are given in Example 2.6. Food access indicators should always be defined according to the economic context.

## Example 2.6: Sample applications of food access indicators

**Sources of food and income**

- A household acquires most of its food from the relief assistance provided by an international humanitarian organization. This source is considered poor, as it is unreliable and unsustainable. The household has no income, as it has recently moved to a camp for displaced people. Its income source is therefore also considered poor. The combination of poor food sources with poor income sources leads to the conclusion that the household has poor food access.
- Another household is receiving most of its food from relief; it too has poor food sources. However, this household retains access to some of its fields and is able to harvest and sell some cash crops. In addition, the household receives regular remittances from a relative working in the capital. This household's income sources are good. The combination of poor food sources with good income sources leads to the conclusion that this household has average food access.

An illustration of the development of this indicator is given in Example 2.7.

**Consumption of famine foods**

- Households in a certain area acquire food from cultivation and market purchases. Some local wild plants are nutritious but are not usually consumed because they taste bad and indicate that a household cannot obtain food through the normal channels, making these plants socially unacceptable as food. An EFSA reveals that an increasing number of households are consuming these plants; this indicates that access to normal foods is declining.
- In an urban environment there is stigma about using government soup kitchens. Households that use soup kitchens are considered to have failed. An EFSA reveals that an increasing number of households are using soup kitchens.

It may be difficult to obtain accurate data about these strategies because people are reluctant to admit that they are using them. Data should be cross-checked, for example, by reviewing attendance records at soup kitchens.

**Access to natural resources**

A pastoral community depends on cattle for its consumption of milk products and for sales to buy food and other essential items. Conflict has reduced mobility and the amount of pasture available to the pastoralists, who are forced to cut the sizes of their herds by selling animals. The price of cattle decreases and the pastoralists' purchasing power declines, as does their direct access to milk products. Food access for the community as a whole has, therefore, deteriorated.

**Purchasing power**

- Market surveys indicate that the minimum per capita cost of living is US$60 per month. In a household survey, informants are asked to describe their income sources and the monthly income that they receive from each. The results are compared with the US$60 minimum cost of living.

It can be extremely difficult to obtain accurate data on income and expenditure, particularly when much of the economy is informal and people derive their incomes from multiple sources. Informants frequently underestimate their incomes and expenditures, either because they do not know how much they earn and spend in a month – these figures are variable – or because they are reluctant to reveal such information to a stranger. The survey may also miss crucial non-cash components of household income, such as in-kind gifts. This indicator should therefore be used with caution.

*(cont…)*

*(…cont)*

**Terms of trade**

- Households depend on rice purchased at market as their staple food. The livelihoods of the poorest people are based on casual labour. Workers earn an average of US$60 per month. If rice costs US$0.5 per kilogram, a worker's monthly salary equates to 120 kg of rice.
- If this indicator is monitored over time, trends in food access can be ascertained. For example, if the rice price doubles to US$1 per kilogram and wages remain constant, a worker's salary will equate to 60 kg of rice, indicating a sharp decrease in food access.
- A minimum rice/wage ratio can be determined below which household food access is considered to be insufficient. This ratio will depend on the amount of rice that an average household requires and the other expenses that must be covered from the wages, among other factors.

**Food self-sufficiency**

In a community, households keep about half of their harvested crops for their own consumption. This does not cover all of their food needs, so the households must have a source of income to buy food and other necessary items. Income comes partly from the sale of crops and partly from other activities, such as fishing and livestock sales. To estimate food access, the post-harvest duration of food stocks is compared with the reliability of the main source of income. Food stocks in this example are classified as follows:

- poor: up to two months household food supply;
- average: three to seven months household supply;
- good: more than seven months household supply.

Income sources are also rated as poor, average and good. The two variables are then combined. For example, a household with poor food stocks and poor income sources is considered to have poor food access. A household with good food stocks but poor income sources is considered to have average food access.

**Asset ownership**

- In an agricultural area, access to land may be the primary determinant of food access. A suitable indicator might be area of land per household member.
- Displaced people who have lost most of their possessions depend on their skills for their livelihoods. In this case, education level or professional skills might therefore be used as indicators of human assets.
- Access to assets may vary according to gender. Female-headed households may be at a disadvantage compared with male-headed households.

**Remittances**[20]

An area is affected by a drought – a slow-onset emergency – which has led to the widespread loss of livelihood assets. It is known that people with close relatives working in other parts of the country or abroad are better off, as they generally receive some remittances. Although it is difficult to gain accurate data about the size of remittances, the location of the migrant worker gives an indication of the significance of this source of income for the household. For example, a relative in:

- the district capital, seeking casual labour, implies a minor enhancement of household food access;
- mines in another part of the country implies a medium-level enhancement of household food access;
- the Gulf States, working on oil installations, implies a major enhancement of household food access.

20. For more information, see: Technical Guidance Sheet No. 1 Integrating Migration and Displacement into Emergency Food Security Assessments, WFP Emergency Needs Assessment Service, May 2007; Remittances during crises: implications for humanitarian response, K. Savage and P. Harvey, eds., Humanitarian Policy Group Report No. 25, Overseas Development Institute (ODI), May 2007.

Markets are of critical significance to food access in most situations. Many of the food access indicators described in Table 2.11 are based on market interactions, so it is essential to have indicators illustrating the ways in which markets function.

Common market indicators are shown in Table 2.12. Some of these may not be appropriate in every situation, and additional market indicators can be added, according to the context.[21]

Many of the indicators should be reviewed over time, through comparison with the same period in previous years and with trends over recent weeks or months. **If baseline surveys or previous assessments are not available, market traders can usually provide reliable information about trends and the reasons for them.**

**Table 2.12: Market indicators**

| | |
|---|---|
| **Households' interaction with markets**<br>Sources: household survey, focus group discussion, key informant interview | |
| **Own production sold:** staple food, cash crops, livestock, livestock products | • Quantity sold<br>• Proportion of own production sold<br>• Price obtained<br>• Reasons for selling |
| **Food bought from market:** disaggregated according to different foods | • Quantity per week/month<br>• Proportion of total household food consumption<br>• Price<br>• Seasonal variation<br>• Access to credit from traders |
| **Participation in labour market** | • Household members involved in casual or seasonal labour<br>• Access for men and women to markets<br>• Type of work and season(s)<br>• Daily wage rate(s)<br>• Proportion of annual income from this source |
| **Market functioning**<br>Source: Market trader interview | |
| **Prices of key commodities:** staple foods, cash crops, livestock, fuel, etc. | • Main commodities available<br>• Prices now and at same time last year<br>• Margins now and at same time last year<br>• Price variation and trends over recent weeks or months<br>• Impact of food aid on prices<br>• Perception of future evolution of prices |
| **Sources of key commodities** | • Local, other parts of country or imported<br>• Problems with movement of commodities |
| **Trade volume** | • Quantity of commodities sold, and seasonal variation<br>• Variation in supply and demand of key commodities over recent weeks/months<br>• Speed of response in case of changes in supply or demand<br>• Trends over recent weeks/months<br>• Reasons for trends |

*(cont…)*

21. For more guidance on market analysis see: Market Analysis in Emergency Food Security Assessments, WFP Emergency Needs Assessment Service, August 2007.

*(…cont)*

| | |
|---|---|
| **Terms of trade** | • Staple food/livestock<br>• Cash crop/cereal<br>• Labour wage rate/cereal |
| **Labour market** | • Number of people seeking work compared with number finding work each day<br>• Variation in supply and demand for labour, according to season<br>• Daily wage rate and seasonal variation |
| **Traders** | • Number of traders and trend over recent weeks/months<br>• Access to credit<br>• Size of stocks of key commodities<br>• Impact of food aid on willingness to trade<br>• Transaction costs: transportation, taxes, etc. |
| **District/national level**<br>Sources: Secondary data review, key informant interview | |
| **Characteristics of markets** | • Location<br>• Wholesale, retail, etc.<br>• Areas covered by markets<br>• Distance between markets<br>• Frequency of markets |
| **Consumer price index** | • Recent trends, disaggregated as far as possible by district |
| **Main trade routes** | • Commodities traded<br>• In-country and international trade routes<br>• Ease of movement of commodities: physical, administrative |
| **Price variation among markets** | • Prices in different markets<br>• Transaction costs |
| **Proportion of country's / district's food imported** | • Percentage |
| **Exchange rate** | • Fluctuation and impact on imports/exports |
| **National/district data** | • Inflation<br>• Poverty rate<br>• Per capita trends in gross national income (GNI) and gross domestic product (GDP)<br>• Unemployment rate<br>• Interest rates |
| **Policy** | • Significant changes in trade policy |

Examples of using market indicators to develop food access indicators are given in Example 2.7.

**Example 2.7: Using market indicators to define food access indicators**

For each of the following three food access indicators, examples of market data that would be incorporated in the indicator are given. Other useful market data should be determined according to the context.

**Food access indicator: sources of food and income**
- **Price stability:** Are the prices of food in the market and the prices paid to producers stable?
- **Food sources:** Where does the food in the market come from? If it is imported – internally or from abroad – how reliable is the supply?
- **Labour market:** How many days per month can a casual labourer expect to find work? Is this stable?

**Food access indicator: purchasing power**
- **Price stability:** Is the cost of essential food and non-food items increasing, decreasing or remaining stable in relation to normal for this time of year?

**Food access indicator: terms of trade**
- **Staple food/labour:** The cost of staple food is monitored at the market and compared with the average monthly wage of a casual labourer. This indicator is used to estimate the status of food access for livelihood groups that depend primarily on casual labour.
- **Livestock prices/cereal prices:** A decline of livestock prices against cereal prices has proved to be a strong indicator of deteriorating food access and general food security in pastoral communities.

### 7.3.3 Description of the current household food security situation

A key part of the description of household food security in an EFSA or a CSFVA is derived from a short-term household food security classification. This is based on the household's current food consumption as a proxy for its current food security. It gives a snapshot picture of the household's situation at the time the data are collected.

This is an essential step in both the EFSA and CFSVA processes and is the starting point for situation analysis and scenario-building exercises (see **Part IV, Section 4.2**).

Households are classified according to the FCS – poor, borderline or acceptable. For some households, the FCS may not reveal their current food security situation. In such cases, information about household access to and sources of food is crucial in allowing these households to be reclassified.

**Description of the current household food security is therefore based on the FCS and its thresholds**, as described in Box 2.6. This usually[22] means that households with an FCS of 21 or less have poor food security, those with an FCS between 21.5 and 35 have borderline food insecurity, and those with an FCS of more than 35 have acceptable food security.

22. These thresholds can be increased by 7 points each, as described in Box 2.6.

The household food consumption classification serves as a standardized, objective and replicable tool for describing **short-term food security**. This classification can be standardized by using household FCS as the basis for comparison. Although differences in context must be considered when interpreting the FCS, this method of standardization is acceptable because the FCS is well-defined[23] and objectively measurable. When FCS thresholds are appropriately defined, the resulting food consumption groups match the corresponding levels of food intake, to a certain extent (see Box 2.7).

**The short-term household food security description may need to be adjusted** if the FCS does not properly reflect the food security situation of the moment. This is the case for households with unsustainable sources of food, or with food access strategies that are uncertain, damaging to their future livelihoods or so severe that they endanger the health of household members. Typical examples are food aid recipients, who may be benefiting from acceptable food consumption at the time of the assessment, but who would probably have poor food security without that food.

The use of the FCS-based classification to describe current food security should be triangulated with other food security indicators, such as the CSI and income and production indicators.

In an EFSA, the description of current food security should always go beyond this method. A complete situation analysis should also include statements about the evolution of the overall food security context and about critical livelihood factors related to resilience, coping mechanisms and how income generation and food production will define future access to food.

The description of the current household food security situation therefore serves only as a starting point and for reference. **Part IV, Chapters 3 and 4**, on conducting situation and forecast analysis, go beyond this snapshot analysis and include projections for the future.

The situation analysis starts from the current household food security description, which is based on the FCS complemented by a livelihoods analysis to make it a true, forward-looking food security classification. The analyst decides what adjustments need to be made, based on other food security indicators and a livelihoods analysis, and concentrating on the outlook for households' access to food in the near or more distant future. Ideally, the analyst should draw on a combination of quantitative indicators and qualitative information. The context-specific indicators used for household food security classification are similar to those identified in Table 2.11:

23. It will often be necessary to design a country-specific questionnaire, to ensure that household food consumption is evaluated in a way that is appropriate to the local context.

- income sources, unsustainable or harmful coping strategies, debt, distress indicators;
- production, stocks, reserves;
- food sources, including aggregate food supply; and
- asset ownership, access to natural resources.



Analysis based on household food consumption alone should therefore **not** serve as a simplistic approach to targeting food assistance during programme implementation. The description of current household food insecurity does not automatically equate to food assistance requirements: not everyone with poor food consumption at the time of the data collection will need assistance, and some households with currently good consumption may need assistance later. To define assistance, it is essential to have a good understanding of how households obtain access to food, their livelihoods, the effects of shocks on these, and the macro trends for the future.

### 7.3.4 Coping strategy indicators

The **coping strategy index (CSI)** is often used as a proxy indicator for food security. Its elements can be used to analyse the structure of coping strategies.[24] The index is based on the many possible answers to the question: "In the past seven days, if there have been times when you did not have enough food or enough money to buy food, how many days has your household had to…"

A summary of the procedure for establishing the CSI is given in Box 2.8.

**Box 2.8: Process for establishing the CSI**

a) **The specific community's** usual food-based coping strategies are recorded from focus group and key informant interviews.

b) Local key informants assign a **weight** to each coping strategy, based on the **severity** of the circumstances under which it is used. For example, a slight reduction in food consumption by adults might be a response to short-term food insecurity entailing no major problems in the long term. On the other hand, the selling of prime productive assets, such as livestock or machinery, might indicate an extreme level of food insecurity.

c) During the field survey, the **current** food-based coping strategies that people use and the frequency with which they use each strategy are established.

d) For each household, a score is given to each coping strategy:
Score = (frequency with which coping strategy is used) x (weight).

*(cont…)*

24. Detailed guidance on the CSI is given in The Coping Strategies Index – Field Methods Manual, second edition, CARE, Feinstein International Center, Tango, United States Agency for International Development (USAID), WFP, January 2008

*(…cont)*

e) The scores for each coping strategy are added together to give a composite score for each household.

A household's composite score is meaningless unless it is compared with some other factor:

- Comparing the scores of **different households at the same time** gives an indication of their **relative** food security status; for example, household X is more severely food-insecure than household Y.
- Comparing the scores of the **same household**, or group of households, **over time** gives a useful indication of the food security trend: improving, deteriorating or stable.

The composite score can also be **calibrated** against other food security indicators. For example, if a score of 95 correlates directly with severe food insecurity as established by other reputable means, this score can be used in the future to indicate severe food insecurity.

An example of calculating the CSI is given in Example 2.8, taken from a study in Kenya cited in the Cooperative for Assistance and Relief Everywhere (CARE) and WFP Coping Strategies Index, Field Methods Manual.

## Example 2.8: Calculating the CSI

| In the past 30 days, as a result of not having enough food, how often has your household had to: | All the time/ every day | Fairly often/ 3-6 times per week | Occasionally/ 1-2 times per week | Rarely/ less than once a week | Never | Raw score | Severity weight | Score = relative frequency x weight |
|---|---|---|---|---|---|---|---|---|
| Relative frequency score | 7 | 4.5 | 1.5 | 0.5 | 0 | | | |
| a. Rely on less preferred and less expensive foods? | | X | | | | 4.5 | 2 | 9.0 |
| b. Borrow food, or rely on help from a friend or relative? | | | X | | | 1.5 | 4 | 6.0 |
| c. Purchase food on credit? | | | X | | | 1.5 | 4 | 6.0 |
| d. Gather wild food, hunt, or harvest immature crops? | | | | | X | 0 | 8 | 0 |
| e. Consume seed stock held for next season? | | | | | X | 0 | 6 | 0 |
| f. Send household members to eat elsewhere? | | | | X | | 0,5 | 4 | 2.0 |
| g. Send household members to beg? | | | | | X | 0 | 8 | 0 |
| h. Limit portion sizes at meal times? | X | | | | | 7 | 2 | 14.0 |
| i. Restrict adults' consumption so that children can eat? | | | X | | | 1.5 | 6 | 9.0 |
| j. Feed working household members at the expense of non-working members? | | | | | X | 0 | 4 | 0 |
| k. Ration the money available and buy prepared food? | | | | | X | 0 | N.A. | - |
| l. Reduce number of meals eaten in a day? | | X | | | | 4.5 | 2 | 9.0 |
| m. Pass entire days without eating? | | | | | X | 0 | 8 | 0 |
| **Total household score** | | | | | | | | **55.0** |

As noted in Box 2.8, the CSI provides a score for each household, which in Example 2.8 is 55.0. However, unless the significance of the score has been established through reliable calibration, or CSIs have been collected over time, this score alone does not explain much about the **absolute** level of food insecurity experienced by the household. Instead, it allows comparison of the **relative** food security of different households whose CSIs were calculated during the assessment.

This does not mean that the CSI should not be compiled; it is a useful reference for future assessments. The information about coping strategies and the circumstances in which they are employed is used to estimate the **absolute** level of food security, as explained in Box 2.9.

## Box 2.9: Developing coping strategy indicators

**A method for analysing coping strategies during an EFSA**

This approach relies on the combination of qualitative and quantitative data collection:
- Baseline information about local coping strategies is collected through a focus group discussion.
- The information collected is used in the questionnaire design. This leads to the collection of quantitative data that are analysed as follows.

During a focus group interview in the community being assessed, the following questions are asked:
- In this community, what strategies do households adopt when they do not have enough food, or do not have enough money to buy food?
- Which groups within the community might adopt each strategy?
- Under what circumstances is each strategy adopted?

From this it is possible to deduce the food security status and the severity associated with each strategy.

A table is then compiled. The following table *uses examples of coping strategies*.

| Strategy | Groups using the strategy | Implication |
|---|---|---|
| 1. Purchase of less expensive food | All | Alert |
| 2. Withdrawal of children from school | All | Risk to future livelihoods |
| 3. Reduction of number of meals | All | |
| 4. Migration of whole household to look for work | Landless households | |
| 5. Selling land | Landowners | Risk to livelihoods |

Based on this example, the focus group might agree to the following:
- Strategies 4 and 5 are adopted during periods of severe food insecurity.
- Strategies 2 and 3 are adopted when food insecurity is moderate or deteriorating, but not yet severe.
- Strategy 1 corresponds to a household that is not currently at risk, but whose situation must be monitored.

The frequency with which the various coping strategies are used can also be considered when discussing and interpreting the severity of the food security situation.

Having established the types of strategies that people *might* use, either qualitative or quantitative data are collected to determine the strategies that they are *currently* using. When quantitative data are used, questions about the coping strategies identified during the focus group are included in the questionnaire. The resultant data are analysed to determine which households are resorting to strategies that indicate moderate or severe food insecurity, according to the information provided by the focus group.



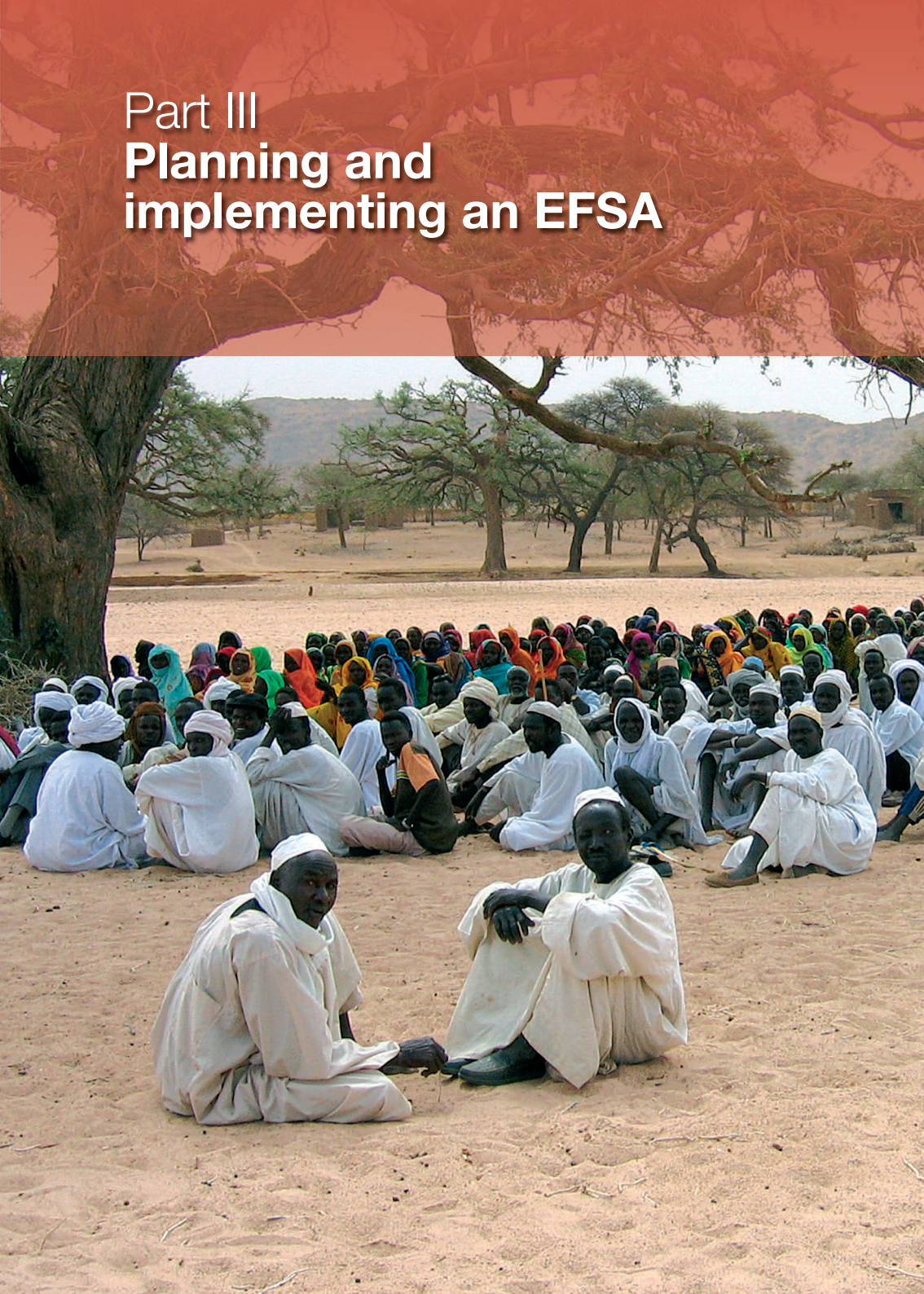
Recent research on the CSI has led to a reduced version being developed. The **reduced coping strategy index** (reduced CSI) compares food security across different contexts. It is a subset of the context-specific CSI, calculated on the basis of a specific set of behaviours each with its own universal severity weighting. The reduced index is less valuable in identifying the most vulnerable households in a location, but it is very useful for comparisons across crises or for geographical targeting because it measures the same set of behaviours and uses the same weights. The behaviours measured by the reduced CSI are:

- eating less preferred/expensive foods;
- borrowing food or relying on help from friends and relatives;
- limiting portion sizes at meal times;
- limiting adult intake so that small children can eat;
- reducing the number of meals per day.

**Example 2.9: Calculating a reduced CSI**

| 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: | Raw score | Universal severity weight | Weighted score = frequency X weight |
|---|---|---|---|
| **Relative frequency score** | | | |
| a. Rely on less preferred and less expensive foods? | 5 | 1 | 5 |
| b. Borrow food, or rely on help from a friend or relative? | 2 | 2 | 4 |
| c. Limit portion sizes at meal times? | 7 | 1 | 7 |
| d. Restrict consumption by adults so that small children can eat? | 2 | 3 | 6 |
| e. Reduce the number of meals eaten in a day? | 5 | 1 | 5 |
| Total household score – reduced CSI | Sum of the totals for each strategy | | **27** |

# Part III
# Planning and implementing an EFSA



## Contents of Part III

chapter 1

# Introduction

The three types of EFSA were defined in **Part I**. Information requirements and indicators for an EFSA were defined in **Part II**. **Part III** focuses on planning an assessment and collecting primary data. It addresses the following issues:

- **planning an EFSA**, outlining the steps undertaken prior to fieldwork;
- **logistics considerations**, regarding the management of fieldwork and daily activities;
- **primary data collection**, emphasizing the importance of good quality primary data and describing approaches to and tools for primary data collection.

The specific requirements for planning, logistics and primary data collection vary depending on whether the EFSA is to be an initial, rapid or in-depth assessment. This part of the handbook provides general guidance for an EFSA, but it is important to consider the different requirements for each type of assessment and to adjust planning, logistics, and other functions accordingly.

chapter 2

# Planning an EFSA



Any assessment must be carefully planned. Activities should be identified in advance and a timeframe established.

Participation in assessment planning should be as broad as possible depending on the time available. Planning the EFSA in consultation with key partners ensures that knowledge of the situation is shared, transparency is enhanced and constraints are identified. It also makes it more likely that stakeholders accept and use the assessment findings in programme responses. Representatives of the national/local government and the organizations participating in the assessment should take part in the planning. Organizations with a stake in the assessment's outcome should also participate; these include organizations working in nutrition and food security sectors, and donors.

The amount of consultation depends on the urgency of the situation and the capacity of stakeholder organizations. For example, if detailed contingency plans have already been developed, extensive consultation may not be necessary. In a quick-onset crisis, common sense should be applied. The objectives of this type of assessment are usually obvious;[25] it is likely that only key stakeholders will be consulted rapidly, in person or by telephone, and a set of objectives drafted and circulated.

The **key objectives** of planning an EFSA include:

1. determining whether or not an assessment is required, assisted by trigger mechanisms;[26]
2. defining the assessment objectives and terms of reference;
3. preparing the budget;
4. developing an analysis plan and identifying the information requirements;
5. reviewing secondary information and collecting reference material;

25. For more guidance, see: Technical Guidance Sheet No. 6 Initial Emergency Food Security Assessments, WFP Emergency Needs Assessment Service, November 2007.
26. For more guidance, see: Technical Guidance Sheet No. 4 Trigger Criteria for an Emergency Food Security Assessment in Slow-Onset Crisis Situations, WFP Emergency Needs Assessment Service, November 2007.

6. determining the data collection methodology;
7. determining the sampling approach;
8. establishing the staffing structure for the assessment, and training the teams;
9. making administrative and logistics arrangements;
10. establishing communications, security and emergency procedures;
11. briefing the assessment teams; and
12. preparing the assessment schedule.

The order in which these tasks are carried out is not fixed and the process is *iterative*. This means that completion of each task may lead to repetition and/or adaptation of other tasks; for example, consideration of logistics issues might lead to adaptation of the sampling approach.

## 2.1 Trigger mechanisms for an EFSA

An EFSA should be launched when trigger mechanisms show evidence that an assessment is needed. A *trigger* is an event or series of events indicating that the nutrition or food security situation is deteriorating, or has already reached a level of crisis. Trigger indicators are based on the data already collected by early warning and food security monitoring systems, and consist of a few indicators at the macro- and micro-levels that signal the need for a closer look at the situation. Such indicators include the harvest levels of staple crops, the gap between harvests and food consumption requirements at the national or sub-national level, staple food market prices, terms of trade of staple foods against key assets such as livestock and labour, acute malnutrition rates, mortality rates, and context-specific coping strategies that indicate food stress.[27] If any of the data monitored give cause for concern, an initial assessment should be launched.

There are three types of EFSA: initial assessment, rapid assessment, and in-depth assessment (see **Part I**).

### 2.1.1 Sudden-onset crises

Sudden-onset crises are often the result of large-scale disasters such as earthquakes, floods and the outbreak of conflict. Typically, an **initial assessment** is carried out to provide a rough idea of the nature and scope of the crisis and, in urgent situations, the information on which the first stages of the response plan are based.[28] After the initial assessment, a follow-up **rapid assessment** is

27. Details of an indicator-based monitoring system for triggering EFSAs in slow-onset crises are given in Technical Guidance Sheet No. 4 Trigger Criteria for an Emergency Food Security Assessment in Slow-Onset Crisis Situations, WFP Emergency Needs Assessment Service, November 2007.
28. Extensive guidance on conducting this type of assessment is provided in Technical Guidance Sheet No. 6 Initial Emergency Food Security Assessments, WFP Emergency Needs Assessment Service, November 2007.

undertaken if more in-depth analysis is needed or the initial assessment information is out of date owing to rapid changes in the context.

A follow-up rapid assessment is not necessary if:
- there is compelling evidence that the crisis will have no impact on nutrition and food security;
- other agencies have conducted assessments that provide sufficient reliable information; or
- it is clear that the government or other organizations are capable of covering all the needs.



### 2.1.2 Slow-onset or protracted crises

Slow-onset or protracted crises include drought, economic or environmental decline, long-term conflict, and pandemics such as HIV/AIDS. **In-depth assessments** gather detailed, representative information about the affected population. The trigger for an EFSA is less clear than in rapid-onset crises because the situation deteriorates *gradually* and there may be no sudden and dramatic escalation that alerts attention. Frequent, large-scale EFSAs may be undesirable or unfeasible, so it is essential to monitor the deteriorating situation and take action before crisis status is reached.

Slow-onset food security crises should be monitored continually through as many different mechanisms as possible, including:
- field offices, where staff members monitor the situation during field visits and through discussions with stakeholders;
- partner organizations, through regular communication with government offices of health, agriculture, meteorology, etc. and organizations working in relevant sectors, such as specialized United Nations agencies and NGOs;
- formal monitoring systems that compare selected trigger indicators with pre-established baselines.

## 2.2 Objectives and terms of reference

The EFSA planning process is based on the assessment objectives and the terms of reference. These are defined in consultation with the intended users of the results, including country office decision-makers and partners:
- The objectives describe the outputs expected from the assessment (see **Part I**).
- The terms of reference indicate how the assessment will be carried out, and define the roles and responsibilities of the assessment team.

## 2.3 Budget

The budget is based on the planned data collection methods, sample methodology, number of assessment staff, and vehicles and other equipment required during the assessment schedule. These in turn depend on the assessment's objectives and terms of reference. Revisions to the assessment methodology may be necessary if the resulting budget exceeds the available funding.

The available budget for EFSA activities will determine the following:

- **Professional profiles of participating staff**: If the budget is tight, it may be possible to use only a few experienced staff members, which limits the scope of the assessment and the methodology used; experienced staff are needed to manage teams in the field, analyse data, etc.
- **Logistics arrangements**: Budget considerations will likely determine the amount and type of equipment available and the logistics arrangements for field activities.

WFP has established policies and procedures for funding at least a portion of assessment costs.[29] In some cases, such as a high-profile emergency, it may be possible to fund an assessment completely from external donor resources.

## 2.4 Analysis plan and information requirements

The analysis plan provides a framework for collecting information and interpreting findings based on the EFSA objectives. It specifies:

- the information needed to meet the objectives;
- how this information should be collected;
- the source(s) from which it should be collected.

**Part II** provides guidance on how to develop and use the analysis plan to identify information requirements.

## 2.5 Collation and review of secondary data and reference material

Secondary information includes any available contextual information about the area and the local population prior to the current crisis, and information on the current crisis collected by other organizations.

A thorough review of secondary information is crucial for defining assessment objectives and determining further information requirements. It also minimizes

29. Policies and Procedures for the Use of the Immediate Response Account (IRA), WFP Operations Department and Administrative Department Joint Directive, 18 October 2005 (OD2005/005, A 2005/009).

duplication; if good quality data have been collected recently by another organization, there is no need to collect the same data in the EFSA.

Examples of secondary data and sources are given in Table 3.1.

**Table 3.1: Secondary data sources**

| Type of information | Example of sources |
|---|---|
| **Information about the area and its population before the current crisis** | |
| **Nutrition and food security baseline surveys** | - CFSVA: WFP<br>- Food economy baseline: Save the Children<br>- Nutrition survey: Ministry of Health, UNICEF<br>- FEWS NET |
| **Food production baseline surveys** | - CFSAM: WFP/FAO<br>- National government: e.g. Ministry of Agriculture |
| **Market surveys** | Government, universities, World Bank, United Nations, NGOs |
| **Social, political, historical and anthropological reports** | Universities, literature |
| **Information about the current crisis collected by other organizations** | |
| **Recent assessments** | Government, other organizations: United Nations, NGOs |
| **Education baseline surveys** | - Government statistics<br>- United Nations, NGO reports<br>- WFP baseline and follow-up surveys |
| **Media reports** | Local and international news agencies |

If resources allow, one person or a small team should be assigned to go through secondary data and identify useful material. These individuals must be fully conversant with the assessment objectives and terms of reference.

The **reliability** of secondary sources must be carefully appraised in terms of the source, methodology used, potential bias, age of the information, relevance, and agreement with other sources. Once the secondary information has been reviewed, the remaining gaps constitute the information that will be collected directly as primary data during the EFSA.

A template for secondary information review and identification of gaps is shown in Table 3.2.

**Table 3.2: Identification of information gaps, with examples**

| Question | Information requirements | Secondary source 1 | Secondary source 2 | Secondary source… | Ways to fill information gaps *(with primary information)* |
|---|---|---|---|---|---|
| **Is there a food security or nutrition problem?** | **Is there evidence of excess mortality?** | Survey data from 6 months ago show mortality rate of 1 death per 10 000 people per day | Doctor interviewed in local press says that mortality rate "seems to be declining" | Recent NGO rapid assessment indicates increased burial ceremonies in last 3 months | Collect data on number of deaths over last 6 months in sampled villages |
| | **Is there evidence of acute malnutrition?** | An NGO specialized in nutrition carried out an anthropometric survey in 3 of the 5 affected districts 3 weeks ago | Livelihoods and the emergency's impact in the other 2 districts seem to differ from those in the 3 surveyed districts | | Undertake an anthropometric survey in the remaining 2 districts, using the same methodology as the NGO used |
| | **Have people lost land or access to land?** | Government economic data show increased land sales and decreased land prices in drought-affected areas | A market survey by the local university shows no increase in the number of people looking for casual labour opportunities | A report by the International Organization for Migration (IOM) indicates no unusual migration within or out of the affected area | Identify the people selling land.<br>Are these crisis sales?<br>If so, how are people compensating for their lost land assets? |
| | **How do people currently obtain food?** | A market survey by a local NGO indicates that demand for expensive foods such as meat has declined | A WFP rapid EFSA undertaken 3 months ago shows most households' food consumption measured – through the FCS – was acceptable | The local clinic reports increased micronutrient deficiency among children under 5 | Evidence suggests that food access has deteriorated over the last 3 months.<br>The EFSA will check the current situation and look for the causes of this |

As Example 3.1 illustrates, the availability of reliable secondary data helps determine the types of primary data that must be collected during the EFSA.

## Example 3.1: Using secondary data to determine primary information needs

Drought is leading to widespread crop failure and deteriorating livestock health.

One of the objectives of the EFSA is to estimate the impact of crop failure on food access. The following information is available from secondary sources:

- Source 1: A reliable and recent market survey shows that prices of staple crops have doubled since the same season last year, and prices of livestock have declined by one-third.
- Source 2: A livelihoods assessment from five years ago indicates that 25 percent of the population buy staple food using the proceeds of livestock sales, and 50 percent combine consumption of own production with sales of cash crops.
- Source 3: Key informants say that the relative proportions of livestock owners and farmers have changed over the last five years, but percentages cannot be reliably estimated.

This information is summarized in a table, as follows.

| Question | Information requirements | Source 1 | Source 2 | Source 3 | Ways to fill information gaps |
|---|---|---|---|---|---|
| **How has crop failure affected food access?** | Price of crops now | 2X | … | … | … |
| | Price of crops this time last year | X* | … | … | … |
| | Price of livestock now | 0.67Y | … | … | … |
| | Price of livestock this time last year | Y** | … | … | … |
| | Proportion of households buying food through sale of livestock | … | 25% | Changed | Find current proportion and number of households |
| | Proportion of households buying food through production and sale of crops | … | 50% | Changed | Find current proportion and number of households |

X* = price of crops this time last year.
Y** = price of livestock this time last year.

The table indicates the following:

- Accurate price data are available, because Source 1 is highly reliable, so it is not necessary to collect price data during the assessment.
- Data on the proportion and number of households utilizing each of the two livelihood strategies are out-of-date, so this information must be sought during the assessment.

Price information from secondary data is combined with information about livelihood strategies from primary *and* secondary data to estimate the impact of the crop failure on the two livelihood groups.

Secondary data also provide contextual information that is essential to the analytical process (see **Part IV**).

**Reference material** collected from secondary sources is also useful for planning an EFSA. Reference information includes the following:

- **Population data**: Accurate and up-to-date data on population numbers and locations are valuable when determining the approaches to information collection (see **Section 2.6**) and the sampling strategy (see **Section 2.7**). The sources and estimated accuracy of the information must be considered when planning fieldwork and reporting results.
- **Maps**: These are useful for designing the sampling approach, and planning and implementing the fieldwork. Any available information relevant to the emergency, such as population movements, damaged roads and airstrips, is plotted on the most up-to-date maps available of the affected area.
- **Crisis updates and bulletins**: In many emergencies, regular bulletins from the national government, the Office for the Coordination of Humanitarian Affairs (OCHA) and others provide the latest news about population movements, humanitarian operations, security, logistics constraints, etc.

Primary data are collected for most EFSAs, but occasionally secondary data are sufficiently comprehensive, reliable and up-to-date to cover all the information requirements. *In such cases, primary data collection is unnecessary*.

## 2.6 Methodology for primary data collection

The data collection methodology determines the ways in which primary data are collected during the assessment. The following are some of the critical issues that must be considered:

- Is this an initial, rapid or in-depth assessment?
- Will the assessment be based on standard questionnaires, semi-structured interviews or a combination of both?
- What sort of interviews will be used: household interviews, community group discussions, focus group discussions, key informant interviews, etc.?
- Will sampling follow a random, purposive or other approach?

Details of primary data collection methods and techniques are given in **Chapter 4**.

**Practical constraints** always affect the sampling approach and methods of primary data collection. The following are some of the most common constraints.

**Security environment**

- If security in the survey area is poor, the number of people and the time spent in the field should be limited. The sampling approach and data collection will be affected, as fewer households and locations can be visited. Instead of household interviews, focus groups might be used to collect information more quickly.

- If it is impossible to visit the affected area, the entire assessment must be based on secondary data and interviews with people who have recently come from the area.

**Physical access**

- Poor transportation and communication infrastructure may constrain field activities. Assessment team members should consider such factors as road conditions, alternative ways to travel, time taken to travel to and from affected areas, and whether or not teams will be able to maintain contact with field offices.
- If some areas are not accessible, it may be possible to interview individuals who have recently come from these areas, such as displaced people and people working for humanitarian organizations.

**Available time and resources**

- Programme priorities may dictate a specific period for the assessment. For instance, results of the assessment may be needed for preparing project proposals and appeals such as an emergency operation (EMOP), a protracted relief and recovery operation (PRRO), a flash appeal or a United Nations Consolidated Appeal. Partner organizations may also have specific information needs and deadlines.
- Resource constraints may prevent the country office and partners from sustaining a lengthy assessment, in which case support from the regional bureau or Headquarters may be required. It should be kept in mind that an assessment always places demands on the country office and draws resources for staff, administration, vehicles, etc. away from other activities.

**Nature of the emergency**

- In a quickly evolving emergency the assessment should focus on collecting essential data: What is the cause of risk? Which groups/people are affected? Where are they? Rapid information collection uses key informants, observation and purposive sampling. Quick assessments are undertaken until the situation stabilizes, at which point a more thorough assessment is carried out.
- In a slow-onset emergency, information needs are less urgent. More time can therefore be spent on developing a rigorous methodology and undertaking an in-depth survey using two-stage sampling.

EFSAs vary depending on the type of assessment and the context; some common scenarios and related approaches to data collection are presented in Example 3.2.

## Example 3.2: Choice of data collection and sampling methodology for different scenarios

### Rapid-onset emergencies

**Initial assessment:**
**Scenario 1:** The beginning of a sudden-onset emergency, such as an earthquake, population displacement, etc.
- It is an **emergency**. Lives are in danger. Information is needed within one day so that relief operations can be initiated.
- The crisis is **highly volatile**. The situation is constantly changing. Assessments must be updated daily.
- There is **little time**. Emergency health and feeding programmes may be needed immediately.
- The **area is small**. Most of the affected people can be reached quickly with available means of transport.
- All parts of the area are **accessible**.

Under this scenario, a snapshot assessment approach is followed:
- Key informants are the core source of information. They include local relief workers and people coming from the affected area who can explain the details and locations of problems. Quick visits to the most severely affected locations are undertaken, based on information from key informants. Observation and short interviews with people in these areas are carried out. Clinics, mortuaries, etc. provide the basis for injury and mortality estimates.
- Ideally, this type of assessment is updated at least once a day until the situation stabilizes (see next scenario).

**Rapid assessment:**
**Scenario 2:** A quick-onset emergency has stabilized, such as when mass population movement ceases and mortality and injury rates decline, but there are major fears about disease because of unsanitary living conditions.
- Although lives are not at the same level of risk as in Scenario 1, the situation is still **urgent**, as shelter and water supplies are inadequate and there is a constant risk of disease.
- The crisis is **less volatile**. Population movement has stopped and there is no imminent danger of further shocks.
- There is **little time**, but the reduced volatility of the situation makes it possible to be more rigorous with information collection than in Scenario 1.
- The area and accessibility remain the same as in Scenario 1.

The assessment approach is still rapid, but information is collected more rigorously than in Scenario 1:
- If the affected area is small and compact, such as a refugee camp, a town or a small group of villages, the assessment is completed within one to two days. In larger areas, more time is needed, and it is important to prioritize the areas to visit according to the impact of the emergency. Sampling is therefore mostly **purposive**.
- Key informants continue to provide an overview of what is happening. Relief services such as health, water and food have been established; staff members working on these projects are also consulted.
- Consultation with the affected people is more rigorous. If there are population lists, such as in a refugee camp, a **simple random sample** is taken (see Box 3.2) for household visits. If there are no population lists, the area is mapped with the help of key informants, and priority areas are identified. Households are identified within these areas, using one of the random sampling techniques explained in **Section 2.7.3.5**.
- Semi-structured interviews with households, focus groups and key informants may be combined with a questionnaire survey.

**Slow-onset emergencies**

**In-depth assessment:**
**Scenario 3:** A slow-onset emergency, such as a drought or long-term conflict.
- The crisis is **neither urgent nor volatile**. The situation has been slowly deteriorating for some time, and some factor has now triggered an assessment (see **Section 2.1**).
- There are **no time constraints**, but the assessment results are needed soon for programming.
- The area may be large or small.

**Stratified two-stage sampling** is applied (see Box 3.2): zones (strata) → locations → households. Where possible, random samples of locations and households within those locations are used. If random samples are not feasible, locations are selected purposively, and households within these are selected randomly or purposively. Both semi-structured interviews and questionnaires surveys are undertaken.



## 2.7 Sampling

In an EFSA, it is normally neither feasible nor desirable to survey every location and household affected by the emergency. A **sample** must therefore be drawn. A sample is a selection of households or individuals from the total affected population. The sample should represent the larger population and reduce the time and cost of data collection. If a sample is representative, generalizations about the total population can be extrapolated from the results of the **sample survey**.

*It is extremely important that the sample be drawn in a methodologically rigorous way*. This section explains the key terms used in sampling, and provides guidance on choosing the most appropriate sampling methodology for a given situation.

### 2.7.1 Sampling frame

The sampling frame represents the area and population that the assessment is intended to cover, for example, a region within a country or a particular population group, such as displaced people. **The sampling frame must be defined at the start of the assessment planning process**.

The sampling frame may cover only areas and groups **directly affected** by the emergency. Alternatively, it may also include **indirectly affected** areas and groups, where the impact on the population can be just as severe. These include the areas into which displaced people have moved;[30] host populations for displaced people; and areas suffering economically as a result of the emergency, such as those whose markets depend on produce from a drought-affected area.

30. Technical Guidance Sheet No. 1 Integrating Migration and Displacement into Emergency Food Security Assessments, WFP Emergency Needs Assessment Service, May 2007.

The directly and indirectly affected areas and population groups are identified from secondary information and key informant interviews.

### 2.7.2 Types of sampling

The choice of sampling methodology depends on the time and resources available, the level of access and the specific objectives of the assessment. There are two major types of sampling approach, **probability sampling** and **non-probability sampling**. The following two sampling approaches are commonly used in EFSAs:

- **Purposive sampling** (non-probability sampling): The researcher decides which particular groups to interview. Non-probability sampling does not involve random selection, so the results cannot be used to characterize the wider population. Its value lies in selecting information-rich cases to gain a deeper understanding of the situation when random sampling is not possible. The researcher selects what she/he regards as representative sampling units, but the generalization of findings from such a sample can always be contested.

  **Purposive sampling techniques are normally used in initial and rapid assessments for rapid-onset emergencies.**

- **Random sampling** (probability sampling): All members of the population have a known, non-zero chance of being selected. Random sampling is based on formal statistical theory, which allows reliable estimates to be calculated and minimizes bias. Results can be extrapolated to the entire population with a degree of accuracy that depends on the sample size and the variability of the indicator.

  **Random sampling techniques are normally used for in-depth assessments, usually in slow-onset emergencies, and in emergency situations once conditions have stabilized.**

Table 3.3 shows the circumstances under which each type of sampling is used.

| Table 3.3: Circumstances under which each type of sampling is used | |
|---|---|
| **Sampling approach** | **Circumstances** |
| **Non-probability** | **Initial and rapid assessments** |
| **Purposive** | - Population data do not exist or are not reliable<br>- Access is limited to certain areas<br>- There is little time<br>- The situation is unstable and changing continuously<br>- Can be used for initial, rapid and in-depth EFSAs |
| **Snowball** | - Very little information is available about the location of groups or individuals<br>- People are reluctant to be registered on a list<br>- Time is short<br>- In an initial EFSA it can provide background information for a subsequent rapid or in-depth EFSA |
| **Convenience** | - Time or access is limited<br>- In an initial EFSA it can provide background information for a subsequent rapid or in-depth EFSA |
| **Probability** | **In-depth assessments** |
| **Random** | - Unbiased estimates with known precision are needed<br>- Population data exist<br>- All parts of the affected area are accessible<br>- The situation is reasonably stable<br>- There is sufficient time to visit all the selected households and carry out the required number of interviews<br>- Can be used for rapid and in-depth EFSAs in slow-onset emergencies or once an emergency situation has stabilized |



### 2.7.3 Purposive sampling

This section presents methods for initial and rapid assessments using purposive sampling.

#### 2.7.3.1 Principles of purposive sampling

Purposive sampling might be used when any of the following conditions apply:

- It is difficult to reach every area, household or individual member of the population.
- Reliable information about population locations and numbers is not available.
- There is insufficient time to visit the number of households or individuals needed for statistical analyses using a random sample. The most severely affected areas are prioritized, for example, agricultural areas during a drought, or villages inhabited by targeted groups during a conflict.
- There is strong evidence that nutrition and food security risks are concentrated in certain areas or population groups, such as particular livelihood groups or displaced people. In many cases, it is not possible to set up a sampling frame that allows these groups or areas to be stratified.

- The assessment objectives necessitate in-depth investigation of specific issues. For example, if the EFSA is expected to provide detailed information about the impact of market disruptions, groups of people who depend on the markets will be prioritized, such as traders, cash crop growers and people who rely on purchasing their food at markets.

Although the information collected through purposive sampling cannot be extrapolated to the entire population – as it can be in random sampling – generalizations can be extended to the wider population under the following circumstances:

- Triangulation is applied to all data (see **Part IV**). In triangulation, data are collected from numerous sources and their convergence, or otherwise, is appraised. If data from at least three reliable sources converge, the conclusions can be treated with reasonable confidence.
- Purposive sampling is combined with semi-structured interviews for primary data collection (see **Section 4.3.2**). This allows in-depth discussion and, consequently, a greater understanding of the crisis, its causes and effects. Conclusions from all the semi-structured interviews provide a sound basis for judging the extent to which they can be extrapolated.

**It is not known how representative the sample is, so generalizations made through the purposive sampling approach are subjective (or biased)**, and confidence intervals for the estimates would be irrelevant.

Good purposive sampling depends on having a thorough knowledge of the context – the type of emergency and the characteristics of the population. Such knowledge is initially gained through secondary data review (see **Section 2.5**). If secondary data are incomplete or inaccurate, or if the situation is changing rapidly, sampling can be adjusted as the assessment progresses. For example, population groups and areas may be added or removed as more information about the crisis is obtained.

Purposive sampling can be combined with random sampling techniques. For example, households might be selected through random sampling in a location selected through purposive sampling. Note that this does not make the sample statistically representative, which requires that *the entire sampling process follow random sampling principles* (see **Section 2.7.4**).

#### 2.7.3.2 Determining the sample size

There is no formula for setting the sample size for purposive sampling. Instead, judgements must be made, based on the expected heterogeneity of areas, population groups, locations, households and individuals. If heterogeneity is high and units are very different from each other, a large sample is needed, but the sample size also depends on the time and resources available. If heterogeneity is low and units are similar to each other, a smaller sample will suffice. This is illustrated in Example 3.3.

**Example 3.3: Heterogeneous populations: implications for purposive sampling**

An EFSA is undertaken in the urban and rural areas of a region affected by economic collapse. One of the objectives is to determine the impact of the crisis on livelihoods. The assessment team decides that to do this, they need to sample according to livelihood groups.

**In the urban area**, six main livelihood groups are identified:
- civil servants;
- traders;
- professional workers: doctors, engineers, teachers, etc.;
- salaried workers: shop assistants, storekeepers, construction supervisors, etc.;
- casual labourers;
- unemployed/beggars.

To understand the situation, and taking the time constraints into account, the team decides that ten households must be interviewed from each livelihood group. This gives a total sample size for the urban area of 6 x 10 = 60 households.

**In the rural area**, three main livelihood groups are identified:
- farmers producing crops for consumption and sale;
- pastoralists living from the consumption and sale of animal products;
- landless farm workers.

Again, the team decides to interview ten households per livelihood group. The total sample size for the rural area is therefore 10 x 3 = 30 households.

If areas and population groups are heterogeneous, a separate sample size should be estimated for each. The **rule of thumb** explained in Box 3.1 can be used,

**Box 3.1: Rule of thumb for estimating sample size in purposive sampling**

As a rule of thumb based on empirical experience of household food security surveys, **between 50 and 150 households** per reporting domain can be included in a purposive sample, and the following guidance applied.

**If locations are clearly very different from each other:**
- divide them into groups of locations with similar characteristics;
- within each group, visit seven to fifteen locations;[31]
- within each location, interview seven to ten households or individuals.[32]

**If locations seem to resemble each other:**
- check that there are no less obvious characteristics that may influence household food security (see **Section 2.7.3.4**), such as:
  - geographical dispersion of the locations, which could affect crop production patterns, access to markets and other services, and roads;
  - population size;

*(cont…)*

31. However, whenever possible, random probability sampling is preferable to purposive sampling.
32. Here too, random sampling should be considered if it fulfils the assessment requirements.

*(…cont)*

distribution of ethnic or social groups within the locations, such as different ethnicities or social strata within communities, which may affect access to assets, including food and income;
- direct and indirect impacts of events, etc;

- if differences exist, group the locations according to the chosen characteristic and proceed as indicated above.

**If there is no information for identifying differences among locations:**
random sampling is applied, as described in **Section 2.7.4.4**; fewer locations and households can be sampled because the statistics derived cannot be extrapolated with known confidence intervals, and time is limited. The number of locations can be ten to fifteen, with seven to ten households within each location.

In purposive sampling, the sample size can be adjusted during the assessment. For example, if it becomes apparent that all locations within a group are very similar, the number of locations to be visited can be reduced to seven or eight, instead of ten to fifteen. When households are seen to be very similar, the number of households visited in each location can be reduced in the same way. Conversely, if there is *more* heterogeneity than expected, groups of locations may be subdivided and additional groups added.

### 2.7.3.3 Selection of geographical zones

In purposive sampling, the geographical zones to be covered are determined according to the nature of the crisis and the assessment objectives:

- If the crisis is small-scale and concentrated, the assessment may cover only the directly affected area, such as when flooding affects only one isolated part of a country.
- In a sudden-onset crisis, early assessments will prioritize the zones directly affected, where lives are most at risk. Subsequent assessments may consider wider economic, social and health implications.
- In a slow-onset emergency affecting the whole country, such as in a drought in a small country that relies on agriculture, zones may be selected in any part of the country, but random sampling would be more appropriate if time and resources permit.

Wherever possible, it is useful to select a range of zones that include some directly affected, some indirectly affected and some minimally affected, to provide the basis for comparison. This is rarely possible in sudden-onset emergencies, however, so zones are prioritized according to the expected severity of the situation in each.

In some situations, it is worth visiting areas covered by previous assessments to allow qualitative comparisons between current and previous situations.

#### 2.7.3.4 Selection of locations within geographical zones

The locations - villages, communities or neighbourhoods - to be visited can be identified in either of the following ways:

- They can be selected according to the expected severity of the situation, or the characteristics of the locations and the people living in them. This method is used when there are significant differences among the locations in a geographical zone, or when constraints such as time and accessibility limit the number of locations that can be visited.
- When locations are known to be similar, or when little is known about their characteristics, those selected should be more dispersed, and hence more representative. The number of locations should also be increased – i.e. from ten to fifteen (see Box 3.1).[33]



When choosing locations, it is important to minimize the "**hub effect**"[34] In many emergencies, humanitarian hubs develop in the affected areas, typically main towns, where aid agencies congregate, set up field offices and stockpile resources. Villages close to a humanitarian hub tend to receive more attention and services than those further away. When choosing locations to visit for an EFSA, it is important to bear this in mind and visit some locations that are less easily accessible.

The list of purposively selected locations to be visited can be changed during the assessment, for example, if it is found that initial assumptions about the most affected locations were wrong or incomplete. New locations can be added, and existing ones removed from the list.

As with random sampling, it is better to visit a relatively large number of locations and interview a few households in each, than to visit fewer locations and interview many households in each.

#### 2.7.3.5 Selection of households and individuals within locations

Within each of the locations visited by the assessment team, households, individuals and groups are selected for interview. The aim is to achieve as valid and accurate an impression of the location's entire population as possible.

If the location is reasonably homogeneous and there is sufficient time, households and individuals can be selected through random sampling (see **Section 2.7.4.5**).

When time is limited, the groups expected to be most severely affected are prioritized. Within these vulnerable groups, households may be selected purposively, such as the most severely affected within the group. This gives the sample a high bias

33. However, when the means allow, random sampling is still preferable.
34. Guidelines for Emergency Assessment, International Federation of Red Cross and Red Crescent Societies (IFRC), 2005.

towards the most affected. In this case *no* generalizations of findings to the general population can be made, only statements about the worst-affected households.

Alternatively, within the vulnerable groups, representative households can be selected by the analyst or, preferably, at random.
For some social stratifications it is often difficult to develop a proper sampling frame, so purposive sampling is used. These groups include:

- displaced people living in a host community;
- the community hosting the displaced people;
- the landless and the poor;
- the livelihood groups that are expected to be most severely affected by the crisis, such as pastoralists during droughts or traders during market collapse;
- members of an ethnic group that is targeted during conflict.

It is advisable also to consider groups that are less severely affected. This gives a basis for comparison, and helps to confirm or reject initial assumptions about vulnerability.

#### 2.7.3.6 Example of purposive sampling

Example 3.4 describes purposive sampling from an EFSA carried out in Rwanda in 2006.

**Example 3.4: Purposive sampling in the 2006 Rwanda EFSA**

In April 2006, WFP and partners undertook an EFSA in Rwanda to assess the impact of drought on household food security. The EFSA was triggered by indications of severe hardship after two years of poor rainfall. Sampling was based on Rwanda's administrative system: the country is divided into districts, which are subdivided into sectors, and then into cells of 20 to 40 households each.

**Sampling approach**
Five of the most drought-affected districts were identified from a review of field mission reports by various agencies and government services, and discussion with the country office.

In each of the five districts, a purposive sample of eight cells was drawn. The cells were identified as follows:

- The most affected sectors were selected by the district executive secretaries.
- The head of each of the most affected sectors selected the most affected cells.

Within each selected cell, interviews were held with four to eight of the worst-off households. Key informant interviews, focus group discussions and market and health centre surveys were undertaken, to complement and triangulate the information.

This sampling approach did not provide an overview of the situation, as it focused on the most severely affected areas and households. However, given the time and information limitations, this type of sampling enabled conclusions to be drawn about the severity of the situation and how the worst-affected people can or cannot cope with it.

**A sample of the "worst of the worst" is severely biased towards the most food-insecure and is not at all representative of the five districts as a whole; no estimates of numbers of affected households can be made.**[35]

When purposive sampling is used, the assessment report should explain why it has been used and describe the process for selecting which people to interview.

#### 2.7.3.7 Snowball sampling

Snowball sampling can be used if neither random nor purposive sampling is feasible. This may be the case when the population of interest cannot easily be found, such as refugees scattered across a large city, or when people do not wish to be identified, such as illegal immigrants or people affected by HIV/AIDS who do not want to be stigmatized.

Snowball sampling is undertaken as follows:

- Key informants are identified on the basis of their knowledge of the emergency and the people affected by it.
- The key informants are interviewed, and act as entry points by recommending other people who can provide useful information.
- The next group of informants is interviewed and the process continues.

*Snowball sampling incurs a high risk of bias*. Each informant is likely to refer the assessment team to people that he/she knows. These people may all belong to a particular sub-group within a larger population. For example, if the assessment team is looking for refugees, they may end up interviewing people from only a particular region, or belonging to certain political parties or ethnic groups.

When snowball sampling is used, the assessment report should explain why it has been used and describe the process for selecting which people to interview.

#### 2.7.3.8 Convenience sampling

Convenience sampling is the least effective of the sampling approaches, but if time and access are very short, such as during initial assessments, it may be the only option. In convenience sampling, informants are chosen because they are accessible. For example, if an initial assessment involves only one short visit to the affected area, with little or no preparation, the EFSA team should talk to everyone who is available; team members should apply judgement, such as by visiting health

35. As an alternative, local key informants can be asked to stratify the districts according to whether they are "most affected", "moderately affected" or "least affected". Within each of these strata, further substrata can be defined. Households can be randomly selected within each substratum. If the population of each substratum is known, the appropriate sample weights can be applied to make unbiased estimates of the prevalence of food-insecure households.

clinics and other places where they can expect to find good quality information.

With convenience sampling, the risk of bias is very high. Generalizations to other areas and population groups must therefore be made with caution.

### 2.7.4 Random sampling[36]

This section presents **methods for in-depth assessments** using random sampling.

#### 2.7.4.1 Principles of random sampling

Random sampling is based on the principle that each unit in a population has exactly the same chance[37] of being selected as every other unit. In an EFSA, a unit is usually a household when analysing food security, or an individual when collecting anthropometric measurements.

In random sampling approaches, **all selections within a stratum are made randomly**, including the selection of:
- locations within the geographical strata;
- households and individuals within the chosen locations.

Random sampling is the preferred method because, theoretically, it is the only one that allows findings to be generalized to the entire sampling frame. It is used when there is need for statistically representative data that can be extrapolated to the wider population with a known degree of confidence, such as for estimating the prevalence of malnutrition or food insecurity.

Random sampling requires the following:
- There must be sufficient information about the population, location and numbers to construct the sampling frame from which a random sample is to be drawn, and it must be possible to find each of the households selected for interview. Population lists or maps showing the location of each residence must exist, or it must be possible to construct them.
- It must be possible to assess every area, household and individual within the sampling frame. There can be no physical or security constraints to access.
- There must be sufficient time and resources to visit the selected areas and interview each selected household or individual, including travel time.

36. For more detailed guidance, see: Guidelines for Comprehensive Food Security and Vulnerability Analysis (CFSVA), WFP Food Security Analysis Service, January 2009, and Thematic Guidelines on Sampling, WFP Vulnerability Analysis and Mapping Branch, December 2004.
37. The probability of being selected does not have to be equal for each unit, see: Guidelines for Comprehensive Food Security and Vulnerability Analysis (CFSVA), WFP Food Security Analysis Service, January 2009. It is enough that the probability is known and not zero, so that sample weights can be constructed to calculate unbiased population estimates.

### 2.7.4.2 Geographical stratification

Normally an EFSA targets a specific area of a country, and a stratified two-stage sampling approach is often used within that part of the country.

Depending on the expected homogeneity of the survey area, geographical zones can be selected in either of two ways:

- If the characteristics of the population and the impact of the emergency are expected to vary across the sampling frame, geographical zones are defined according to such characteristics as the extent to which each is expected to be affected by the crisis. The survey area is **stratified**, meaning that zones are grouped according to characteristics that are important for the food security situation. Random sampling of locations according to population size is then carried out *within* each stratum. Results are representative of each stratum, results from the various strata can be compared, and the number of households to be targeted can be calculated for each zone separately. Such stratification is designed to ensure that each stratum is as homogenous as possible and that there are important differences among strata. A typical stratification could be the agro-ecological or livelihood zones in a country, or the areas that have been affected by a flood vs. those that have not. These approaches are illustrated in the worked example in **Section 2.7.4.6**.
- If no particular food security pattern is expected across the survey area, the area can be subdivided using the existing administrative divisions. If there are too many of these, they can be regrouped. For example, in a survey covering eight provinces of a country, three geographical strata could be maintained:
  stratum A - covering the three western provinces; stratum B - the three central provinces; and stratum C - the two eastern provinces.

Within a stratum, households and individuals can be chosen through either **two-stage sampling** or **simple random (direct) sampling**.

**Box 3.2: Two-stage and simple random sampling**

**Two-stage stratified sampling** (see **Section 2.7.3**)

This is the most common approach used in an EFSA. The sample is defined in stages:

1. *Stratification*: The **geographical zones** to be assessed are determined. In an EFSA these are based on the expected extent of the emergency's impact, and include both directly affected and indirectly affected areas. For instance, for an assessment after the passage of cyclone Nargis in Myanmar, the delta region was divided into a "severely affected", a "moderately affected" and a "mildly affected" zone. Geographical zones may also correspond to those chosen in previous assessments, for the purpose of comparison.
2. *First stage*: The **locations** to be visited within the chosen geographical zones are selected. These might be villages, groups of villages, towns, neighbourhoods within towns, livelihood zones, camps or any other unit appropriate to the local context and

*(cont…)*

*(…cont)*

type of crisis. The locations are selected with probability proportional to size (PPS).[38]

3. *Second stage*: Within each location, **groups, households or individuals** are randomly chosen for interview, based on an existing or specially prepared list.

Two-stage sampling saves resources and time, as only selected locations are visited. However, the **sample size must be increased** to compensate for the relative homogeneity of households within locations.[39]

The number of locations to visit and the number of households or individuals to interview within each location depend on the total sample size required. This is estimated differently for random and purposive sampling (see **Sections 2.7.3** and **2.7.4**). In all cases, **it is better to select a large number of locations and interview relatively few households/individuals at each location than to select a small number of locations and interview many households/individuals at each**.

**Simple random sampling**
Households and individuals are selected from lists covering the entire area under study – i.e. all the units within the sampling frame. This avoids the need to select locations from which to draw the sample. This approach depends on having up-to-date population lists and accurate data on the locations of households and individuals. It also depends on access; if the population is widely dispersed, it may not be possible to reach all units within the time available for the assessment.

Because of these restraints, EFSAs rarely use simple random sampling, unless the sampling frame is small and geographically concentrated, such as in an internally displaced person (IDP) camp.

### 2.7.4.3 Determining the sample size

The sample size is the number of surveyed units – generally households or individuals – required to give the desired level of precision.

The sample size is calculated on the basis of the main characteristic of interest for the assessment. For example, to estimate acute malnutrition among children under 5 years of age, the sample size is calculated on the basis of the *expected prevalence of wasting*. The number of households to be visited is derived[40] from the average number of children under 5 per household.

This approach is problematic for food security assessments however, because no single food security indicator can be used to estimate the size of the sample. If baseline studies exist,[41] the proportion of food-insecure households in the baseline study can be adjusted according to the expected impact of the crisis.

38. Guidelines for Comprehensive Food Security and Vulnerability Analysis (CFSVA), WFP Food Security Analysis Service, January 2009.
39. *ibid.*
40. For more details see: Emergency Nutrition Assessment: Guidelines for Field Workers, Save the Children, 2004.
41. For example, the CFSVAs carried out by WFP.

There are formulae and statistical software for calculating sample size once the characteristics to be measured and the expected prevalence have been determined.[42]

If there are no relevant data from which to estimate prevalence, the rule of thumb explained in Box 3.3 can be used.

**Box 3.3: Rule of thumb for estimating the sample size in a household survey**

Based on experience from many household food security surveys, a simple rule of thumb is to consider a **sample size of between 150 and 250 households for each reporting domain**. Ideally, the sample size should be towards the upper end of this scale, to increase the reliability of the results and the validity of their extrapolation to other households in the sampling frame. For example, in one reporting domain the sample size is 200 households (ten households interviewed in each of twenty villages). If the sample prevalence of food insecurity is 40 percent, it could be generalized, with 95 percent confidence, that for the entire reporting domain the prevalence of food insecurity is between 31 and 49 percent.[43]

The following points should be noted when using this rule of thumb:

1. The sample size applies to each geographical area, population group or other reporting domain. For example, if prevalence of food insecurity is to be estimated for both IDPs and residents, a sample of 150 to 250 households must be drawn *from each*. If food insecurity is to be compared among districts, a sample of 150 to 250 households should be drawn *from each district*.
2. If sampling is done in stages (see Box 3.2), the upper limit of 250 households must be used to factor in the homogeneity of the households within each location sampled during the first stage.[44]
3. Anthropometric measurements to estimate the prevalence of malnutrition are sometimes combined with indicators to estimate the prevalence of food insecurity. In this case, **the size of the household sample is based on the sample size required for estimating the prevalence of malnutrition with the required degree of precision**. Typically, the sample required for an anthropometric survey is larger than the 150 to 250 households required for household food security analysis, and a sample of up to 900 children may be recommended.

### 2.7.4.4 Selection of locations/clusters within geographical zones

When simple random sampling is used, there is no need to select locations, or clusters, as the sample of households or individuals is drawn directly from the entire sampling frame (see Box 3.2).

42. Guidelines for Comprehensive Food Security and Vulnerability Analysis (CFSVA), WFP Food Security Analysis Service, January 2009; and Thematic Guidelines on Sampling, WFP Vulnerability Analysis and Mapping Branch, December 2004.
43. Assuming a design effect of 2.
44. This phenomenon is known as the "design effect". In EFSAs it may require a doubling of the sample size.

The first step is to determine the number of clusters to visit within each zone or stratum. This depends on:

- the sample size: the total number of households or individuals to interview (see **Section 2.7.3.5**);
- practical considerations, such as time, access, logistics and human resource constraints.

As explained in Box 3.2, it is better to select a large number of clusters and interview a relatively small number of households/individuals in each than to select fewer clusters and hold more interviews in each. The **rule of thumb** explained in Box 3.4 can be applied.

**Box 3.4: Rule of thumb for determining the number of clusters in a random sample**

Based on experience of assessing household food security, a total of **ten households per cluster** is usually sufficient. The main result of adding households in each cluster is an increase in the design effect. The sample size can therefore be decided according to the following, based on the level of precision desired:

- if the sample size is 150 households, at least 15 clusters should be selected, and at least 10 households within each cluster;
- if the sample size is 250 households, at least 25 clusters should be selected, and at least 10 households within each cluster.

Clusters, often villages, within each zone are selected randomly with probability according to their size (see **Section 2.7.4.6**). The communities or villages to visit are determined according to the selected clusters. There may be more or less than one cluster in a village.

In nutrition surveys of children under 5, it is common to use a 30 x 30 sample: 30 locations are selected, and anthropometric measurements of 30 children are taken in each location. The total sample size is therefore 900 children. It is advisable to fine-tune this sample size according to the expected prevalence of malnutrition.[45]

### 2.7.4.5 Selection of households or individuals within locations

In each location/cluster, simple random sampling of households or individuals is carried out (see Box 3.2) in either of two ways:

- **Simple random sampling** is preferred and can be used when accurate population lists exist or can be created and when each of the listed households can be located and reached easily within the time available. All the households are listed. Households are then selected at random, using a random number table or by picking names out of a hat. This approach is feasible in small

45. The 30 x 30 sample is valid for an expected prevalence of 50 percent and a desired confidence (at 95 percent) interval of +/- 5 percent, with a non-response rate of about 10 percent. For more guidance, see: A Manual: Measuring and Interpreting Malnutrition and Mortality, CDC and WFP, 2005.

communities and camps with known boundaries.

- Systematic sampling is used when population lists do not exist, but each house can be identified and reached within the time available. Households can be chosen by walking through the location and visiting houses at pre-selected intervals, such as every tenth house, or by spinning a pen and counting off the houses in the direction indicated. Both of these approaches are illustrated in Example 3.5.

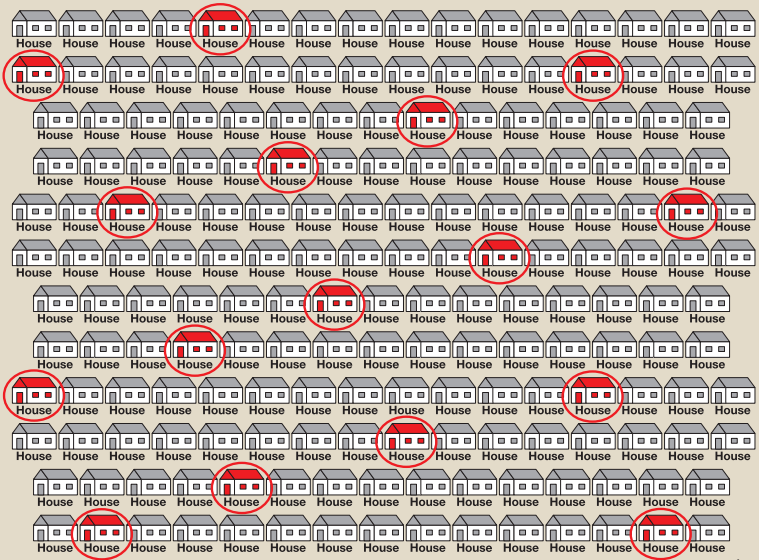


## Example 3.5: Selection of households or individuals within locations

**Option 1**: Houses are laid out in streets and each can be identified from either a map or observation.
**Example**: A sample of 15 households is to be selected from a total of 186 houses in the location:

- Calculate the sampling interval by dividing the total number of houses by the sample size. In this case: 186/15 = 12.4 houses.
- Round the sampling interval up/down. In this case: down to 12 houses.
- Agree a starting point for the assessment, usually one end of a particular street.
- Choose a number between one and the sampling interval randomly. In this case: between one and 12, say five.
- Count off five houses from the first identified. Interview this household.
- Count off the next 12 houses and undertake the second interview in the twelfth.
- Repeat the process at intervals of 12 houses until the entire location has been covered, and the sample of 15 households has been completed.
- If there are fewer than 12 houses in the street, continue the count in the next street. Clear instructions about the procedure should be given; for example, “at the end of the street, turn right into the next street”.

The process is illustrated in the following diagram.




*(cont…)*

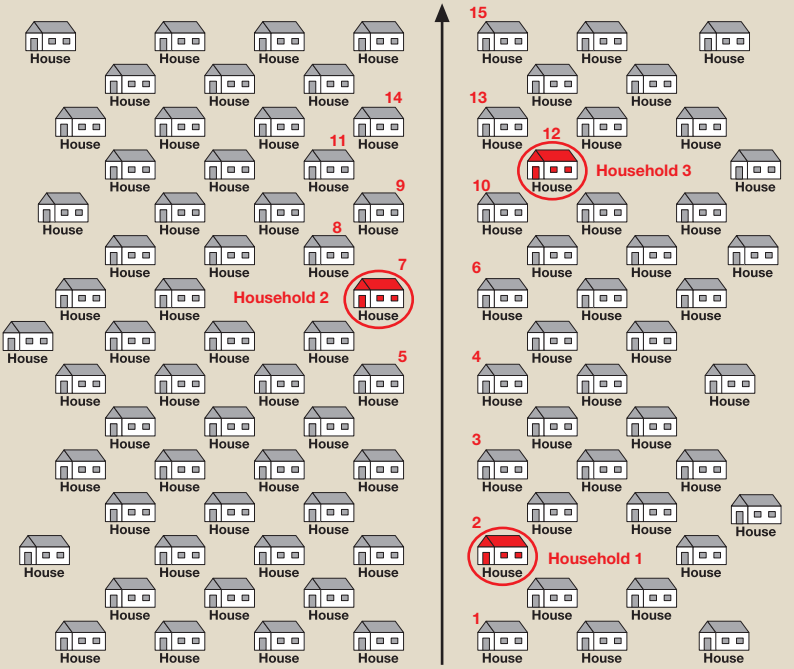
*(…cont)*

**Option 2**: Houses are not laid out in streets, but each can be identified by observation on the ground.[46]

**Example**: A sample of three households is to be selected:

- Stand in the centre of the location.
- Spin a bottle on the ground or throw a pen in the air and watch where it lands.
- Walk in the direction indicated by the end of the bottle or pen as far as the edge of the location, counting the houses passed. In this case, there are 15 houses.
- Calculate the sampling by dividing the number of houses by the sample size. In this case: 15/3 = 5 houses.
- Choose a number between one and the sampling interval randomly. In this case, between one and five. This is the first house to be visited.
- After this house, walk in the same direction and count another five houses. The fifth is the second household to be visited. Carry out the same procedure to identify the third household in the sample.

The process is illustrated in the following diagram.




46. Adapted from Guidelines for Emergency Assessment, IFRC, 2005.

### 2.7.4.6 Example of random sampling

An EFSA is being carried out in a conflict-affected area. Some people have been displaced to camps, while others remain in their homes. Two of the objectives of the EFSA are *to determine the rate of under-5 malnutrition* and to *determine the levels of food insecurity among both displaced and resident populations*.

In this case, the affected area is the basis for **the sampling frame** and it is large, with villages and IDP camps widely dispersed. Although each of these locations could be reached, there is insufficient time to do so. The dispersion means that simple random sampling of the whole population cannot be carried out. Instead, a **two-stage sampling** approach is chosen (see Box 3.2).

The following steps are undertaken:

1. The population is divided into two strata: **resident population** and **IDPs**.

2. For each stratum, a sample of **localities** is needed. For residents, localities are defined as villages; for IDPs they are camps.

3. Because the rates of malnutrition are unknown and therefore cannot be used to calculate the sample size more accurately, it is decided that a 30 x 30 cluster sample will be drawn for each stratum, to obtain a sufficient number of children for statistical analysis of the anthropometric data. Thus, 30 clusters are identified (stage 1), and 30 units – households or individuals – are selected in each cluster (stage 2). In each locality, 30 households will be interviewed to estimate the level of household food insecurity, and 30 children under 5 will be examined to determine their nutrition status.

4. The samples to be drawn are therefore:
   - resident population: 900 households and 900 children under 5;
   - IDP population: 900 households and 900 children under 5.

   Children under 5 are selected from the households where food security interviews take place. The sample size for each stratum is therefore 900 households.

5. A table similar to Table 3.4 is constructed and its columns filled in as explained in the following steps. A separate table is constructed for each stratum: residents and IDPs.

6. To identify where the clusters will be located, the names of the localities – the villages and camps – are entered in the second column. To ensure a truly random procedure, each location is assigned a random number and ranked in the table according to that number.

7. The best available population data for each of these localities are entered in the third column. For the villages, this information may come from a population census or district-level records. Information on camps is obtained from the NGOs, United Nations agencies and/or government organizations that manage them. Camp records should indicate the villages from which IDPs come; this information may be used to modify the data on village populations.

8. The best available data on the number of children under 5 in the population are used. In this example, secondary data sources indicate that approximately 20 percent of the total population is under 5. These data are entered in the fourth column of the table.

**Table 3.4: Table for identifying clusters**

| Randomized order | Geographical unit | Estimated total population | Estimated children 6-59 months | Cumulative population 6-59 months | Attributed numbers | Number of clusters |
|---|---|---|---|---|---|---|
| **1** | **Locality F** | 2500 | 500 | 500 | 1-500 | 1 |
| **2** | **Locality N** | 1000 | 200 | 700 | 501-700 | 1 |
| **3** | **Locality D** | 800 | 160 | 860 | 701-860 | 0 |
| **4** | **Locality A** | 3250 | 650 | 1510 | 861-1510 | 2 |
| **etc.** | **etc.** | … | … | … | 1511-… | … |
| | **Total** | 50000 | 10000 | 10000 | | |

9. The **sampling interval** is calculated by dividing the population of children under 5 by the number of clusters. In this case, the population of under 5 children is 10,000 and the number of clusters is 30. The sampling interval is therefore 10,000/30 = 333.

10. The location of the first cluster is determined by randomly selecting a number within the sampling interval of one to 333. Say that the randomly chosen number is 256, the first cluster is in locality 1 to which the number range 1 to 500 has been attributed.

11. The remaining clusters are identified by adding the sampling interval sequentially to the starting number until 30 clusters have been selected. In this example:
    - the first cluster is at 256, in locality 1
    - the second cluster is at 256 + 333 = 589, in locality 2
    - the third cluster is at 589 + 333 = 922, in locality 4
    - the fourth cluster is at 922 + 333 = 1,255, in locality 4

The process continues until the required number of clusters have been chosen. Note that the larger the population of the locality, the more clusters it contains.
Therefore, locality 3, with a small population, has no cluster, while locality 4, with a large population, has two clusters. Hence the approach is called **probability proportional to size (PPS)**.

12. Within each of the selected localities, households are identified by one of the methods explained in Example 3.5.



## 2.8 Human resources

Human resource requirements for an EFSA depend on the assessment methodology that has been chosen:

- For an in-depth large-scale household survey, enumerators, field managers, data analysts, vehicles, drivers, translators, etc. will be needed.
- For an initial or rapid assessment based on purposive sampling and semi-structured interviews, fewer staff will be needed, but the people carrying out the interviews will have to be very well trained and experienced.

Human resources should be drawn from the country office and partners in the country. If capacity is lacking at the national level, additional resources may be requested from the regional bureau and Headquarters, or consultants may be employed.

Human resource needs also depend on the assessment type. The following staff may be required:

- **Assessment managers and team leaders**: See following paragraph on management structure.
- **Enumerators** for questionnaire-based surveys: These individuals need to be well-educated, resourceful and prepared to travel for the assessment period. They do not need in-depth knowledge of food security, nutrition or assessment, but should have at least a basic understanding of these issues and preferably some experience of field-based research.
- **Interviewers** for semi-structured interviews and focus group discussions: These people require a good understanding of food security and nutrition, and must be experienced in interview techniques.
- One **translator** should be available for each member of the field team who does not speak the local language. Ideally, translators should be hired at the same time as the rest of the team, and should go through the same pre-assessment training. Translators are sometimes hired in the field, in which case time should be set aside to brief them on the assessment objectives and data collection methods.

- **Drivers** are required for the vehicles to be used.
- In large assessments, dedicated **administrators** and **logisticians** may be used. In smaller assessments, administrative and logistics capacity may be shared with the country office, in which case the time it allocates to the assessment must be clearly agreed with the country office.
- **Data analysts** and **data managers** are needed if much statistical analysis will be required.

To ensure that gender issues are addressed during field activities, **the enumerators, interviewers and translators should include both men and women**, preferably in equal numbers.

The **management structure** for an EFSA depends on the scope of the assessment. For a large-scale in-depth assessment involving a household survey, different layers of management are needed: overall assessment manager, team leaders, etc. For an assessment in an insecure area, a single team with an experienced team leader is more appropriate.

Management positions typically include the following:
- **Assessment manager** with overall responsibility for the assessment: In addition to strong technical assessment skills, this person should also be able to manage people, organize multiple, simultaneous tasks, and deliver results within a specified period. She/he is ultimately responsible for ensuring that the assessment fulfils its objectives.
- **Field team leaders**: If multiple field teams are deployed to different parts of the affected area, such as in a household survey, each team needs a leader. This person ensures that his/her team works according to the plan agreed with the assessment manager, and is responsible for the team's administrative and logistics arrangements in the field.
- **Analytical team leader**: If large quantities of data are to be processed, an analytical team is established. The analytical team leader ensures that data are properly entered and cleaned, analysis is completed on time, and problems are identified and rectified quickly. This involves collaboration with field teams throughout the assessment.
- **Administrative and logistics team leaders**: For a large-scale assessment, these people are assigned to provide full-time support to other management personnel and assessment team members. For small-scale assessments, they may work part-time on the assessment and part-time in their usual country office roles. In the latter case, it is important to assess the time requirements for each role, and agree these with the country director.

In assessments involving external staff, the country director should assign a senior manager from the country office to liaise with the assessment team. This person does not have a hands-on role in the assessment, but is kept up-to-date with its

progress and any changes in the planning. She/he meets the assessment manager regularly and helps to resolve any operational problems that arise.

All the people working on the assessment must receive training, even if they have undertaken assessments in the past. This is particularly important for enumerators. **Trainers** must be deployed for the time needed, which is typically about two days for enumerators' training and one week for interviewers'.



## 2.9 Administration and logistics

Most assessments involve a lot of administrative work, such as:

- organizing contracts and payment arrangements for the staff employed specifically for the assessment;
- managing cash flow during the assessment, including paying hotel bills, purchasing food, and other incidental expenses; reliable and *safe* procedures must be developed for teams working in the field, as it is best to avoid carrying large quantities of cash;
- booking hotels, flights, etc.;
- booking office space for training, briefings, debriefings, etc.;
- arranging security clearance, visas and internal travel permits when needed; this can take several weeks, so it must be addressed as soon as the assessment is agreed to.

Teams must have all the equipment and systems they need to operate efficiently and safely in the field, including:

- fully functional and equipped vehicles, with spare wheels, tools and first aid equipment;
- radios, satellite and/or mobile telephones, depending on the context;
- supplies of food and drinking water, where needed;
- camping equipment, where needed;
- adequate quantities of checklists, questionnaires and all the stationery required.

## 2.10 Communications, security and emergency procedures

**Communications procedures must be established to ensure that assessment teams remain in contact with assessment managers and country offices**. Regular contact times should be set; these might be once a day in a secure situation and more frequently when security is poor. Fall-back plans should be made, in case a team cannot report for some reason.

Emergency and security procedures are important, and should include:

- obtaining the latest version of the agency's security procedures for the specific

context, and ensuring that all team members read them;
- training all staff in the agency's security procedures;
- providing an up-to-date briefing from the security officer;
- establishing field security procedures, such as travel times and no-go areas;
- identifying medical facilities in the areas to be visited;
- establishing evacuation procedures.

## 2.11 Briefing

All members of the assessment team, including translators and drivers, are briefed before fieldwork commences. Briefing includes:
- the assessment objectives and methodology;
- techniques and tools to be used, such as semi-structured interviews and proportional piling;
- the time schedule;
- communications, security and emergency procedures;
- administrative and logistics arrangements, such as transport and accommodation.

## 2.12 Assessment schedule

An assessment schedule must be drawn up during the early stages of the EFSA planning process, giving all the major activities and the dates on which they should start and finish. The assessment manager and team members consult the schedule regularly to ensure that their work is progressing according to plan. If the schedule has to be changed during the assessment, the assessment manager consults the country office and partners to ensure that the proposed changes are feasible. Once agreed, the revised schedule is circulated among all assessment team members and partners.

Table 3.5 shows a sample EFSA schedule. The schedule may expand or contract depending on whether it is an initial, rapid or in-depth assessment.

## Table 3.5: Example of an EFSA schedule

| Activity | Time (days) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Week 1 | | | | | | | Week 2 | | | | | | | Week 3 | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 1. Establish/confirm working arrangements with partners | | | | | | | | | | | | | | | | | | | | | |
| 2. Collate and review secondary data | | | | | | | | | | | | | | | | | | | | | |
| 3. Review working scenario from initial investigation | | | | | | | | | | | | | | | | | | | | | |
| 4. Define assessment objectives and time frame | | | | | | | | | | | | | | | | | | | | | |
| 5. Draw up assessment plan | | | | | | | | | | | | | | | | | | | | | |
| 6. Establish analysis plan and define information requirements | | | | | | | | | | | | | | | | | | | | | |
| Decide data collection methods and sampling procedure | | | | | | | | | | | | | | | | | | | | | |
| 7. Design/customize data collection instruments | | | | | | | | | | | | | | | | | | | | | |
| Pre-test assessment tools, with teamtraining | | | | | | | | | | | | | | | | | | | | | |
| Finalize assessment tools | | | | | | | | | | | | | | | | | | | | | |
| 8. Prepare briefing kit, supplies and equipment | | | | | | | | | | | | | | | | | | | | | |
| 9. Identify and recruit team members | | | | | | | | | | | | | | | | | | | | | |
| Train and brief team(s) | | | | | | | | | | | | | | | | | | | | | |
| 10. Arrange transport, security and communications | | | | | | | | | | | | | | | | | | | | | |
| 11. Collect data at field sites | | | | | | | | | | | | | | | | | | | | | |
| 12. Process and analyse data | | | | | | | | | | | | | | | | | | | | | |
| 13. Identify and analyse response options | | | | | | | | | | | | | | | | | | | | | |
| 14. Write report | | | | | | | | | | | | | | | | | | | | | |
| 15. Present findings | | | | | | | | | | | | | | | | | | | | | |
| Finalize and disseminate the report | | | | | | | | | | | | | | | | | | | | | |

chapter 3

# Fieldwork

Fieldwork must be carefully managed to ensure that:
- teams work efficiently and cohesively;
- the assessment schedule is adhered to;
- all the information requirements are fulfilled;
- information is collected rigorously and consistently;
- unanticipated issues relevant to the food security situation are identified and incorporated.

The assessment manager has overall responsibility for fieldwork. She/he remains in contact with team leaders, who make sure that their teams are working efficiently and collecting all the information required. This involves daily planning. The following section describes a typical day in the field.[47]

## 3.1 Daily preparation

The assessment team should make the following preparations every day, typically during the evening before field activities are to be carried out:
- Identify the location(s) to be visited for the day.
- Make a preliminary list of interview types and informants. For a household survey using questionnaires, the approach is standard for all locations. For an assessment based on qualitative data, the types of focus group and key informant interviews are agreed, and can be adjusted later, at the location.
- Define responsibilities – who will carry out each interview.

## 3.2 Discussion with community leaders

Assessment teams meet community leaders when they arrive at a location. During this meeting, the team leader explains the reason for the visit and the assessment methodology to be used, and asks for the leaders' support. The meeting provides

47. Section 3.1 is adapted from Guidelines for Emergency Assessment, IFRC, 2005.

an opportunity to obtain the leaders' perspective on the crisis, including its causes and effects on the community in general, and vulnerable households in particular.

## 3.3 Collection of primary data

Enumerators and interviewers disperse and collect information according to the day's plan. Detailed guidance on primary data collection is given in **Chapter 4**.



## 3.4 Team meetings

Where possible, each team meets at midday to discuss progress and agree any necessary changes to the approach. This is especially relevant for surveys using qualitative data and semi-structured interviews. Interviewers often identify important pieces of information that had not been anticipated. They share this additional information with their colleagues, who then examine the issue(s) raised during the afternoon interviews.

At a minimum, the whole assessment team must meet every evening to discuss progress and share opinions and initial conclusions.

## 3.5 Final community meeting

Whenever possible, it is good practice to convene a short meeting with community representatives at the end of the visit to a location. This gives the team an opportunity to offer feedback to the host community about the process and, possibly, the conclusions, thereby enhancing transparency.

## 3.6 Daily analysis

Analysis is undertaken throughout the assessment and not just at the end, when all the data are available. The extent of this real-time analysis differs according to whether the data are quantitative or qualitative:

- Wherever possible, quantitative data are sent to data analysts every day, to allow them to start data entry, cleaning and preliminary analysis. This saves time at the end of the assessment and enables assessment teams to make use of the analysis during their fieldwork. For example, if the preliminary analysis indicates a particular type of malnutrition, field teams might adjust their approach to probe this issue.
- If personal digital assistants (PDAs) are used, the questionnaires completed on the PDAs must be downloaded to a central computer each day.
- Qualitative data are analysed by field teams continuously. Discussion among team members and assessment managers can lead to daily adjustment of checklists and data collection methodologies.

chapter 4

# Primary data collection

## 4.1 The importance of gathering good quality primary data

The primary data collection methodology is critical to the accuracy of an EFSA. **Even excellent analysis cannot produce good results if the data that feed it are not accurate and reliable**.

Box 3.5 describes some common problems of primary data collection.

### Box 3.5: Common problems with primary data collection

Primary data used in EFSAs come from interviews with key informants, focus groups, households and individuals. The following are some common sources of inaccuracy in primary data.

**Interviewers lack knowledge or skills**

- Interviewers are insufficiently knowledgeable about the context in which they are working or the issues they are discussing. This makes them miss essential information or interpret responses inappropriately.
- Interviewers lack the skills to ask questions about sensitive subjects, such as gender issues, violence or coping strategies.

**Information is incomplete or inaccurate**

This is often the case when discussing income and expenditure, for the following reasons:

- Informants do not know exactly how much they earn and spend. This is particularly common when households depend on several income sources, each of which is variable. It is difficult to estimate an average monthly income.
- The interviewer and the interviewee interpret terms differently. For example, does income include in-kind gifts from neighbours? What is an average month? The latter is especially relevant in seasonal economies such as farming.
- Informants are reluctant to reveal all sources, because they are suspicious of the motives for the assessment and fear that results may be used by taxation or legal authorities; some of their activities are illegal; or they do not want to reveal details of their livelihoods to a stranger.
- Informants become aware of the types of information that are most likely to result in their community receiving assistance, and tailor their responses accordingly. If information is taken at face value, a highly misleading impression might be created.

**Questionnaires or checklists neglect key issues**
If the questions have not been defined carefully and with good knowledge of the context, important issues may be left out. For example, some communities rely heavily on remittances from relatives working in other places. If the assessment concentrates solely on local income generation, the situation may be portrayed as being worse than it actually is.

**Interviewers and informants are biased**
- Particularly during semi-structured interviews, interviewers can affect responses by asking leading questions or by their attitude. For example, if interviewers are condescending, respondents might feel embarrassed about revealing the extent of their poverty and the coping strategies to which they resort.
- Understandably, informants frequently see the assessment as an opportunity for personal or community gain. They may give the impression that the situation is worse than it actually is in order to obtain relief or other assistance. They may also give misleading information about the impact of the crisis on different groups.

**Interviewers and informants become bored**
- It is often observed that the first semi-structured interviews of the day take much longer and go into more depth than those carried out later in the day. Interviewers tire and feel as though they are hearing the same responses repeatedly. They become less inclined to query the information given to them, and are less alert to inconsistencies and new information than they are at the start of the day.
- Informants also suffer from boredom, particularly during a long interview and when they have other things to do. At the start of the interview they may be happy to discuss their lives, but lose interest as the interview progresses; the quality of their responses therefore declines.

**Informants experience assessment fatigue**
In high-profile emergencies, numerous organizations may be conducting assessments during the same time period. Sometimes communities are visited by several assessment teams asking similar questions in the course of a few days. This may have the following effects:
- Informants are diverted from other tasks and find the process tedious; the quality of the information they provide will therefore decline.
- Informants learn how to adapt their information to their own advantage.

Any of the problems described in Box 3.5 could result in inaccurate and unreliable information. If this is fed into the analysis system (see **Part IV**), the final conclusions may be misleading and the recommendations inappropriate.

In order to minimize these problems, the following principles should be observed:
- Collect primary information using an approach that is appropriate to the assessment objectives, the context and the skills of the personnel carrying out the fieldwork.
- Undertake thorough secondary data review to ensure that questionnaires and checklists are as relevant as possible, and that they address fully the specific objectives of the EFSA.
- Train the enumerators and interviewers well. Ensure that they are able to ask questions in a non-leading and sensitive way, to probe during interviews and to triangulate information. Ensure that interviewers have a thorough knowledge of

the context and the issues to be discussed, so that they know what to look for and are alert to unusual information.
- Do not try to carry out too many interviews in one day. It is better to undertake a few high-quality interviews than many interviews that produce inaccurate and incomplete data.
- Discuss impressions and conclusions regularly among the assessment team, at least once a day during the fieldwork.
- Use a variety of informants. Ensure that the perspectives of both women and men are included.
- Triangulate the information (see **Part IV, Section 2.2**). If information from diverse sources converges, it is likely to be accurate; if it is inconsistent or diverges, it is likely that at least one of the sources is providing inaccurate information, or that perspectives differ across the sample.

**Application of these principles cannot eliminate all inaccuracies, but it will reduce them and help assessment teams to recognize when problems exist**. If it is clear that the primary information is inaccurate and none of the approaches suggested in this section reduces the inaccuracies to an acceptable level, it may be necessary to adapt the assessment or sampling approach, such as by:
- removing interview data that are clearly incorrect, and including additional informants as necessary;
- including more qualitative semi-structured interviews, to probe issues more deeply and identify the reasons for inconsistencies;
- adding new locations to the sample, particularly when using purposive sampling; for example, adding areas that have not been exposed to aid agencies might help clarify inconsistencies brought about by strategic behaviour among the beneficiaries.

## 4.2 Approaches to primary data collection

During an EFSA, primary data are collected in the following ways:
- **Household surveys**: Household representatives are interviewed using questionnaires or semi-structured interview checklists.
- **Community group discussions**: A mixed group of community members is interviewed.
- **Focus group discussions**: A group of people sharing at least one common characteristic is interviewed.
- **Key informant interviews**: Individuals with good knowledge of aspects of the community or the present emergency are interviewed.
- **Observation**: Visible and significant aspects of the affected area are noted.

Each of these approaches has strengths and weaknesses and is useful for collecting specific types of information; **the approaches should therefore be combined**. This improves the quality of the information and provides the basis for triangulation.

Four of these five approaches to primary data collection are based on interviews or discussions. These can be conducted in a variety of ways, ranging from highly structured questionnaire approaches, through semi-structured interviews, to open-ended conversations. The two main approaches used in EFSAs are **questionnaires** and **semi-structured interviews**. Each has merits and drawbacks, as explained in Boxes 3.6 and 3.7.



### Box 3.6: Main characteristics of questionnaires

**Features**
A questionnaire consists of a series of questions, carefully formulated and ordered. Questions are coded to facilitate data entry and statistical analysis. The same questionnaire is used for all the households or other informants selected from the sample.

**Advantages**
- Each informant answers the same series of questions, so the results are comparable.
- Enumerators' training is standardized, so they are all likely to record the information in the same way.
- The structured and coded nature of the questionnaire facilitates data management and analysis.

**Disadvantages**
- All issues to be investigated must be planned in advance so that a standard series of questions can be designed; there is little opportunity to adjust questions on the basis of information received during the fieldwork.
- It is difficult to collect sensitive information using a questionnaire, such as information about coping strategies that are socially unacceptable or illegal.
- It is difficult to check the accuracy of the collected information before the analysis stage, by which time it is usually too late to repeat fieldwork.

**Key issues when planning an assessment that uses questionnaires**
- The questionnaire should be designed according to knowledge about the specific context, otherwise redundant questions are likely to be included, which wastes time, and important questions left out, which reduces the usefulness of the questionnaire. Thorough secondary data review is essential prior to designing the questionnaire (see **Section 2.5**). When time allows, secondary data can be supplemented by primary information collected through semi-structured interviews with key informants, focus groups and households, before the questionnaire was designed.
- The questionnaire must be prepared in accordance with the EFSA analysis plan (see **Part II**). Questions should be designed to allow the cross-tabulations and comparisons required for the analysis.
- The questionnaire should be translated into the language in which it will be administered. Once translated, it should be translated back into the original language by a different translator to check the accuracy of the translation.
- Before it is applied, the questionnaire should be pre-tested in a zone of the assessment area. Testing helps to identify: (i) questions that are redundant and do not provide useful information; (ii) questions that need to be adapted; (iii) problems with the structure of the questionnaire; and (iv) new questions that should be added.
- Enumerators – the people who administer the questionnaires in the field – should be well trained and supervised. They should be taught how to ask the questions in a culturally sensitive way, and advised on how to pick up inconsistencies and inaccuracies in responses. They should understand the rationale behind questions so that they can ask them in an appropriate way and explain them to informants.

### Box 3.7: Main characteristics of semi-structured interviews

**Features**
A semi-structured interview is based on a pre-prepared series of questions – a **checklist or topical outline**. Unlike a questionnaire interview, the phrasing, order and form of the questions for a semi-structured interview are not fixed. Interviewers use a conversational approach and encourage respondents to explain issues in their own words and their own time. Interviewers must be alert to additional information that was not anticipated when the checklist was compiled, so that they can pursue relevant topics as they arise during the interview.

Semi-structured interviews can be carried out with individuals, household groups, gatherings of individuals such as community leaders, and focus groups.

**Advantages**
- The conversational style encourages people to be more forthcoming with information than in the formal style of a questionnaire interview.
- Sensitive issues can be addressed by formulating and timing questions to suit the informant.
- Information can be cross-checked during the interview.
- Additional information can be collected and the checklist of questions adjusted during the fieldwork.

**Disadvantages**
- The questions and interpretations of answers are not standardized, making comparison among interviews difficult.
- Interviewers require considerable skills and experience.

**Key issues when planning an assessment that uses semi-structured interviews**
- Secondary data must be thoroughly reviewed to identify information requirements and design the checklist.
- Interviewers and translators must be briefed about the context, and must understand the issues and the reasons why the information is needed.

The two approaches to primary data collection described in Boxes 3.6 and 3.7 can be combined. For example, the first phase of an assessment might use semi-structured interviews for community and focus group discussions and key informant interviews. This provides a good understanding of the problems affecting the population. Information from this phase can then be used to design a questionnaire for the second phase of the assessment. This approach has the following advantages:
- Qualitative understanding of the emergency and its impacts is developed through the semi-structured interviews.
- Statistical information is collected through the questionnaire-based survey. This information can be used to draw conclusions about the severity and scope of the problems identified.
- The semi-structured interviews and questionnaire-based survey can be cross-checked against each other.

Such an approach requires considerable time, even when the affected population and area are small. Therefore, it may not be practical for a rapid EFSA conducted over a three-week period.

Alternatively, semi-structured interviews can be undertaken at the same time as the questionnaire survey, with one group of enumerators carrying out the questionnaire survey, while another carries out semi-structured interviews with individuals and groups. It is important that the two groups consult each other at least once a day to discuss findings and adjust the methodology as necessary.

The most appropriate way of collecting primary data depends on the specifics of the emergency context.



## 4.3 Undertaking primary data collection

This section explains how to carry out **questionnaire interviews** and **semi-structured interviews**, and how to undertake the **five main approaches** to primary data collection identified in **Section 4.2**:

- household surveys;
- community group discussions;
- focus group discussions;
- key informant interviews;
- observation.

It also describes **tools** used to help informants express themselves, and interviewers to analyse the information they receive.

### 4.3.1 Formal questionnaires

#### 4.3.1.1 Conducting the interview

A questionnaire contains a standard series of questions that is asked of every respondent. Although the approach is standardized, the way in which enumerators interact with respondents and the manner in which they ask the questions can have major impacts on the quality of the data collected. Table 3.6 outlines some common pitfalls and suggests some solutions.

**Table 3.6: Common pitfalls and solutions in questionnaire interviews**

| Pitfall | Consequence | Solution |
|---|---|---|
| **Interviewer does not introduce himself/herself properly** | Respondent does not understand the reason for the visit and may not wish to answer questions. This may lead to incomplete, inaccurate or misleading answers. | Explain the reason for the visit and how the information will be used. Ask whether the informant is happy to answer the questions and whether the time is convenient. |
| **Interviewer talks to an inappropriate respondent**, such as a young child or a neighbour | Information is inaccurate. | The respondent should be an adult member of the household – not a guest – and preferably the household head or her/his spouse. If nobody suitable is available, skip this household and move to the next on the list. Return later to interview the household if possible. |
| **Interviewer goes through the questionnaire mechanically, without thinking about the responses that are being given** | Information is often incorrect, as revealed during data cleaning. For example, the reported food consumption may be incompatible with the physical status of household members. | Take time over the interview. Ask each question carefully, ensuring that the respondent has understood it properly. Think about the response, and compare it with the responses to previous questions. If necessary, repeat the question and probe to be sure that the answer is accurate. |
| **Interviewer does not observe the household and its surroundings** | Important information is missed. | During the introduction, take time to look around. Ask questions about points of interest and note the responses. Then go through the questionnaire. |

#### 4.3.1.2 Designing the questionnaire

A household questionnaire consists of a series of questions addressed to the selected households. The following principles should be applied when designing a household questionnaire:

**1. The questionnaire should be specific to the context:** Food access and consumption patterns differ markedly among countries and among areas within a country. Questions should be based on a thorough understanding of the context, which can be developed through secondary information review, primary data collection, or – ideally – a combination of the two.

**2. The questionnaire should be focused:** Each question must have a purpose. Each should contribute directly to fulfilling the information requirements and should fit into a clear analysis plan (see **Part II**). The inclusion of numerous questions that will not be used in the analysis wastes time, and can lead to poor quality responses to the questions that are needed, as both interviewers and informants become bored with very long questionnaires.

**3. Questions should provide the opportunity for cross-checking:** It is useful to include questions that provide different perspectives on the same issue, to facilitate triangulation. For example, several questions may address sources of income, receipt of remittances and migration. Questions related to household expenditure and/or consumption can be used as proxies for income.

**4. Questionnaires should be in the local language:** Questionnaires are frequently designed in a language such as English, French or Spanish that is not widely spoken in the assessment area. The questionnaire should be translated into the local language, even if the enumerators speak both languages. Back-translation is important: the questionnaire is translated into the local language, and then translated back into the original language *by a different translator*. If the re-translated version is different from the original, there is a problem with one of the translations. The process is repeated until an accurate re-translation is achieved. If necessary, translators can be changed during the process.

**Annex 1** gives an example of a good questionnaire. Note that this questionnaire was developed for a specific emergency and should not be used elsewhere without being adapted. Other examples of questionnaires can be found on the DVD that accompanies this handbook.

### 4.3.2 Semi-structured interviews

#### 4.3.2.1 Conducting the interview

Semi-structured interviews are more difficult to conduct than questionnaire-based interviews. A **checklist or topical outline** is used instead of a questionnaire, and the interviewer tries to build a relaxed and constructive relationship with the informant, through a conversational approach. This is not always easy, especially if the interviewer is not familiar with the culture and does not understand the language. Box 3.8 gives tips for carrying out semi-structured interviews.

**Box 3.8: Tips for semi-structured interviews**

**Preparation**
- Study the checklist thoroughly before setting out for the field, to avoid having to refer to it continually during interviews.
- Work in teams of two people. One asks the questions, while the other takes notes.
- If translators are used, brief them thoroughly about the purpose of the interviews and give them copies of the checklist. Explain any tools that will be used (see **Section 4.4**).
- Dress respectably for the culture, and do not overdress. Wearing expensive clothes in a poor neighbourhood can increase the psychological distance between the interviewer and the informants.

**Conducting the interviews**
- Ask the informant if he/she is happy to talk. Explain the reason for the visit and the ways in which the information will be used.
- Try to fit in with the household as much as possible. If the household members are sitting on the floor, do the same. Accept offers of tea, snacks, etc.
- Start the interview slowly. Talk about general issues such as the weather or the family. Be sympathetic and friendly.
- Gradually lead into the questions on the checklist. Give the informants time to express themselves in their own words. If answers are unclear, let the informant finish, then ask for clarification. Do not worry about the order in which the issues on the checklist are addressed; it is more important to let the conversation flow.
- Be alert to information that was not anticipated.
- Think about the responses that people give, and compare them with the information received previously from this interview and other sources. If there seem to be contradictions, ask for more explanation or ask the same questions in different ways.
- Avoid looking at the checklist frequently, as this disrupts the flow of the interview.
- Be alert to signs that the informant is becoming bored or irritated, or has other things to do. Terminate the interview politely if this happens; people have no obligation to talk to EFSA teams.

A good interviewer should be **patient, sympathetic and curious**. It takes a lot of practice to become good at interviewing. If the EFSA depends on semi-structured interviewers, the team should include experienced interviewers. These people can be paired with less experienced colleagues who can learn from them.

#### 4.3.2.2 Designing the checklist

A checklist – also referred to as a topical outline – is similar to a questionnaire in that it consists of a list of questions that need to be answered during an interview. As in questionnaires, the questions are based on the assessment objectives and knowledge of the context. There are important differences, however, including the following:
- A checklist is used to remind the interviewer to cover all the issues identified in the analysis plan (see **Part II**).
- Questions are not asked in a particular order, and the way in which they are asked is adjusted to suit the conversational approach used during semi-structured interviews.

- The interviewer should be ready to discuss relevant issues that are not on the checklist. Additional discussion points might come from observation or from the people being interviewed.
- Unlike questionnaires, checklists can be changed as the assessment progresses and understanding of the situation improves.
- Analysis from checklists is more difficult because some answers, such as narratives, cannot easily be coded.

**Annex 3** gives an example of a checklist. As with the questionnaire example in Annex 1, this is a context-specific checklist that should not be used elsewhere without adaptation. Additional examples can be found on the DVD.



### 4.3.3 Household surveys

The term "household survey" usually refers to the administration of a standard questionnaire to a random sample (see **Section 2.7**). For a household survey:

- a standard questionnaire is designed based on the information requirements identified in **Part II**;
- enumerators are trained to administer the questionnaire;
- the questionnaire is field-tested and modified as necessary;
- the final questionnaire is administered according to the chosen household sampling approach (see **Section 2.7.2**).

Household surveys can also use semi-structured interviews administered to a random or purposive sample.

Standard questionnaire surveys are most useful when there is good knowledge about the population size and location, and good physical access. Under these circumstances, a random sampling approach can be used, and statistical analyses performed on data that are coded in a standard format. Less structured household surveys are useful when access is limited, knowledge of the population is poor, or the required information is sensitive. In such cases, a purposive sampling approach and checklists are generally used, with less emphasis on statistical analysis.

In some cases, households are interviewed outside the formal household survey. This occurs frequently during initial or rapid assessments, when the depth of the information is more important than its statistical representation.

### 4.3.4 Community group discussions

Community group discussions can be particularly useful when time is limited. Community groups consist of men and women with mixed backgrounds, who are not chosen on the basis of common characteristics, as is the case with focus groups. Community group discussions generally take place in the following circumstances:

1. A discussion is organized soon after the assessors arrive at a location, as an entry point. A selected cross-section of the community takes part.
2. A discussion occurs spontaneously, when assessors are talking to an individual or small group and other people join in. Such groups can become quite large.

It is advisable to be prepared for community group discussions, as they almost always occur at some point during an EFSA. When talking to a community group, it is best to aim for breadth rather than depth of information; issues can be addressed in more depth during focus group and individual interviews. The information that can be gathered from a community group includes:

- the overall situation within the community, and the impact of the emergency;
- the livelihood strategies used in the area, and how they are affected by the emergency;
- preliminary identification of the most affected areas and groups;
- insight into the status of services and infrastructure, such as health, education, markets, water installations and roads;
- other context-specific issues.

Interviewers should be alert to new information. Community groups are excellent opportunities for uncovering information that can be probed later during key informant and focus group discussions.

**Box 3.9: Data collection in the context of sexual and gender-based violence**

The following is extracted from the **Inter-Agency Standing Committee's** guidance[48] for gender-based violence.

*During emergencies, it is unlikely that there will be any reliable data about sexual violence, most information is likely be based on anecdotal evidence obtained through a variety of sources.*
*During an emergency, many assessments are undertaken by humanitarian organizations, donors and government authorities. These assessments should include information about sexual violence, regardless of sector or organizational interests, and should be shared with the Gender-Based Violence working groups. This will avoid duplicate assessments and repetitive interviews with the community.*

*It is advised to collect and compile information related to the nature and extent of sexual violence; policies, attitudes, and practices of multisectoral actors; and existing prevention / response services and gaps. Information should include:*

- *demographic information, including disaggregated age and sex data;*
- *description of population movements (to understand the risk of sexual violence);*
- *description of the setting(s), organizations present, and types of services and activities under way;*
- *overview of sexual violence (populations at higher risk, any available data about sexual violence incidents);*

48. Guidelines for Gender-based Violence Interventions in Humanitarian Settings, Focusing on Prevention of and Response to Sexual Violence in Emergencies, IASC, September 2005.

- *national security and legal authorities (laws, legal definitions, police procedures, judicial procedures, civil procedures);*
- *community systems for traditional justice or customary law;*
- *existing multisectoral prevention and response action (coordination, referral mechanisms, psychosocial, health, security/police, protection/legal justice).*

*Collect information in accordance with guiding principles for safety, confidentiality, respect and non-discrimination, and bear in mind the sensitive nature of this issue in communities and among service providers.*

- *Methods for collecting information should involve the community and may include semi-structured interviews, site visits and observation of the environment.*
- *Secondary information sources that may be useful include existing needs assessments, reports and available data related to sexual violence.*
- *Use techniques that will gain rather than alienate community and individual trust, incorporating cultural sensitivity and extreme care in discussing sensitive topics.*
- *Ensure anonymity and safety of all information sources.*
- *Use same-sex interviewers and interpreters.*
- *Information gathering should ideally be conducted by multidisciplinary teams.*



Community groups can be difficult to manage, as they often become large very quickly. Many people may want to speak, causing a chaotic atmosphere. Interviewers should try to maintain good humour and explain that people have to speak one by one. They should encourage the quieter people to contribute, without insisting if somebody does not want to talk. If the conversation gets out of control, with too many people talking, arguments breaking out, etc., the interviewers should thank all the participants and close the discussion.

### 4.3.5 Focus group discussions

A focus group consists of people who have attributes in common, and who are able to provide information about the topic or subject that is the focus of discussion. Focus groups are extremely useful for obtaining detailed information about a topic. They are also a useful complement to a household survey, because they can provide information about sensitive subjects that are not easily addressed in a questionnaire survey (see **Section 4.3.1**), and they can be used for triangulation and cross-checking of information.

When talking to a group of no more than ten people, the opinions expressed by one person can be cross-checked immediately with the other members of the group. The group dynamics often result in more lively debate than would be achieved during individual interviews. There should not be significant power differentials among group members, as this often results in influential people dominating the discussion. Examples of focus groups include:

- farmers who use similar agricultural systems and have similar assets, such as area of land cultivated;
- traders who work with similar commodities and have similar turnovers;

- mothers and caregivers, who have primary responsibility for child care and food preparation in many societies; these are issues of crucial interest to EFSA teams.

In societies where women are less powerful or less educated than men, or where women exercise influence out of the public arena, it is advisable to talk to them separately. Focus groups are selected according to the type of information that is sought, and the nature of the emergency. Example 3.6 gives some illustrations.

**Example 3.6: Focus group discussions in the context of a drought**

The assessment team wants to discover how the drought affects different livelihood groups. Focus groups may be of:
- farmers who plant crops and sell their produce to purchase other goods;
- livestock owners who sell animals and animal products to buy food;
- traders who buy and sell crops and animals.

It is important to talk to these people separately because, among other issues, the drought may affect them differently:
- **Farmers** have reduced harvests. Consumption of their own production decreases and they have less output to sell. However, the prices they receive for their crops increase.
- Animals are in poor health because of the state of grazing and water supplies. They therefore fetch low prices at the market. **Livestock owners** have to sell their animals at low prices, but must buy food at high prices.
- **Traders** have stockpiled food crops when prices were low; they are now able to sell them at high prices, thereby making a good profit.

A semi-structured approach is used when conducting a focus group discussion. A checklist is developed, as explained in **Section 4.3.2**, and the interviewer encourages a relaxed and constructive atmosphere (see Box 3.8). Box 3.10 explains features of focus groups that must be taken into account.

**Box 3.10: Tips for facilitating focus group discussions**

**Preparation**
- Identify which groups and which individuals from those groups to talk to, through consultation with local people.
- Ensure that there are no large power differences among the people in the group, such as between a local chief and a member of a marginalized clan. When this occurs, the more powerful people tend to dominate the discussion, and the less powerful may be reluctant to express their opinions openly.
- The group should consist of between six and ten people. If there are fewer than six, the benefits of accumulated knowledge and group dynamics are reduced. If there are more than ten, the group becomes difficult to manage and individuals do not get enough time to speak.
- Draw up a checklist for the discussion. This should be specific to the context and the focus group. **Section 4.3.2** explains how to compile a checklist.
- Agree a time and place for the discussion. A secluded place is better than a public area, where onlookers may observe or participate, and the group may quickly become unmanageable.

- Dress respectably but not too formally.
- Where possible, have two interviewers: one to ask questions, and the other to record the answers.
- The assessment team should agree on a format for recording the information received during focus group discussions. The details are not important, but the format must be used consistently by different teams, to facilitate analysis.[49]

**Conducting the discussion**
- Arrange the seating so that everyone is at the same level, either all on the floor or all on chairs. Sit in a circle.
- The interviewer introduces herself/himself and explains the objectives of the exercise.
- The interviewer explains the rules for the discussion: everybody has an equal opportunity to talk, and any views can be expressed.
- The interviewer uses a checklist: topics are introduced into the conversation and group members are invited to give their inputs. The interviewer ensures that all the issues are covered, and looks out for additional information that was not expected.
- The recorder writes down the responses.
- The interviewer needs to use his/her judgement to decide when to let the discussion take its own course, and when to bring it back to the topics on the checklist.
- The interviewer tries to ensure that all the people in the group participate. Often one or two people dominate a discussion. If this starts to happen, the interviewer politely asks these people to wait, and invites input from the less forceful members of the group. Considerable tact may be needed.
- There are usually disagreements among group members. For example, one person might say that everybody is receiving relief assistance, while another says that people in certain districts receive more than others. The interviewer works through the issue by bringing other people into the discussion and probing to discover the source of the disagreement. One of the main advantages of using focus groups is this opportunity for instant cross-checking. There is often no single "truth". Group members have different perspectives, and the emergency may affect them differently. A focus group provides an opportunity to learn about these perspectives.
- The interviewer gradually moves through the topics on the checklist. At the end of each she/he summarizes the conclusions to ensure that he/she has understood what the group has been saying.
- At the end of the discussion, the interviewer summarizes all the conclusions and explains how the information will be used.

**After the discussion**
- The interviewer and the recorder agree on the results and structure them in the pre-agreed format.

### 4.3.6 Key informant interviews

Key informants are people with specialist knowledge about some aspect of the area, the population or the emergency. They should be consulted in all EFSAs. Typical key informants include:
- health workers and other service providers, such as water engineers and teachers;
- traders;
- farmers and agricultural extension workers;

49. For more details, see: Technical Guidance Sheet No. 9, Qualitative Data Collection and Analysis for Food Security Assessments, L. Morinière, WFP Emergency Needs Assessment Service, September 2007.

- government, United Nations and NGO employees;
- community leaders.

Anyone who might have an interesting perspective and knowledge about the situation can be interviewed as a key informant. The assessment team should always look out for such people during assessment planning and implementation.

Selection of key informants depends on the context and the information requirements defined in **Part II**. For example:
- if the crisis is triggered by long-term economic decline and the closure of trade links with traditional partners, key informants might include economic analysts from the local university, and market traders from different types of market – wholesale, retail, etc.;
- if the crisis is caused by drought, key informants might include farmers, agricultural extension officers and market traders.

There are no set rules for selecting key informants or the number to interview during the assessment, but the rules of thumb described in Box 3.11 can be applied.

**Box 3.11: Rules of thumb for identifying key informants**

Select **primary key informants** who are directly involved with the issues identified in the analysis plan. For example, all EFSAs cover nutrition and health status, and food availability and access, so key informants could include:
- health workers, for information about health and nutrition status and health services;
- market traders, for information about food availability and access, through inputs on price trends, supply and demand, market integration, etc.;
- fishers, crop producers, pastoralists, for information about production expectations, prices, demand for produce, etc.

Identify as many key informants as time allows, and try to select a diverse range. For example, if there is time to interview five key informants about nutrition problems, it is not advisable to talk to five nutritionists working at the same feeding centre. It would be more useful to interview:
- one nutritionist from the feeding centre, for information about the type and severity of malnutrition among children and mothers attending the feeding centre;
- one health extension worker, for information about care practices, food preparation and water usage;
- one representative of the local water authority or an NGO working in water and sanitation, for information about the quality and quantity of water available, and the sanitary environment;
- one market trader, for information about the types of food available, price trends and, hence, food accessibility;
- one teacher, for information about the nutrition and health status of children attending school.

Consulting a diverse range of key informants allows issues to be studied in depth. In this example, the different informants provide information about both the symptoms of the problem, that is the level of malnutrition seen in the feeding centre, and its possible causes – poor water quality leading to disease, poor dietary diversity and so on.

Select **secondary key informants** who are knowledgeable about the context and who may have indirect links with the issues identified in the analysis plan. These people may not be directly involved with the core sectors of interest – nutrition and food security – but they can provide contextual information and insights into the core sectors. They include:

- community leaders;
- teachers;
- local journalists;
- local NGO workers.

Secondary key informants should be interviewed as time allows. Assessment teams should look out for people who can provide interesting perspectives, and use their judgement about how long to spend talking with these people.



Key informant interviews can be undertaken individually or in groups. In the example in Box 3.11, a discussion with all five informants together would probably be interesting. Another alternative is to facilitate a **focus group discussion** among, for example, health workers or traders.

In general, key informant interviews follow the semi-structured approach (see **Section 4.3.2**). **The checklist is specific to the type of informant**, as in the following examples:

- **Health workers**: Interviews focus on factors that affect the health of the population, disease incidence and causes of poor health.
- **Traders**: The functioning of local and national markets is discussed, using the indicators in **Part II** as guidance.
- **Relief workers**: Discussion covers the crisis' impact on populations with whom the relief workers are in contact, and the type of assistance that is already being provided.

In addition to sector-specific information, it is often useful to discuss general topics with the key informants, who are often well-informed about the situation and may travel frequently to different parts of the affected area. For example:

- traders may work in several markets and can therefore provide information about the relative impact of the crisis in different parts of the affected area;
- professional people such as doctors and engineers often have friends and contacts in other sectors, such as local politicians, so may be able to talk knowledgeably about the political or social situation.

**Annex 2** gives an example of a key informant questionnaire. As with the examples in Annexes 1 and 2, this is context-specific and should not be used elsewhere without adaptation.

**A word of caution when working with key informants**: It is easy to give undue weight to the opinions of certain key informants, particularly if they are very articulate and accessible. For example, an assessment team leader who does not come from

the affected country might find it easy to talk to a university professor who has strong opinions and speaks English, French, etc. There is a danger that this person's input becomes more influential to the assessment than that of (say) a market trader who speaks only the local language. Assessors must be aware of this form of bias and should try to work with as wide a variety of key informants as possible.

### 4.3.7 Observation

Observation is an important tool in allowing a great deal of information to be assimilated quickly. It can also guide which information to collect. For example, if flood damage or adverse road conditions are observed on the way to the assessment area, these would be obvious subjects for enquiry. Observations must be used with caution, however; a factor with a strong visual impact may assume undue weight. For example, flood damage to homes and roads may be limited to a specific location with no implications for other areas.

Observation can take several forms. Some of the most useful approaches are described in the following sections.

#### 4.3.7.1 Casual observation

Fieldworkers are constantly exposed to a vast number of visual images. When carrying out an assessment, it is advisable to take advantage of every opportunity for observing the context:

- **During journeys** the features that can be observed include economic activities, such as farming, manufacture and trading; population movement along roads; climatic conditions, such as rainfall, state of pasture and crops; road conditions; security, such as road blocks and armed people; and numerous other things.
- **On arrival in a location**: After introductions have been made and before interviews begin, it is a good idea to walk around the location with members of the community. This helps to develop a feel for the location and a rapport with the local people; it also provides material for questions, through observation of people's activities, etc.

#### 4.3.7.2 Observation within households

During a household survey, using either questionnaires or semi-structured interviews, it is useful to look around the households where interviews take place. This can provide useful information about the foods consumed, cooking and hygiene practices, the types of asset that people have, and so on. Assessment teams should not be intrusive, however, and should ask permission to examine foodstuffs, visit the latrine, etc.

#### 4.3.7.3 Transect walks

The assessor walks in as straight a line as possible across the location – village,

urban district, etc. – in the company of one or more local people. The assessor records noteworthy features, such as the locations of a river, a grinding mill and different types of shelter, and discusses these with the local people. This can provide an interesting cross-section of the location. If time allows, additional transect walks can be taken along different axes.

#### 4.3.7.4 Structured observation

Observation can be used to provide specific quantitative data. For example, an observer can sit near the village water point during the times when people collect water – usually morning and evening. He/she counts the number of people coming to the water point, notes the size of containers that they use, and measures the average length of time that they spend at the water point queuing, filling, etc.

**Observations should be recorded**, otherwise it is easy to overlook the information they provide for analysis. In structured observation, this is straightforward. A standard form should be developed to be completed by all observers. In less structured approaches to observation, it is important to record the issues noted, usually in two stages:

1. The observer notes in her/his field notebook the points of interest.
2. Later, usually at the end of the day, the observer collates the information in a format agreed with the rest of the assessment team.

Table 3.7 illustrates a form for recording observations.

**Table 3.7: Form for recording observations, with examples**

| Location | Observation | Significance | Follow-up |
|---|---|---|---|
| Village X | • Poor drainage around well; spilled water flowing back into the well<br>• Animals walking around the well | • Water contamination, likely to lead to diarrhoeal disease and malnutrition, particularly among young children | • Investigate household water usage: do people boil and/or treat water?<br>• Talk to health workers about nutrition situation<br>• Undertake anthropometric measurements |
| | • Healthy livestock observed on outskirts of the village: informants have mentioned livestock health as a major problem | • Some villagers have maintained their animals' health through access to better pasture, veterinary care, etc.<br>• The healthy animals belong to people from other areas<br>• The informants have misrepresented the situation | • Ask local people who owns the animals<br>• Try to identify the factors that enable the owners of this herd to keep their animals healthy |

## 4.4 Participatory tools for primary data collection[50]

**The tools presented in this section can be used in any of the interview and discussion formats described in Section 4.3**. The tools:

- help informants express themselves, by structuring the way in which issues are discussed; this is especially useful when informants are unfamiliar with quantitative concepts, such as percentages, and are not used to categorization according to priorities, timeframes, etc.;
- help assessors to analyse the information received, by converting data – often qualitative – into standard frameworks;
- facilitate discussion, because working through a task together can help break down barriers between informants and interviewers; in focus groups, the tools can stimulate discussion.

The tools should be used selectively. Not all of them are useful in every situation; in some situations, none may be useful. For example, they are unlikely to be useful in a key informant interview with a highly educated professional, such as an engineer or a doctor.

Assessment teams should use their judgement to decide which tools, if any, to use in a given situation. Additional tools not included in this handbook, such as Venn diagrams showing institutional relations, may also be used.[51]

### 4.4.1 Daily calendars

Informants are asked to describe a typical day, giving as much detail as possible about the activities that they carry out and the amount of time each takes.

Daily calendars help the assessment team to find out how different members of a community spend their time, and ways in which daily routines may change in response to a shock. They can also guide programme design. For example, if people spend five hours a day collecting water, the development of an improved water supply should be considered. Comparing current daily schedules with past ones helps identify trends. For example, if people who used to find fuelwood within half an hour now have to walk for two hours to find it, it can be concluded that there may be a deforestation problem.

50. Section 4.4 is adapted from Guidelines for Emergency Assessment, (IFRC), 2005; and Participation by Crisis-Affected Populations in Humanitarian Action: Practitioners' Handbook, Active Learning Network for Accountability and Performance in Humanitarian Action. See also Participatory Techniques and Tools - A WFP Guide, 2001.

51.Technical Guidance Sheet No. 9 Qualitative Data Collection and Analysis for Food Security Assessments, L. Morinière, WFP Emergency Needs Assessment Service, September 2007; and Participatory Techniques and Tools - A WFP Guide, 2001.

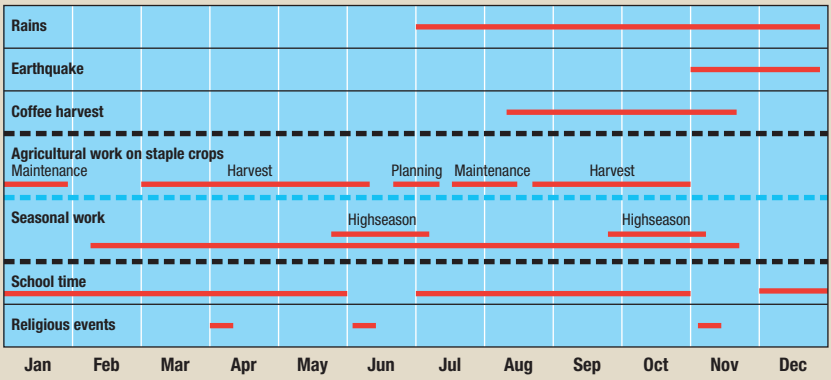
It is often useful to carry out separate exercises with different members of a household, such as children, men and women.

### 4.4.2 Seasonal calendars

Informants are asked to identify events that take place at particular times of a normal year. These include climatic events such as rains or cold weather, livelihood activities such as planting, harvesting or labour migration, cultural events such as religious festivals, and other events that are significant to the community. These are plotted on a calendar, and unusual events resulting from the current crisis are superimposed on this.



**Figure 3.1: Example of a seasonal calendar**

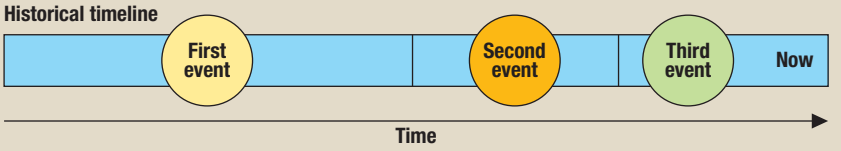



A seasonal calendar can indicate whether something is normal, in that it happens regularly, or new. For example, some agricultural areas always have a hunger gap just before the harvest. The people living in these areas have developed systems for coping with this difficult period. Limited food availability at this time of year is therefore much less significant than it would be immediately after the harvest. Seasonal calendars are also useful if activities have to be coordinated and timed to fit in with local schedules, such as seed or food distributions, which may be affected by the state of roads at certain times of year. People's workloads should also be taken into account when planning activities. For example, people tend to be very busy during planting and harvesting periods.

### 4.4.3 Historical time lines

A historical time line provides a useful overview of how the current crisis fits into a historical perspective. It shows whether this type of crisis is a regular or a one-off occurrence. It also helps identify trends. For example, a time line might show that drought is affecting an area more frequently than in the past.

**Figure 3.2: Example of a historical time line**




There are numerous ways of constructing a historical time line. When informants are not used to attributing specific dates to events, the following approach can be used:

- A line is drawn to represent a given period, say 20 years.
- Informants are asked to identify two or three important events that have occurred within the time period, such as the start/finish of conflict, national independence, elections, major floods or volcanic eruptions. These are located in chronological order on the line.
- People then think about significant events, both positive and negative, and locate these on the line, explaining their causes and impacts.

### 4.4.4 Proportional piling

This is useful for estimating quantities and proportions, especially when working with people who are not used to quantifying data. For example, to discover the proportions of a livelihood group's annual income to come from different sources, the procedure is as follows:

1. Collect 100 dried beans, pebbles or anything similar that are all more or less the same size.
2. Working with a focus group drawn from a specific livelihood group, ask the informants to divide the beans into piles relative to the income received from each source.
3. Count the number of beans in each pile; this number is equivalent to the percentage of annual income to come from that source.

**Figure 3.3: Example of proportional piling**


As well as quantifying data, proportional piling is also a good facilitation tool. An activity of this kind can break down barriers within a group of people. It can focus discussion, as there is usually considerable debate about the relative sizes of the piles; this encourages participation and enhances accuracy.

### 4.4.5 Pair-wise ranking

This is a good way of analysing the relative importance of different factors, such as when identifying which problems people consider the most severe. For example, four major problems have been identified: lack of rain, lack of health care, poor domestic water sources, and insecurity. Each problem is inserted on a grid, with the cells along and below the diagonal blanked out, as shown in Table 3.8, to ensure that questions are not asked twice. Each pair of factors is then considered in turn, and the responses to the following questions noted on the grid:

- Which is the more severe problem, rain or health care? In this example, the answer is health, which is noted in the relevant box.
- Which is the more severe problem, rain or domestic water? Rain, in this example.
- And so on…

| Table 3.8: Example of pair-wise ranking | | | | |
|---|---|---|---|---|
| | **Rain** | **Health care** | **Domestic water** | **Insecurity** |
| **Rain** | | Health care | Rain | Insecurity |
| **Health care** | | | Health care | Insecurity |
| **Domestic water** | | | | Insecurity |
| **Insecurity** | | | | |

Count the results, which in this case are as follows:
- Lack of rain: 1.
- Lack of health care: 2.
- Poor domestic water sources: 0.
- Insecurity: 3.

This indicates that for this group, insecurity is the most serious problem, and poor domestic water sources the least serious. Domestic water's score of zero does not mean that it is not a problem, but that the group considers it to be less severe than the other three problems.

# Part IV
# Analysing EFSA data

## Contents of Part IV

chapter 1

# Introduction

The EFSA analytical process adopts a dynamic approach to interpret food and nutrition security by examining the *current* situation, as well as the *past* and the *future*:

- Analysis of the **current situation** determines whether or not food security and nutrition are compromised now.
- Analysis of the **past** establishes **trends**: is the situation improving, deteriorating or remaining constant?
- **Scenarios** are developed for forecasting the direction and magnitude of **future** trends.

Throughout this analysis, the **risks** faced by the population are balanced against the population's **capacities** – coping and resilience – and **vulnerabilities**.

To analyse the population's food security and nutrition situation, communities are disaggregated into groups that share similar **livelihoods** and are likely to be affected by **shocks** in similar ways. These groups are considered individually; their specific livelihood assets and strategies, the shocks to which they are exposed, and their capacities and vulnerabilities are analysed in relation to the overall context. Other relevant issues, such as gender, HIV/AIDS and displacement, are also considered.

The EFSA analytical process is divided into two key stages, which are summarized in Table 4.1.

**Table 4.1: Stages of EFSA analysis**

| Stage | Objectives |
|---|---|
| **Situation analysis** | • Describe the food security and nutrition status of the population<br>• Identify the population's coping strategies<br>• Determine whether food insecurity and malnutrition are chronic or transitory |
| **Forecast and response analysis** | • Forecast the evolution of the situation, using scenarios – projections of how the situation is likely to develop<br>• Determine the need, or otherwise, for external intervention<br>• Determine the types of intervention that are appropriate, and their characteristics: level, duration, target groups, etc.<br>• Determine the capacities of the various stakeholders to provide assistance, and identify the remaining gaps |

The following sections explain these stages. It should be noted that analysis is iterative. Steps are often repeated as more information becomes available and understanding improves. The order presented here is generally the order in which the steps are taken. In a real assessment, numerous feedback loops exist, as information is refined and new questions are raised.

chapter 2

# Essential concepts and methods

This section explains some of the concepts that are essential to EFSA analysis, building on the guidance given in **Parts II** and **III**.

## 2.1 Vulnerable groups, including livelihood groups

In an EFSA, it is useful to distinguish population groups according to the characteristics that make them vulnerable. A household's level of vulnerability reflects the extent to which it can cope with shocks affecting nutrition and food security.

**During the assessment**, the identification of vulnerable groups assists:

- the sampling and identification of which groups to assess (see **Part III**), such as people displaced during a conflict;
- the identification of issues that affect vulnerability; for example, if adaptation of the Food and Nutrition Security Conceptual Framework (see **Part I**) indicates that vulnerability may be related to livestock ownership, groups would be distinguished according to the size of their herds.

**During the situation and response analyses**, identification of the characteristics that affect vulnerability is used to:

1. Estimate the impacts of a shock on different segments of the population;
2. Target assistance, if provided; identification of the observable characteristics of vulnerable groups is essential to targeting.

The characteristics that make a group vulnerable depend on the nature of the crisis. For example, in a conflict, the primary indicator of vulnerability might be displacement. Households would therefore be categorized as IDP or resident, and most data analysis would be based on these two groups. In other situations, gender, education level or the presence of a chronic disease such as HIV/AIDS may be used to categorize groups.

In EFSAs, vulnerable population groups are usually defined according to livelihoods, particularly when the shock has an economic impact and its overall impact differs according to households' livelihood assets and strategies. A **livelihood group** is

defined as: *A group of people who share similar basic means of livelihood and life styles – the same main subsistence activities, main income activities and social and cultural practices – and face similar risks to food and nutrition insecurity*.

Livelihood groups can be defined in various ways. When possible, **pre-crisis definitions** of livelihoods should be used,[52] as this facilitates comparison. However, this may not be feasible, either because livelihood groups have not been previously defined, or because pre-crisis definitions are no longer relevant, such as when large-scale displacement or other social change has occurred.

If pre-crisis definitions cannot be used, livelihood groups are defined according to **primary productive activity**. This helps to ensure that the groups distinguished *are relevant to the local context*. Which activities are defined as "primary productive activities" depends on the area and the ways in which local people describe themselves. Wherever possible, people from the affected area should be involved in defining livelihood groups, through focus group or key informant interviews.



Examples of primary productive activities include:
- subsistence farming;
- cash crop farming;
- pastoralism;
- fishing;
- petty trade;
- daily labour.

Note that these categories do not denote the *only* productive activities undertaken by the households. For example, although subsistence farmers are likely to produce a substantial proportion of the food they eat, they will probably supplement this through other activities, such as selling cash crops or engaging in daily labour.

Once the livelihood groups have been defined, details of each group's livelihood strategies are identified. For example, subsistence farmers may gain 60 percent of their food from own production, 20 percent from selling produce, 10 percent from handicrafts, and 10 percent from casual labour.

The number of livelihood groups defined depends on the complexity of the economic environment and the extent to which the crisis effects differ among groups, as illustrated in the following examples:
- If locusts have destroyed crops, livelihood groups involved with crop production and sales should be defined, such as the farmers who produced the damaged crops, crop traders, labourers who are normally employed during the harvest, and people who purchase the crop in local markets.

52. For example, the baseline information provided by WFP CFSVAs usually includes a description of livelihood groups.

- The outbreak of widespread conflict affects all sectors of the economy, but the impacts are likely to vary according to livelihood group. Numerous livelihood groups should therefore be identified, and the impact of the crisis on each analysed.

When defining population groups, livelihoods can be combined with other characteristics. For example, if refugees are identified as a group at risk, they could be subdivided into livelihood groups: those whose livelihoods are based on daily labour, those depending on food aid, etc.

Having established *who is vulnerable to food insecurity*, it is necessary to understand *why* they are vulnerable. This means examining the factors that affect food security and nutrition, and the risks that food insecurity poses to the livelihoods of affected households. It involves:

- identifying the characteristics of food-insecure households and malnourished individuals;
- identifying the factors that contribute to food insecurity, malnourishment, coping mechanisms and specific vulnerabilities;
- determining the extent to which food security and malnutrition problems are directly related to the current crisis, or are persistent: are they **chronic** or **transitory**?

**Box 4.1: Chronic and transitory food insecurity**

A state of food insecurity may be chronic or transitory, depending on its evolution over time:

- **Chronic food insecurity** is a long-term or persistent inability to meet minimum food requirements. As a rule of thumb, food insecurity **lasting for at least six months a year** can be considered **chronic**.
- **Transitory food insecurity** is a short-term or temporary inability to meet minimum food requirements, indicating a capacity to recover. As a rule of thumb, limited periods of food insecurity related to sporadic crises can be considered transitory.

These definitions do not presuppose the **severity** of the food insecurity; for example, transitory food insecurity may be short-lived but very severe. People who are chronically food-insecure are likely to be particularly vulnerable to transitory food insecurity. Repeated periods of *transitory* food insecurity may lead to a situation of *chronic* food insecurity if people do not have time to recover fully from one crisis before the next one arrives.

(See **Section 3.5** and Technical Guidance Sheet No. 5 *Distinguishing between Chronic and Transitory Food Insecurity in EFSAs*, WFP Emergency Needs Assessment Service, December 2007.)

## 2.2 Triangulation and convergence of evidence

**Triangulation** is the process through which information from different sources is compared to determine whether or not **evidence converges**.

Example 4.1 illustrates the triangulation process.

**Example 4.1: Triangulation**

An EFSA team is investigating the functioning of markets after a hurricane. Access to the affected area is impossible, so the assessment team relies on information from key informants and secondary data.

**Woman who travelled from the area yesterday**: "The main road is flooded. The usual market area is not accessible. In some of the smaller markets, food seems to be available, but in much smaller quantities than usual."

**Market trader who has not been in the affected area since the hurricane**: "I usually go to the market every Wednesday. It is my main source of income for the week. However I have not been able to get there since the hurricane, because of the flooded roads. My produce is rotting, and my income is seriously reduced."

**Woman who lives in an area that was not affected by the hurricane**: "I don't think there is such a big problem with markets there. We are all poor and we all need help."

**Reputable evaluation report from the previous major hurricane, which hit the area five years ago**: "Markets were seriously affected by the flooded roads. Food access was severely disrupted for up to four weeks in some areas. This led to widespread economic loss and malnutrition among young children."

**Local highway engineer**: "The drainage systems in the affected area are overdue for maintenance. We have been telling the local government this for years, but no funds have been available. This means that floods will recede more slowly than usual, and the state of emergency will persist longer than it did after the hurricane five years ago."

Informants 1 and 2 indicate that the floods are disrupting the markets. Both seem to be reliable: informant 1 because she travelled from the area recently; and informant 2 because she is intimately involved with the local market.

These statements about the current situation are supported by information from the evaluation report, which shows that markets were disrupted in a previous similar crisis, and by the engineer's statement that the flooding problem will probably be worse than last time. Both of these sources seem to be reliable.

Informant 3 contradicts the other four sources. She can be considered less reliable, however: her information is not first hand, and she seems to be trying to convince the assessors that her area needs assistance, even though it is not directly affected by the hurricane.

On the basis of this evidence it can be concluded, *with reasonable confidence*, that markets will be seriously disrupted, and that this will have consequences on lives and livelihoods.

Triangulation is essential to the analysis of both qualitative and quantitative data:

- with qualitative data, information from different focus groups and key informants is compared;
- with quantitative data, conclusions from different cross-tabulations are compared.

Triangulation can also be used to check consistency between qualitative and quantitative data. For example, surveys using quantitative data can be cross-checked against surveys using qualitative data among the same population.

chapter 3

# Conducting a situation analysis

Situation analysis focuses on the *current* food security and nutrition status of the population *at the time of the assessment*. Ultimately, an EFSA situation analysis should result in answers to the following core questions:

1. How many people are food-insecure?
2. Which population groups are at risk?
3. Who are the people at risk?
4. Why are they at risk?
5. How severe is the situation?

A situation analysis should answer these questions by considering the following factors:

- The status of food security and nutrition, and the factors that affect them – availability, access, utilization, health and care – among different communities, groups and individuals.
- The severity of food insecurity and nutrition problems among different communities, groups and individuals.
- The type of coping strategies currently used to withstand the crisis.
- The affect(s) of the shock on livelihoods.
- The number of people affected, and their locations.

The severity of a food security or nutrition crisis depends on the extent to which health and/or livelihoods are threatened. It is difficult to measure severity, or potential severity, at the start of a crisis. It may be easier to measure it later, once the crisis has unfolded, for example, through nutrition surveys. By then, however, it may be too late to avert suffering and death. To avoid waiting until mortality and malnutrition have reached unacceptable levels, severity can be estimated using **proxy indicators**, as described in **Part II, Section 5.3**.

This section describes critical steps in conducting a situation analysis, each of which is intended to answer the core questions. In an EFSA, the steps of situation analysis are often carried out concurrently, and may be repeated several times as understanding of the situation improves. The steps for conducting a situation analysis are:

**Step 1:** Synthesize contextual information to gain a broad understanding of the nature of the crisis.
**Step 2:** Use quantitative and qualitative data to estimate the numbers of households and individuals that are food-insecure and malnourished.
**Step 3:** Determine the characteristics of the households and individuals facing food insecurity and malnutrition, and define their livelihood or other relevant characteristics.
**Step 4:** Identify the reasons why people are food-insecure and malnourished and why their livelihoods are at risk.
**Step 5:** Determine whether food insecurity and malnutrition are chronic or transitory.
**Step 6:** Estimate the severity of food insecurity and malnutrition.



## 3.1 Step 1: Synthesize contextual information to gain a broad understanding of the nature of the crisis

A sound knowledge of the context is essential if the factors causing malnutrition and food insecurity and the linkages among these are to be understood. Contextual information is gathered from both secondary and primary sources (see **Part II**).

Contextual information is used continually to inform the analysis, particularly during Step 5. **Part II** provides useful information for this. The analysis includes food availability from crop production and market supplies, and access to key services, particularly health and education.

**Contextual information is constantly updated throughout the assessment**. Assessors should always look for people who can enhance the assessment team's understanding of the situation.

## 3.2 Step 2: Use quantitative and qualitative data to estimate the numbers of households and individuals that are food-insecure and malnourished

The population groups that are likely to be facing food insecurity can be identified:
- Select key indicators that measure food insecurity and coping strategies (see **Part II**).
- Define thresholds that indicate the degree of severity for each indicator or combination of indicators (see **Part II**).
- Determine the numbers of individuals and households that are at risk according to each of the chosen indicators and thresholds.
- Estimate the numbers of individuals and households that are likely to be suffering from food insecurity, as a proportion of the population sample.

- Estimate *the total number of people in the population* whose food security is at risk by multiplying the proportion of the sample that is at risk by the total population size.

It is often difficult to obtain accurate and up-to-date data on the total population size in crisis-affected countries. Technical Guidance Sheets[53] Nos. 7, 10 and 11, provide guidance on methods for estimating population size when data are unavailable, unreliable or contested.

In some emergencies, it is impossible to obtain a random sample. In such cases, purposive sampling may be the best option available.

Example 4.2 illustrates this process.

**Example 4.2: Extrapolation of conclusions when no random sample is available**

For an EFSA in a conflict-affected region, access to some parts of the region is impossible. Large-scale displacement has occurred.

A household survey is undertaken, based on a purposive sample of three villages where both IDPs and residents live:
- Residents and IDPs are consulted about social, economic, cultural and other variables in the conflict-affected region during normal times.
- IDPs are consulted about their areas of origin, and when they travelled from these areas. The most up-to-date information about these areas and their similarities with those in which the survey is taking place are collected.

It is necessary to **judge the extent to which the sample is representative of the wider population**. If discussions with residents and IDPs indicate that the situation in other areas is broadly similar to that in the villages sampled, the conclusions of the assessment can be extended to the wider population *with caution*.

In the assessment report, the process of extrapolation should be explained in detail, and the limits to its statistical validity stated clearly.

A more thorough assessment will be carried out as soon as access is possible.

53. Technical Guidance Sheet No. 7 Area Method to Estimate Population Size and Demographics in Emergency Food Security Assessments, A. Henderson, WFP Emergency Needs Assessment Service, September 2007; Technical Guidance Sheet No. 10 Using the Delphi Method to Estimate Population Size and Demographics in Emergency Food Security Assessments, A. Henderson, WFP Food Security Analysis Service, January 2008; Technical Guidance Sheet No. 11 T-Square Method to Estimate Population Size and Demographics in Emergency Food Security Assessments, A. Henderson, WFP Food Security Analysis Service, December 2008.

### 3.2.1 Households facing major health risks

Nutrition data can be used to identify individuals and households that may be facing major health risks. When collecting nutrition data, statistical software is typically used to calculate the proportions of malnourished individuals. These proportions are extrapolated to the whole population of interest, if the sample is representative.

Households that have poor food consumption at the time of the assessment and are expected to remain in that situation for the next month or more are likely to face major health risks, particularly among vulnerable members with added nutrition needs, such as young children, the sick and the elderly. Pregnant women's expected newborns are also likely to face major health risks.

Households that are using certain coping strategies and are expected to continue using these in the next month or more could also face health risks. The coping strategies concerned are context-specific, and include sustained skipping of meals, dropping of health treatment to save money for food, consumption of contaminated water for drinking and food preparation, and consumption of wild resources that are inappropriate for consumption.



### 3.2.2 Using qualitative data to estimate the number of households that are food-insecure

In qualitative data analysis, the current status of food insecurity is investigated using information gathered from focus group discussions and key informant interviews. Box 4.2 shows the procedure for this (see **Part III** for guidance on semi-structured interviewing and the use of data collection tools).

**Box 4.2: Qualitative identification of population groups, households and individuals facing food insecurity and malnutrition**

The criteria for food security – food access and food consumption – used in quantitative data analysis can also be used in qualitative data analysis; **Part II** provides guidance on which indicators to discuss. These criteria can be analysed during a focus group discussion as follows:

1. Ask the group how people obtain access to food.
2. Determine whether each means of access is considered poor, average or good.
3. Using proportional piling (see **Part III, Section 4.4.4**), estimate the proportions of households in the community that rely on poor, on average and on good ways of obtaining access to food.
4. There will now be three piles. Keep these piles.
5. Ask the group to explain the diets – the types of food – consumed by different groups in the community.
6. Determine whether each diet indicates poor, borderline or acceptable food consumption.
7. Take each of the piles from step 3 in turn. Ask the group to divide each pile according to the proportions of poor, borderline and acceptable food consumption.
8. Count the beans and enter the numbers in a table.

*(cont…)*

*(cont…)*

Coping strategies are investigated in a similar way to that proposed for analysing quantitative data, adapted as follows:

1. List the coping strategies that people use, and the severity related to each, as explained in **Part II, Section 7.3.4**.
2. For each group, check whether its members are using damaging coping strategies. This may result in re-categorization of some groups. For example, people who are found to use highly damaging coping strategies may be re-categorized as severely food-insecure.

Having determined the **proportion** of people at risk in the community, the **number** can be estimated using population figures for the community. These may come from a census, a village/town/district register, estimation by community members, or any other source that is appropriate to the context.

It is advisable to harmonize, as much as possible, the ways in which different communities describe food consumption and access, to facilitate comparison among communities.

In an assessment, similar exercises are undertaken in different communities. The results are **triangulated** to determine the level of confidence with which they can be treated and the extent to which generalizations can be made about the wider area and population.

The qualitative approach can be applied to investigating other types of risk to livelihoods that were not anticipated when the assessment was planned. **This is a major strength of the qualitative approach**. Informants are asked to explain risks in their own terms and to identify the individuals and groups that are vulnerable to these risks. Numbers of people at risk are estimated as described in Box 4.2.

## 3.3 Step 3: Determine the characteristics of the households and individuals facing food insecurity and malnutrition, and define their livelihood or other relevant characteristics

Step 2 defined the numbers of individuals and households who are food-insecure. In Step 3, **profiles** of these people are developed. The aim of this step is to:

- categorize the livelihoods of the people who are food- and nutrition-insecure;
- define easily recognizable characteristics that can be used to identify at-risk people – IDPs, women-headed households, pastoralists, etc. – for targeting, should an intervention be necessary.

Profiling is done by:

- cross-tabulating, or matching in the case of qualitative data, the food-insecure people with their livelihood characteristics, at the individual, household, community and national levels;
- defining population groups that can be used for targeting, such as livelihood groups.

When nutrition status data are available, it is useful to cross-tabulate or compare these with the information collected during the nutrition and food security components of the assessment. This provides information about the characteristics of the households where malnutrition exists, and the possible causes of malnutrition. The way in which cross-tabulations and comparisons are made depends on the data collection approach. Table 4.2 provides guidance on this aspect of analysis.

**Table 4.2: Characteristics of households where malnutrition exists**

| Methodology for collecting nutrition information | Cross-tabulations and comparisons |
|---|---|
| **Anthropometric data collected simultaneously with food security, health and care information:**<br>*Same households*<br>*Same geographical area*<br>*Same time* | **Direct cross-tabulation/comparison of malnutrition with:**<br>• Household food security status<br>• Food access and consumption indicators<br>• The health and public health environment<br>• Care information |
| **Anthropometric data collected in parallel with food security, health and care information:**<br>*Different households*<br>*Same geographical area*<br>*Same time* | **Comparison between the geographical concentration of malnutrition and geographical information on:**<br>• Household food security status<br>• The health and public health environment<br>• Care information |
| **Only household food security, health and care information available:**<br>*Anthropometric data not collected and not available from other surveys* | **Only hypotheses of the nutrition situation can be made, based on:**<br>• Household food security status<br>• Food consumption patterns, preferably at the individual level<br>• The public health environment<br>• Care information |

### 3.3.1 Using quantitative data to create profiles of households and individuals facing food insecurity and malnutrition

With quantitative data, each food- and nutrition-insecure individual and household is cross-tabulated against a range of livelihood characteristics, such as:

- key livelihood characteristics, which should be included in every assessment;
- context-specific livelihood characteristics, which depend on the communities and areas being assessed and the nature of the crisis.

The following key livelihood characteristics should *always* be considered:

- **Locations** of individuals and households: name of area, village, town, etc.
- **Residential status** of households: resident, IDP, refugee, returnee, hosting displaced people, etc.
- **Sex, age and health status** of individuals whose nutrition status is measured.
- **Sex, age and education level** of heads of households.

- **Size and age composition** of households, including dependency ratio[54] or proportion of dependants,[55] where appropriate.
- **Sources of food** for individuals and households.
- **Sources of income** for individuals and households.
- **Markets:** physical access to markets in distance and time, proportions/amounts of food and other items purchased at markets.
- **Coping strategies** used by individuals and households.
- **Health and disability status** of household members, with details of diseases, chronic sickness and disability.
- **Health care access:** physical access to health services, constraints to health care access.
- **Water access:** quantity and quality of households' water sources, distance(s) to them.
- **Sanitation facilities:** types and extent of usage by household members.
- **Housing:** type and quality, protection from heat, cold, rain, wind, etc.
- **Assets:** types, numbers and values (when/if possible).

Other livelihood characteristics and their relevance to risks of food insecurity are context-specific. These are identified through:
- contextual analysis of the specific community and the factors that affect it;
- analysis of the changes affecting the community as a result of the current crisis.

Context-specific characteristics are identified on the basis of the background information gathered in Step 1 (see **Section 3.1**).

Cross-tabulations are used to develop a series of **profiles** of individuals and households at risk. Other statistical techniques such as regression analysis can also be used.

Having profiled the food- and nutrition-insecure individuals and households, the next step is to define easily identifiable at-risk groups. These may be **livelihood groups** or other relevant groups (see **Section 2.1**). If possible, groups should be defined in the same ways as they were before the crisis, to facilitate comparison. If groups were not defined before the crisis or if the definitions of groups are no longer relevant, livelihood groups must be defined on the basis of the survey data.

54. The household dependency ratio is the number of individuals aged under 15 or over 64 years, divided by the number of individuals aged 15 to 64 years, expressed as a percentage. Age thresholds may have to be adapted to the norms in the country concerned.
55. The proportion of dependants is the number of dependent household members divided by the total number of household members, expressed as a percentage. Definition of a dependant is context-specific, and may include people who are under a certain age, over a certain age, chronically sick, or disabled.

### 3.3.2 Using qualitative data to create profiles of households and individuals who are facing food insecurity and malnutrition

In Step 2, the analysis of qualitative data was based on focus group discussions and key informant interviews investigating aspects of risk to people's food security and livelihoods. The numbers of individuals and households facing food or nutrition insecurity were also estimated. Information on the *characteristics* of the people at risk is usually collected during the same interviews, as described in Box 4.3.

**Box 4.3: Defining the characteristics of households and individuals facing food insecurity and malnutrition, using qualitative data**

For more guidance on conducting focus group discussions, see **Part IV** and Technical Guidance Sheet No. 9.[56]

During a focus group discussion, the interviewer poses a question similar to the following: *"You have explained the types of risks to which people are exposed. Can you now tell me what sorts of people are vulnerable to these risks?"*

The group may start by giving vague descriptions of "people who live over there", or "farmers". They may say that everyone is exposed to the risks. It is usually necessary to **probe** extensively. Interviewers ask detailed questions, continually **cross-checking** the answers with different members of the focus group, and with information collected from previous interviews.

Look for the same information as recommended for cross-tabulations in quantitative data analysis (see **Section 3.3.1**). Key characteristics that should always be investigated are:

- **Location** of individuals and households: name of area, village, town, etc.
- **Residential status** of households: resident, IDP, refugee, returnee, hosting displaced people, etc.
- **Sex, age and health status** of individuals whose nutrition status is measured.
- **Sex, age and education level** of heads of households.
- **Size and age composition** of households, including dependency ratio or proportion of dependants, where appropriate.
- **Sources of food** for individuals and households.
- **Sources of income** for individuals and households.
- **Markets:** physical access to markets in distance and time, proportions/amounts of food and other items purchased at market.
- **Coping strategies** used by individuals and households.
- **Health and disability status** of household members, with details of diseases, chronic sickness and disability.
- **Health care access:** physical access to health services, constraints to health care access.
- **Water access:** quantity and quality or households' water sources, distance(s) to them.
- **Sanitation facilities:** types and extents of usage by household members.
- **Housing** type and quality: protection from heat, cold, rain, wind, etc.
- **Assets:** types, numbers and values (when/if possible).

In addition, informants are asked to explain other context-specific characteristics that increase vulnerability to food insecurity.

During the focus group discussion, the interviewer lists the characteristics and links them

*(cont…)*

56. Technical Guidance Sheet No. 9 Qualitative Data Collection and Analysis, L. Morinière, WFP Emergency Needs Assessment Service, September 2007

*(…cont)*

to the specific risks identified in Step 2. At the end of the discussion, she/he reads out the list and the linkages to ensure that he/she has understood correctly.
Information from different discussions and interviews must be compared and **triangulated**. If there is solid **convergence of evidence**, it can be concluded that these characteristics contribute to food insecurity. If evidence does not converge, the analysts must look for reasons why. The following are some possible explanations:
- Informants from different groups are talking about different at-risk populations.
- Informants have different perceptions of risk.
- Some interviews and discussions were conducted more thoroughly than others.
- Information has been misinterpreted.

Wherever possible, inconsistencies should be identified during the interview or discussion (see guidelines on interview technique in **Part III**). This facilitates on-the-spot revision of data.

Groups that are at risk are then profiled on the basis of the characteristics described by the informants (see **Section 2.1** for ways of defining groups).

## 3.4 Step 4: Identify the reasons why people are food-insecure and malnourished and why their livelihoods are at risk

This step is the same for both quantitative and qualitative data analysis, although statistical analysis can be applied to quantitative data to help determine risk factors.

Knowledge of the context (Step 1) is combined with the characteristics of the people facing food insecurity and malnutrition (Step 3) to draw conclusions about the *reasons* why people are at risk:
- The characteristics of **each group** are compared with the nature of the risk affecting the group and the characteristics of the people who are not at risk.
- Judgement and a thorough knowledge of the context are used to draw conclusions about which characteristics are associated with risk.

Example 4.3 illustrates this process.

### Example 4.3: Identifying the reasons why people are at risk

A crisis is characterized by:
- high rates of malnutrition, leading to health risks among under-5 children in group X;
- no obvious problem with food security: food consumption, food access and coping strategies all indicate that households are not food-insecure or facing risk to livelihoods.

Households in group X have the following characteristics:
1. Livelihoods are based on agriculture, growing crops for own consumption and sale.
2. Most household heads are male, aged between 25 and 60 years.
3. Education levels are low, particularly among women.
4. Health access is good; there is a well-stocked and well-staffed clinic close by.
5. Market access and functioning are good, and prices are normal for the season.
6. Water quality and quantity are poor; water is collected from a well with a declining yield.

Each of these characteristics is compared with the nature of the risks:
1. The type of livelihood does not seem to be a risk-causing factor, as food security is satisfactory.
2. There is no obvious causal link between malnutrition and the sex of the household head.
3. The low education level among women may lead to poor care, food preparation and water handling practices.
4. Households appear to have good access to curative health care.
5. Effective markets indicate that farmers should be able to sell their produce and buy essential items.
6. Poor water supplies could lead to disease and malnutrition among young children.

On the basis of this analysis, it would appear that the main risk-related characteristics among group X are:
- low levels of female education;
- poor water supplies.

Once these hypotheses are made, further evidence is sought to corroborate or refute them. If random sampling and quantitative data are used, the primary factors associated with malnutrition can be ascertained through regression analysis. Triangulation with information from other sources – key informants, health data, etc. – can strengthen this analysis.



The factors associated with risk are more effectively determined when consultations are held among members of the assessment team, representatives of the affected communities and technical experts. If shortage of time makes it impossible to convene this ideal group, a group of assessment team and country office representatives can undertake the analysis.

Table 4.3 gives some *examples* of people who may face risks to health and livelihoods, and possible reasons why they are at risk.

**Table 4.3: Examples of individuals and households who may face risks to health and livelihoods, and possible reasons why**

| Individuals or group at risk | Possible reasons for vulnerability |
|---|---|
| **Children under 5 living in area X** | • Mothers spend many hours a day collecting fuel and water, so are unable to dedicate sufficient time to preparing food and feeding their young children |
| **School-aged children** | Long-term livelihoods are compromised because:<br>• children are taken out of school to work;<br>• children who attend school are malnourished, and therefore unable to learn well |
| **Nomadic livelihood group:** *households' main productive activity is raising animals for the sale of animal products* | • Drought causes deaths and poor health among animals, making owners eager to sell; livestock prices decrease, and nomads also have fewer dairy products to sell<br>• Low livestock prices and reduced sales of products reduce income; food access declines and animals are sold beyond the regenerative capacity of the herd |
| **Petty traders livelihood group:** households' main productive activity is the trade of small quantities of food and other commodities | • Insecurity makes roads unsafe, reducing the movement of goods and people; income from trade disappears |
| **Internally displaced people** | • Loss of livelihood assets and strategies leads to loss of income and food |

**Causality** is often **two-way**, and **feedback loops** frequently exist. The following are examples:

- Food insecurity might cause malnutrition, because household members are unable to obtain and consume sufficient quantities or diversity of foodstuffs.
- Malnutrition might cause food insecurity, because productive household members are weakened, become unable to work and, hence, are unable to earn enough money with which to obtain food.

Analysts should be careful not to confuse **association** with **causality**, as illustrated in Example 4.4.

**Example 4.4: Association and causality**

An agricultural area is affected by floods just before the harvest. Most of the staple crops are lost. Soon after this event, abnormally high levels of acute malnutrition are found among children in the area.

It might be assumed that flood damage to crops has resulted in low food availability and, hence, malnutrition. However, closer analysis reveals that food availability is satisfactory because markets are functioning well. The households with malnourished children are those that depend on daily labour – in normal times they rely on harvesting work to earn money for food purchases. They are unable to work because of crop destruction. The primary cause of the problem is therefore low food access among certain livelihood groups, and not low food availability due to harvest failure.

The choice of appropriate cross-tabulations depends on the context, the hypotheses made when adapting the Food and Nutrition Security Conceptual Framework, and the distribution of the variables in the sample.

## 3.5 Step 5: Determine whether food insecurity and malnutrition are chronic or transitory

The distinctions between chronic and transitory food insecurity were explained in **Section 2.1**. It is important that an EFSA distinguish between chronic and transitory food insecurity as they are likely to require different types of response, in terms of both the design and the duration of interventions. Interventions aimed at addressing *chronic* food insecurity typically last for several years and focus on the underlying and basic causes of food and livelihood insecurity. Responses to *transitory* food insecurity may focus on the immediate causes of food insecurity and last several months. In some instances, however, it may be important for short-term interventions also to address underlying causes of food insecurity in order to prevent repeated transitory food insecurity that may lead to chronic food insecurity.

To determine whether food insecurity and malnutrition are chronic or transitory,

information about the situation *before* the crisis must be collected. The following questions should be addressed:

- Did food insecurity and/or malnutrition exist before the current crisis?
- If so, what were the nature, underlying causes, extent and severity of the food insecurity and/or malnutrition? How different were these from the current situation?
- Which groups were affected, and how different were they from the groups that are currently facing food insecurity and/or malnutrition?

To answer these questions, it is necessary to analyse:

- pre-crisis data;
- crop production, market and price data for the previous three to five years;
- data on all relevant issues – such as malnutrition rates (including stunting), disease prevalence, livelihoods, poverty, food production and market features – for the equivalent period in other years, to account for seasonal factors.



If the pre-crisis situation is not documented, it must be compiled retrospectively.[57] This is best done using qualitative data from focus group discussions, key informant interviews and secondary data review (see Box 4.4), possibly complemented with retrospective questions included in a formal household questionnaire.

**Box 4.4: Compilation of pre-crisis information using a focus group discussion**

The characteristics of the food- and nutrition-insecure population were defined in Step 3. In this step, the focus group discusses the pre-crisis situation. Interviewers may ask the following questions:

- Who was affected by food insecurity before the crisis? Locally adapted terminology and concepts should be used to define food insecurity. What coping strategies were used, and by whom? Where possible, groups of individuals and households are defined according to the same criteria used in Step 4.
- If pre-crisis food- and nutrition-insecure groups were similar to those at risk during the current crisis, have the proportions and/or numbers of people facing food insecurity and malnutrition increased?

If pre-crisis food- and nutrition-insecure groups were different from those that are currently food- and nutrition-insecure, what are the reasons for this?

Information about the nature of the risks (Steps 2 and 4) can also provide indications about whether food insecurity and malnutrition are chronic or transitory. For example:

- Stunting is a sign of long-term malnutrition, and therefore indicates a chronic problem that could be caused by persistent food insecurity and/or a poor health environment.

57. It is important to anticipate the need for these data and to review secondary data early on during the EFSA.

Wasting is a sign of short-term malnutrition, and therefore might indicate a transitory problem of food insecurity and/or infectious disease; wasting can also be due to recurrent, possibly seasonal, problems.

Distinctions between chronic and transitory food insecurity are also linked to the type of factors associated with malnutrition and livelihood insecurity. These variables can be either structural or dynamic:

- **Structural** variables relate to the underlying contextual factors that affect individuals and communities in the area in which they live. These variables do not change quickly, and can influence livelihood outcomes. Such factors can include: local climate, soil type, local governance system, public infrastructure – roads, drainage, etc., land tenure, and inter-ethnic relations.
- **Dynamic** variables relate to features that can change quickly. They tend to be indicators of **transitory** problems, which may exacerbate existing chronic problems. Examples include: infectious disease, displacement, change of market functioning, fluctuation in labour demand, ownership of assets, level of indebtedness, labour migration patterns, and size of harvest.

Further guidance on chronic and transitory issues is provided in Technical Guidance Sheet No. 5.[58]

## 3.6 Step 6: Estimate the severity of food insecurity and malnutrition

Severity at the population level can be estimated in three ways:

1. Through the prevalence of food insecurity and borderline food insecurity, and analysis of food access gaps.
2. According to the numbers of individuals and households found to have health and livelihoods at risk, based on nutrition, mortality and food security indicator information (Step 2, see **Section 3.2**).
3. Through convergence of evidence, using multiple indicators.

Where possible, these methods should be combined.

### 3.6.1 Indicators of risks to lives and livelihoods

#### 3.6.1.1 Mortality and nutrition indicators

There are standard thresholds for mortality and nutrition indicators (see **Part II**). The analysis results can be collated in a template, as illustrated in Table 4.4.

58. Technical Guidance Sheet No. 5 Distinguishing between Chronic and Transitory Food Insecurity in EFSAs, WFP Emergency Needs Assessment Service, November 2007.

**Table 4.4: Interpretation of the population-level severity of mortality and nutrition status indicators**

| Indicator | Rate (%) | Severity at the population level (based on standard thresholds) |
|---|---|---|
| Crude mortality rate | | |
| Under-5 mortality rate | | |
| Prevalence of wasting - global acute malnutrition - in under-5 children | | |
| Prevalence of stunting - global chronic malnutrition - in under-5 children | | |
| Prevalence of low BMI in non-pregnant, non-lactating women | | |



#### 3.6.1.2 Food security and coping strategy indicators

There are no universal standards for food security and coping strategy indicators; the severity of the situation is estimated according to the proportion of the population with an FCS below a certain threshold. However, WFP uses thresholds of FCS ≤ 21 for "poor food consumption" and FCS ≤ 35 for "borderline food consumption" (see **Part II, Section 7.3.1**).

There are also no universal benchmarks for the CSI. However, in a specific context, some coping strategies used by households show that they endanger livelihoods (selling productive assets, for instance) or even lives (working in conditions or places where physical safety is not guaranteed, for instance).

### 3.6.2 Using convergence of evidence from a series of indicators

Comparison of a variety of different indicators is an effective way of determining the severity of a crisis. If numerous indicators lead to the same conclusion, and evidence converges (see **Section 2.2**), it is probable that their conclusion about severity is correct.

The Integrated Food Security Phase Classification (IPC) system is a way of compiling indicators systematically and consistently. The IPC approach is summarized in Box 4.5.

IPC indicates when, in a certain area, there are households whose livelihoods are at risk of damage or loss – the "acute food and livelihoods crisis" phase. When the lives of households are at risk, the crisis is in the "humanitarian emergency" and "famine/humanitarian catastrophe" phases.

## Box 4.5: The IPC approach

IPC was developed for Somalia by the Somalia Food Security Analysis Unit, and is now being implemented in other countries. It is not an assessment methodology, but a way of collating information from the assessments of several organizations to produce conclusions that are rigorous, transparent and comparable. The results of an EFSA could be *included* in IPC, along with the assessment results of other agencies such as Save the Children, UNICEF, CARE and government bodies. The end result of IPC is a *phase classification* of the crisis in question, according to one of five phases:
1. generally food-secure;
2. moderately/borderline food-insecure;
3. acute food and livelihood crisis;
4. humanitarian emergency;
5. famine/humanitarian catastrophe.

Classification of the crisis is based on indicators and thresholds. Where possible, internationally recognized standards are used, such as for nutrition data. Where the indicator is context-specific, judgements are made using standard guidance (see references at the end of this box).

The following indicators are used for classification: crude mortality rate; acute malnutrition; disease; stunting; food access/availability; dietary diversity; water access and availability; destitution/displacement; hazards; civil security; coping strategies; livelihood assets; and structural issues.

In addition to the classification of phases, IPC also provides:
- a strategic response framework, with guidance on the priority types of intervention in each phase;
- early-warning levels: watch, moderate risk, high risk;
- colour-coded maps showing the relative levels of food security across a country or area and including information about immediate hazards, key underlying causes, estimated populations, criteria for social targeting, the usual phase prior to the current one, projected trends, and the confidence level of the analysis.

IPC is a useful way of bringing together the various actors involved in food security analysis and combining their conclusions into a standard framework that can be interpreted easily and compared among different crises, and over time in a single crisis. IPC is *not* an assessment methodology, so it is not an alternative to the WFP EFSA; as explained, EFSA results should be a *component* of IPC.

For a detailed explanation of using IPC, see:
- Integrated Food Security Phase Classification: Technical Manual Version 1.1, IPC Global Partners, FAO, 2008.
- Integrated Food Security Phase Classification (IPC) User Guide. Draft-in-progress for feedback. FAO, July 2008.

Additional information is available on www.ipcinfo.org

Table 4.5 gives the indicators and thresholds used in the IPC approach. These can also be used during EFSA analysis to estimate severity. Convergence of evidence from a number of indicators enhances the confidence with which conclusions can be stated.

## Table 4.5: Key reference indicators and thresholds used in the IPC approach

| Phase Classification | | Indicators and thresholds | |
|---|---|---|---|
| 1A | Generally Food Secure | **Crude Mortality Rate** | < 0.5 / 10,000 / day |
| | | **Acute Malnutrition** | <3 % (w/h <-2 z-scores) |
| | | **Stunting** | <20% (h/age <-2 z-scores) |
| | | **Food Access / Availability** | usually adequate (> 2,100 kcal ppp day), stable |
| | | **Dietary Diversity** | consistent quality and quantity of diversity |
| 1B | Generally Food Secure | **Water Access / Avail.** | usually adequate (> 15 litres ppp day), stable |
| | | **Hazards** | moderate to low probability and vulnerability |
| | | **Civil Security** | prevailing and structural peace |
| | | **Livelihood Assets** | generally sustainable utilization (of 6 capitals) |
| 2 | Moderately / Borderline Food Insecure | **Crude Mortality Rate** | <0.5 / 10,000 / day; U5MR<1 / 10,000 / day |
| | | **Acute Malnutrition** | >3% but <10 % (w/h <-2 z-score), usual range, stable |
| | | **Stunting** | >20% (h/age <-2 z-scores) |
| | | **Food Access / Availability** | borderline adequate (2,100 kcal ppp day); unstable |
| | | **Dietary Diversity** | chronic dietary diversity deficit |
| | | **Water Access / Avail.** | borderline adequate (15 litres ppp day); unstable |
| | | **Hazards** | recurrent, with high livelihood vulnerability |
| | | **Civil Security** | unstable; disruptive tension |
| | | **Coping** | 'insurance strategies' |
| | | **Livelihood Assets** | stressed and unsustainable utilization (of 6 capitals) |
| | | **Structural** | pronounced underlying hindrances to food security |
| 3 | Acute Food and Livelihood Crisis | **Crude Mortality Rate** | 0.5-1 / 10,000 / day, U5MR 1-2 / 10,000 / day |
| | | **Acute Malnutrition** | 10-15 % (w/h <-2 z-score), > than usual, increasing |
| | | **Disease** | epidemic; increasing |
| | | **Food Access / Availability** | lack of entitlement; 2,100 kcal ppp day via asset stripping |
| | | **Dietary Diversity** | acute dietary diversity deficit |
| | | **Water Access / Avail.** | 7.5-15 litres ppp day, accessed via asset stripping |
| | | **Destitution / Displacement** | emerging; diffuse |
| | | **Civil Security** | limited spread, low intensity conflict |
| | | **Coping** | 'crisis strategies'; CSI > than reference; increasing |
| | | **Livelihood Assets** | accelerated and critical depletion or loss of access |
| 4 | Humanitarian Emergency | **Crude Mortality Rate** | 1-2 / 10,000 / day, >2x reference rate, increasing; U5MR > 2 / 10,000 / day |
| | | **Acute Malnutrition** | >15 % (w/h <-2 z-score), > than usual, increasing |
| | | **Disease** | pandemic |
| | | **Food Access / Availability** | severe entitlement gap; unable to meet 2,100 kcal ppp day |
| | | **Dietary Diversity** | regularly 3 or fewer main food groups consumed |
| | | **Water Access / Avail.** | < 7.5 litres ppp day (human usage only) |
| | | **Destitution / Displacement** | concentrated; increasing |
| | | **Civil Security** | widespread, high intensity conflict |
| | | **Coping** | 'distress strategies'; CSI significantly > than reference |
| | | **Livelihood Assets** | near complete & irreversible depletion or loss of access |
| 5 | Famine / Humanitarian Catastrophe | **Crude Mortality Rate** | > 2/10,000 / day (example: 6,000 / 1,000,000 / 30 days) |
| | | **Acute Malnutrition** | > 30 % (w/h <-2 z-score) |
| | | **Disease** | pandemic |
| | | **Food Access / Availability** | extreme entitlement gap; much below 2,100 kcal ppp day |
| | | **Water Access / Avail.** | < 4 litres ppp day (human usage only) |
| | | **Destitution / Displacement** | large scale, concentrated |
| | | **Civil Security** | widespread, high intensity conflict |
| | | **Livelihood Assets** | effectively complete loss; collapse |

EFSA results can also be represented on maps, as in IPC (see Box 4.5).

The IPC process requires extensive consultation with partners and the use of standard templates. In a rapid EFSA, consultation may be limited by time constraints, especially if some partners are unfamiliar with the approach. Moreover, some of the indicators listed in Table 4.5 may not be available.

### 3.6.3 Using the food consumption or food access gap

The severity of food insecurity can be confirmed by two additional indicators:
- the food consumption gap;
- the food access gap.

Further guidance on calculating food gaps is provided in **Section 4.4.1**. When using either of these indicators, the season must be taken into account. In many areas, household food consumption varies during the course of a normal year, and a temporary food consumption gap may not be cause for alarm.

The **food consumption gap** gives a direct indication of the severity of **food insecurity** at the aggregate population level (see Box 4.6).

**Box 4.6: Estimation and use of the food consumption gap**

The gap between aggregate food consumption **required to meet nutrition needs** and **actual** aggregate food consumption is estimated, by comparing households' food intake with the intake and thresholds established from reference nutrition requirements.
The difference between the reference threshold and the households' score indicates the severity of the gap. This approach can be used to estimate the number of households called food-insecure because of a **deficient diet**.
However, food intake data are hardly ever available.

The **food access gap** (see Box 4.7) can be estimated by comparing household food expenditure with the cost of a minimum food basket, taking into consideration the proportion of food that is not purchased, such as food coming from own production. The food access gap can be a useful indicator in livelihood groups that purchase most of their food.

### Box 4.7: Estimation and use of the food access gap

Average current expenditure on food for a given livelihood group is estimated through a questionnaire survey or focus group interviews. The quantity and monetary value of food produced and consumed by households are also estimated, and compared with the cost of a minimum local food basket, estimated through a market survey.

This approach can give an indication of **major food access shortfalls**. People often under-report their food expenditure, so it can be difficult to obtain accurate figures in less extreme circumstances, such as when there is a relatively small food access shortfall.

There are no standard references against which to judge the severity of the food consumption or food access gap. The following rule of thumb can be used:

- If more than 10 percent of the population is facing a severe food gap, there is a critical crisis.
- If more than 30 percent of the population is facing a moderate food gap, there is a severe crisis.

chapter 4

# Conducting a forecast analysis

This section explains the following steps for forecasting and scenario development:

- Identify opportunities and shocks that are likely to affect the area in the future.
- Combine an analysis of shocks and opportunities with their influence on household food security to develop scenarios that describe how the situation might develop in the future.
- Identify the most likely scenario and the groups whose food security will be at risk under this scenario.

Forecasting is, by nature, uncertain. Uncertainty can be reduced by using the best information available and rigorous analytical procedures. There is always an element of **judgement**, however. Analysts must decide what they consider the most likely outcome, based on the available information. The forecast should then be qualified by the reliability of the information on which it is based. A forecast includes **assumptions**, which must be clearly documented in the assessment report, along with the process through which conclusions were developed. At a minimum, a forecast analysis should result in the following outputs:

- a forecast of the future opportunities and shocks that are likely to affect the food security and nutrition situation;
- scenarios that forecast the evolution of the food security and nutrition situation in the absence of assistance; and
- identification of the groups that will be most at risk in the most likely scenario.

## 4.1 Identification of future opportunities and shocks

In order to develop reasonably accurate forecasts, it is necessary to identify the range of **opportunities** and **shocks** that may affect the future nutrition status and food security of a particular population.

## Box 4.8: Opportunities and shocks

In EFSA analysis, **opportunities** are events that ameliorate or improve an adverse situation. They can be:
- natural opportunities, such as resumption of rain after a dry season;
- human-induced opportunities, such as the next harvest, peace accords, opening of previously closed borders, and improvement of market infrastructure.

Opportunities can arise through a combination of natural and human-induced occurrences. For example, a peace agreement means that roads will be opened and markets may become better integrated. Good rains contribute to an improved harvest. These two opportunities will combine to enable farmers to sell larger quantities of produce at good prices in the coming months.

In an EFSA, **shocks** are events with a negative impact on nutrition status and/or food security. They may be:
- natural shocks, such as earthquakes, drought or floods;
- human-induced shocks, such as conflict or economic recession.

Natural and human-induced shocks are not always easy to differentiate. For example:
- floods can be caused by seasonal climatic fluctuation, exacerbated by deforestation;
- conflict can be caused by political tension, exacerbated by drought.

Opportunities and shocks do not necessarily occur at distinct times; some **evolve** gradually. For example:
- an improvement of physical infrastructure and services takes effect slowly;
- the impact of a drought increases slowly.

When analysing opportunities and shocks, both sudden-onset and evolutionary variants should be considered.



The importance of assessing the **current** risks to food security during the situation analysis was discussed in **Section 3**. In forecasting, each of the factors related to food security is reviewed, to determine whether the same situation is likely to persist in the future. Additional events – opportunities or shocks – that are not currently present should also be identified during a forecast analysis.

The analysis is informed by the following:
- **The nature of a potential shock**: Is it a one-off event, such as an earthquake, or a long-term and complex process, such as conflict or environmental degradation?
- **The opinions of experts and key informants**: For example, meteorologists and environmental experts might provide input on trends related to the natural environment; local NGO and social workers might provide input on social trends; economists might help with market predictions; and political analysts might provide input on the evolution of a conflict.

A procedure for predicting future opportunities and shocks is explained in Box 4.9

### Box 4.9: Predicting opportunities and shocks

1. Start with the existing situation. **What are the features of the current crisis and are they likely to persist into the future?** For example, households' food consumption is found to be poor because recurrent droughts have reduced agricultural production and limited the opportunities for daily labour. *This problem will probably persist for the foreseeable future*.

2. Consider various time periods, such as three, six and twelve months. **What new shocks and opportunities are likely to arise?** The following are examples.
The harvest is due in one month. Farmers usually sell 80 percent of their production to traders, who sell it overseas. However, neighbouring countries have closed their borders for the export of agricultural produce. It is probable that when the harvest comes, farmers will be forced to sell their produce at reduced prices, thus curtailing their income. A **shock** to local livelihoods can be predicted.
The harvest is due in one month, and it looks as though it will be very good. Markets are recovering, and there is high demand for local produce. This should represent a good **opportunity** for farmers, who can expect their income to rise within the next month.

Some shocks, such as tsunamis, earthquakes and volcanic eruptions, are extremely difficult to predict. Certain parts of the world are far more susceptible to this type of shock than others. In these areas, **contingency plans** should be developed to ensure preparedness in case of shock (see **Section 4.2**). Historical trends of shocks can allow greater confidence in forecasting future shocks.

EFSAs generally take place in areas that are already facing a crisis or in which a crisis is predicted. The approach explained in Box 4.9 is therefore appropriate for most EFSAs.

The following information should be noted for each opportunity or shock:

- **Recurrent/persistent or occasional**: This defines the nature of the shock or opportunity and provides important insight into its likely evolution. Persistent shocks are continuous or recurrent, such as long-term drought. Occasional shocks are one-off, such as earthquakes. An equivalent approach is applied to opportunities.
- **Probability of occurrence**: Some shocks and opportunities can be predicted with more confidence than others. For example, the arrival of the rainy season can be predicted with reasonable confidence – it occurs at more or less the same time every year – although the amount of rain that falls may vary greatly from year to year. The return of refugees following a conflict may be less easy to predict as it depends on numerous factors, all of which are uncertain, such as the signing of a peace accord, the availability of transport, and refugees' perception of the security situation.
- **Expected time of occurrence**: The timing of some opportunities and shocks, such as a harvest or a hunger gap, can be predicted reasonably accurately. Others, such as earthquakes, are much more difficult to predict.
- **Scale of the severity of a shock or the benefit of an opportunity**: some shocks are more severe than others, and some opportunities bring greater benefits than

others. For example, a pest attack on crops affecting a small proportion of farms is less severe than a flood that destroys large swathes of farmland; a comprehensive peace agreement conveys more benefits than a temporary drop in food prices due to a one-off localized food distribution.

Table 4.6 gives examples of how shocks and opportunities may be recorded for a forecast analysis. This template should be adapted to reflect the context of the shocks and opportunities that are likely to occur in a particular region.

**Table 4.6: Documentation of opportunities and shocks, with examples**

| Expected event | Recurrent / persistent or occasional | Probability of occurrence *1 = low 5 = high or ongoing* | Expected time of occurrence | Scale of severity or benefit |
|---|---|---|---|---|
| | | **Shocks** | | |
| **Earthquake** | Occasional | 1 | Any time | High severity |
| **Drought** | Recurrent | Ongoing | Ongoing | Medium severity |
| **Attack by armed groups** | Occasional | 3 | Any time | High severity |
| | | **Opportunities** | | |
| **Harvest** | Recurrent | 4 | 7 months from now | High benefit |
| **Establishment of rural health service** | Occasional | 3 | 1 month from now | Medium benefit |
| **Peace accord** | Occasional | 2 | Unknown | High benefit |

Examples of different types of shock and their effects on food security are given in Table 4.7. Shocks affect people in different ways, depending on their individual or group characteristics. The following are examples of this:

- During periods of insecurity, women may be at greater risk than men because they have to walk long distances to collect water, fuelwood, etc. and are targets for violence.
- When people are displaced, women's coping strategies may have more severe consequences on their lives and livelihoods than men's.
- Children are more vulnerable to diseases than adults, such as when water supplies are contaminated during floods.
- Certain ethnic groups may be targeted during conflict. Other groups may be denied access to areas where they farm or carry out other livelihood activities.

It is therefore essential to undertake a **disaggregated** analysis of the potential impact of shocks. Populations should be disaggregated according to:

- **sex** – always;
- **age** – always;

- **livelihood group**, particularly for slow-onset shocks and conflict;
- **health status**, particularly regarding chronic diseases such as HIV/AIDS and acute infections in young children – always;
- **ethnic or social group**, such as IDPs, refugees and host families – only if relevant to the specific emergency;
- **other, locally relevant criteria**, for example, by location, such as coastal or mountain, when it implies different exposures to risk.

**Table 4.7: Shocks and their potential impacts on food security**

| Shock | Potential direct effects on food security | | |
|---|---|---|---|
| | **Main immediate effects** | **Food availability and access** | **Food consumption** |
| • **Drought**<br>• **Crop pest**, such as locust invasion, crop disease | • Loss of harvest<br>• Loss of food stocks | • Decreased staple food availability<br>• Decreased staple food access from own production, for sale and consumption<br>• Decreased food access from purchase, due to increased market food prices, decreased sales | • Decreased amounts of food consumed, due to decreased availability and/or increased prices<br>• Lower quality of diet by choice (coping) and/or availability |
| • **Flood**<br>• **Tsunami**<br>• **Hurricane, cyclone** | • Loss of harvest<br>• Loss of food stocks<br>• Loss of economic infrastructure: workplaces, roads, etc.<br>• Loss of assets | • Decreased staple food availability<br>• Decreased staple food access from own production<br>• Decreased food access from purchase, due to increased market food prices, loss of income, decreased sales<br>• Decreased employment opportunities | |
| • **Earthquake** | • Loss of food stock<br>• Loss of assets<br>• Loss of animals | • Decreased staple and animal food access from own stocks<br>• Decreased food access from purchase, due to loss of income<br>• Decreased food availability | |
| • **Animal disease**<br>• **Livestock thefts and looting** | • Loss of animal products<br>• Loss of animals | • Decreased animal food access<br>• Decreased food access from purchase, due to loss of income, decreased sales | |
| • **Market food price rise**<br>• **Economic collapse** | • Deterioration of terms of trade for livestock or labour<br>• Loss of purchasing power | • Decreased food access from purchase, due to loss of income | |
| • **Forced displacement**<br>• **Conflict** | • Loss of harvest<br>• Loss of animals<br>• Loss of assets | • Decreased staple food and animal product availability<br>• Decreased food access from purchase, due to increased market food prices, loss of income, decreased sales of own production | |
| **Epidemics**, such as cholera<br>**HIV / AIDS** | • Disease | • Decreased food access from purchase, due to increased health expenditures, decreased income earnings because of loss of physical capacity and extra time required to care for the sick | • Decreased amounts of food consumed, due to loss of appetite, lack of time to care for vulnerable individuals<br>• Loss of nutrients |

## 4.2 Developing scenarios

In forecast analysis, assessors develop possible future scenarios. A **scenario** is "*a description of situations that could occur; it is a set of informed assumptions about a situation*".[59] Scenarios indicate alternative ways in which the situation might evolve, based on: (i) **current food insecurity**; (ii) **assumptions** about possible **future shocks** and **opportunities**, taking into account the type of emergency and its volatility; and (iii) people's **resilience and vulnerability**. The *most likely* scenario is chosen as the basis for predicting the coming three, six and/or twelve months; the period depends on the purpose of the EFSA and the data that have been collected. This process is explained in detail in following sections. A simplified example is given in Example 4.5.



### Example 4.5: Scenario development

**Note:** This is a simplified example using the hypothetical situation of a rural area affected by conflict and recurrent drought.

**Step 1: Identify future shocks and opportunities that could affect the food security and nutrition situation.**

- The harvest is expected in one month: rains have been good, although the area planted has been 20 percent smaller than usual. The harvest is expected to be average compared with long-term trends, but much better than the average for the last ten years.
- Increased conflict is expected in area X because of its strategic importance: troops from both sides are massing in this area; and populations are moving from area X to the border, which is currently closed.
- Other parts of the country seem to be relatively stable.

**Step 2: Develop scenarios to anticipate the evolution of the food security and nutrition situation in the absence of assistance.**

One or more scenarios is/are developed, depending on the volatility of the situation. In general, the *most likely scenario* is used for planning, but in some cases a worst-case scenario could be used for additional contingency planning. In this example, the most likely scenario might be as follows:

- In most parts of the country, food availability will improve because of the relatively good harvest. Food access will improve because of enhanced labour and trade opportunities. Food utilization is unlikely to change significantly because long-term health issues have not been addressed: access to health care and water quality.
- In area X, all food security factors are likely to deteriorate. Nutrition problems are probable, especially in IDP settlements.

**Step 3: Identify the population groups affected by the most likely scenario, and the impact of the shocks and opportunities on their livelihoods.**

- In general, vulnerability is decreasing because of improved harvests and reduced conflict.
- In area X, vulnerability is expected to increase because of the fighting. IDPs moving from area X are extremely vulnerable during their move and when established in makeshift camps on the border.

59. Contingency Planning and Humanitarian Action, a Review of Practice, R. Choularton, Overseas Development Institute (ODI) Network Paper No. 59, March 2007.

### 4.2.1 Procedures

**One or more scenarios can be developed, depending on the level of uncertainty that surrounds future events**. If the future can be predicted with a high level of confidence, one scenario might be sufficient. If the crisis is complex and has the potential to evolve in several different ways, it might be necessary to develop more than one scenario and to judge which is the most likely. In certain cases, shocks are almost impossible to predict accurately, so contingency plans are developed (see **Section 4.2.2**).

Wherever possible, scenarios should be developed through consultation; the extent to which this is possible depends on the time available and the degree of collaboration among stakeholders. It is critical that EFSA team members work with local key informants and counterparts from partner agencies to decide the most likely evolution of future events. The likelihood of a given scenario is based on the **collective judgement** of the group; there is no standard way of determining likelihood.

The period covered by a scenario depends on the following:

- **The type of emergency**: For example, a rapid-onset emergency that is limited in geographical scope, such as a flood, may necessitate a scenario covering the coming three months, which might be updated later. A slow-onset, persistent emergency, such as a drought, may demand a scenario covering a year or more.
- **The type of operation that WFP is planning**: For example, an EMOP may cover a period of six to twelve months, while a PRRO may last for three years.

Scenarios are developed by considering all the potential opportunities and shocks identified in **Section 4.1** and making assumptions about their combined influence on food security in the near future. For example, the harvest is imminent, which is a good opportunity for food-insecure households. Fighting is currently intensifying, however, and soldiers frequently loot or destroy crops. This is likely to continue at least until the onset of the rainy season in five months' time, and the shock caused by the fighting is expected to obliterate the potential opportunity of the harvest.

To develop realistic scenarios that are not too complex, it is necessary to identify the **dominant opportunities and shocks** that will have the greatest influence on how the food and nutrition security situation evolves in the coming months. In the example in the previous paragraph, the fighting is the dominant event, because its effects overcome those of the coming harvest. Identifying the dominant shock saves time; the fighting is expected to obliterate the benefits of the harvest, so there is no point in engaging in in-depth analysis of the harvests' benefits for the population.

The following are some examples of dominant opportunities and shocks:

- Large-scale droughts and floods are natural shocks that are not affected by other events, at least in the short term.
- Major armed violence is likely to override most other events.
- Government policies that are directly related to food and nutrition security may represent supportive opportunities or harmful shocks.

Dominant opportunities and shocks steer the development of scenarios. **Secondary opportunities and shocks** might be: (i) *caused* by the dominant event, as a cascade effect; (ii) unrelated to the dominant event but *enhancing* or *mitigating* its effects, as a synergistic effect; or (iii) subsumed by the dominant event. The following are simplified examples of these three possibilities:

- **Cascade effect**: Armed violence is the dominant shock leading to large-scale displacement; displaced people move to town, where they live in overcrowded slums, resulting in the spread of disease and increased severe malnutrition as secondary shocks.
- **Synergistic effect**: A drought is the dominant shock, which is exacerbated by the introduction of government policy that constrains the movement of food among districts in a country as a secondary shock.
- **Subsumed effect**: An earthquake is the dominant shock causing mass loss of life and destruction of infrastructure. This subsumes the effects of a localized pest infestation as a secondary shock. It may not be worth analysing the effects of the pest infestation because the earthquake and its effects dominate the scenario.

The existence of a dominant shock does not mean that secondary shocks should not be analysed. Many scenarios are characterized by a variety of different shocks interacting to produce a **composite shock**, as in the following examples:

- Low rainfall leads to a poor harvest; conflict results in reduced mobility, loss of access to fields, and looting of crops; and deterioration of roads leads to increased market transaction costs. These shocks combine to cause an escalation of grain prices, with each factor exacerbating the negative impacts of the others.
- Low rainfall and deterioration of roads put upwards pressure on the grain price because of poor harvests and high market transaction costs. However, resolution of conflict mitigates these negative effects to some extent. The three factors are analysed together to determine the net impact on the population.

The population groups that might be affected in a scenario are identified broadly, based on their main livelihood characteristics, particularly their sources of food and income, and their geographical location, as in Example 4.6. More detailed characteristics and numbers of affected people are estimated after the most likely scenario has been identified (see **Sections 4.3, 4.4** and **4.5**).

Example 4.6 illustrates how different types of shock interact.

## Example 4.6: Formulating a scenario in a relatively straightforward situation

A rural, primarily agricultural area has been affected by drought for the last three seasons. The population is poorer than the national average, and people's purchasing power has declined since the drought began. This year's rains have been good. Large-scale seed distributions have allowed farmers to plant the same area as they plant in a normal year:

- A good harvest is expected in one month.
- Physical access to the area is poor because of bad roads, which are sometimes unusable during the rainy season. Poor physical access and low profit margins make the area unattractive to traders. A road construction programme started a year ago, and should be completed within the next six months. This will allow year-round access to the area.
- The area has been beset by low-level insurgency against the government for the last ten years. Since the recent collapse of peace negotiations, the conflict has escalated severely in district X, which has experienced many casualties and widespread looting.

**1. Identification of opportunities and shocks**
Opportunities and shocks are first identified in isolation, and the probability of each occurring is judged and assigned a value of 1 to 5, with 5 representing a certainty.

**Opportunities**
Good harvest in one month – probability: 4.
Improved road in six months – probability: 4.

**Shocks**
Escalation of conflict, with high loss of life and looting – probability: 3.

**2. Combination of shocks and opportunities**
The positive effects of both the harvest and the road improvement have a high probability of occurring *if these events are considered in isolation*. However, escalation of the conflict, although slightly less likely to occur, would probably outweigh the benefits of the harvest and road construction. With a probability of 3, conflict escalation has to be taken seriously.

**3. Development of the scenario**
Conflict escalation is judged to be the dominant event, which overrides the others in its effect on lives and livelihoods. In this scenario, it is assumed that conflict escalation will occur. The interaction between the dominant shock and the two **secondary opportunities** is then considered:*

- The harvest is one month away. Although it is expected to be good, its positive impact will be reduced by: (i) an expected loss of 20 percent of the crop to looting in district X; (ii) disruption of markets by conflict, making it more difficult for farmers in the area to sell produce; and (iii) a forecast displacement of 30 percent of the population of district X because of the fighting.
- Road construction is due to finish within six months. Given the escalating security threats, it is likely that the contractor will halt construction pending resolution of the problems.
- Markets are unlikely to pick up as previously hoped, because of the continued bad physical access with no road, the poor security, incurring risks to lives and high transaction costs, and the low purchasing power of the population.

Based on this, the probable scenario is as follows:

- Conflict escalates, particularly in district X, where it leads to displacement of 30 percent of the population. Food availability declines, owing to loss of harvested crops, and food stocks throughout the area are stretched further by the presence of IDPs from district X. Markets do not provide an effective response.

* Percentages in this example are arbitrary and provided for the sake of illustration. The information on which these estimates are based could come from key informants, focus groups and/or household surveys.

Consideration of dominant and secondary opportunities and shocks and their relative probabilities helps to determine whether the situation is likely to **improve**, **deteriorate** or **stay the same**. The situation in Example 4.6 is likely to deteriorate drastically. Sometimes the outcome is less obvious, as shown in Example 4.7.

**Example 4.7: Formulating a scenario in a relatively unclear situation**

The situation is the same as in Example 4.6, but the probability is different.

**Opportunities**
Good harvest in one month – probability: 4.
Improved road in six months – probability: 4.

**Shocks**
Escalation of conflict, with high loss of life and looting – probability: 1.

In this case, the outcome is less clear than in Example 4.6. The probability of severe escalation is low but still significant; given the implications of such an escalation, it would be unwise to discount this possibility altogether. Conflict does not constitute the **most likely scenario**, however, which could instead be postulated as follows:

- The harvest is good, leading to a significant improvement in food availability. Prices in the market decrease, improving food access. Some traders are prepared to traverse the poor roads to buy produce from the area, which now has a food surplus. Over the next six months, trade increases greatly, owing to completion of the road and integration of the area's markets into the national market system. In areas where conflict continues, there are looting and small-scale, temporary displacement.

In this type of situation, two or more scenarios might be developed:

- **Most likely scenario**: This describes the situation most likely to occur, given the likelihood of each of the opportunities and shocks and the interactions among them.
- **Worst-case scenario**: When an alternative, worse scenario is less likely to occur, but still has a possibility of occurring – in this example, conflict – it should also be considered for contingency planning and preparedness (as in Example 4.6).

The situation should be monitored constantly to identify promptly any deterioration that might lead to the worst-case scenario.

### 4.2.2 Contingency planning

It is advisable to base recommendations for response planning (see **Chapter 5**) on the most likely scenario, but to make **contingency plans** according to the worst-case scenario.

The reliability of the information used to develop the scenarios should also be taken into account. If confidence in the information is low, such as in a rapid EFSA carried out in a short time without full access, it is advisable to prepare two or three scenarios, select the most likely, and include the worst-case for contingency planning. If information is known to be accurate and can be treated with a high level of confidence, a single planning scenario can suffice.

The scenarios can be summarized as in Table 4.8, which includes simplified examples of two scenarios.

**Table 4.8: Scenarios and their impacts, examples**

| Scenario and probability (5 = certainty) | Period | Opportunity or shock | Location |
|---|---|---|---|
| 1. **Situation will improve:** probability 4 | 0-6 months | Good harvest: opportunity | Districts A and B |
| | | Floods: shock | Villages along river |
| 2. **Situation will deteriorate:** probability 2 | 0-6 months | Major crop failure due to late failure of rains: shock | Districts A and B Town C |

Of the two scenarios in Table 4.8, one is considerably more probable than the other. However, given the grave consequences of scenario 2 - major crop failure - contingency plans should be made for this scenario. Indicators should be defined and closely monitored to determine whether or not scenario 2 is developing.

## 4.3 Identification of population groups affected under the most likely scenario

After developing the most likely scenario, the next step is to identify the groups and numbers of people likely to be negatively affected under this scenario. This involves:

- comparing the most likely scenario with the existing situation, and determining whether the food security of the same groups would be at risk in the future;
- identifying additional groups whose food security would become at risk in the future owing to the effects of each of the opportunities and shocks identified in the scenario.

### 4.3.1 Population groups currently at risk

**The most likely scenario is compared with the existing situation**. The scenario may predict a continuation of an existing situation, such as a long-lasting drought or conflict. In this case, the profiles of the groups whose food security is at risk will be similar to those developed in the situation analysis (see **Section 3.3**), with the following modifications:

- If the crisis is expected to become more severe, the numbers of people at risk are likely to rise, and vice versa.
- Additional population groups may be put at risk if the same crisis persists, such as during a drought. To begin with, only the poor with few assets are at risk. As the drought continues, the assets of more wealthy groups are depleted, putting these people at risk. Identification of these groups is explained in **Section 4.3.2**.

### 4.3.2 Additional population groups expected to become at risk

The **main characteristics** of additional groups likely to be affected by each of the opportunities and shocks in the scenario are identified. The following are examples:

- If armed attacks are expected to target particular ethnic groups, those ethnic groups are likely to be the most affected.
- If it is predicted that the market system will be disrupted, such as through border closures, the people whose livelihoods are based on the market, such as producers and traders, and those whose food access is based on purchase at the market will be affected.
- If particular rivers are expected to flood, the people living nearby will be affected first, followed by those who depend on the rivers for their food and income.

Having determined the main characteristics of the groups that will be at risk in the future, detailed **profiles** are compiled using information about the population gathered from primary and secondary sources:

- With **quantitative data**, group profiles are developed through cross-tabulation of the primary livelihood characteristics – IDP, farmer, etc. – of populations whose food security is at risk, as identified during the situation analysis (see **Section 3.3**).
- With **qualitative data**, information collected during focus group discussions is analysed to identify the groups that are likely to be affected in the future. Their profiles are developed in the same way as in the situation analysis.

Example 4.8 illustrates this procedure.

**Example 4.8: Forecasting the effects of opportunities and shocks on population groups**

In a particular area, much of the food in the markets comes from neighbouring countries.

**Note:** This is a simplified example for illustration purposes. In a real situation the analysis will be more complex, although the principles remain the same.

Under the most likely scenario, it is predicted that border closures will halt food imports for at least six months. This will result in the doubling of staple food prices. This shock is expected to have the following effects on the population:

- People who depend primarily on market purchases for their food will be adversely affected.
- Local farmers who are able to sell their produce during this period will benefit from the raised prices.

If the EFSA data are **quantitative**, households that are primarily dependent on market purchase for their food are identified by looking at the share of household food that comes from this source. These households are then cross-tabulated against other key characteristics, such as gender, age and displacement status. The profiles developed are used for subsequent targeting and monitoring.

If the data are **qualitative**, the livelihood profiles developed during focus group discussions are used to identify the groups that are particularly dependent on market purchases.

The same procedure is used to identify the groups that will *benefit* from the shock: in this case, the farmers who are able to sell their produce.

The next step in forecast analysis is to categorize groups according to the degree to which their lives and livelihoods are likely to be at risk under the scenario (see **Section 3.3**), based on the expected impacts on mortality, nutrition status, food security and coping strategies.

Table 4.9 provides examples of the groups that are likely to be affected by particular shocks. These examples are for the purpose of illustration; the effects of shocks on different groups should always be analysed within the specific context. Both **directly** and **indirectly affected** groups should be identified. For example, during a conflict in part of a country:

- people who are targeted by warring factions are **directly affected**;
- food traders and consumers who depend on produce from the conflict-affected area are **indirectly affected**, as their livelihoods and food consumption are damaged by the conflict.

**Table 4.9: Shocks and their impacts on different groups, examples**

| Shocks | Livelihood groups likely to be most affected | Potential effects on livelihood assets | Possible alternative / complementary livelihood strategies |
|---|---|---|---|
| • **Drought**<br>• **Crop pest:** such as locust invasion, crop disease | • Subsistence farmers<br>• Landless agricultural labourers: loss of labour<br>• Pastoralists: drought<br>• Consumers dependent on markets for food | • **Human**: malnutrition from decreased food consumption<br>• **Physical**: sale of tools, equipment, animals - decapitalization<br>• **Financial**: decreased income from decreased sales of crops and animals; decreased access to credit from difficulties with reimbursement; decreased access to food<br>• **Natural**: overexploitation of grazing areas and other natural resources, such as forest | • Decreased expenditures on food and essential non-food items and services, such as health and education<br>• Increased indebtedness<br>• Use of savings<br>• Preferences for lower-yielding but more drought- and pest-resistant crops and animals<br>• Migration in search of labour, grazing land, water |
| • **Flood**<br>• **Tsunami**<br>• **Hurricane, cyclone** | • Subsistence farmers<br>• Landless agricultural labourers: loss of labour | • **Human**: malnutrition from decreased food consumption; disease from unsafe water; missed education opportunities from destruction of schools, longer distances to school<br>• **Physical**: loss of tools, equipment, animals, housing - decapitalization; loss of infrastructure such as roads, bridges, health services, schools<br>• **Financial**: decreased income from decreased sales of crops and animals; decreased access to credit from difficulties with reimbursement<br>• **Natural**: losses from erosion, landslides | • Decreased expenditures on food and essential non-food items and services, such as health and education<br>• Increased indebtedness<br>• Use of savings<br>• Migration in search of shelter and labour |
| • **Earthquake** | • All livelihood groups with no/limited assets: human, financial, physical | • **Human**: missed education opportunities from destruction of schools, longer distances to school<br>• **Physical**: loss of equipment, animals, sometimes housing - decapitalization; loss of infrastructure such as roads, bridges, health services, schools<br>• **Financial**: decreased access to credit from difficulties with reimbursement | • Decreased expenditures on food and essential non-food items and services, such as health and education<br>• Increased indebtedness<br>• Use of savings |

| Shocks | Livelihood groups likely to be most affected | Potential effects on livelihood assets | Possible alternative / complementary livelihood strategies |
|---|---|---|---|
| • **Animal disease**<br>• **Livestock theft and looting** | • Pastoralists<br>• Small agropastoralists | • **Human**: malnutrition from decreased animal food consumption<br>• **Physical**: loss of animals<br>• **Financial**: decreased income from decreased sales of animals and their products; decreased savings; decreased access to credit from difficulties with reimbursement | • Decreased expenditures on food and essential non-food items and services, such as health and education<br>• Decreased cultivation from loss of draught power or increased cultivation<br>• Migration in search of security |
| • **Rise in market food prices**<br>• **Economic collapse** | • Casual workers<br>• Landless agricultural labourers<br>• Pastoralists | • **Human**: malnutrition from decreased food consumption<br>• **Financial**: decreased value of cash savings; decreased access to credit from difficulties with reimbursement | • Decreased expenditures on food and essential non-food items and services, such as health and education<br>• Sale of assets - decapitalization<br>• Increased indebtedness<br>• Use of savings<br>• Migration in search of labour |
| • **Epidemic**, such as cholera<br>• **HIV / AIDS** | • All livelihood groups with no/limited assets: human, financial, physical | • **Human**: malnutrition, disease, mortality<br>• **Social**: disruption of community, kinship and other social networks - solidarity stretched<br>• **Financial**: decreased access to credit from difficulties with reimbursement | • Decreased expenditures on food and essential non-food items and services, such as education<br>• Sale of assets - decapitalization<br>• Switch to lower-earning and lower-yielding crops that are less labour-intensive, because of poor physical capacity, time needed to care for sick individuals<br>• Increased indebtedness<br>• Use of savings<br>• Sending children to relatives |
| • **Forced displacement**<br>• **Conflict** | • All livelihood groups, particularly those with weak social assets/solidarity networks | • **Human**: malnutrition, missed education opportunities<br>• **Social**: disruption of community, kinship and other social networks from dispersion of members; creation of war economies<br>• **Physical**: loss of tools, equipment, animals, housing<br>• **Financial**: decreased income from decreased sales of crops and animals; loss of savings from theft<br>• **Natural**: overexploitation | • Decreased expenditures on food and essential non-food items and services, such as health and education<br>• Migration in search of security and labour |



### 4.3.3 Combining current and predicted population groups facing risk to food and nutrition security

As defined in **Sections 4.3.1** and **4.3.2**, groups that will be at risk under the future scenario(s) include:

- groups whose food security is currently at risk and *will remain so*;
- groups whose food security is not currently at risk, but *will become so* in the future.

Population groups that will *remain* at risk and groups that will *become* at risk are *added together* to provide the total of groups whose food and nutrition security is expected to be at risk in the future. Groups that are *currently* at risk but whose situation is expected to improve to the point at which they are *no longer* at risk are not included on the list.

**Caution**: It normally takes a long time for risk levels to decline because crises typically entail loss of assets, displacement, etc. In the short term – say, for the next three months – groups *currently* at risk are therefore usually expected to *remain* at risk. Each situation has to be carefully analysed to determine the point at which the risks have declined to a level where affected groups are no longer at risk. For example, following a drought, farming communities may remain at risk for several years after the first harvest, because they have to rebuild the assets that were lost during the drought, or sold to cope with the situation.

Example 4.9 illustrates how this analysis is applied.

**Example 4.9: Combining forecast opportunities and shocks with current population groups at risk**

The situation analysis indicates that agricultural labourers are among the groups whose food security is currently at risk, because last year's harvest was destroyed by floods and labourers were unable to accumulate enough money to buy food during the dry season, when little work is available. Agricultural labourers are predominantly from ethnic group X.

Forecast analysis indicates that the following events are likely to happen in the coming months:

- The planting season is expected to start in one month. Farmers have already received seed from agricultural relief programmes, so are expected to plant substantial areas in spite of last year's poor harvest.
- There is growing civil unrest, and local leaders predict that low-intensity armed conflict will erupt within the next three months. Last time this happened, ten years ago, nearly all members of ethnic group Y, who are currently among the more affluent members of the population, were displaced to the neighbouring region.

In this *simplified* example, the following conclusions might be drawn:

- Although the agricultural labourers are at risk now, within the next month their situation should improve, as there will be abundant work opportunities.
- The lives and/or livelihoods of ethnic group Y are not currently at risk. If conflict erupts as predicted, however, group Y will be forced to move and its situation will deteriorate dramatically.
- Therefore, although *at the moment* the livelihoods of agricultural labourers are most at risk, within the next three months the situation is likely to change, with members of ethnic group Y becoming the most at risk.

This example is simplistic, for the purposes of illustration. In reality, each group must be analysed in terms of its **vulnerability** to the threats that it currently faces and is likely to face in the future. In this example, the following issues might be taken into account:

- Will the labourers find sufficient work to counteract the deterioration in their assets that resulted from last season's problems? The situation analysis may indicate that they have sold productive assets. To regain their livelihood security, the labourers will therefore need to replace their assets, including savings, *and* supplement these with enough additional savings to sustain themselves through the next lean period.
- Ethnic group Y is relatively affluent and owns some of the land on which the labourers find work. Will the expected displacement of group Y affect labour opportunities?
- How will the coming conflict affect agricultural activity? Will the expected benefits be achieved? For example, landowners might delay planting their fields because of the political uncertainty.

- The fact that ethnic group Y will probably relocate does not *necessarily* mean that it will be more vulnerable than other groups. People in this group are currently relatively affluent, and probably have savings and other resources in different locations. As the conflict is predicted for three months from now, it is probable that members of ethnic group Y are making provisions and moving assets out of the area.

## 4.4 Estimation of the impact of shocks and opportunities on livelihoods

The selected scenario's impact on livelihoods must be estimated for each group concerned. This can be done by estimating the ways in which existing sources of food and income will be affected. Coping strategies are taken into account during this analysis. Examples 4.10 and 4.11 illustrate two ways of making this estimation, one based on quantitative data, the other on qualitative data.



### Example 4.10: Estimating the impact of a shock using quantitative data

During a household survey, the following data about sources of food and income for a given livelihood group are collected.

**Food sources**
- 50 percent from own production.
- 50 percent bought at market.

**Income sources**
- About 10 percent from sale of handicrafts.
- About 50 percent from seasonal labour.
- About 40 percent from sale of livestock products.

**Expenditures**
- Food: XYZ 3,000 per year, representing 67 percent of total expenditure.
- Other essential expenditure, such as health care, school and clothing: XYZ 1,500 per year, representing 33 percent of total expenditure.

*Total essential expenditure: XYZ 4,500 per year.*

According to the **most likely scenario**, the labour market will collapse because of fighting in the area where people go to work. As a result, access to labour is expected to drop by 75 percent, with only 25 percent of the labour market remaining accessible. This means that instead of providing 50 percent of total income, seasonal labour will now cover only about 12 percent: that is, 25 percent of 50 percent. This leaves an income shortfall of about 38 percent.

The situation analysis has shown that people cope with such a shortfall in the following ways:
- Selling animals: At current market prices and assuming that no more than two animals can be sold before herd sizes are reduced to unsustainable levels, this may bring an extra XYZ 1,000, or 22 percent of total expenditure.
- Reducing food consumption and diet diversity: This may save between XYZ 500 and XYZ 1,000, or 11 to 22 percent of total expenditure.

*It is therefore predicted that there may still be a 10 percent shortfall in household income, depending on how drastically food consumption is adjusted.*

## Example 4.11: Estimating the impact of a shock using qualitative data

Poor rainfall leads to the prediction that the harvest will be 50 percent less than normal: a shock. A major road construction project is about to start in the area: an opportunity. The combined impact of the shock and the opportunity is estimated for farming households.

The following details of farmers' livelihoods *in a normal year* are identified during focus group discussions:

- Farming households eat 50 percent of their produce and sell the rest.
- Own produce covers consumption needs for seven months a year.
- For the remaining five months, farming households buy food using the money from their food sales, which is estimated to cover about three months of food needs; and undertake casual labour on other people's farms and construction projects, which is estimated to cover about two months of food needs.
- In a normal year, these strategies enable farming households to cover all their food and non-food needs, while retaining savings equivalent to 10 percent of their annual expenditure.

The **impact** of the predicted 50 percent reduction in the harvest is estimated as follows:

- *It is assumed* that households will continue to eat 50 percent of their produce and sell the rest – this can be checked in the focus group discussions. Own produce will therefore now account for 3.5 months of food instead of seven. Because of the poor harvest, food prices in the market are relatively high. Food sales will now enable the household to buy approximately half the usual amount of food, that is 1.5 months of food needs.
- Own produce, both consumption and sales, is therefore expected to cover approximately five months of food needs instead of the usual ten months.
- Because of the poor harvest, households are unable to find any seasonal labour on other people's farms.
- Road construction will provide employment for at least one member of each farming household for some portion of the coming year. It is estimated that this will provide approximately four months of food needs per household.
- Households will experience a food shortfall and will mobilize some of their savings from previous years, estimated at 1.5 months of food needs.

Combining all of these figures, the extent to which farming households might be expected to cover their food needs in the coming year is estimated as follows:

Own consumption: 3.5 months
+
Sale of own produce: 1.5 months
+
Construction work: 4 months
+
Savings: 1.5 months
=
10.5 months

*It is therefore predicted that farming households will experience a food gap of 1.5 months in the coming year.*

### 4.4.1 Conducting a food gap analysis

Calculating the food gap is an essential step in estimating the food needs of the affected population in an emergency. The food gap has three distinct elements:
- the food availability gap, which is the shortfall between a region's aggregate food needs and its aggregate food availability;
- the food access gap, which is the shortfall at the household level; and
- the food consumption gap, which is the shortfall between nutrition needs and actual food consumption.

Estimating the food gap is a relatively straightforward process. In simple terms, the food access gap is the difference between the level of household food stores, or access to food, and the actual amount of food needed to ensure adequate nutrition and health for every household member. By quantifying this difference, an EFSA can arrive at reasonably accurate estimates of emergency food needs.

For a population affected by a shock, the food access gap – or food need – is equal to the aggregate food deficits of vulnerable households who are unable to meet their own minimum requirements without endangering their health, their access to essential non-food items such as income and education, and their own or the community's resource base.

Every EFSA should estimate the expected food access gap resulting from an emergency, but the specific methodology for doing so differs according to the type of EFSA being undertaken. In an initial assessment, there is not usually enough time to gather in-depth food access information on distinct livelihood groups. As a result, estimates of the food gap developed during initial assessments typically rely on general information obtained from group discussions and key informant interviews. A rapid assessment should be able to outline how the food gap differs among distinct livelihood groups, but may have limited ability to gather detailed quantitative information at the household level. An in-depth assessment should focus on obtaining detailed, household-level information and should calculate food gaps with relative precision.

Table 4.10 outlines the general process for determining the food gap.

**Table 4.10: General process for determining the food gap**

| Process | Sources / methods |
|---|---|
| → Identify distinct vulnerable groups within the population of concern | - Key informants<br>- Informal discussions with different groups: gender-based, livelihood groups, community-based organizations, etc. |
| → Describe the ways in which each vulnerable group currently obtains access to food and meets its non-food needs; how members of each group use the food and other resources available to them; and how access and use vary within and across groups, according to the wealth or status of households | - Focus group discussions<br>- Proportional piling and seasonal calendars with groups of participants representing the different livelihood groups<br>- Observation (transect walks)<br>- Household visits and/or household surveys |
| → Examine the general availability of food and other resources in the locality, and use the findings of the forecast analysis (**Section 4**) to predict how changes in context – e.g. market access, climatic conditions, sources of conflict – are likely to affect people's access to and use of food, their nutrition status or their indebtedness | - Key informants: local authorities, traders, etc.<br>- Food aid distribution data<br>- Monitoring reports<br>- Nutrition surveys and surveillance data<br>- Market surveys/analysis<br>- FEWS information<br>- VAM analyses |
| → For each livelihood group, estimate the difference between food needs and the amount of food that individuals expect to be able to provide for themselves<br><br>The difference represents the *food gap*: the level of food assistance recommended by the EFSA should be sufficient to fill this gap | - Household surveys that enable analysis of household income and expenditure<br>- Quantitative and qualitative data that provide empirical information on the nutrition outcomes of household resource use |

Wherever possible, the recommended method for calculating the food gap follows five basic steps.

**Step 1: Determine baseline consumption and income levels**
To estimate the food gap, an EFSA must derive baseline consumption and income levels that reflect a normal year – one in which emergency food aid is not required. Assessors should ensure the accuracy of baseline information by triangulating household information with other data sources, such as district-level agricultural production data.

**Step 2: Convert basic food requirements to cereal equivalents**
A common measure is needed so that consumption, income and expenditure data can be combined, and food gaps or food aid needs calculated. The most common measure is the cereal equivalent. As cereals account for the bulk of energy needs for food-insecure households and of food assistance provided to these households, it is convenient to use them as the measure. Income and expenditures are converted to cereal equivalents using the local market values of cereals, or their substitutes, collected during the assessment from secondary sources, key informant interviews or market visits.

Typically, a minimum consumption requirement of 2,100 kcals/person/day is used as a basis for calculating the food gap.[60] If this minimum requirement is derived from cereals only – which is unlikely, even during emergencies – each person will require approximately 18 kg of cereals per month. If the 2,100 kcal comes from cereals only, it can be assumed that the diet is not diverse enough and that there are potential problems with nutrition quality.

**Step 3: Convert non-cereal foods into cereal equivalents**
In many situations, the predominant portion of beneficiaries' food intake comes from non-cereals, for example from root or tuber crops such as cassava or potatoes. An EFSA must determine the extent to which cereals such as wheat or rice can substitute the deficit of the non-cereal staples. To determine the nutrition deficits of these areas, the non-cereal foods can be converted into nutritional cereal units. Using the example in step 2, the theoretical cereal deficit is 18 kg per person per month.



It should be noted that when a cereal substitutes a non-cereal diet staple, beneficiaries will often trade or sell the cereal food aid, frequently at unfavourable terms of trade. If the EFSA finds this response, it may be possible to account for these poor exchanges and terms of trade by supplying additional cereal to make up the trade deficit, or by introducing ways of using cereals in locally preferred dishes.

If the substitute cereal is likely to be consumed by beneficiaries, the nutritional cereal equivalent applies. If it is traded, the economic equivalent applies.

**Step 4: Develop an income/expenditure balance sheet**
The most common approach to calculating the food gap uses a balance sheet of household income and expenditures. This is because many households rely on purchasing food for at least part of their dietary needs, and the assessment needs to determine the degree to which households normally fulfil their food requirements from such transfers. Using an income/expenditure balance sheet enables direct comparison of households' available incomes with their expenditures. It also provides insight into the degree of food insecurity (if any) and determines the household deficits that will be taken into account when calculating food aid needs.

Food produced by a household for consumption is considered to be both a source of income and an expenditure. In both cases, it is estimated in terms of quantity, for example, weight. Other sources of cash income, such as wage labour and remittances, must initially be estimated in terms of their actual market values. Again, each must be converted into a cereal equivalent so that all income sources and expenditures can be compared. This should be done using the current market price of the cereal as the conversion rate.

60. A general food ration of 2,100 kcal/person/day is based on the mean per capita energy requirement for the "normal" population distribution of a developing country. This estimate is designed to include the needs of vulnerable sub-groups: infants, young children, pregnant and lactating women, the elderly.

In Example 4.12, a number of household income sources are converted into cereal equivalents, and the total income of the household is estimated for the current year. In this particular year, food produced for home consumption was 400 kg; if this were a drought scenario, this value would likely be significantly lower than the normal or average income value of food production.

**Example 4.12: Household income and expenditure balance sheet**

| **Income** | | | |
|---|---|---|---|
| **Average household income** | **Cash value /** | **Cereal price =** | **Cereal equivalent** |
| Food produced for home consumption | | | 400 kg |
| Cash crop sales | $70 | 0.35 | 200 kg |
| Livestock sales | $150 | 0.35 | 300 kg |
| Off-farm cash income | $35 | 0.35 | 100 kg |
| Remittance income | $18 | 0.35 | 50 kg |
| Savings | $18 | 0.35 | 50 kg |
| **Total income capacity** | | | **1100 kg** |
| **Expenditures** | | | |
| **Household expenditures** | **Cash value /** | **Cereal price =** | **Cereal equivalent** |
| Cereal seeds | n/a | | 100 kg |
| Cereal storage losses | n/a | | 50 kg |
| School fees | $18 | 0.35 | 50 kg |
| Medical expenses | $35 | 0.35 | 100 kg |
| Clothing | $18 | 0.35 | 50 kg |
| Fuel | $53 | 0.35 | 50 kg |
| **Total expenditures** | | | **1,500 kg** |
| **Balance** | | | |
| Total household requirements | | | 1500 kg |
| Total expenditure capacity | | | 1100 kg |
| Total needs: requirements minus capacity | | | 400 kg |

The balance sheet in Example 4.12 shows a household that has expenditures of approximately 1,500 kg cereal equivalent for the current year, but the capacity to provide only 1,100 kg of cereal equivalent based on all estimated income sources. It will therefore fall short of meeting its minimum food needs by approximately 400 kg. In this example, an estimated 400 kg of food aid (in cereal equivalent) is needed to alleviate the household's food deficit.

**Step 5: Calculate aggregate food needs for different socio-economic groups**
It is recommended that an EFSA calculate balance sheets for households within different livelihood groups or wealth categories, depending on the homogeneity of the population being considered. This is because different groups living in the same geographical area, such as the same food economy zone or agro-ecological zone, typically have different incomes and expenditures, and hence have different food deficits. Overall, regional or

national deficits are the weighted sum of the deficits of the different groups that have been defined and for which balance sheets have been developed. Example 4.13 illustrates an aggregate food gap estimate for various livelihood groups.

**Example 4.13: Aggregate food gap estimate**

| Livelihood group | Yearly household deficit (kg) | Number of households | Total food needs (mt of cereal equivalents) |
|---|---|---|---|
| Coastal fishers | 200 | 4000 | 800 |
| Highland coffee farmers | 150 | 6000 | 900 |
| Highland subsistence farmers | 400 | 10000 | 4000 |
| **Total** | | **20000** | **5700** |



The use of different livelihood or other groups will help to target food aid, but only makes sense if the differences among groups are reflected in the actual distribution of food aid. It must be operationally and politically feasible to allocate different food aid rations to specific sub-groups living in the same area. For each group, the number of months that food aid will be needed should also be estimated, and factored into the overall estimate of the food gap. This requires consideration of how different groups will be able to recover from whatever shock created the emergency, and how future income and expenditures will be affected.

## 4.5 Estimation of the numbers of people who will be affected by shocks and opportunities

The groups whose food security is likely to be at risk in the future were identified in **Section 4.3**. During the situation analysis of an EFSA, the **numbers** of people expected to be at risk in the future must be estimated. How this is done depends on whether the data used are quantitative or qualitative. This section provides guidance on estimating the *affected* population; for guidance on ways of estimating the *total* population size, see the desk review on estimating population size in emergencies and Technical Guidance Sheets Nos. 7, 10 and 11.[61]

61. Desk Review, Estimating Population Size in Emergencies, A. Henderson, WFP Emergency Needs Assessment Service, December 2006; Technical Guidance Sheet No. 7 Area Method to Estimate Population Size and Demographics in Emergency Food Security Assessments, A. Henderson, WFP Emergency Needs Assessment Service, September 2007; Technical Guidance Sheet No. 10 Using the Delphi Method to Estimate Population Size and Demographics in Emergency Food Security Assessments, A. Henderson, WFP Emergency Needs Assessment Service, January 2008; Technical Guidance Sheet No. 11 T-Square Method to Estimate Population Size and Demographics in Emergency Food Security Assessments, A. Henderson, WFP Food Security Analysis Service, December 2008.

The number of people expected to be at risk in the future is estimated as follows:

Number of people currently at risk and whose situation
is not expected to improve in the short term
+
Number of additional people who will become at risk
-
Number of people currently at risk but whose situation is expected
to improve to the extent that they are no longer at risk

When subtracting populations no longer at risk, the caution in **Section 4.3.3** must be taken into account. It may be possible to divide the coming year into periods of, say, three months, and identify the populations at risk in each period. The feasibility of such an approach depends on the situation, however. For example:

- in a slow-onset emergency, numbers are unlikely to vary greatly within a short period;
- in a rapid-onset emergency, such as localized flooding, the population at risk may decline substantially over the course of a few weeks or months.

Note that this approach increases the analytical, administrative and logistics workload substantially, as beneficiary numbers may vary from month to month. The added value of this level of fine-tuning and the implications for targeting should be carefully considered (see **Section 4.3.3**), as should the practical constraints.

### 4.5.1 Final estimate of numbers at risk

The information that relates shocks and opportunities to population groups is added to the information collected in Table 4.8 (in **Section 4.2**), as shown in Table 4.11.

**Table 4.11: Overview of groups affected under different scenarios, examples**

| Scenario and probability *(5 = certainty)* | Period | Opportunity or shock | Affected groups | Number of affected people *(current + forecast)* | Location of affected groups |
|---|---|---|---|---|---|
| **1. Situation will improve:** probability 4 | 0-6 months | Good harvest: opportunity | Farmers | 20 000 | District A |
| | | | Agricultural labourers | 5 000 | Districts A and B |
| | | | Grain traders | 1 000 | Town C |
| | | Flood: shock | Farmers | 2 000 | Villages along river |
| | | | | | |
| **2. Situation will deteriorate:** probability 2 | 0-6 months | Major crop failure due to late failure of rains: shock | Farmers | 20 000 | District A |
| | | | Agricultural labourers | 5 000 | Districts A and B |
| | | | Grain traders | 2 000 | Town C |

chapter 5

# Conducting a response analysis



In response analysis, the conclusions from the situation and forecast analyses are combined to identify possible interventions that can help to save lives and secure livelihoods. The outputs of response analysis include:

- identification of the factors related to risk;
- identification of the broad sectors and types of intervention required – the entry points;
- review of the intervention plans and capacities of government and other actors, and identification of gaps in these;
- identification of a range of response options to fill the gaps, and the strengths, weaknesses, opportunities and threats (SWOT) associated with each;
- selection of the most appropriate response option(s);
- recommendations for interventions, including targeting criteria, timing, scale and duration.

As already noted, response analysis is usually based on the most likely scenario (see **Section 4.2**). However, if there is a worst-case scenario that is less probable than the most likely scenario but *nonetheless has a reasonable probability of occurring*, a contingency plan should also be made for this scenario (see Example 4.7 in **Section 4.2**).

Interventions may be aimed at saving lives, protecting livelihoods or a combination of both. They may be focused on addressing the current situation, preventing future deterioration of the situation, or both. For timing and resource allocation purposes, response recommendations are prioritized according to the following urgency of needs:

- **First priority**: current risks to lives.
- **Second priority**: current risks to livelihoods, and risks to lives in the near future.
- **Third priority**: risks to lives and livelihoods in the more distant future.

If the current situation and/or forecasts indicate that an intervention is needed, the next step is to identify response options (see **Section 5.4**). The process is as follows:

- Ongoing interventions, future plans and the capacities of other stakeholders – government, United Nations agencies, NGOs and civil society – are examined and compared with the assessed needs. Gaps are identified.

- Different types of intervention are identified as **options** for responding to the needs and filling the gaps.
- For each possible intervention, a SWOT analysis is undertaken. This examines the **strengths, weaknesses, opportunities and threats** (SWOT) associated with each intervention option.
- Using the results of the SWOT analysis, the most effective and appropriate intervention strategy is chosen. This strategy should be proposed in the recommendations section of the assessment report.

Examples of interventions that might be used in a food security or nutrition crisis are given in Example 4.14.

**Example 4.14: Intervention options for food security and nutrition crises**

- Food distributions (general or targeted).
- Cash and voucher transfers.
- Food for work, cash for work.
- Supplementary or therapeutic feeding to malnourished individuals: pregnant and lactating women, emaciated children, people suffering from HIV / AIDS, tuberculosis, etc.
- Institutional feeding.
- Food for education.
- Health/nutrition education programmes, such as nutrition and food preparation training.
- Health programmes, such as immunization, vitamin A and iron supplements.
- Agricultural programmes, such as seed and tool distributions or fairs, fodder distributions, restocking.
- Other non-food interventions, such as water supply, provision of household items, market development.

**Note**: All relevant options should be considered, even those that do not fit the competence or mandate of the organization carrying out the assessment. In such cases, analysis should be disseminated to organizations with the requisite capacities.

For a more detailed discussion of response options see **Section 5.4**.

## 5.1 Factors related to risks to lives and livelihoods

To design an effective response, it is necessary to identify the factors that cause risk, both current and future.

For groups that are **currently at risk and whose situation will not change** in the short term, the main factors of risk are identified during the situation analysis (see **Chapter 3**).

For groups that are **expected to become at risk in the future**, risk-related factors are identified in the forecast analysis (see **Section 4.3.2**).

The factors that are directly related to risk should be defined as specifically as possible **and should relate directly to the situation and forecast analyses**. Factors that **contribute to risk** are categorized as immediate, underlying or basic, using the Food and Nutrition Security Conceptual Framework as a guide (see **Part I**). This categorization is useful when determining the types of intervention that are appropriate to the level of urgency:

- **Immediate factors** have a direct impact on lives and livelihoods. If dietary intake or health status is at a critical level, *immediate* action may be needed to save lives.
- **Underlying factors** may have an indirect impact on lives, but a direct impact on livelihoods. If they are not addressed, there is a danger that the situation will deteriorate, possibly leading to risks to lives in the future.
- **Basic factors** are long-term, structural issues. These are not normally addressed by EFSA response options, but if serious structural problems are identified, they should be recorded in the EFSA report, and relevant stakeholders such as government should be notified.



Factors that **decrease risk** should also be noted. These include the **capacities** of the affected groups and the **opportunities** identified in **Section 4.1**.

For each at-risk group, summarize the factors that increase and decrease risk, together with the associated livelihood characteristics, institutions and processes. An example is given in Table 4.12, which can also be used as a template.

**Table 4.12: Factors associated with risk for various groups, with examples**

| Group with lives at risk now or in the future | Factors exacerbating or alleviating risk | Associated livelihood assets and strategies | Associated institutions and processes |
|---|---|---|---|
| **Severely wasted children under 5** | **Factors increasing risk** | | |
| | **Food utilization:**<br>- lack of breastfeeding<br>- high prevalence of diarrhoea<br>- poor quality of complementary feeding<br>- poor quality of water | - Mothers' limited knowledge about feeding and hygiene practices | - Low staffing in health centres |
| | **Food access:**<br>- lack of income to purchase diverse foodstuffs | - Lack of agricultural land<br>- Women's multiple responsibilities: income generation, caring for children, cooking, etc.<br>- Low access to education | - Environmental degradation of farmland<br>- Few employment options available<br>- Poor terms of trade between wage rates and food prices |
| | **Factors decreasing risk** | | |
| | **Food availability:**<br>- imminent abundance of nutritious wild plants with onset of rains | - Consumption of wild plants is part of usual livelihood strategy | |
| | **Food accessibility:**<br>- economy gradually diversifying | - Households gradually diversifying livelihood strategies to adapt to changing economic environment | - Government loans to small businesses |

*(cont…)*

*(…cont)*

| Group with lives at risk now or in the future | Factors exacerbating or alleviating risk | Associated livelihood assets and strategies | Associated institutions and processes |
|---|---|---|---|
| Households with low levels of food security | **Factors increasing risk** | | |
| | **Food availability:**<br>- low production in area due to failed rains<br>- few food imports | - Limited livelihood strategies: only farming | - Poor roads increase transportation costs and discourage traders from moving food into the area<br>- High import tariffs reduce amount of food brought into the country |
| | **Food accessibility:**<br>- lack of own production<br>- lack of income to buy food at raised prices | - Lack of able-bodied workers due to high disease prevalence<br>- Lack of alternative skills to diversify income | - Poor preventive and curative health services<br>- Poor education reduces knowledge of health issues and limits income-related skills |
| | **Factors decreasing risk** | | |
| | **Food availability:**<br>- arrival of rains<br>- improvement of physical and market infrastructure | - Diversification of the economy | - Reduction of tariffs and other taxes that constrain the movement of food<br>- Improvement of physical infrastructure |
| | **Food accessibility:**<br>- opportunities for income diversification | - Training in income-generating activities<br>- Access to credit | - Introduction of vocational training programmes<br>- Introduction of credit programmes for small businesses |

## 5.2 Entry points for interventions

Entry points are the sectors and broad types of intervention that can be used first to address the needs identified during the analysis phase of the EFSA. They also provide a basis for analysing interventions managed by other organizations (see **Section 5.3**).

The following are possible entry points for the examples given in Table 4.12:

Severely wasted children under 5:
- **Water sector**: Improvement of water quality and quantity through emergency delivery, treatment and storage systems.
- **Health services**: Deployment of additional health staff and equipment; establishment of complementary feeding programmes.
- **Care practices**: Dissemination of information regarding the benefits of hygiene and breastfeeding.

Food-insecure households:
- **Health services**: Establishment of preventive and curative health services.
- **Vocational training**: Training in activities that enable households to diversify their income sources.
- **Credit**: Provision of loans to help people buy productive assets, both agricultural and non-agricultural.

These programmes are more effective if they are supported by such government interventions as:

- **Policy changes**, reduction of taxes or changes in regulations that constrain the free movement of food.
- **Investment in services**, particularly health and education.

## 5.3 Other stakeholders' interventions, and remaining gaps

Before a response can be planned, the existing and planned activities of government and other agencies must be taken into account, to prevent duplication, identify gaps and ensure they are covered, and avoid incompatible programme responses, such as one agency undertaking food for work while another carries out free food distribution in the same area.



Relevant agencies are identified through stakeholder analysis, and consulted. The subsequent selection of agencies to collaborate on interventions is then based on the entry points, as described in **Section 5.2**. For example, for the emergency described in Table 4.12, entry points were identified in water, health services and care practices. Organizations working in these sectors should be approached for potential partnership activities. Box 4.10 lists some agencies that may be stakeholders in interventions resulting from an EFSA response analysis.

**Box 4.10: Typical stakeholders in food security response programmes**

- Government – national, regional and local
- Non-State authorities, such as in situations of civil conflict
- WFP
- OCHA
- FAO
- UNICEF
- UNHCR
- International Committee of the Red Cross (ICRC)
- International Federation of Red Cross and Red Crescent Societies (IFRC)
- National Red Cross or Red Crescent societies
- International NGOs
- National NGOs
- Donors

The *capacity* of governments and agencies to *fulfil* their plans is assessed, as is their *flexibility* for changing plans if necessary. Whenever possible, details of the planned activities are discussed with the agency concerned, including the following issues:

- **Financial resources**: Does the agency have the necessary money, or is it waiting for funds?

- **Material resources**: Does the agency have the necessary goods and equipment, such as food for distribution, vehicles, etc.?
- **Human resources**: Have all the necessary personnel been deployed?
- **Logistics**: How will the operation function?

Detailed discussion of these and other topics with the government department or agency concerned should clarify the feasibility of its plans and can also form the basis for strong operational partnerships.

It can be difficult to estimate government capacity because of decentralization and the involvement of several departments. Indicators reflecting the macroeconomic situation and the government institutions and budgets allocated to disaster preparedness and response can be used for this purpose. For detailed advice, see Technical Guidance Sheet No. 13.[62]

Information on different stakeholders' responses may be presented in a table similar to Table 4.13.

**Table 4.13: Ongoing and planned response interventions, with examples**

| Actor | Type of intervention | Type and number of beneficiaries | Place of intervention | Duration of intervention (start to finish) |
|---|---|---|---|---|
| **Ministry of Social Affairs** | Subsidized food | To be determined | - Area B<br>- Area D | One-off food delivery in … |
| **WFP** | General food aid distributions of full rations | Vulnerable households:<br>- with less than 1 ha<br>- female-headed<br>- the poorest according to leaders<br>Total: ~ 50 000 people | - Area A<br>- Area B<br>- Area C<br>- Area D | From … to … |
| | Supplementary feeding:<br>• rations for children<br>• take-home full rations for households | Moderately malnourished children<br>Total:<br>~ 3 500 children;<br>~ 500 households | - Area B<br>- Area D | From … to … |
| **Religious institution** | Targeted food aid distributions: ~ 3/4 ration | Vulnerable households identified by community | - Area B<br>- Area C<br>- Area D | |
| … | … | … | … | … |

62. Technical Guidance Sheet No. 13 Analysing National Capacity to Respond to Food Security Crises, WFP Food Security Analysis Service, September 2008.

The planned and ongoing activities of other agencies are compared with what is required to address the factors related to risks to lives and livelihoods identified in **Sections 5.1** and **5.2**. Information can be summarized in a table similar to Table 4.14.

**Table 4.14: Summary of interventions and gaps for groups at risk**

| Group at risk now and in the future | Ongoing interventions | Planned interventions | All needs covered? If not, what are the gaps? |
|---|---|---|---|
| At-risk group A | What is being provided? | What will be provided? | |
| | To whom/how many? | To whom/how many? | |
| | By whom? | By whom? | |
| | Since when/until when? | When/for how long? | |
| | Where? | Where? | |
| At-risk group B | What is being provided? | What will be provided? | |
| | To whom/how many? | To whom/how many? | |
| | By whom? | By whom? | |
| | Since when/until when? | When/for how long? | |
| | Where? | Where? | |

**If all the risk factors identified in Section 5.1 are being addressed adequately by other agencies, there is no need to intervene at this stage.** The situation should be monitored to ensure that any unmet needs arising in the future are identified promptly. This should be a key recommendation of the EFSA report.

If Table 4.14 indicates that some needs are not being addressed by other agencies, an additional or complementary response is necessary, as described in the following section.

## 5.4 Response options[63]

In the EFSA report, response options are examined for the groups requiring assistance (see **Section 5.1**) that is not being provided by government or other agencies (see **Section 5.3**). Response options should be directly linked to the risk factors and groups identified in the situation and forecast analyses, taking into account the affected groups' capacities and other agencies' responses. As much as possible, the affected people should participate in planning the response, including women, the elderly and disabled people.

63. The following guidance is not a project planning guide. This section presents generic response options and explains the circumstances under which each is appropriate. It also provides an example of the level of detail expected in an EFSA report. Operational planning requires a comprehensive approach that is beyond the scope of this handbook.

The procedure for identifying response options is as follows:
1. Identify the number of people requiring food assistance.
2. Facilitate a workshop for identifying programme options with programme and other key WFP and non-WFP actors.[64]
3. Use a matrix or SWOT analysis to identify all possible modalities and activities.

### 5.4.1 Identification of response options

There are many ways of addressing a food security or malnutrition problem. The most appropriate response is *highly context-specific* and depends on:
- the type of emergency, rapid or slow-onset, and the stage of the emergency at the time of response, early or mid-cycle;
- the pre-emergency situation - the status of infrastructure and services, level of education, etc.;
- the habits, priorities and culture of the affected population;
- the degree of access to the affected area;
- the quality of infrastructure;
- food availability and market conditions in the affected area;
- the resources available - financial, human, logistics, etc.;
- the range of feasible partnerships, such as with government, United Nations agencies and NGOs;
- the political and economic environment; and
- the security situation.

Each response must be planned according to the particular circumstances and must be explicitly linked to the needs and gaps identified in the analysis.

The first level of screening response options is to categorize the interventions required according to the type of risk factor that they address: food availability, access and/or utilization. A second level of screening defines the level at which each intervention can take place, based on whether it addresses an immediate, underlying or basic factor of risk (see the Food and Nutrition Security Conceptual Framework in **Part I**).

The following are sectors and broad types of intervention that address food availability, access and utilization factors:
- **Food availability**: Interventions to support agricultural production, both crops and livestock, the movement of food between deficit and surplus areas, food distributions, etc.
- **Food access**: Interventions to support income generation, such as public works and food/cash for work, income transfers, such as cash/voucher distributions,

64. Collaboration within programmes is essential for defining response options: programme and assessment staff must work together from the onset of the assessment, when information requirements are defined, to the analysis. During the workshop, entry points are identified, and their feasibility, etc. evaluated by the WFP units that will be required to implement interventions.

food transfers, such as food distributions and school feeding, market interventions to support or reduce food prices, etc.

- **Food utilization**: Interventions to improve health care, water, sanitation, shelter, nutrition knowledge and care practices, child-care services, etc.
- **Malnutrition**: Interventions to improve food consumption – therapeutic and supplementary feeding programmes, school feeding, food distribution.

Additional examples of response options for addressing malnutrition and food insecurity problems are given in Table 4.15. Some interventions can cover more than one food security issue. For example, food distributions might ease problems of both food availability and food access. Responses in Table 4.15 are categorized according to their most common application. More detailed guidance on the circumstances under which each option might be applied, and the advantages and disadvantages of each, is given in **Annexes 4** and **5**.



**Table 4.15: Food and non-food responses in terms of factors of risk**

| Response | Description |
|---|---|
| **Responses to food availability problems** | |
| **Free food distribution** | Free rations to households in need – general distribution to all households in area or targeted distribution to households in specific groups |
| **Market assistance programmes** | Selected food commodities made available to traders and retailers to sell at controlled prices |
| **Market support** | Reduction of logistics bottlenecks, such as through road repair, or provision of credit to traders |
| **Food for work** | Food ration as payment for work – can be used as method for self-targeting, with only those who really need the food being willing to work for it.<br>Is also a response to food access problems |
| **Food for training** | Food as an incentive to individuals from food-insecure households to undertake training in skills that will help them improve their own food security.<br>Is also a response to food access problems |
| **Responses to food access problems** | |
| **Neighbourhood and home-based care programmes** | Food given to orphans and vulnerable children, such as in situations of high HIV/AIDS prevalence |
| **School feeding** | Provision of nutritionally balanced and fortified meals to children at school, and of take-home rations to compensate parents for sending their children to school |
| **Food to other social service institutions** | Food provided to social institutions, such as orphanages, homes for the elderly or disabled, hospitals and health centres |
| **Cash transfer programmes** | Cash distributed to households in need – general distribution to all households in area or targeted distribution to households in specific groups |

*(cont…)*

*(…cont)*

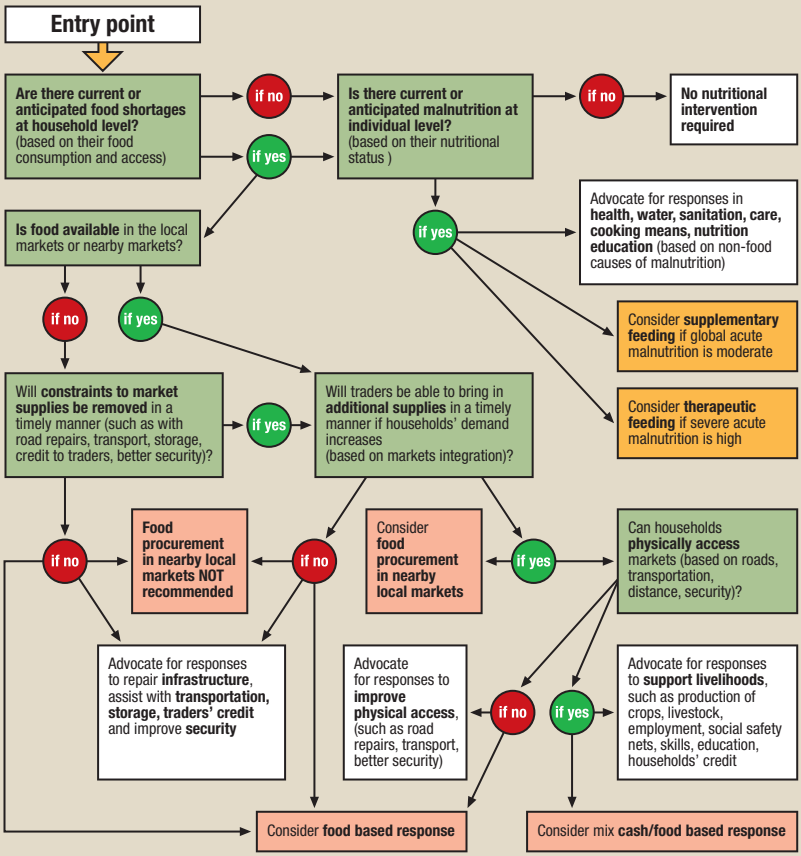
| | |
|---|---|
| **Cash for work** | Cash as payment for work – can be used as method for self-targeting, with only those who really need the money being willing to work for it |
| **Food vouchers** | Distribution of vouchers that can be exchanged for food and other essential items |
| **Non-food transfers** | Provision of non-food items, such as soap and blankets, or services, such as water, schooling and health care |
| **Non-food support to livelihood activities** | Provision of productive inputs and services to maintain, rebuild or restore capital assets for food-insecure but economically active people |
| **Exchange with produce** | Food given to households in return for produce that they are not able to sell at reasonable prices, such as livestock |
| **Responses to food utilization problems** | |
| **Food preparation materials** | Provision of cooking equipment, fuel, water, etc. |
| **Nutrition, education, health, water and sanitation interventions** | Improvement of feeding and care practices through, for example, prevention of nutrient loss during food preparation and prevention and treatment of diarrhoea and other diseases that affect nutrient absorption and utilization |
| **Responses to malnutrition** | |
| **Therapeutic feeding** | Medical and nutritional treatment to save the lives of severely malnourished individuals |
| **Supplementary feeding** | Distribution of food to supplement the energy and nutrients available from the basic diet of individuals who have special nutrition needs or are malnourished |
| **Public health measures** | Measures to improve sanitation, water supply, health care services, etc. |
| **Food fortification** | Provision of food fortified with nutrients, particularly vitamins and minerals, when the diet is deficient in these respects |
| **Nutrient supplementation** | Distribution of nutrient supplements, such as vitamin A capsules, when the diet is deficient in these respects |

Wherever possible, interventions that build on existing programmes should be selected, to speed up the implementation process and make use of established capacities and experience. Some interventions will be outside the mandate of WFP. **If the EFSA indicates that such interventions constitute the most effective response, this should be stated in the EFSA report, to be shared with agencies that have the relevant competence and capacity**. Response options should also be discussed with partner organizations.

Figure 4.1 shows a decision tree for determining the most appropriate type of response options. This decision tree can be used as a guide for drawing on contextual and empirical knowledge to solve issues such as constraints to market supplies, physical access and market linkages. The decision tree does not explicitly

include gender, but gender should be considered a critical factor throughout the entire assessment, analysis and response planning process.

**Figure 4.1: Decision tree for response options**




### 5.4.2 SWOT analysis

Having identified a series of response options, each must be analysed in terms of its strengths and weaknesses, and the opportunities and threats that it presents. This is known as SWOT analysis. A SWOT analysis should be undertaken for each of the recommended response options.

In a SWOT analysis **strengths** and **weaknesses** reflect the appropriateness and feasibility of the response option. The following criteria should be taken into account when assessing the **appropriateness** of a response option. The response should:

- address the factors that have been identified as contributing to risk;
- reflect the needs and priorities of the affected population, disaggregated according to sex, age, etc.;
- be compatible with local society and customs; and
- be compatible with the interventions of the government or other agencies.

The response should *not*:

- lead to dependency on aid for any sector of the population;
- have a negative impact on the local social, environmental or economic situation – for example, a large food distribution might discourage agricultural production;
- divert people from other important tasks, such as productive activities, caring, collection of water and fuel;
- expose the population or agency staff to security risks; or
- stigmatize people – for example, by targeting people with HIV/AIDS or from certain ethnic groups.

The following criteria should be taken into account when assessing the **feasibility** of a response option:

- Targeting criteria should be realistic, given the social and cultural factors and the time available.
- It should be possible to undertake the response with the resources available. Human resources, including expertise, financial and material resources should all be considered.
- The response must be implemented in a timely manner, given the urgency of the situation.

In a SWOT analysis **opportunities and threats** reflect the external factors that may affect the response. These are context-specific. The following are some examples:

**Opportunities**

- The introduction of new government policy that facilitates market functioning.
- The end of the wet season and the improvement of transportation.
- The signing of peace agreements.
- The harvest.

**Threats**

- Government policies that limit the scope of trade or aid programmes.
- Reduction of donor interest in the country.
- Deterioration of security.
- Lack of key programme resources such as fuel.

The strengths, weaknesses, opportunities and threats are combined in a matrix to assist the comparison of response options and evaluate the relative merits of each. Example 4.15 illustrates how a SWOT analysis may be conducted.

## Example 4.15: SWOT analysis of response options

An EFSA has been undertaken in a rural area affected by recent floods. The area has always been poor, with some households suffering from chronic food insecurity. Nutrition surveillance over the last ten years indicates a gradual upward trend for malnutrition among children under 5. The local economy is based on agriculture, food processing and light industry.

The EFSA reveals the following:

- Approximately 20 percent of the population is food-insecure. Food consumption patterns show that both energy and micronutrient intakes are alarmingly low in this group.
- Among the remaining 80 percent of the population, food consumption is acceptable.
- Prices of food in the local market have increased.
- Opportunities for income generation are lower than usual. Farmland has been swamped, and some factories and processing plants have been put out of action.
- Farms that are not close to the river have recorded a good harvest because their fields were not flooded.
- Physical access to the area is difficult, as the flood destroyed a bridge on the main road.

The prospects for the next three months are poor, for the following reasons:

- The flood waters will take several weeks to recede.
- No harvest is expected before next year.
- There is no tradition of seasonal migration to look for work.
- The government's capacity to respond is weak, and the only NGO working in the area concentrates on supplementary feeding programmes and nutrition education for mothers and pre-school-age children.

In view of the situation, a targeted food distribution to address food shortage at the household level is proposed. A SWOT analysis is undertaken.

**Note:** The strengths and weaknesses reflect aspects that are under the control of the implementing agency – primarily programme design – while the opportunities and threats concern external issues that are outside the control of the implementing agency.

| Strengths | Weaknesses | Opportunities | Threats |
|---|---|---|---|
| - Addresses the food consumption problem<br>- Helps bring down the price of food, thereby improving food access<br>- Partially substitutes lost earnings<br>- Could act as a catalyst in rehabilitating the local economy: increased household purchasing power and employment generated through logistics operation | - May be difficult to target the intended 20% of the population<br>- Logistics complications may lead to food arriving late and disrupting the market<br>- If too much food is distributed, traders may be discouraged from bringing in commercial supplies, and farmers whose land was not flooded may not be able to sell their produce at good prices | - Food for the distribution could be bought locally from farmers who are not close to the river<br>- The food distribution could be undertaken in collaboration with the NGO, making it possible to address both bulk food deficit and malnutrition | - Weak government capacity means that coordination and support are likely to be poor<br>- Transportation of food will be difficult because of the broken bridge and flooded land<br>- Slowly receding flood waters might lead to water-borne disease, reducing the benefits of improved food consumption |

In Example 4.15, it is evident that a food distribution could bring substantial benefits, but that these depend on a number of conditions, especially the following:

- An effective targeting system must be established.
- The amount of food needed and the duration of the distribution must be analysed realistically.
- The feasibility of the operation must be assured and logistics constraints taken into account. Late distribution might be worse than no distribution at all: it would not provide assistance when needed, and by the time the food arrives, the situation may have improved to the extent that food will disrupt the local market.
- Complementary health care activities should be implemented to reduce the incidence of water-borne disease and to maximize the benefits of the food distribution on food consumption.

This type of SWOT analysis is undertaken for each of the response options identified in **Section 5.4.1**. Options that do not comply with the appropriateness and feasibility criteria outlined in this **Section 5.4.2** are discarded. The remaining response options are ranked, as described in **Section 5.4.3**.

The "do-no-harm" principle is essential in the SWOT analysis of response options (see Box 4.11), particularly in conflict situations, where a specific conflict analysis is required. See *Methods and Tools for Conflict Analysis*[65] for more details.

**Box 4.11: Conflict analysis and the do-no-harm principle**

A badly planned response may be worse than no response at all if it harms the local population. Examples of harmful responses include:

- distribution of items that attract looters and put recipients in danger;
- food distributions that disrupt local markets to the extent that the livelihoods of farmers and traders are put at risk;
- distributions that necessitate long and dangerous journeys for recipients, for example, to collect distributed items.

Any proposed intervention should be analysed for its **potential negative effects**, as well as its benefits.

### 5.4.3 Ranking and prioritization of response options

The ranking of response options requires good judgement and a sound knowledge of the context. In general, the interventions that most fully comply with the criteria outlined in **Section 5.4.2** are the best options.

**Different response options can be combined in one programme**, either simultaneously or sequentially. For example:

65. Methods and Tools for Conflict Analysis, WFP Transition Unit, August 2007.

- a general food distribution can be combined with the provision of supplementary rations for pregnant and lactating women and malnourished children;
- a cash-for-work scheme can be combined with market support interventions and food for work implemented at different periods of the year.

The same intervention might also assist more than one target group. The target groups (see **Section 5.4.4**) are linked to the proposed interventions in a table similar to Table 4.16.

**Table 4.16: Targeted interventions, examples**

| Affected (target) group | Examples of interventions |
|---|---|
| **Under-5 children whose lives are at risk:** severely wasted | • Therapeutic feeding to children<br>• Supplementary feeding to mothers<br>• Emergency provision of clean water<br>• Targeted distribution of cooking materials |
| **Households whose livelihoods are at risk:** experiencing severe depletion of productive assets by distress sales, and of human assets by rapidly deteriorating food access | • Targeted general food distribution to affected households<br>• Provision of seeds and tools<br>• Provision of fortified on-site school feeding |



The EFSA report does not need to include all the details of the forecast and response analyses, but the logic of each recommended intervention should be clearly explained. It is also important to explain why other proposed responses are not recommended. The recommended interventions should be linked explicitly to:
- the groups whose lives and livelihoods are at risk, and the factors of risk identified during the situation and forecast analyses;
- the context – markets, agro-ecology, social circumstances, etc.;
- the security and access situation;
- operational constraints – time, human resources, funding, etc.

### 5.4.4 Targeting

The EFSA report should provide recommendations about whether or not targeting is appropriate and, if so, the form that it should take. Targeting of assistance is based on the groups defined as being at risk in the situation and forecast analyses.

Targeting may be applied at different levels:
- **Geographical targeting**: All people living in a specific area receive assistance.
- **Household targeting**: All households fulfilling certain criteria receive assistance, based on the profiles of groups whose lives and livelihoods are at risk, such as IDP households or female-headed households.
- **Individual targeting**: *Within* households, individuals whose lives are at risk receive assistance, such as malnourished children or pregnant and lactating women.

- **Institutional targeting**: Schools, hospitals and other institutions receive support to improve food access and promote household and individual asset development and retention.

Whatever the approach to targeting, **practical criteria** must be applied to identify the people who qualify for assistance. Targeting criteria must be:
- *easily understood and accepted by programme staff and the affected communities*, otherwise the targeting is unlikely to be successful;
- *observable and measurable*, so that they can be monitored objectively, otherwise there will probably be lengthy debates about who is eligible for assistance and who is not;
- *specific to the target groups*: attributes that are also possessed by people outside the target group are not useful as criteria.

In some cases, **targeting may not be appropriate** because either everybody in the area needs assistance, or the costs and complications of targeting outweigh the benefits. Examples of the second possibility include:
- situations in which it is very difficult to define targeting criteria that are sufficiently observable and measurable, when the cost of targeting in terms of staff time may be greater than the cost saving achieved by limiting assistance to certain groups;
- communities in which the principle of targeting is not accepted, because the culture places a strong value on equality and people do not accept that some members of the community should receive assistance while others do not.

The following are approaches that can help address these issues:
- **Community targeting**: Community representatives decide who will receive assistance. This works well if the representatives are genuinely acting on the entire community's behalf. If they are not, there is a danger of substantial inclusion and exclusion errors.[66]
- **Self-targeting**: Some types of intervention, such as food for work, are based on the principle that the target groups select *themselves*. The theory is that only those who really need the assistance will undertake the work required to receive it. However, such projects are often implemented in areas with high unemployment, where the work implemented cannot absorb all the people willing to work. In such cases, other targeting approaches need to be used to select workers.
- **Blanket assistance**: If the situation is very severe, such as after a tsunami, and the period of assistance provision is short, it may be cost-effective and socially beneficial simply to provide assistance to everyone.

66. A guidance note on community-based food aid targeting in complex emergencies is being prepared by WFP's Policy, Planning and Strategy Division (Humanitarian Policy and Transitions). It will be available in mid-2009.

chapter 6

# Formulating recommendations for interventions and follow-up



In the EFSA report (see **Part V**), the conclusions of the situation, forecast and response analyses are summarized in the recommendations section. The following detailed operational information is required for the selected response option(s):

- the type(s) of intervention recommended;
- the level of assistance: quantities of resources to be provided and frequency of provision;
- the target group(s) and institution(s), including descriptions and numbers of beneficiaries;
- the priority geographical areas;
- the duration of the interventions, including start and finish dates and exit strategy;
- the mechanisms for coordination with other agencies and the government.

The EFSA report may also include recommendations for interventions that WFP will not implement, such as those focusing on protection, agriculture, health, water, sanitation, shelter, education, and capacity-building and training. For this type of recommendation, the level of detail in the EFSA report depends on the composition of the assessment team. If the team includes specialist partner agencies, detailed recommendations may be feasible. If not, the EFSA report should include broad recommendations to be shared with agencies that have the relevant expertise. Although EFSAs are likely to result in recommendations for intervention carried out by WFP and/or partner agencies, they must remain open to the possibility of *not* intervening in circumstances where activities may be unsafe, detrimental to the affected community, or otherwise ineffective in addressing identified issues.

The EFSA report should also include recommendations for **follow-up assessment and monitoring**:

- If the situation is changing quickly, such as during the first days after a forced displacement, regular follow-up assessments will be needed. During a slow-onset emergency, a rapid assessment may be undertaken to ascertain whether or not the situation warrants an emergency intervention. If so, it is likely that an in-depth EFSA will be recommended. The EFSA report should provide specific recommendations concerning the timing and focus of follow-up assessments.
- Situation monitoring should be undertaken periodically after an EFSA. This will

show whether or not the situation is evolving as predicted in the scenario, and how effective any response interventions have been. Monitoring is usually less time- and resource-intensive than assessment, because it is based on selected indicators rather than a full process of primary data collection. The EFSA report should specify the indicators to be monitored and the frequency with which they should be collected.

Monitoring schedules should also be specified. Table 4.17 provides an example of a monitoring schedule.

**Table 4.17: Monitoring data and schedule, example**

| Information / aspect to monitor | Data required | Sources | Timing |
|---|---|---|---|
| **Nutrition status** | • Prevalence of wasting among children 6–59 months | • Community health centres<br>• NGO surveys | Monthly |
| **Coping mechanisms** | • Excessive out-migration<br>• Excessive animal sales<br>• Withdrawing children from school, etc. | • Community key informants<br>• Markets<br>• Schoolteachers and parents | Every two months |
| **Harvest** | • Yields of staple crops | • Community key informants<br>• Local and central Ministry of Agriculture staff<br>• NGOs | At harvest time |
| **Market prices** | • Prices of staple foods<br>• Prices of vegetables<br>• Prices of fuelwood | • Community key informants<br>• Traders<br>• Local and central Ministry of Trade staff | Every two weeks or monthly |
| **Cross-border trade** | • Prices on both sides of the border<br>• Volumes crossing the border | • Traders<br>• Local Ministry of Trade and Customs staff | Monthly |
| **Livestock** | • Prices of livestock<br>• Health condition of livestock<br>• Condition of pastures | • Community key informants<br>• Traders<br>• Local and central Ministry of Agriculture staff | Monthly in dry season |
| **...** | | | |

# Part V
# Reporting EFSA results

## Contents of Part V

chapter 1

# Introduction

The report is the end-product of the EFSA. It provides a synthesis of the results for sharing with those who did not take part in the assessment. Users of the report may include decision-makers within WFP or partner organizations, and other key stakeholders such as government counterparts and potential donors. It is essential that the assessment analysis and recommendations are conveyed clearly and concisely so that stakeholders can understand the situation and take appropriate action.



This final **Part V** of the EFSA Handbook:

- outlines the report structure;
- explains the EFSA quality monitoring system, which is based on a review of the report;
- provides guidelines for communicating EFSA conclusions and recommendations.

chapter 2

# Report structure

The EFSA report structure is given in Table 5.1. When preparing reports, the following points should be kept in mind:

- Not all the items in Table 5.1 will be needed in every assessment report: only the relevant issues should be included.
- It is very important that the methodology and constraints are clearly explained in Section II of the report. This ensures transparency and provides readers with a means of gauging the reliability of the information contained in the report.
- The report should be thorough but concise. Ideally, it should not exceed 30 to 40 pages, with additional details presented as annexes.
- The executive summary should be no longer than four pages.
- The sections of the report should be interlinked, and the analytical process must be evident. It must be clear to the reader how the assessment team reached its conclusions.
- Findings and conclusions should be illustrated by clear graphs and maps, when relevant.

**Note:** The outline of contents given in Table 5.1 is indicative. Actual contents depend on the objectives of the EFSA and the terms of reference.

**Table 5.1: EFSA report format**

| | **Outline of contents** |
|---|---|
| **Executive summary** | • Reasons for doing the EFSA – main objectives of the EFSA<br>• Brief description of areas covered<br>• Extent and severity of malnutrition<br>• Extent and severity of household food insecurity, including numbers<br>• Extent of current risks to lives and livelihoods, including any distress coping mechanisms being employed<br>• Locations of food-insecure households, possibly including a map<br>• Characteristics – livelihoods, gender, etc. – of food-insecure individuals and households<br>• Factors contributing to food insecurity, risks to lives and livelihoods<br>• Likely evolution of the situation<br>• Total needs for assistance and what is already planned by other organizations<br>• Recommended responses, for whom and for how long<br>• Requirements for monitoring, periodic reassessment and contingency planning |

| | Outline of contents |
|---|---|
| **I. Background** | • Type of crisis, date/period of the event, evolution of the situation; assistance provided since the last assessment, when there is an ongoing operation<br>• Population groups and areas affected<br>• General context: economic, agricultural, political, security, etc.<br>• Rationale for the EFSA: Why was it carried out – as a first assessment following a sudden-onset crisis or warning of a slow-onset crisis, in preparation for a new EMOP or PRRO?<br>• Type of EFSA: When did it take place? Was it a first-time assessment (initial, rapid or in-depth) or a reassessment (rapid or in-depth)? |
| **II. Objectives and methods of the EFSA** | **2.1 Objectives**<br>• Main objective and specific objectives of this EFSA |
| | **2.2 Methods**<br>• Partnerships and consultation process before, during and after fieldwork: government counterparts, agencies involved<br>• Local adaptation of the Food and Nutrition Security Conceptual Framework: Who was involved among the partners? What hypotheses were used to design the EFSA and select the data to collect?<br>• Sources of data – secondary reviews, households, key informants, focus groups – and type of data collected from each source; describe the data collection instruments used in an annex<br>• Sampling approach: population groups and areas covered, random/purposive sampling, modalities of sampling; describe the sampling procedures used in an annex, if required<br>• Type of analysis: statistical and/or qualitative data; describe the analysis in an annex, if required<br>• Team composition and training<br>• Limitations of the methods employed, such as sampling, coverage and biases |
| **III. Mortality and nutrition situation**<br>***Note:*** *This section can come after, or be integrated with, Section V if no nutrition status data were collected directly during the EFSA and only secondary data are used* | ***Note:*** *mortality data are presented only when relevant and available.*<br>**3.1 Current mortality rates and severity at the population level:**<br>• Current CMR and U5MR: dates of collection; primary or secondary data<br>• Severity indicated by CMR and U5MR compared with standard thresholds<br>• Trends in CMR and U5MR in recent months, when appropriate |
| | **3.2 Nutrition status**<br>• Prevalence of malnutrition – acute, chronic – from direct anthropometric measurements or secondary data<br>• Severity indicated by population-level malnutrition rates compared with standard thresholds and local seasonal norms<br>• Trends in malnutrition rates, when appropriate |
| | **3.3 Health services and health status**<br>• Effect of the crisis on access to health services<br>• Access to health services and constraints: physical, economic, staffing, supplies, equipment<br>• Prevalence and causes of main diseases<br>• Coverage of immunization against main infectious diseases<br>• Association/correlation between disease and nutrition status |
| | **3.4 Water, sanitation and housing conditions**<br>• Effect of the crisis on access to and quality of water<br>• Effect of the crisis on sanitation and hygiene<br>• Effect of the crisis on housing<br>• Sources of water – quality of water<br>• Constraints to access to water<br>• Association/correlation between water access/quality and nutrition status<br>• Sanitation systems<br>• Association/correlation between sanitation systems and nutrition status<br>• Housing conditions<br>• Association/correlation between housing and nutrition status |

*(cont…)*

*(…cont)*

| | Outline of contents |
|---|---|
| | **3.5 Care practices**<br>• Current infant and young child feeding practices: prevalence of breastfeeding, age of introduction of complementary foods, etc.<br>• Main infant and young child caregiver(s): age, education, etc.<br>• Association/correlation between care factors and nutrition status |
| | **3.6 Household food security**<br>• Association/correlation between household food security and nutrition status (details on household food security are given in Section V) |
| **IV. Markets** | **4.1 Market structures and supplies**<br>• Effect of the crisis on market structure, access to markets, level of market activity, and supplies to markets<br>• Location of markets in the area(s)<br>• Trade activity level: number of traders, types of commodity, etc.<br>• Level of supplies of the main staples: volumes available in markets and traders' stocks; comparison with the past: previous months and the same season in previous years |
| | **4.2 Levels and trends of market food prices**<br>• Current market prices for food, changes from seasonal norm, trends |
| | **4.3 Main constraints to trade**<br>• Movement of commodities from surplus to deficit areas: occurs/does not occur<br>• Constraints to trade from traders' viewpoint |
| **V. Household food security situation** | **5.1 Analysis of food security**<br>• Food consumption<br>• Food access<br>• Food security groups |
| | **5.2 Livelihood characteristics of food-insecure households**<br>• Human assets: gender, size, education (attendance, level), health<br>• Natural assets: crop and livestock/fisheries production – levels, damage, uses for consumption and income<br>• Physical assets: domestic and productive assets – ownership, sales<br>• Economic assets and strategies: income sources, migration/remittances, savings, expenditures (food and non-food), sources of food, debts<br>• Social assets: support structures, solidarity mechanisms, ongoing assistance programmes |
| | **5.3 Coping mechanisms**<br>• Coping strategies used to obtain access to food and income<br>• Risks to lives and livelihoods caused by these strategies, if any<br>• Associations between food security status and coping strategies |
| **VI. Main problems and priorities of households and key informants** | **6.1 Main problems** |
| | **6.2 Priorities for assistance identified by the population** |
| **VII. Conclusions on the nutrition and food security situation** | **7.1 Summary of the food security and nutrition situation analysis**<br>• Severity of food insecurity based on food consumption, access and coping strategies<br>• Severity of malnutrition at the population level |
| | **7.2 Groups most affected by food insecurity and risks to lives and livelihoods**<br>• Summary characteristics of the food-insecure and/or malnourished<br>• Distinction between chronic and transitory food insecurity<br>• Main factors associated with food insecurity and risks to lives and livelihoods<br>• Tentative targeting criteria<br>• Estimated numbers of food-insecure people |
| | **7.3 Location of the food-insecure** |

| | Outline of contents |
|---|---|
| **VIII. Scenarios and response options** | **8.1 Forecasts and scenarios**<br>• Shocks expected in the next 3, 6, 12 or more months<br>• Opportunities expected in the next 3, 6, 12 or more months<br>• Groups likely to be affected by predicted shocks and opportunities<br>• Most likely scenario, including shocks, opportunities, affected groups<br>• Worst-case scenario for preparedness and contingency planning, including shocks, opportunities, affected groups |
| | **8.2 Response options in the short and medium terms**<br>• Options for short-term, early interventions<br>• Options for medium-term interventions |
| | **8.3 Analysis of response options: strengths, weaknesses, opportunities and threats**<br>• SWOT analysis of the different options |
| **IX. Recommendations** | **9.1 Recommendations for interventions**<br>• Interventions recommended to save lives and livelihoods, based on the results of the SWOT analysis<br>• Target beneficiaries, including targeting criteria and mechanisms<br>• Type(s) of assistance, quantities, start/finish dates |
| | **9.2 Recommendations for monitoring, reassessment and contingency planning**<br>• Indicators to be monitored over the coming months to evaluate the evolution of the food security and nutrition situation<br>• Timing and type of reassessment, if appropriate<br>• Need for contingency planning |
| **Annexes** | • Terms of reference |
| | • List of team members |
| | • Data collection tools: questionnaires, checklists |
| | • Details of sampling procedures, if needed |
| | • Maps showing distribution of the affected population and severity of food insecurity |
| | • List of reference documents (secondary data) |
| | • Summary of stakeholder consultations |
| | **Optional annexes**<br>• Description of households' food availability, access and consumption situation: overall, by livelihood group, by geographical area<br>• Description of linkages among food security, health and care factors<br>• Description of livelihood assets, strategies and context of households: overall, by livelihood group, by geographical area |

chapter 3

# Report quality monitoring

The report must be submitted to a quality check to ensure that:

- it contains all the required information;
- the analytical process is clear, and the reader can understand how the conclusions were reached.

At WFP, the quality check is carried out by experienced assessment officers posted in the region or at Headquarters, or by a qualified senior staff member of the country office who was not directly involved with the assessment. The quality check involves completing a quality monitoring checklist (QMC) in electronic format.

The results of the QMC are fed back to the team who carried out the EFSA, so that they can contribute to the learning process and the improvement of future EFSAs. WFP uses the QMC to decide whether a report is already suitable for posting on the public website (see **Section 4.6**) or will require further adjustment.

chapter 4

# Communicating the results of the EFSA

## 4.1 Users of the EFSA report and communication channels

The EFSA report should enable decision-makers for WFP and its partners to understand the nature of the crisis and the types of intervention that may be helpful. It may also help donors to decide on the allocation of resources. It is therefore crucial that the assessment conclusions and recommendations are communicated clearly.

EFSA reports may be used by a wide range of stakeholders, as shown in Box 5.1.

**Box 5.1: Potential users of an EFSA report**

**WFP**

- Country directors require reliable and timely information to make decisions about crisis response.
- Managers at the country, regional and Headquarters levels need information that can be shared with governments and humanitarian partners. This is crucial for operational coordination and transparency.
- Programme officers need information that will help them to design or reorient interventions.
- Fundraisers need carefully researched and well-argued information to present to donors.

**Other agencies and partners**

- Host governments use the information for their own programmes and policy-making.
- United Nations and NGO partners use EFSA information when designing programmes.
- WFP implementing partners need to know the rationale behind the programmes that they are undertaking.
- Donors need accurate information when allocating resources.
- The media need reliable information to ensure accurate and balanced reporting.

Information can be communicated through a variety of channels:

- an EFSA executive brief;
- in-country workshops and presentations to stakeholders;

- dissemination of the EFSA report and executive brief by mail and e-mail;
- news media – television, radio and newspapers;
- the websites of WFP and partners who participated in the EFSA;
- advocacy, when recommended interventions are outside the scope of WFP and its partners.

**Box 5.2: WFP procedures for communicating EFSA results**

For an EFSA led by WFP, the country director is responsible for disseminating the results. This enhances transparency and strengthens the links between assessment recommendations and decisions about programming and funding.

For an EFSA in which WFP participated but did not lead, the country director should work with the EFSA leader to ensure that the report is finalized and of acceptable quality, and that it is disseminated rapidly.

## 4.2 EFSA executive brief

The executive brief is directed to an audience of decision-makers in humanitarian and other food security interventions. These people are non-specialists and do not need to know the details of the analysis, but they must have a clear and accurate overview.

The executive brief is a stand-alone document. It differs from the executive summary presented at the beginning of the report. The executive brief must provide its audience with the information needed to make decisions on programming, funding allocation, targeting, etc. The information must be tailored to fit these needs. It must be both concise and complete.

The executive brief is prepared by the EFSA team leader and cleared by the country director. It is prepared as soon as the assessment analysis and recommendations are complete. *It can be prepared before the final report is complete*, and used before publication of the full assessment report, perhaps as a pre-alert for donors and partners.

The executive brief should not be more than three pages long. It should be written in clear, non-technical language, and should include visual instruments such as maps, tables, charts and graphics. It should also include the names and contact details of the people responsible for the assessment. An outline of its main contents is shown in Table 5.2.

| Table 5.2: Contents of the executive brief | |
|---|---|
| | **Summary of contents** |
| **Nature of crisis** | • Rapid-onset or chronic<br>• Type: earthquake, conflict, etc. |
| **Impact on food and nutrition security** | • Summary of impact on nutrition, food availability, food access and food consumption |
| **Affected population** | • Estimated numbers of food-insecure people and households<br>• Description of food-insecure groups, the malnourished and their location |
| **Reasons why people are at risk** | • Main factors associated with food insecurity and risks to lives and livelihoods |
| **Most likely future scenario(s)** | • Explanation of the most likely evolution of the situation and the groups that will be affected<br>• Projected future numbers – in 3, 6 and 12 months – of food-insecure people |
| **Recommended responses** | • Type(s) of response, including summary of inputs required<br>• Objectives<br>• Target group(s) and numbers<br>• Start and finish dates |



The template for an executive brief is available in **Annex 6**.

## 4.3 Presentation workshop or meeting

For each EFSA, a final workshop or meeting should be convened at which to present the results to partners, who include representatives of:

- government ministries;
- United Nations partners;
- national and international NGOs working in relevant sectors;
- WFP implementing partners; and
- donor agencies.

The purpose of the meeting is to:

- present the key findings and recommendations from the EFSA, and answer partners' queries on these;
- receive feedback and suggestions from the meeting participants;
- encourage partners' endorsement of the recommendations, to the extent possible, adjusted as a result of the meeting if required.

The meeting is an opportunity to develop a common understanding of the problem. It takes place after the conclusions and recommendations have been defined, but before final decisions about responses have been taken. This means that feedback from the meeting can be taken into account when finalizing the recommendations.

EFSAs generally include recommendations for both food and non-food responses. At this meeting, WFP can explain the need for non-food responses to other stakeholders that may be able to contribute.

The meeting should be scheduled as far in advance as possible, to ensure good participation. For EFSAs in slow-onset chronic emergencies, it may be possible to organize a series of decentralized workshops and meetings at the district level in order to broaden the consultative base.

A draft of the executive brief, or of the full report if it is ready to be shared, should be distributed prior to the meeting to ensure that participants can familiarize themselves with the information before they meet. The executive brief and report will be amended after the meeting, on the basis of the feedback received.

## 4.4 Dissemination by e-mail and hard copy

In WFP, the country director is responsible for disseminating the EFSA report (see Box 5.2). Once finalized, the report and executive brief are e-mailed to all stakeholders and partners. This is done systematically, following compilation of a list of agencies at the national, regional and Headquarters levels. Hard copies may be delivered or mailed to the most significant stakeholders.

## 4.5 The news media

The media are an important channel for disseminating information. When they exist, agency public information officers at the national and regional levels should be aware that the EFSA is being undertaken, and should be updated about progress, conclusions and recommendations. They will ensure that the information is provided to the media through the right channels, when appropriate.

Information may be passed to the media through a variety of means, including:
- press releases;
- media advice notes;
- news briefings;
- press conferences;
- websites.

A press release is the most common way of informing the media about EFSA results. It constitutes a straightforward message, uses non-technical language and is tailored to journalists' needs. It is prepared by the public information officer according to specific guidelines.

The country director decides whether or not to issue a press release. This decision is based on the significance of the results, their newsworthiness, the political context, and the need for funds, among other factors. A press release may be issued in the affected country only, or also at the regional and international levels.

## 4.6 Websites and newsletters

Once it has been cleared by the country director, the EFSA report is usually sent to the relevant Headquarters unit. In WFP, the Food Security Analysis Service must receive all EFSA reports. After a report has gone through the QMC (see **Chapter 3**), the Service is responsible for posting it on WFP internal and public websites.

Reports may also be posted on other websites, such as:

- ReliefWeb, which is run by OCHA: reports can be submitted by e-mail to submit@reliefweb.int;
- Humanitarian Information Centres (HICs), managed by OCHA in disaster-affected countries;
- United Nations country team (UNCT) websites in the country concerned.



## 4.7 Advocacy for non-food recommendations

An EFSA may recommend both food and non-food responses to a crisis. This is because food and nutrition insecurity is multifaceted, and interventions may be required in such areas as education, hygiene promotion, water and sanitation, infrastructure development and agriculture.

WFP may not be able to implement some of the response recommendations, and must therefore encourage the government or other organizations to do so. The presentation meeting (see **Section 4.3**) is the starting point for discussions with possible collaborating partners. This should be followed by more specific meetings with interested agencies. The purpose of such meetings is to:

- provide a detailed explanation of the reasons why particular interventions have been recommended;
- emphasize the complementary nature of different food and non-food interventions;
- seek commitments from other organizations regarding interventions in specific sectors.

It is usually necessary to organize a series of such meetings.