

Part IV

Analysing EFSA data



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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	<ul style="list-style-type: none"> • Describe the food security and nutrition status of the population • Identify the population's coping strategies • Determine whether food insecurity and malnutrition are chronic or transitory
Forecast and response analysis	<ul style="list-style-type: none"> • Forecast the evolution of the situation, using scenarios – projections of how the situation is likely to develop • Determine the need, or otherwise, for external intervention • Determine the types of intervention that are appropriate, and their characteristics: level, duration, target groups, etc. • 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.

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 EFSA, 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.

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 Sheets⁵³ 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...)

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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: <i>Same households</i> <i>Same geographical area</i> <i>Same time</i>	Direct cross-tabulation/comparison of malnutrition with: <ul style="list-style-type: none"> • Household food security status • Food access and consumption indicators • The health and public health environment • Care information
Anthropometric data collected in parallel with food security, health and care information: <i>Different households</i> <i>Same geographical area</i> <i>Same time</i>	Comparison between the geographical concentration of malnutrition and geographical information on: <ul style="list-style-type: none"> • Household food security status • The health and public health environment • Care information
Only household food security, health and care information available: <i>Anthropometric data not collected and not available from other surveys</i>	Only hypotheses of the nutrition situation can be made, based on: <ul style="list-style-type: none"> • Household food security status • Food consumption patterns, preferably at the individual level • The public health environment • 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 ratio⁵⁴ 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 of 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	<ul style="list-style-type: none"> • 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	<p>Long-term livelihoods are compromised because:</p> <ul style="list-style-type: none"> • children are taken out of school to work; • children who attend school are malnourished, and therefore unable to learn well
Nomadic livelihood group: <i>households' main productive activity is raising animals for the sale of animal products</i>	<ul style="list-style-type: none"> • 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 • 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: <i>households' main productive activity is the trade of small quantities of food and other commodities</i>	<ul style="list-style-type: none"> • Insecurity makes roads unsafe, reducing the movement of goods and people; income from trade disappears
Internally displaced people	<ul style="list-style-type: none"> • 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 EFSA's, 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 $FCS \leq 21$ for “poor food consumption” and $FCS \leq 35$ 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
1B	Generally Food Secure	Dietary Diversity	consistent quality and quantity of diversity
		Water Access / Avail.	usually adequate (> 15 litres ppp day), stable
		Hazards	moderate to low probability and vulnerability
		Civil Security	prevailing and structural peace
2	Moderately / Borderline Food Insecure	Livelihood Assets	generally sustainable utilization (of 6 capitals)
		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)
3	Acute Food and Livelihood Crisis	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
		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 epidemic; increasing
4	Humanitarian Emergency	Disease	emerging; 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
		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
5	Famine / Humanitarian Catastrophe	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
		Crude Mortality Rate	> 2/10,000 / day (example: 6,000 / 1,000,000 / 30 days)
		Acute Malnutrition	> 30 % (w/h <-2 z-score)

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.

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 <i>1 = low 5 = high or ongoing</i>	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
<ul style="list-style-type: none"> • Drought • Crop pest, such as locust invasion, crop disease 	<ul style="list-style-type: none"> • Loss of harvest • Loss of food stocks 	<ul style="list-style-type: none"> • Decreased staple food availability • Decreased staple food access from own production, for sale and consumption • Decreased food access from purchase, due to increased market food prices, decreased sales 	<ul style="list-style-type: none"> • Decreased amounts of food consumed, due to decreased availability and/or increased prices • Lower quality of diet by choice (coping) and/or availability
<ul style="list-style-type: none"> • Flood • Tsunami • Hurricane, cyclone 	<ul style="list-style-type: none"> • Loss of harvest • Loss of food stocks • Loss of economic infrastructure: workplaces, roads, etc. • Loss of assets 	<ul style="list-style-type: none"> • Decreased staple food availability • Decreased staple food access from own production • Decreased food access from purchase, due to increased market food prices, loss of income, decreased sales • Decreased employment opportunities 	
<ul style="list-style-type: none"> • Earthquake 	<ul style="list-style-type: none"> • Loss of food stock • Loss of assets • Loss of animals 	<ul style="list-style-type: none"> • Decreased staple and animal food access from own stocks • Decreased food access from purchase, due to loss of income • Decreased food availability 	
<ul style="list-style-type: none"> • Animal disease • Livestock thefts and looting 	<ul style="list-style-type: none"> • Loss of animal products • Loss of animals 	<ul style="list-style-type: none"> • Decreased animal food access • Decreased food access from purchase, due to loss of income, decreased sales 	
<ul style="list-style-type: none"> • Market food price rise • Economic collapse 	<ul style="list-style-type: none"> • Deterioration of terms of trade for livestock or labour • Loss of purchasing power 	<ul style="list-style-type: none"> • Decreased food access from purchase, due to loss of income 	
<ul style="list-style-type: none"> • Forced displacement • Conflict 	<ul style="list-style-type: none"> • Loss of harvest • Loss of animals • Loss of assets 	<ul style="list-style-type: none"> • Decreased staple food and animal product availability • Decreased food access from purchase, due to increased market food prices, loss of income, decreased sales of own production 	
<ul style="list-style-type: none"> • Epidemics, such as cholera • HIV / AIDS 	<ul style="list-style-type: none"> • Disease 	<ul style="list-style-type: none"> • 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 	

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
<ul style="list-style-type: none"> • Drought • Crop pest: such as locust invasion, crop disease 	<ul style="list-style-type: none"> • Subsistence farmers • Landless agricultural labourers: loss of labour • Pastoralists: drought • Consumers dependent on markets for food 	<ul style="list-style-type: none"> • Human: malnutrition from decreased food consumption • Physical: sale of tools, equipment, animals - decapitalization • Financial: decreased income from decreased sales of crops and animals; decreased access to credit from difficulties with reimbursement; decreased access to food • Natural: overexploitation of grazing areas and other natural resources, such as forest 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as health and education • Increased indebtedness • Use of savings • Preferences for lower-yielding but more drought- and pest-resistant crops and animals • Migration in search of labour, grazing land, water
<ul style="list-style-type: none"> • Flood • Tsunami • Hurricane, cyclone 	<ul style="list-style-type: none"> • Subsistence farmers • Landless agricultural labourers: loss of labour 	<ul style="list-style-type: none"> • Human: malnutrition from decreased food consumption; disease from unsafe water; missed education opportunities from destruction of schools, longer distances to school • Physical: loss of tools, equipment, animals, housing - decapitalization; loss of infrastructure such as roads, bridges, health services, schools • Financial: decreased income from decreased sales of crops and animals; decreased access to credit from difficulties with reimbursement • Natural: losses from erosion, landslides 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as health and education • Increased indebtedness • Use of savings • Migration in search of shelter and labour
<ul style="list-style-type: none"> • Earthquake 	<ul style="list-style-type: none"> • All livelihood groups with no/limited assets: human, financial, physical 	<ul style="list-style-type: none"> • Human: missed education opportunities from destruction of schools, longer distances to school • Physical: loss of equipment, animals, sometimes housing - decapitalization; loss of infrastructure such as roads, bridges, health services, schools • Financial: decreased access to credit from difficulties with reimbursement 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as health and education • Increased indebtedness • Use of savings

Shocks	Livelihood groups likely to be most affected	Potential effects on livelihood assets	Possible alternative / complementary livelihood strategies
<ul style="list-style-type: none"> • Animal disease • Livestock theft and looting 	<ul style="list-style-type: none"> • Pastoralists • Small agropastoralists 	<ul style="list-style-type: none"> • Human: malnutrition from decreased animal food consumption • Physical: loss of animals • Financial: decreased income from decreased sales of animals and their products; decreased savings; decreased access to credit from difficulties with reimbursement 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as health and education • Decreased cultivation from loss of draught power or increased cultivation • Migration in search of security
<ul style="list-style-type: none"> • Rise in market food prices • Economic collapse 	<ul style="list-style-type: none"> • Casual workers • Landless agricultural labourers • Pastoralists 	<ul style="list-style-type: none"> • Human: malnutrition from decreased food consumption • Financial: decreased value of cash savings; decreased access to credit from difficulties with reimbursement 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as health and education • Sale of assets - decapitalization • Increased indebtedness • Use of savings • Migration in search of labour
<ul style="list-style-type: none"> • Epidemic, such as cholera • HIV / AIDS 	<ul style="list-style-type: none"> • All livelihood groups with no/limited assets: human, financial, physical 	<ul style="list-style-type: none"> • Human: malnutrition, disease, mortality • Social: disruption of community, kinship and other social networks - solidarity stretched • Financial: decreased access to credit from difficulties with reimbursement 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as education • Sale of assets - decapitalization • 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 • Increased indebtedness • Use of savings • Sending children to relatives
<ul style="list-style-type: none"> • Forced displacement • Conflict 	<ul style="list-style-type: none"> • All livelihood groups, particularly those with weak social assets/solidarity networks 	<ul style="list-style-type: none"> • Human: malnutrition, missed education opportunities • Social: disruption of community, kinship and other social networks from dispersion of members; creation of war economies • Physical: loss of tools, equipment, animals, housing • Financial: decreased income from decreased sales of crops and animals; loss of savings from theft • Natural: overexploitation 	<ul style="list-style-type: none"> • Decreased expenditures on food and essential non-food items and services, such as health and education • 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:

$$\begin{array}{r} \text{Own consumption: 3.5 months} \\ + \\ \text{Sale of own produce: 1.5 months} \\ + \\ \text{Construction work: 4 months} \\ + \\ \text{Savings: 1.5 months} \\ = \\ \text{10.5 months} \end{array}$$

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	<ul style="list-style-type: none"> - Key informants - 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	<ul style="list-style-type: none"> - Focus group discussions - Proportional piling and seasonal calendars with groups of participants representing the different livelihoods groups - Observation (transect walks) - 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	<ul style="list-style-type: none"> - Key informants: local authorities, traders, etc. - Food aid distribution data - Monitoring reports - Nutrition surveys and surveillance data - Market surveys/analysis - FEWS information - 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	<ul style="list-style-type: none"> - Household surveys that enable analysis of household income and expenditure - Quantitative and qualitative data that provide empirical information on the nutrition outcomes of household resource use
The difference represents the <i>food gap</i> : the level of food assistance recommended by the EFSA should be sufficient to fill this gap	

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:

$$\begin{aligned}
 & \text{Number of people currently at risk and whose situation} \\
 & \quad \text{is not expected to improve in the short term} \\
 & \quad + \\
 & \quad \text{Number of additional people who will become at risk} \\
 & \quad - \\
 & \text{Number of people currently at risk but whose situation is expected} \\
 & \quad \text{to improve to the extent that they are no longer at risk}
 \end{aligned}$$

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

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: <ul style="list-style-type: none"> - lack of breastfeeding - high prevalence of diarrhoea - poor quality of complementary feeding - poor quality of water 	<ul style="list-style-type: none"> - Mothers' limited knowledge about feeding and hygiene practices 	<ul style="list-style-type: none"> - Low staffing in health centres
	Food access: <ul style="list-style-type: none"> - lack of income to purchase diverse foodstuffs 	<ul style="list-style-type: none"> - Lack of agricultural land - Women's multiple responsibilities: income generation, caring for children, cooking, etc. - Low access to education 	<ul style="list-style-type: none"> - Environmental degradation of farmland - Few employment options available - Poor terms of trade between wage rates and food prices
	Factors decreasing risk		
	Food availability: <ul style="list-style-type: none"> - imminent abundance of nutritious wild plants with onset of rains 	<ul style="list-style-type: none"> - Consumption of wild plants is part of usual livelihood strategy 	
Food accessibility: <ul style="list-style-type: none"> - economy gradually diversifying 	<ul style="list-style-type: none"> - Households gradually diversifying livelihood strategies to adapt to changing economic environment 	<ul style="list-style-type: none"> - 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: - low production in area due to failed rains - few food imports	- Limited livelihood strategies: only farming	- Poor roads increase transportation costs and discourage traders from moving food into the area - High import tariffs reduce amount of food brought into the country
	Food accessibility: - lack of own production - lack of income to buy food at raised prices	- Lack of able-bodied workers due to high disease prevalence - Lack of alternative skills to diversify income	- Poor preventive and curative health services - Poor education reduces knowledge of health issues and limits income-related skills
	Factors decreasing risk		
	Food availability: - arrival of rains - improvement of physical and market infrastructure	- Diversification of the economy	- Reduction of tariffs and other taxes that constrain the movement of food - Improvement of physical infrastructure
Food accessibility: - opportunities for income diversification	- Training in income-generating activities - Access to credit	- Introduction of vocational training programmes - 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 - Area D	One-off food delivery in ...
WFP	General food aid distributions of full rations	Vulnerable households: - with less than 1 ha - female-headed - the poorest according to leaders Total: ~ 50 000 people	- Area A - Area B - Area C - Area D	From ... to ...
	Supplementary feeding: • rations for children • take-home full rations for households	Moderately malnourished children Total: ~ 3 500 children; ~ 500 households	- Area B - Area D	From ... to ...
Religious institution	Targeted food aid distributions: ~ 3/4 ration	Vulnerable households identified by community	- Area B - Area C - 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 options⁶³

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. 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. 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)

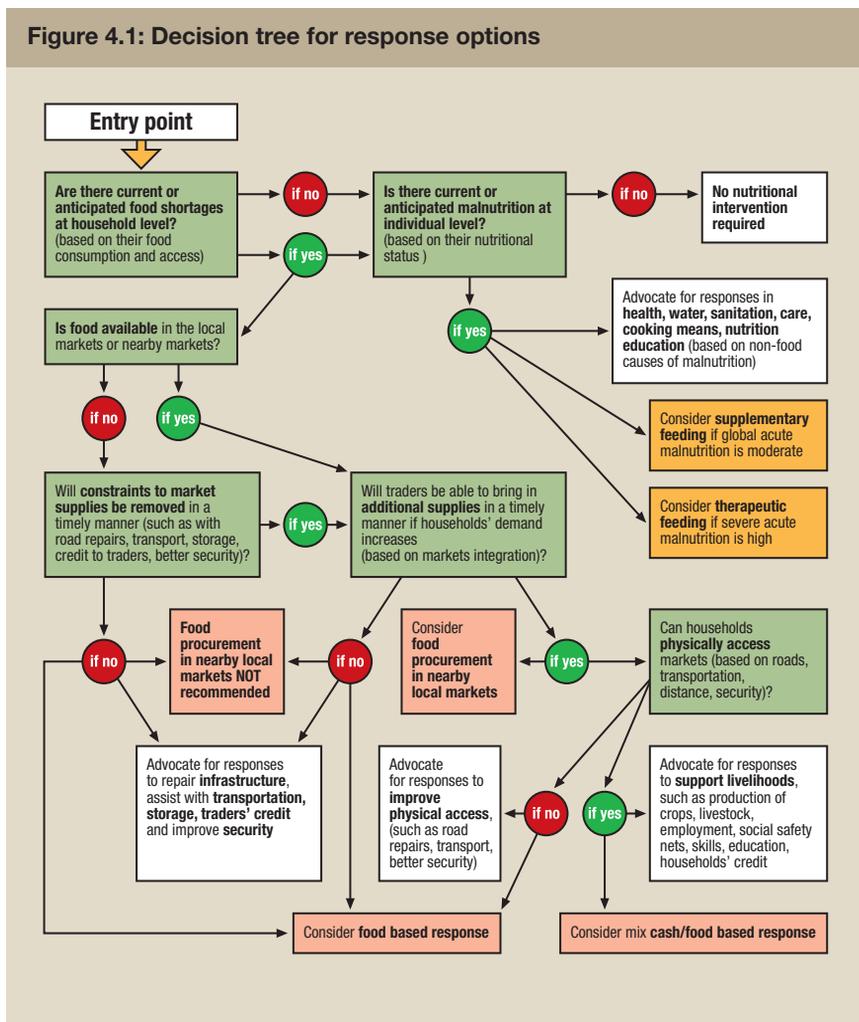
Cash for work	Cash as payment for work – can be used as method for self-targeting, with only those who really need the money being willing to work for it
Food vouchers	Distribution of vouchers that can be exchanged for food and other essential items
Non-food transfers	Provision of non-food items, such 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
<ul style="list-style-type: none"> - Addresses the food consumption problem - Helps bring down the price of food, thereby improving food access - Partially substitutes lost earnings - Could act as a catalyst in rehabilitating the local economy: increased household purchasing power and employment generated through logistics operation 	<ul style="list-style-type: none"> - May be difficult to target the intended 20% of the population - Logistics complications may lead to food arriving late and disrupting the market - 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 	<ul style="list-style-type: none"> - Food for the distribution could be bought locally from farmers who are not close to the river - The food distribution could be undertaken in collaboration with the NGO, making it possible to address both bulk food deficit and malnutrition 	<ul style="list-style-type: none"> - Weak government capacity means that coordination and support are likely to be poor - Transportation of food will be difficult because of the broken bridge and flooded land - 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	<ul style="list-style-type: none"> • Therapeutic feeding to children • Supplementary feeding to mothers • Emergency provision of clean water • 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	<ul style="list-style-type: none"> • Targeted general food distribution to affected households • Provision of seeds and tools • 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.

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 EFSA reports 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	<ul style="list-style-type: none"> • Prevalence of wasting among children 6–59 months 	<ul style="list-style-type: none"> • Community health centres • NGO surveys 	Monthly
Coping mechanisms	<ul style="list-style-type: none"> • Excessive out-migration • Excessive animal sales • Withdrawing children from school, etc. 	<ul style="list-style-type: none"> • Community key informants • Markets • Schoolteachers and parents 	Every two months
Harvest	<ul style="list-style-type: none"> • Yields of staple crops 	<ul style="list-style-type: none"> • Community key informants • Local and central Ministry of Agriculture staff • NGOs 	At harvest time
Market prices	<ul style="list-style-type: none"> • Prices of staple foods • Prices of vegetables • Prices of fuelwood 	<ul style="list-style-type: none"> • Community key informants • Traders • Local and central Ministry of Trade staff 	Every two weeks or monthly
Cross-border trade	<ul style="list-style-type: none"> • Prices on both sides of the border • Volumes crossing the border 	<ul style="list-style-type: none"> • Traders • Local Ministry of Trade and Customs staff 	Monthly
Livestock	<ul style="list-style-type: none"> • Prices of livestock • Health condition of livestock • Condition of pastures 	<ul style="list-style-type: none"> • Community key informants • Traders • Local and central Ministry of Agriculture staff 	Monthly in dry season
...			