



# Chapter 3: Minimum Standards in Food Security, Nutrition and Food Aid

# How to use this chapter

This chapter is divided into four sections: 1) Food Security and Nutrition Assessment and Analysis standards, 2) Food Security standards, 3) Nutrition standards and 4) Food Aid standards. While the Food Security and Nutrition standards are a practical expression of the right to food, the Food Aid standards are more operationally focused. The Food Aid standards can contribute towards the achievement of both the Food Security and Nutrition standards.

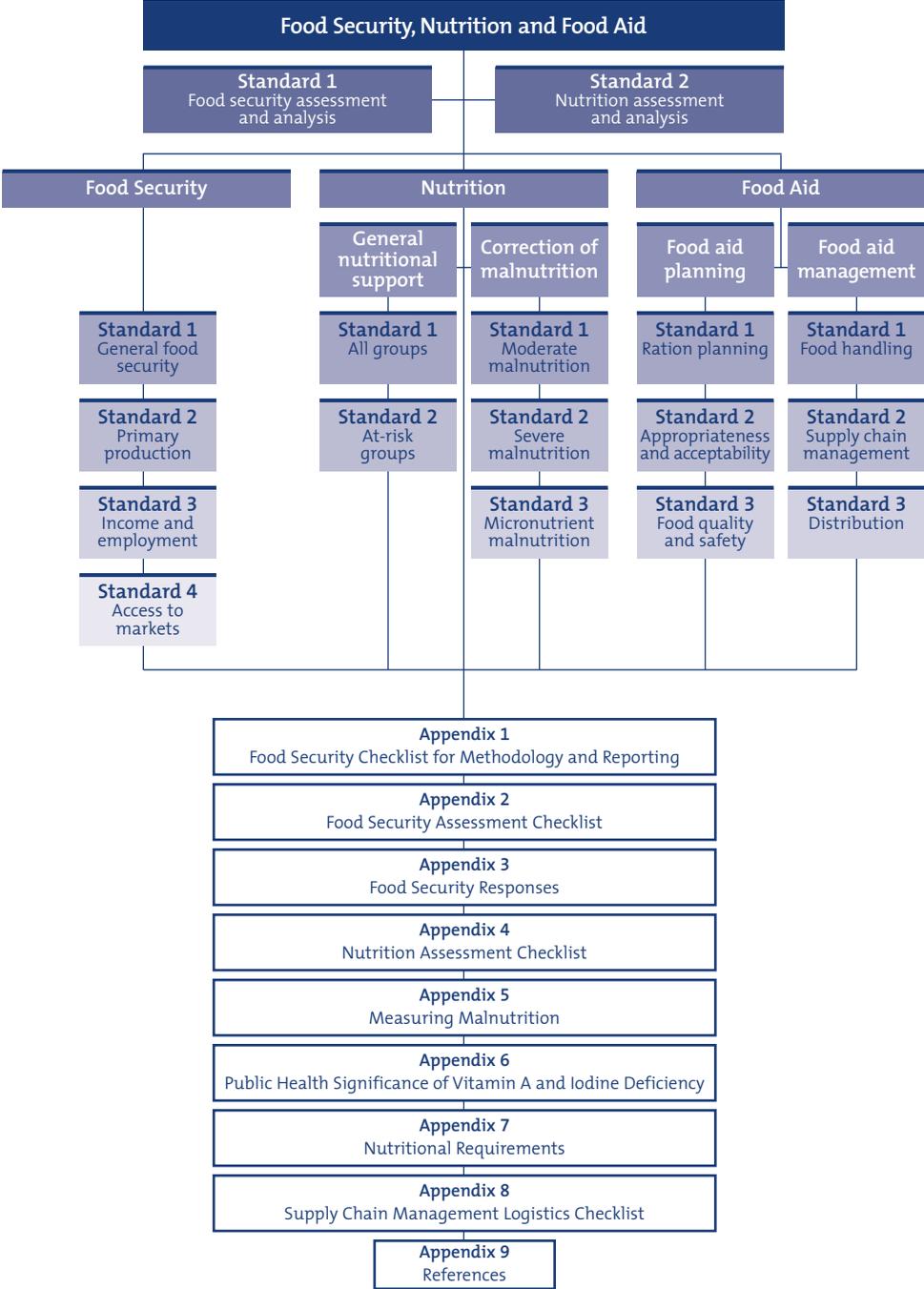
Each of the sections contains the following:

- *the minimum standards*: these are qualitative in nature and specify the minimum levels to be attained in the provision of food security, nutrition and food aid responses;
- *key indicators*: these are 'signals' that show whether the standard has been attained. They provide a way of measuring and communicating the impact, or result, of programmes as well as the process, or methods, used. The indicators may be qualitative or quantitative;
- *guidance notes*: these include specific points to consider when applying the standards and indicators in different situations, guidance on tackling practical difficulties, and advice on priority issues. They may also include critical issues relating to the standards or indicators, and describe dilemmas, controversies or gaps in current knowledge.

Appendices at the end of the chapter include checklists for assessments, examples of food security responses, guidance on measuring acute malnutrition and determining the public health significance of micronutrient deficiency, nutritional requirements and a select list of references, which point to sources of information on both general issues and specific technical issues relating to this chapter.

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# Introduction

## Links to international legal instruments

The Minimum Standards in Food Security, Nutrition and Food Aid are a practical expression of the principles and rights embodied in the Humanitarian Charter. The Humanitarian Charter is concerned with the most basic requirements for sustaining the lives and dignity of those affected by calamity or conflict, as reflected in the body of international human rights, humanitarian and refugee law.

Everyone has the right to adequate food. This right is recognised in international legal instruments and includes the right to be free from hunger. Key aspects of the right to adequate food include:

- the availability of food in a quantity and of a quality sufficient to satisfy the dietary needs of individuals, free from adverse substances and acceptable within a given culture;
- the accessibility of such food in ways that are sustainable and do not interfere with the enjoyment of other human rights.

States and non-state actors have responsibilities in fulfilling the right to food. There are many situations in which the non-fulfilment of these obligations and violations of international law – including, for example, the deliberate starvation of populations or destruction of their livelihoods as a war strategy – have devastating effects on food security and nutrition. In times of armed conflict, it is prohibited for combatants to attack or destroy foodstuffs, agricultural areas for the production of foodstuffs, crops or livestock. In these situations, humanitarian actors can help to realise the rights of affected populations: for example, by providing food assistance in ways that respect national law and international human rights obligations.

The Minimum Standards in this chapter are not a full expression of the Right to Adequate Food. However, the Sphere standards reflect the core content of the Right to Food and contribute to the progressive realisation of this right globally.

## The importance of food security, nutrition and food aid in disasters

Access to food and the maintenance of adequate nutritional status are critical determinants of people's survival in a disaster. Malnutrition can be the most serious public health problem and may be a leading cause of death, whether directly or indirectly. The resilience of livelihoods and people's subsequent food security determine their health and nutrition in the short term and their future survival and well-being. Food aid can be important in protecting and providing for food security and nutrition, as part of a combination of measures.

The food security standards are less detailed than the nutrition or the food aid standards, largely because food security is a diverse field with a limited body of best practice in disaster situations.

For this chapter the following definitions are used:

- **food security** exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food for a healthy and active life (World Food Summit Plan of Action, paragraph 1, 1996);
- **livelihoods** comprise the capabilities, assets (including both material and social resources) and activities required for a means of living linked to survival and future well-being. *Livelihood strategies* are the practical means or activities through which people access food or income to buy food, while *coping strategies* are temporary responses to food insecurity.
- **malnutrition** encompasses a range of conditions, including acute malnutrition, chronic malnutrition and micronutrient deficiencies. Acute malnutrition refers to wasting (thinness) and/or nutritional oedema, while chronic malnutrition refers to stunting (shortness). Stunting and wasting are two forms of growth failure. In this chapter we refer only to acute malnutrition and micronutrient deficiency.

As women usually assume overall responsibility for food in the household and because they are the major recipients of food aid, it is

important to encourage their participation in the design and implementation of programmes wherever possible.

## **Links to other chapters**

Many of the standards in the other sector chapters are relevant to this chapter. Progress in achieving standards in one area often influences and even determines progress in other areas. For an intervention to be effective, close coordination and collaboration are required with other sectors. Coordination with local authorities and other responding agencies is also necessary to ensure that needs are met, that efforts are not duplicated, and that the quality of food security, nutrition and food aid responses is optimised.

For example, requirements for cooking utensils, fuel and water for food consumption, and for the maintenance of public health, are addressed in the standards for Water, Sanitation and Hygiene Promotion, Health Services and Shelter, Settlement and Non-Food Items. These requirements have a direct impact on the ability of households to access food and the maintenance of adequate nutritional status. Reference to specific standards or guidance notes in other technical chapters is made where relevant.

## **Links to the standards common to all sectors**

The process by which an a response is developed and implemented is critical to its effectiveness. This chapter should be utilised in conjunction with the standards common to all sectors, which cover participation, initial assessment, response, targeting, monitoring, evaluation, aid worker competencies and responsibilities, and the supervision, management and support of personnel (see chapter 1, page 21). In particular, in any response the participation of disaster-affected people – including the vulnerable groups outlined below – should be maximised to ensure its appropriateness and quality.

## **Vulnerabilities and capacities of disaster-affected populations**

The groups most frequently at risk in emergencies are women, children, older people, disabled people and people living with HIV/AIDS (PLWH/A). In certain contexts, people may also become vulnerable by reason of ethnic origin, religious or political affiliation, or displacement. This is not an exhaustive list, but it includes those most frequently identified. Specific vulnerabilities influence people's ability to cope and survive in a disaster, and those most at risk should be identified in each context.

Throughout the handbook, the term 'vulnerable groups' refers to all these groups. When any one group is at risk, it is likely that others will also be threatened. Therefore, whenever vulnerable groups are mentioned, users are strongly urged to consider all those listed here. Special care must be taken to protect and provide for all affected groups in a non-discriminatory manner and according to their specific needs. However, it should also be remembered that disaster-affected populations possess, and acquire, skills and capacities of their own to cope, and that these should be recognised and supported.

## The Minimum Standards

# *1 Food Security and Nutrition Assessment and Analysis*

These two standards follow on from the common Initial assessment (see page 29) and Participation (see page 28) standards, and both apply wherever nutrition and food security interventions are planned or are advocated. These assessments are in-depth and require considerable time and resources to undertake properly. In an acute crisis and for immediate response, a rapid assessment may be sufficient to decide whether or not immediate assistance is required, and if so what provisions should be made. Assessment checklists are provided in Appendices 1-3, pages 172-179.

### **Assessment and analysis standard 1: food security**

Where people are at risk of food insecurity, programme decisions are based on a demonstrated understanding of how they normally access food, the impact of the disaster on current and future food security, and hence the most appropriate response.

**Key indicators** (to be read in conjunction with the guidance notes)

- Assessments and analyses examine food security in relevant geographic locations and livelihood groupings, distinguishing between seasons, and over time, to identify and prioritise needs (see guidance note 1).

- The assessment demonstrates understanding of the broader social, economic and political policies, institutions and processes that affect food security (see guidance note 2).
- The assessment includes an investigation and analysis of coping strategies (see guidance note 3).
- Where possible, the assessment builds upon local capacities, including both formal and informal institutions (see guidance note 4).
- The methodology used is comprehensively described in the assessment report and is seen to adhere to widely accepted principles (see guidance note 5).
- Use is made of existing secondary data, and the collection of new primary data in the field is focused on additional information essential for decision-making (see guidance note 6).
- Recommended food security responses are designed to support, protect and promote livelihood strategies, while also meeting immediate needs (see guidance note 7).
- The impact of food insecurity on the population's nutritional status is considered (see guidance note 8).

## Guidance notes

1. **Scope of analysis:** food security varies according to people's livelihoods, their location, their social status, the time of year and the nature of the disaster and associated responses. The focus of the assessment will reflect how the affected population acquired food and income before the disaster, and how the disaster has affected this. For example, in urban and peri-urban areas, the focus may be on reviewing the market supply of food, while in rural areas it will usually be on food production. Where people have been displaced, the food security of the host population must also be taken into account. Food security assessments may be undertaken when planning to phase out a programme as well as prior to starting one. In either case, they should be coordinated among all concerned parties to minimise duplication of effort. Assessments gathering new information should complement secondary data from existing information sources.

2. **Context:** food insecurity may be the result of wider macro-economic and structural socio-political factors e.g. national and international policies, processes or institutions that affect people's access to nutritionally adequate food. This is usually defined as chronic food insecurity, in that it is a long-term condition resulting from structural vulnerabilities, but it may be aggravated by the impact of a disaster.
3. **Coping strategies:** assessment and analysis should consider the different types of coping strategy, who is applying them and how well they work. While strategies vary, there are nonetheless distinct stages of coping. Early coping strategies are not necessarily abnormal, are reversible and cause no lasting damage e.g. collection of wild foods, selling non-essential assets or sending a family member to work elsewhere. Later strategies, sometimes called crisis strategies, may permanently undermine future food security e.g. sale of land, distress migration of whole families or deforestation. Some coping strategies employed by women and girls tend to expose them to higher risk of HIV infection e.g. prostitution and illicit relationships, or sexual violence as they travel to unsafe areas. Increased migration generally may increase risk of HIV transmission. Coping strategies may also affect the environment e.g. over-exploitation of commonly owned natural resources. It is important that food security is protected and supported before all non-damaging options are exhausted.
4. **Local capacities:** participation of the community and appropriate local institutions at all stages of assessment and planning is vital. Programmes should be based on need and tailored to the particular local context. In areas subject to recurrent natural disasters or long-running conflicts there may be local early warning and emergency response systems or networks. Communities which have previously experienced drought or floods may have their own contingency plans. It is important that such local capacities are supported.
5. **Methodology:** it is important to consider carefully the coverage of assessments and sampling procedures, even if informal. The process documented in the report should be both logical and transparent, and should reflect recognised procedures for food security assessment. Methodological approaches need to be coordinated among agencies and with the government to ensure that information and analyses are complementary and

consistent, so that information can be compared over time. Multi-agency assessments are usually preferable. The triangulation of different sources and types of food security information is vital in order to arrive at a consistent conclusion across different sources e.g. crop assessments, satellite images, household assessments etc. A checklist of the main areas to be considered in an assessment is given in Appendix 1. A checklist for reviewing methodology is provided in Appendix 2.

- 6. Sources of information:** in many situations a wealth of secondary information exists about the situation pre-disaster, including the normal availability of food, the access that different groups normally have to food, the groups that are most food-insecure, and the effects of previous crises on food availability and the access of different groups. Effective use of secondary information enables the gathering of primary data during the assessment to be focused on what is essential in the new situation.
- 7. Long-term planning:** while meeting immediate needs and preserving productive assets will always be the priority during the initial stages of a crisis, responses must always be planned with the longer term in mind. This requires technical expertise in a range of sectors, as well as abilities to work closely with members of the community, including representatives from all groups. Participation of community members at all stages of assessment and programme planning is vital, not least for their perspectives of long-term possibilities and risks. Recommendations must be based on a sound and demonstrated understanding by appropriately qualified and experienced personnel. The assessment team should include relevant sectoral experts, including e.g. agriculturalists, agro-economists, veterinarians, social scientists, and water and sanitation or other appropriate experts (see Participation standard on page 28).
- 8. Food insecurity and nutritional status:** food insecurity is one of three underlying causes of malnutrition, and therefore wherever there is food insecurity there is risk of malnutrition, including micronutrient deficiencies. Consideration of the impact of food insecurity on the nutrition situation is an essential part of food security assessment. However, it should not be assumed that food insecurity is the sole cause of malnutrition, without considering possible health and care causal factors.

## Assessment and analysis standard 2: nutrition

Where people are at risk of malnutrition, programme decisions are based on a demonstrated understanding of the causes, type, degree and extent of malnutrition, and the most appropriate response.

### Key indicators (to be read in conjunction with the guidance notes)

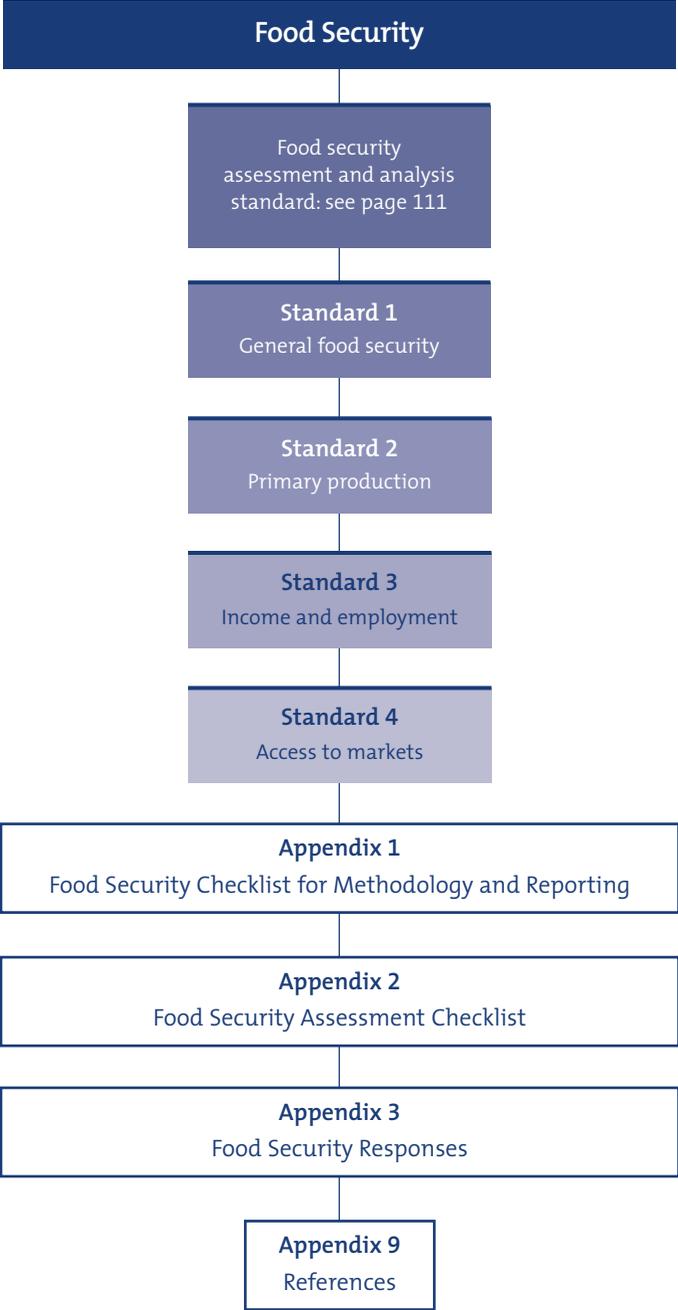
- Before conducting an anthropometric survey, information on the underlying causes of malnutrition (food, health and care) is analysed and reported, highlighting the nature and severity of the problem(s) and those groups with the greatest nutritional and support needs (see guidance note 1 and General nutrition support standard 2 on page 140).
- The opinions of the community and other local stakeholders on the causes of malnutrition are considered (see guidance note 1).
- Anthropometric surveys are conducted only where information and analysis is needed to inform programme decision-making (see guidance note 2).
- International anthropometric survey guidelines, and national guidelines consistent with these, are adhered to for determining the type, degree and extent of malnutrition (see guidance note 3).
- Where anthropometric surveys are conducted among children under five years, international weight-for-height reference values are used for reporting malnutrition in Z scores and percentage of the median for planning purposes (see guidance note 3).
- Micronutrient deficiencies to which the population is at risk are determined (see guidance note 4).
- Responses recommended after nutrition assessment build upon and complement local capacities in a coordinated manner.

## Guidance notes

- 1. *Underlying causes:*** the immediate causes of malnutrition are disease and/or inadequate food intake (which in turn result from food insecurity), a poor public health or social and care environment, or inadequate access to health services at household and community levels. These underlying causes are influenced by other basic causes including human, structural, natural and economic resources, the political, cultural and security context, the formal and informal infrastructure, and population movements (forced or unforced) and constraints on movement. An understanding of the causes of malnutrition in each specific context is an essential prerequisite for any nutrition programme. Information on the causes of malnutrition can be gathered from primary or secondary sources, including existing health and nutrition profiles, research reports, early warning information, health centre records, food security reports and community welfare groups, and can comprise both quantitative and qualitative information. A nutrition assessment checklist can be found in Appendix 4.
- 2. *Decision-making*** should rely on an understanding of all three possible underlying causes of malnutrition as well as results from anthropometric surveys. In an acute crisis, however, decisions to implement general food distribution need not await the results of anthropometric surveys, as these can take up to three weeks. It should, however, be possible to use anthropometric survey findings to inform decisions on responses aimed at correcting malnutrition.
- 3. *Anthropometric surveys*** provide an estimate of the prevalence of malnutrition. The most widely accepted practice is to assess malnutrition levels in children aged 6-59 months as a proxy for the population as a whole. However, other groups may be affected to a greater extent or face greater nutritional risk. When this is the case, the situation of these groups should be assessed, although measurement can be problematic (see Appendix 5). International guidelines stipulate that a representative sample is used for surveys; adherence to national guidelines can promote coordination and comparability of reporting. Where representative data are available on trends in nutritional status, these are preferable to a single prevalence figure. Immunisation coverage rates can also usefully be

gathered during an anthropometric survey, as can retrospective mortality data, using a different sampling frame. Reports should always describe the probable causes of malnutrition, and nutritional oedema should be reported separately.

- 4. *Micronutrient deficiencies:*** if the population is known to have been vitamin A-, iodine- or iron-deficient prior to the disaster, it can be assumed that this will remain a problem during the disaster. When analysis of the health and food security situations suggests a risk of micronutrient deficiency, steps to improve the quantification of specific deficiencies should be taken (see also General nutrition support standard 1 on page 137 and Correction of malnutrition standard 3 on page 152).



## 2 *Minimum Standards in Food Security*

Food security includes access to food (including affordability), adequacy of food supply or availability, and the stability of supply and access over time. It also covers the quality, variety and safety of food, and the consumption and biological utilisation of food.

The resilience of people's livelihoods, and their vulnerability to food insecurity, is largely determined by the resources available to them, and how these have been affected by disaster. These resources include economic and financial property (such as cash, credit, savings and investments) and also include physical, natural, human and social capital. For people affected by disaster, the preservation, recovery and development of the resources necessary for their food security and future livelihoods is usually a priority.

In conflict situations, insecurity and the threat of conflict may seriously restrict livelihood activities and access to markets. Households may suffer direct loss of assets, either abandoned as a result of flight or destroyed or commandeered by warring parties.

The first food security standard, following on from the food security assessment and analysis standard on page 111, is a general standard that applies to all aspects of food security programming in disasters, including issues relating to survival and preservation of assets. The remaining three standards relate to primary production, income generation and employment, and access to markets, including goods and services. Appendix 3 describes a range of food security responses.

There is some obvious overlap between the food security standards, as food security responses usually have multiple objectives, relating to different aspects of food security and hence are covered by more than one standard (including also standards in the water, health and shelter sectors). In addition, a balance of programmes is required to

achieve all standards in food security. Disaster response should support and/or complement existing government services in terms of structure, design and long-term sustainability.

## Food security standard 1: general food security

People have access to adequate and appropriate food and non-food items in a manner that ensures their survival, prevents erosion of assets and upholds their dignity.

**Key indicators** (to be read in conjunction with the guidance notes)

- Where people's lives are at risk through lack of food, responses prioritise meeting their immediate food needs (see guidance note 1).
- In all disaster contexts, measures are taken to support, protect and promote food security. This includes preserving productive assets or recovering those lost as the result of disaster (see guidance note 2).
- Responses that protect and support food security are based on sound analysis, in consultation with the disaster-affected community.
- Responses take account of people's coping strategies, their benefits and any associated risks and costs (see guidance note 3).
- Transition and exit strategies are developed for all food security responses to disaster, and are publicised and applied as appropriate (see guidance note 4).
- When a response supports the development of new or alternative livelihood strategies, all groups have access to appropriate support, including necessary knowledge, skills and services (see guidance note 5).
- Food security responses have the least possible degradative effect on the environment (see guidance note 6).

- Numbers of beneficiaries are monitored to determine the level of acceptance and access by different groups in the population and to ensure overall coverage of the affected population without discrimination (see guidance note 7).
- The effects of responses on the local economy, social networks, livelihoods and the environment are monitored, in addition to ongoing monitoring linked to programme objectives (see guidance note 8).

## Guidance notes

**1. *Prioritising life-saving responses:*** although food distribution is the most common response to acute food insecurity in disasters, other types of response may also help people meet their immediate food needs. Examples include sales of subsidised food (when people have some purchasing power but supplies are lacking); improving purchasing power through employment programmes (including food-for-work); and destocking initiatives or cash distributions. Especially in urban areas, the priority may be to re-establish normal market arrangements and revitalise economic activities that provide employment. Such strategies may be more appropriate than food distribution because they uphold dignity, support livelihoods and thereby reduce future vulnerability. Agencies have a responsibility to take into account what others are doing to ensure that the combined response provides complementary inputs and services. General food distributions should be introduced only when absolutely necessary and should be discontinued as soon as possible. General free food distribution may not be appropriate when:

- adequate supplies of food are available in the area (and the need is to address obstacles to access);
- a localised lack of food availability can be addressed by support of market systems;
- local attitudes or policies are against free food handouts.

**2. *Support, protection and promotion of food security:*** appropriate measures to support food security can include a wide range of responses

and advocacy (see Appendix 3). Although in the short term it may not be feasible to achieve food security based entirely on people's own livelihood strategies, existing strategies that contribute to household food security and preserve dignity should be protected and supported wherever possible. Food security responses do not necessarily seek a complete recovery of assets lost as a result of disaster, but seek to prevent further erosion and to promote a process of recovery.

**3. *Risks associated with coping strategies:*** many coping strategies carry costs or incur risks that may increase vulnerability. For example:

- cutbacks in amounts of food eaten or in the quality of diets lead to declining health and nutritional status;
- cutbacks in expenditure on school fees and health care undermine human capital;
- prostitution and external relationships to secure food undermine dignity, and risk social exclusion and HIV infection or other sexually transmitted diseases;
- sale of household assets may reduce the future productive capacity of the household;
- failure to repay loans risks losing future access to credit;
- over-use of natural resources reduces the availability of natural capital (e.g. excessive fishing, collection of firewood etc);
- travel to insecure areas to work or to gather food or fuel exposes people (especially women and children) to attack;
- producing or trading illicit goods risks arrest and imprisonment;
- separation of families and mothers from children risks poor standards of child care and malnutrition.

These progressive and debilitating effects must be recognised and early interventions undertaken to discourage such strategies and prevent asset loss. Certain coping strategies may also undermine dignity, where people are forced to engage in socially demeaning or unacceptable activities. However, in many societies certain strategies (such as sending a family member to work elsewhere during hard times) are a well-established tradition.

4. **Exit and transition strategies:** such strategies must be considered from the outset of a programme, particularly where the response may have long-term implications e.g. the provision of free services which would normally be paid for, such as access to credit or veterinary services. Before closing the programme or transiting to a new phase, there should be evidence that the situation has improved.
5. **Access to knowledge, skills and services:** structures that provide relevant services should be designed and planned together with the users, so that they are appropriate and adequately maintained, where possible beyond the life of the project. Some groups have very specific needs e.g. children orphaned as a result of AIDS may miss out on the information and skills transfer that takes place within families.
6. **Environmental impact:** as far as possible, the natural resource base for production and livelihoods of the affected population – and of host populations – should be preserved. Impact on the surrounding environment should be considered during assessment and the planning of any response. For example, people living in camps require cooking fuel, which may lead rapidly to local deforestation. The distribution of foodstuffs which have long cooking times, such as certain beans, will require more cooking fuel, thus also potentially affecting the environment (see Food aid planning standard 2 on page 158). Where possible, responses should aim to preserve the environment from further degradation. For example, destocking programmes reduce the pressure of animal grazing on pasture during a drought, making more feed available for surviving livestock.
7. **Coverage, access and acceptability:** beneficiaries and their characteristics should be described and their numbers estimated before determining the level of participation of different groups (paying particular attention to vulnerable groups). Participation is partly determined by ease of access and the acceptability of activities to participants. Even though some food security responses are targeted at the economically active, they should nevertheless be non-discriminatory and seek to provide access for vulnerable groups, as well as protecting dependents, including children. Various constraints, including capacity to work, workload at home, responsibilities for caring for children, the chronically ill or disabled, and restricted physical access, may limit the participation of women, people with disabilities and older people. Overcoming these constraints

involves identifying activities that are within the capacity of these groups or setting up appropriate support structures. Targeting mechanisms based on self-selection should normally be established with full consultation with all groups in the community (see Targeting standard on page 35).

- 8. Monitoring:** as well as routine monitoring (see Monitoring and Evaluation standards on pages 37-40), it is also necessary to monitor the wider food security situation in order to assess the continued relevance of the programme, determine when to phase out specific activities or to introduce modifications or new projects as needed, and to identify any need for advocacy. Local and regional food security information systems, including famine early warning systems, are important sources of information.

## **Food security standard 2: primary production**

Primary production mechanisms are protected and supported.

**Key indicators** (to be read in conjunction with the guidance notes)

- Interventions to support primary production are based on a demonstrated understanding of the viability of production systems, including access to and availability of necessary inputs and services (see guidance note 1).
- New technologies are introduced only where their implications for local production systems, cultural practices and environment are understood and accepted by food producers (see guidance note 2).
- Where possible, a range of inputs is provided in order to give producers more flexibility in managing production, processing and distribution and in reducing risks (see guidance note 3).
- Productive plant, animal or fisheries inputs are delivered in time, are locally acceptable and conform to appropriate quality norms (see guidance notes 4-5).
- The introduction of inputs and services does not exacerbate vulnerability or increase risk, e.g. by increasing competition for scarce natural resources or by damaging existing social networks (see guidance note 6).

- Inputs and services are purchased locally whenever possible, unless this would adversely affect local producers, markets or consumers (see guidance note 7).
- Food producers, processors and distributors receiving project inputs make appropriate use of them (see guidance notes 8-9).
- Responses understand the need for complementary inputs and services and provide these where appropriate.

## Guidance notes

1. **Viability of primary production:** to be viable, food production strategies must have a reasonable chance of developing adequately and succeeding. This may be influenced by a wide range of factors including:
  - access to sufficient natural resources (farmland, pasture, water, rivers, lakes, coastal waters, etc.). The ecological balance should not be endangered, e.g. by over-exploitation of marginal lands, over-fishing, or pollution of water, especially in peri-urban areas;
  - levels of skills and capacities, which may be limited where communities are seriously affected by disease, or where education and training may be barred to some groups;
  - labour availability in relation to existing patterns of production and the timing of key agricultural activities;
  - availability of inputs and the nature and coverage of related services (financial, veterinary, agricultural extension), which may be provided by government institutions and/or other bodies;
  - the legality of specific activities or the affected groups' right to work e.g. controls on the collection of firewood or restrictions on rights of refugees to undertake paid work;
  - security because of armed conflict, destruction of transport infrastructure, landmines, threat of attack or banditry.

Production should not adversely affect the access of other groups to life-sustaining natural resources such as water.

- 2. Technological development:** ‘new’ technologies may include improved crop varieties or livestock species, new tools or fertilisers. As far as possible, food production activities should follow existing patterns and/or be linked with national development plans. New technologies should only be introduced during a disaster if they have previously been tested in the local area and are known to be appropriate. When introduced, new technologies should be accompanied by appropriate community consultations, provision of information, training and other relevant support. The capacity of extension services within local government departments, NGOs and others to facilitate this should be assessed and if necessary reinforced.
- 3. Improving choice:** examples of interventions that offer producers greater choice include cash inputs or credit in lieu of, or to complement, productive inputs, and seed fairs that provide farmers with the opportunity to select seed of their choice. Production should not have negative nutritional implications, such as the replacement of food crops by cash crops. The provision of animal fodder during drought can provide a more direct human nutrition benefit to pastoralists than the provision of food assistance.
- 4. Timeliness and acceptability:** examples of productive inputs include seeds, tools, fertiliser, livestock, fishing equipment, hunting implements, loans and credit facilities, market information, transport facilities, etc. The provision of agricultural inputs and veterinary services must be timed to coincide with the relevant agricultural and animal husbandry seasons; e.g. the provision of seeds and tools must precede the planting season. Emergency destocking of livestock during a drought should take place before excess livestock mortality occurs, while restocking should start when recovery is well assured, e.g. following the next rains.
- 5. Seeds:** priority should be given to local seed, so that farmers can use their own criteria to establish quality. Local varieties should be approved by farmers and local agricultural staff. Seeds should be adaptable to local conditions and be resistant to disease. Seeds originating from outside the region need to be adequately certified and checked for appropriateness to local conditions. Hybrid seeds may be appropriate where farmers are familiar with them and have experience growing them. This can only be determined through consultation with the community. When seeds are provided free of charge, farmers may prefer hybrid seeds to local varieties

because these are otherwise costly to purchase. Government policies regarding hybrid seeds should also be complied with before distribution. Genetically modified (GMO) seeds should not be distributed unless they have been approved by the national or other ruling authorities.

- 6. *Impact on rural livelihoods:*** primary food production may not be viable if there is a shortage of vital natural resources. Promoting production that requires increased or changed access to locally available natural resources may heighten tensions within the local population, as well as further restricting access to water and other essential needs. Care should be taken with the provision of financial resources, in the form of either grants or loans, since these may also increase the risk of local insecurity (see Food security standard 3, guidance note 5 on page 130). In addition, the free provision of inputs may disturb traditional mechanisms for social support and redistribution.
- 7. *Local purchase of inputs:*** inputs and services for food production, such as livestock health services, seed, etc., should be obtained through existing in-country supply systems where possible. However, before embarking on local purchases the risk should be considered of project purchases distorting the market e.g. raising prices of scarce items.
- 8. *Monitoring usage:*** indicators of the process and the outputs from food production, processing and distribution may be estimated e.g. area planted, quantity of seed planted per hectare, yield, number of offspring, etc. It is important to determine how producers use the project inputs i.e. verifying that seeds are indeed planted, and that tools, fertilisers, nets and fishing gear are used as intended. The quality of the inputs should also be reviewed in terms of their acceptability and producer preferences. Important for evaluation is consideration of how the project has affected food available to the household e.g. household food stocks, the quantity and quality of food consumed, or the amount of food traded or given away. Where the project aims to increase production of a specific food type, such as animal or fish products or protein-rich legumes, the households' use of these products should be investigated. The results of this type of analysis may be cross-validated with nutritional surveys (provided health and care determinants of nutritional status are also considered).

- 9. Unforeseen or negative effects of inputs:** for example, the effect of changes in labour patterns in subsequent agricultural seasons, the effect of responses on alternative and existing coping strategies (e.g. diversion of labour), labour patterns of women and effect on child care, school attendance and effect on education, risks taken in order to access land and other essential resources.

### **Food security standard 3: income and employment**

Where income generation and employment are feasible livelihood strategies, people have access to appropriate income-earning opportunities, which generate fair remuneration and contribute towards food security without jeopardising the resources on which livelihoods are based.

#### **Key indicators** (to be read in conjunction with the guidance notes)

- Project decisions about timing, work activities, type of remuneration and the technical feasibility of implementation are based on a demonstrated understanding of local human resource capacities, a market and economic analysis, and an analysis of demand and supply for relevant skills and training needs (see guidance notes 1-2).
- Responses providing job or income opportunities are technically feasible and all necessary inputs are available on time. Where possible, responses contribute to the food security of others and preserve or restore the environment.
- The level of remuneration is appropriate, and payments for waged labour are prompt, regular and timely. In situations of acute food insecurity, payments may be made in advance (see guidance note 3).
- Procedures are in place to provide a safe, secure working environment (see guidance note 4).
- Projects involving large sums of cash include measures to avoid diversion and/or insecurity (see guidance note 5).

- Responses providing labour opportunities protect and support household caring responsibilities, and do not negatively affect the local environment or interfere with regular livelihood activities (see guidance note 6).
- The household management and use of remuneration (cash or food), grants or loans are understood and seen to be contributing towards the food security of all household members (see guidance note 7).

## Guidance notes

- 1. Appropriateness of initiatives:** project activities should make maximum use of local human resources in project design and the identification of appropriate activities. As far as possible, food-for-work (FFW) and cash-for-work (CFW) activities should be selected by, and planned with, the participating groups themselves. Where there are large numbers of displaced people (refugees or IDPs), employment opportunities should not be at the expense of the local host population. In some circumstances, employment opportunities should be made available to both groups. Understanding household management and use of cash is important in deciding whether and in what form microfinance services could support food security (see also Food security standard 2).
- 2. Type of remuneration:** remuneration may be in cash or in food, or a combination of both, and should enable food-insecure households to meet their needs. Rather than payment, remuneration may often take the form of an incentive provided to help people to undertake tasks that are of direct benefit to themselves. FFW may be preferred to CFW where markets are weak or unregulated, or where little food is available. FFW may also be appropriate where women are more likely to control the use of food than of cash. CFW is preferred where trade and markets can assure the local availability of food, and secure systems for dispersal of cash are available. People's purchasing needs, and the impact of giving either cash or food on other basic needs (school attendance, access to health services, social obligations) should be considered. The type and level of remuneration should be decided on a case-by-case basis, taking account of the above and the availability of cash and food resources.

- 3. *Payments:*** levels of remuneration should take account of the needs of the food-insecure households and of local labour rates. There are no universally accepted guidelines for setting levels of remuneration, but where remuneration is in kind and provided as an income transfer, the resale value of the food on local markets must be considered. The net gain to individuals in income through participation in the programme activities should be greater than if they had spent their time on other activities. This applies to FFW, CFW and also credit, business start-ups, etc. Income-earning opportunities should enhance the range of income sources, and not take the place of existing sources. Remuneration should not have a negative impact on local labour markets e.g. by causing wage rate inflation, diverting labour from other activities or undermining essential public services.
- 4. *Risk in the work environment:*** a high-risk working environment should be avoided, by introducing practical procedures for minimising risk or treating injuries e.g. briefings, first aid kits, protective clothing where necessary. This should include risk of HIV exposure, and measures should be taken to minimise this.
- 5. *Risk of insecurity and diversion:*** handing out cash, e.g. in the distribution of loans or payment of remuneration for work done, introduces security concerns for both programme staff and the recipients. A balance has to be achieved between security risks to both groups, and a range of options should be reviewed. For ease of access and safety of recipients, the point of distribution should be as close as possible to their homes, i.e. decentralised, though this may jeopardise the safety of programme staff. If a high level of corruption or diversion of funds is suspected, FFW may be preferable to CFW.
- 6. *Caring responsibilities and livelihoods:*** participation in income-earning opportunities should not undermine child care or other caring responsibilities as this could increase the risk of malnutrition. Programmes may need to consider employing care providers or providing care facilities (see General nutrition support standard 2 on page 140). Responses should not adversely affect access to other opportunities, such as other employment or education, or divert household resources from productive activities already in place.

- 7. Use of remuneration:** fair remuneration means that the income generated contributes a significant proportion of the resources necessary for food security. The household management of cash or food inputs (including intra-household distribution and end uses) must be understood, as the way cash is given may either diffuse or exacerbate existing tensions, and thereby affect food security and the nutrition of household members. Responses that generate income and employment often have multiple food security objectives, including community-level resources that affect food security. For example, repairing roads may improve access to markets and access to health care, while repairing or constructing water-harvesting and irrigation systems may improve productivity.

## **Food security standard 4: access to markets**

People's safe access to market goods and services as producers, consumers and traders is protected and promoted.

**Key indicators** (to be read in conjunction with the guidance notes)

- Food security responses are based on a demonstrated understanding of local markets and economic systems, which informs their design and, where necessary, leads to advocacy for system improvement and policy change (see guidance notes 1-2).
- Producers and consumers have economic and physical access to operating markets, which have a regular supply of basic items, including food at affordable prices (see guidance note 3).
- Adverse effects of food security responses, including food purchases and distribution, on local markets and market suppliers are minimised where possible (see guidance note 4).
- There is increased information and local awareness of market prices and availability, of how markets function and the policies that govern this (see guidance note 5).
- Basic food items and other essential commodities are available (see guidance note 6).

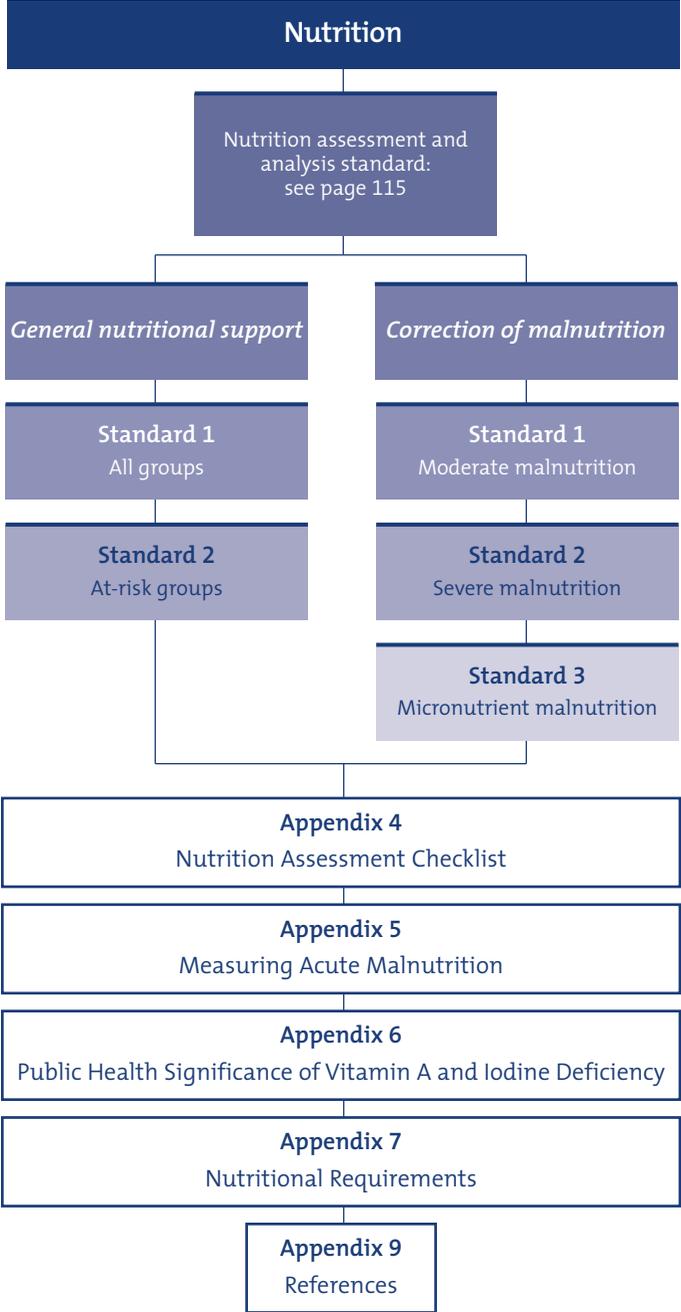
- The negative consequences of extreme seasonal or other abnormal price fluctuations are minimised (see guidance note 7).

## Guidance notes

- 1. Market analysis:** the types of market – local, regional, national – and how they are linked to each other should be reviewed. Consideration should be given to access to functioning markets for all affected groups, including vulnerable groups. Responses that remunerate in food, or provide inputs, such as seeds, agricultural tools, shelter materials, etc., should be preceded by a market analysis in relation to the commodity supplied. Local purchase of any surpluses will support local producers. Imports are likely to reduce local prices. Where inputs such as seeds may not be available on the open market, despite still being accessible to farmers through their own seed supply networks and systems, consideration should be given to the effect of external inputs on such systems.
- 2. Advocacy:** markets operate in the wider national and global economies, which influence local market conditions. For example, governmental policies, including pricing and trade policies, influence access and availability. Although actions at this level are beyond the scope of disaster response, analysis of these factors is necessary as there may be opportunities for a joint agency approach, or advocacy to government and other bodies to improve the situation.
- 3. Market demand and supply:** economic access to markets is influenced by purchasing power, market prices and availability. Affordability depends on the terms of trade between basic needs (including food, essential agricultural inputs such as seeds, tools, health care, etc.) and income sources (cash crops, livestock, wages, etc). Erosion of assets occurs when deterioration in terms of trade forces people to sell assets (often at low prices) in order to buy basic needs (at inflated prices). Access to markets may also be influenced by the political and security environment, and by cultural or religious considerations, which restrict access by certain groups (such as minorities).
- 4. Impact of interventions:** local procurement of food, seeds or other commodities may cause local inflation to the disadvantage of consumers but to the benefit of local producers. Conversely, imported food aid may drive prices down and act as a disincentive to local food production,

increasing the numbers who are food-insecure. Those responsible for procurement should monitor and take account of these effects. Food distribution also affects the purchasing power of beneficiaries, as it is a form of income transfer. Some commodities are easier to sell for a good price than others, e.g. oil versus blended food. The 'purchasing power' associated with a given food or food basket will influence whether it is eaten or sold by the beneficiary household. An understanding of household sales and purchases is important in determining the wider impact of food distribution programmes (see also Food aid management standard 3).

5. **Transparent market policies:** local producers and consumers need to be aware of market pricing controls and other policies that influence supply and demand. These may include state pricing and taxation policies, policies influencing movement of commodities across regional boundaries, or local schemes to facilitate trade with neighbouring areas (although in many conflict situations clear policies on these issues may not necessarily exist).
6. **Essential food items:** selection of food items for market monitoring depends on local food habits and therefore must be locally determined. The principles of planning nutritionally adequate rations should be applied to deciding what food items are essential in a particular context (see General nutrition support standard 1 on page 137 and Food aid planning standard 1 on page 157).
7. **Abnormally extreme seasonal price fluctuations** may adversely affect poor agricultural producers, who have to sell their produce when prices are at their lowest (i.e. after harvest). Conversely, consumers who have little disposable income cannot afford to invest in food stocks, depending instead on small but frequent purchases. They are therefore forced to buy even when prices are high (e.g. during drought). Examples of interventions which can minimise these effects include improved transport systems, diversified food production and cash or food transfers at critical times.



# 3 *Minimum Standards in Nutrition*

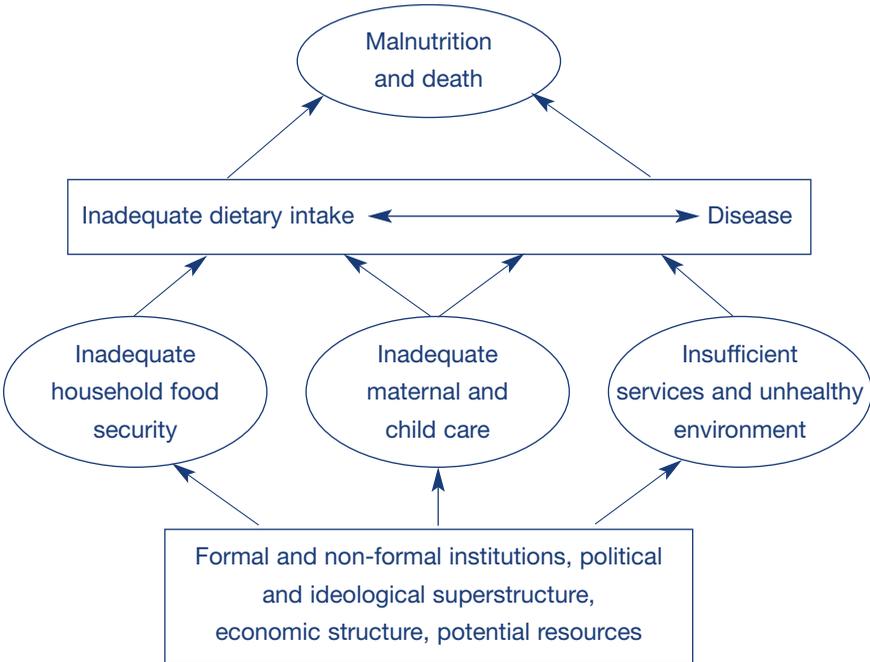
The immediate causes of malnutrition are disease and/or inadequate food intake, which in turn result from inadequate food, health or care at household or community levels.

The aim of preventive programmes is to ensure that the causes of malnutrition identified in the assessment are addressed. This includes ensuring that people have safe access to food of adequate quality and quantity, and have the means to prepare and consume it safely; ensuring that people's living environment, their access to, and the quality of health services (both preventive and curative) minimise their risk of disease; and ensuring that an environment exists in which care can be provided to nutritionally vulnerable members of the population. Care includes the provision within households and the community of time, attention and support to meet the physical, mental and social needs of household members. The protection of the social and care environment is addressed through the Food Aid and Food Security standards, while nutritional care and support for groups of the population that may be at increased risk are addressed in the Nutrition standards.

Programmes aiming to correct malnutrition may include special feeding programmes, medical treatment and/or supportive care for malnourished individuals. Feeding programmes should only be implemented when anthropometric surveys have been conducted or are planned. They should always be complemented by preventive measures.

The first two standards in this section deal with the nutritional issues relating to programmes that prevent malnutrition and should be used alongside the Food Aid and Food Security standards. The last three standards concern programmes that correct malnutrition.

Responses to prevent and correct malnutrition require the achievement of minimum standards both in this chapter and those in other chapters: health services, water supply and sanitation, and shelter. They also require the common standards detailed in chapter 1 to be achieved (see page 21). In other words, in order for the nutrition of all groups to be protected and supported, in a manner that ensures their survival and upholds their dignity, it is not sufficient to achieve only the standards in this section of the handbook.



Conceptual framework showing the causes of malnutrition

## i) General Nutrition Support

This section considers the nutritional resources and services required to meet the needs of both the general population and specific groups that may be at increased nutritional risk. Until these needs are met, any response aimed at the correction of malnutrition is likely to have a limited impact, since those who recover will return to a context of inadequate nutritional support and are therefore likely to deteriorate again.

Where populations require food aid to meet some or all of their nutritional needs, General nutrition support standard 1 should be used alongside Food aid planning standards 1-2 on pages 157-160 and Non-food items standards 3-4 on pages 233-236. General nutrition support standard 2 focuses on at-risk groups. However, those who are vulnerable to a disaster vary according to the context and so the specific groups at risk should be identified in each situation.

### General nutrition support standard 1: all groups

The nutritional needs of the population are met.

**Key indicators** (to be read in conjunction with the guidance notes)

- There is access to a range of foods – staple (cereal or tuber), pulses (or animal products) and fat sources – that meet nutritional requirements (see guidance note 1).
- There is access to vitamin A-, C- and iron-rich or fortified foods or appropriate supplements (see guidance notes 2, 3, 5 and 6).
- There is access to iodised salt for the majority (>90%) of households (see guidance notes 2, 3 and 6).
- There is access to additional sources of niacin (e.g. pulses, nuts, dried fish) if the staple is maize or sorghum (see guidance notes 2-3).
- There is access to additional sources of thiamine (e.g. pulses, nuts, eggs) if the staple is polished rice (see guidance notes 2-3).

- There is access to adequate sources of riboflavin where people are dependent on a very limited diet (see guidance notes 2-3).
- Levels of moderate and severe malnutrition are stable at, or declining to, acceptable levels (see guidance note 4).
- There are no cases of scurvy, pellagra, beri-beri or riboflavin deficiency (see guidance note 5).
- Rates of xerophthalmia and iodine deficiency disorders are not of public health significance (see guidance note 6).

## Guidance notes

**1. Nutritional requirements:** the following estimates for average population requirements should be used, with the figures adjusted for each population as described in Appendix 7.

- 2,100 kcals per person per day
- 10-12% of total energy provided by protein
- 17% of total energy provided by fat
- adequate micronutrient intake through fresh or fortified foods.

It should be noted that these are the requirements for food aid provision only if the population is entirely dependent on food aid to meet its nutritional requirements. In situations where people can meet some of their nutritional needs themselves, food aid provision should be adjusted accordingly, based on the assessment. For planning food rations, see Food aid planning standard 1 on page 157.

**2. Preventing micronutrient diseases:** if these indicators are met, then deterioration of the micronutrient status of the population should be prevented, provided adequate public health measures are in place to prevent diseases such as measles, malaria and parasitic infection (see Control of communicable diseases standards on page 273). Possible options for the prevention of micronutrient deficiencies include food security measures to promote access to nutritious foods (see Food security standards 2-3 on pages 124-131); improving the nutritional quality of the ration through fortification or inclusion of blended foods or locally purchased commodities to provide nutrients otherwise missing;

and/or medicinal supplementation. Micronutrient losses which can occur during transport, storage, processing and cooking should be taken into account. Exceptionally, where nutrient-rich foods are available locally, increasing the quantity of food in any general ration to allow more food exchanges may be considered, but cost-effectiveness and impact on markets must be taken into account.

- 3. *Monitoring access to micronutrients:*** the indicators measure the quality of the diet but do not quantify nutrient availability. Measuring the quantity of nutrient intake would impose unrealistic requirements for information collection. Indicators can be measured using information from various sources gathered by different techniques. These might include monitoring food availability and use at the household level; assessing food prices and food availability on the markets; assessing the nutrient content of any distributed food; examining food aid distribution plans and records; assessing any contribution of wild foods; and conducting food security assessments. Household-level analysis will not determine individual access to food. Intra-household food allocation may not always be equitable and vulnerable groups may be particularly affected, but this is not practical to measure. Distribution mechanisms (see Food aid management standard 3 on page 168), the choice of food aid commodities and discussion with the affected population could contribute to improved intra-household allocation.
- 4. *Interpreting levels of malnutrition:*** trends in malnutrition might be indicated by health centre records, repeat anthropometric surveys, nutritional surveillance, screening or reports from the community. It may be expensive to set up systems to monitor malnutrition rates over large areas or long periods of time, and technical expertise is required. The relative cost of such a system should be judged against the scale of resourcing. A combination of complementary information systems, e.g. both surveillance and intermittent surveys, may be the most effective use of resources. Wherever possible, local institutions and communities should participate in monitoring activities, interpretation of findings and the planning of any response. Determining whether levels of malnutrition are acceptable requires analysis of the situation in the light of the reference population, morbidity and mortality rates (see Health systems and infrastructure standard 1, guidance note 3 on page 260), seasonal fluctuations, pre-emergency levels of malnutrition and the underlying causes of malnutrition.

- 5. Epidemic micronutrient deficiencies:** four micronutrient deficiencies – scurvy (vitamin C), pellagra (niacin), beri-beri (thiamine) and riboflavin – have been highlighted, as these are the most commonly observed deficiencies to result from inadequate access to micronutrients in food aid-dependent populations and are usually avoidable in a disaster situation. If individuals with any of these deficiencies present at health centres, for example, it is likely to be as a result of restricted access to certain types of food and probably indicative of a population-wide problem. As such, deficiencies should be tackled by population-wide interventions as well as individual treatment (see Correction of malnutrition standard 3 on page 152). In any context where there is clear evidence that these micronutrient deficiencies are an endemic problem, their levels should be reduced at least to pre-disaster levels.
- 6. Endemic micronutrient deficiencies:** tackling micronutrient deficiencies within the initial phase of a disaster is complicated by difficulties in identifying them. The exceptions are xerophthalmia (vitamin A) and goitre (iodine) for which clear ‘field-friendly’ identification criteria are available. These deficiencies can also be tackled by population-level interventions, e.g. high-dose vitamin A supplementation for children and post-partum women, salt iodisation and public awareness campaigns. See Appendix 6 for definitions of their public health significance.

## General nutrition support standard 2: at-risk groups

The nutritional and support needs of identified at-risk groups are met.

**Key indicators** (to be read in conjunction with the guidance notes)

- Infants under six months are exclusively breastfed or, in exceptional cases, have access to an adequate amount of an appropriate breast milk substitute (see guidance notes 1-2).
- Children aged 6-24 months have access to nutritious, energy-dense complementary foods (see guidance note 3).
- Pregnant and breastfeeding women have access to additional nutrients and support (see guidance note 4).

- Specific attention is paid to the protection, promotion and support of the care and nutrition of adolescent girls (see guidance note 4).
- Appropriate nutritional information, education and training is given to relevant professionals, care givers and organisations on infant and child feeding practices (see guidance notes 1-4 and 8).
- Older people's access to appropriate nutritious foods and nutritional support is protected, promoted and supported (see guidance note 5).
- Families with chronically ill members, including people living with HIV/AIDS, and members with specific disabilities have access to appropriate nutritious food and adequate nutritional support (see guidance notes 6-8).
- Community-based systems are in place to ensure appropriate care of vulnerable individuals (see guidance note 8).

## Guidance notes

1. **Infant feeding:** exclusive breastfeeding is the healthiest way to feed a baby under six months. Babies who are exclusively breastfed receive no pre-lactates, water, teas or complementary foods. Rates of exclusive breastfeeding are typically low and so it is important to promote and support breastfeeding, especially when hygiene and care practices have broken down and the risk of infection is high. There are exceptional cases where a baby cannot be exclusively breastfed (such as where the mother has died or the baby is already fully artificially fed). In these cases adequate amounts of an appropriate breast milk substitute should be used, judged according to the Codex Alimentarius standards, and relactation encouraged where possible. Breast milk substitutes can be dangerous because of the difficulties involved in safe preparation. Feeding bottles should never be used, as they are unhygienic. Professionals should be trained in providing adequate protection, promotion and support for breastfeeding, including relactation. If infant formula is distributed, care givers will need advice and support on its safe use. Procurement and distribution must adhere to the International Code of Marketing of Breastmilk Substitutes and relevant World Health Assembly resolutions.

- 2. HIV and infant feeding:** if voluntary and confidential testing for HIV/AIDS is not possible, all mothers should be supported to breastfeed. Alternatives to breast milk are too risky to offer if a woman does not know her status. If a woman has been tested and knows she is HIV-positive, replacement feeding is recommended if it can be done in a way that is acceptable, feasible, affordable, sustainable and safe. HIV-positive mothers who choose not to breastfeed should be provided with specific guidance and support for at least the first two years of the child's life to ensure adequate feeding.
- 3. Young child feeding:** breastfeeding should continue for at least the first two years of life. At the age of six months, young children require energy-dense foods in addition to breast milk; it is recommended that 30% of the energy content of their diet comes from fat sources. Where children aged 6-24 months do not have access to breast milk, foods must be sufficient to meet all their nutritional requirements. Efforts should be made to provide households with the means and skills to prepare appropriate complementary foods for children under 24 months. This may be through the provision of specific food commodities or of utensils, fuel and water. When measles or other immunisation is carried out, it is usual practice to provide a vitamin A supplement to all children aged 6-59 months. Low birth-weight infants and young children can also benefit from iron supplementation, though compliance with daily protocols is very difficult to maintain.
- 4. Pregnant and breastfeeding women:** the risks associated with inadequate nutrient intakes for pregnant and breastfeeding women include pregnancy complications, maternal mortality, low birth weight and impaired breastfeeding performance. The average planning figures for general rations take into account the additional needs of pregnant and breastfeeding women. When the general ration is inadequate, supplementary feeding to prevent nutritional deterioration may be necessary. Low body weight at conception is strongly associated with low birth weight which means that, where they exist, mechanisms for providing nutritional support to adolescent girls should be used. Pregnant and breastfeeding women should receive daily supplements of iron and folic acid but as with children, compliance can be problematic. It is therefore important to ensure that steps are taken to reduce the prevalence of iron deficiency through a diversified diet (see General

nutrition support standard 1). Post-partum women should also receive vitamin A within six weeks of delivery.

**5. Older people** can be particularly affected by disasters. Nutritional risk factors which reduce access to food and can increase nutrient requirements include disease and disability, psychosocial stress, cold and poverty. These factors can be exacerbated when normal support networks, either formal or informal, are disrupted. While the average planning figures for general rations take into account the nutritional requirements of older people, special attention should be paid to their nutritional and care needs. Specifically:

- older people should be able to easily access food sources (including relief food);
- foods should be easy to prepare and consume;
- foods should meet the additional protein and micronutrient requirements of older people.

Older people are often important care givers to other household members and may need specific support in fulfilling this function.

**6. People living with HIV/AIDS (PLWH/A)** may face greater risk of malnutrition, because of a number of factors. These include reduced food intake due to appetite loss or difficulties in eating; poor absorption of nutrients due to diarrhoea; parasites or damage to intestinal cells; changes in metabolism; and chronic infections and illness. There is evidence to show that the energy requirements of PLWH/A increase according to the stage of the infection. Micronutrients are particularly important in preserving immune function and promoting survival. PLWH/A need to ensure that they keep as well nourished and healthy as possible to delay the onset of AIDS. Milling and fortification of food aid or provision of fortified, blended foods are possible strategies for improving their access to an adequate diet and in some situations it may be appropriate to increase the overall size of any food ration (see Targeting standard on page 35).

**7. Disabled people** may face a range of nutritional risks which can be further exacerbated by the environment in which they are living. Nutritional risks include difficulties in chewing and swallowing, leading to reduced food intake and choking; inappropriate position/posture when feeding;

reduced mobility affecting food access and access to sunlight (affecting vitamin D status); discrimination affecting food access; and constipation, particularly affecting individuals with cerebral palsy. Disabled individuals may be at particular risk of being separated from immediate family members (and usual care givers) in a disaster. Efforts should be made to determine and reduce these risks by ensuring physical access to food (including relief food), developing mechanisms for feeding support (e.g. provision of spoons and straws, developing systems for home visiting or outreach) and access to energy-dense foods.

- 8. *Community-based care:*** care givers and those they are caring for may have specific nutritional needs: e.g. they may have less time to access food because they are ill/caring for the ill; they may have a greater need to maintain hygienic practices which may be compromised; they may have fewer assets to exchange for food due to the costs of treatment or funerals; and they may face social stigma and reduced access to community support mechanisms. The availability of care givers may have changed as a consequence of the disaster e.g. due to family break-up or death, children and older people can become the main care givers. It is important that care givers be supported and not undermined in the care of vulnerable groups; this includes feeding, hygiene, health and psychosocial support and protection. Existing social networks can be used to provide training to selected community members to take on responsibilities in these areas.

## **ii) Correction of Malnutrition**

Malnutrition, including micronutrient deficiency, is associated with increased risk of morbidity and mortality for affected individuals. Therefore, when rates of malnutrition are high, it is necessary to ensure access to services which correct as well as prevent malnutrition. The impact of these services will be considerably reduced if appropriate general support for the population is not in place – for example, if there is a failure in the general food pipeline, or acute food insecurity, or if supplementary feeding without general support is being done for security reasons. In these instances, advocacy for general nutritional support should be a key element of the programme (see Response standard on page 33).

There are many ways to address moderate malnutrition, for example through the improvement of the general food ration, improving food security, improving access to health care and to sanitation and potable water. In disasters, targeted supplementary feeding is often the primary strategy for correction of moderate malnutrition and prevention of severe malnutrition (standard 1). In some instances, rates of malnutrition may be so high that it may be inefficient to target the moderately malnourished and all individuals meeting certain at-risk criteria (e.g. those aged 6-59 months) may be eligible. This is known as blanket supplementary feeding.

Severe malnutrition is corrected through therapeutic care which can be delivered through a variety of approaches, including 24-hour in-patient care, day care and home-based care (standard 2). The provision of in-patient care relies on other standards being achieved, such as the provision of functioning water and sanitation facilities (see Water, Sanitation and Hygiene Promotion, page 51). The correction of micronutrient deficiencies (standard 3) relies on the achievement of standards in health systems and infrastructure and control of communicable diseases (see Health Services, page 249).

## **Correction of malnutrition standard 1: moderate malnutrition**

Moderate malnutrition is addressed.

**Key indicators** (to be read in conjunction with the guidance notes)

- From the outset, clearly defined and agreed objectives and criteria for set-up and closure of the programme are established (see guidance note 1).
- Coverage is >50% in rural areas, >70% in urban areas and >90% in a camp situation (see guidance note 2).
- More than 90% of the target population is within <1 day's return walk (including time for treatment) of the distribution centre for dry

ration supplementary feeding programmes and no more than 1 hour's walk for on-site supplementary feeding programmes (see guidance note 2).

- The proportion of exits from targeted supplementary feeding programmes who have died is <3%, recovered is >75% and defaulted is <15% (see guidance note 3).
- Admission of individuals is based on assessment against internationally accepted anthropometric criteria (see guidance note 4 and Appendix 5).
- Targeted supplementary feeding programmes are linked to any existing health structure and protocols are followed to identify health problems and refer accordingly (see guidance note 5).
- Supplementary feeding is based on the distribution of dry take-home rations unless there is a clear rationale for on-site feeding (see guidance note 6).
- Monitoring systems are in place (see guidance note 7).

## Guidance notes

1. **Design of targeted supplementary feeding:** programme design must be based on an understanding of the complexity and dynamics of the nutrition situation. Targeted supplementary feeding programmes should only be implemented when anthropometric surveys have been conducted or are planned and if the underlying causes of moderate malnutrition are being addressed simultaneously. Targeted supplementary feeding programmes may be implemented in the short term, before General nutrition support standard 1 is met. The purpose of the programme should be clearly communicated and discussed with the target population (see Participation standard on page 28).
2. **Coverage** is calculated in relation to the target population, defined at the start of the programme, and can be estimated as part of an anthropometric survey. It can be affected by the acceptability of the programme, location of distribution points, security for staff and those requiring treatment, waiting times, service quality and the extent of home visiting. Distribution centres

should be close to the targeted population, to reduce the risks and costs associated with travelling long distances with young children and the risk of people being displaced to them. Affected communities should be involved in deciding where to locate distribution centres. The final decision should be based on wide consultation and on non-discrimination.

- 3. Exit indicators:** exits from a feeding programme are those individuals no longer registered. The total of exited individuals is made up of those who have defaulted, recovered (including those who are referred) and died.

Proportion of exits defaulted =  
$$\frac{\text{number of defaulters in the programme}}{\text{number of exits}} \times 100\%$$

Proportion of exits died =  
$$\frac{\text{number of deaths in the programme}}{\text{number of exits}} \times 100\%$$

Proportion of exits recovered =  
$$\frac{\text{number of individuals successfully discharged in the programme}}{\text{number of exits}} \times 100\%$$

- 4. Admission criteria:** individuals other than those who meet anthropometric criteria defining malnutrition may also benefit from supplementary feeding e.g. people living with HIV/AIDS or TB or those who have a disability. Monitoring systems will need to be adjusted if these individuals are included. In situations where emergency feeding programmes are overwhelmed with the numbers of individuals eligible for treatment, this may not be the best way to address the needs of these individuals, who will also remain at risk beyond the duration of the disaster. It may be better to identify alternative mechanisms for providing longer-term nutritional support e.g. through community home-based support or TB treatment centres.
- 5. Health inputs:** targeted supplementary feeding programmes should include appropriate medical protocols such as the provision of anti-helminths, vitamin A supplementation and immunisations, but delivery of these services should take into account the capacity of existing health services. In areas where there is a high prevalence of particular diseases (e.g. HIV/AIDS), the quality and quantity of the supplementary food should be given special consideration.

- 6. On-site feeding:** dry take-home rations, distributed on a weekly or bi-weekly basis, are preferred to on-site feeding but their size should take into account household sharing. On-site feeding may be considered only where security is a concern. Where fuel, water or cooking utensils are in short supply, such as in populations which are displaced or on the move, distributions of ready-to-eat foods may be considered in the short term, provided they do not disrupt traditional feeding patterns. For take-home feeding, clear information should be given on how to prepare supplementary food in a hygienic manner, how and when it should be consumed and the importance of continued breastfeeding for children under 24 months of age (see Food aid management standard 3 on page 168).
- 7. Monitoring systems:** systems should monitor community participation, acceptability of the programme (a good measure of this is the rate of defaulting), rates of readmission, the quantity and quality of food being provided, programme coverage, admission and discharge rates and external factors such as morbidity patterns, levels of malnutrition in the population, level of food insecurity in households and in the community, and the capacity of existing systems for service delivery. Individual causes of readmission, defaulting and failure to recover should be investigated on an ongoing basis.

## Correction of malnutrition standard 2: severe malnutrition

Severe malnutrition is addressed.

**Key indicators** (to be read in conjunction with the guidance notes)

- From the outset, clearly defined and agreed criteria for set-up and closure of the programme are established (see guidance note 1).
- Coverage is >50% in rural areas, >70% in urban areas and >90% in camp situations (see guidance note 2).
- The proportion of exits from therapeutic care who have died is <10%, recovered is >75% and defaulted is <15% (see guidance notes 3-5).

- Discharge criteria include non-anthropometric indices such as good appetite and the absence of diarrhoea, fever, parasitic infestation and other untreated illness (see guidance note 4).
- Mean weight gain is >8g per kg per person per day (see guidance note 6).
- Nutritional and medical care is provided according to internationally recognised therapeutic care protocols (see guidance note 7).
- As much attention is attached to breastfeeding and psychosocial support, hygiene and community outreach as to clinical care (see guidance note 8).
- There should be a minimum of one feeding assistant for 10 in-patients.
- Constraints to caring for malnourished individuals and affected family members should be identified and addressed (see guidance note 9).

## Guidance notes

1. **Starting therapeutic care:** factors which should be taken into account in the opening of centres for the treatment of severe malnutrition are the numbers and geographical spread of affected individuals; the security situation; recommended criteria for setting up and for closing centres; and the capacity of existing health structures. Therapeutic feeding programmes should not undermine the capacity of health systems, nor allow governments to abdicate their responsibilities for providing services. Wherever possible, programmes should aim to build on and strengthen existing capacity to treat severe malnutrition. The purpose of the programme should be clearly communicated and discussed with the target population (see Participation standard on page 28). A therapeutic care programme should only be started if there is a plan in place for remaining patients, at the end of the programme, to complete their treatment.
2. **Coverage** is calculated according to the target population and can be estimated as part of an anthropometric survey. It can be affected by the acceptability of the programme, location of treatment centres, security for staff and those requiring treatment, waiting times and service quality.

- 3. Exit indicators:** the time needed to achieve the exit indicators for a therapeutic feeding programme is 1-2 months. Exits from a feeding programme are those no longer registered. The population of exited individuals is made up those who have defaulted, recovered (including those who are referred) and died (see previous standard, guidance note 3 for how to calculate exit indicators). Mortality rates should be interpreted in the light of coverage rates and the severity of malnutrition treated. The extent to which mortality rates are affected in situations where a high proportion of admissions are HIV-positive is unknown; for this reason, the figures have not been adjusted for these situations.
- 4. Recovery rates:** a discharged individual must be free from medical complications and have achieved and maintained sufficient weight gain (e.g. for two consecutive weighings). Established protocols suggest discharge criteria which should be adhered to, in order to avoid the risks associated with premature exit from the programme. Protocols also define limits for the mean length of stay for patients in therapeutic feeding, aimed at avoiding prolonged recovery periods (e.g. typical lengths of stay may be 30-40 days). HIV/AIDS and TB may result in some malnourished individuals failing to recover. Options for longer-term treatment or care should be considered in conjunction with health services and other social and community support (see Control of communicable disease standards 3 and 6, pages 277 and 283). Causes of readmission, defaulting and failure to respond should be investigated and documented on an ongoing basis. Individuals should be followed up wherever possible after discharge and referred for supplementary feeding where possible.
- 5. Default rates** can be high when the programme is not accessible to the population. Accessibility may be affected by the distance of the treatment point from the community, an ongoing armed conflict, a lack of security, the level of support offered to the care giver of the individual treated, the number of care givers who are left at home to look after other dependants (this may be very few in situations of high HIV/AIDS prevalence), and the quality of the care provided. A defaulter from a therapeutic feeding programme is an individual who has not attended for a defined period of time (e.g. for more than 48 hours for in-patients).
- 6. Weight gain:** similar rates of weight gain can be achieved in both adults and children when they are given similar diets. Average rates of weight gain, however, may mask situations where individual patients are not

improving and are not being discharged. Lower rates may be more acceptable in out-patient programmes because the risks and demands on the community, e.g. in terms of time, can be much lower. Mean weight gain is calculated as follows:  $(\text{weight on exit (g)} - \text{weight on admission (g)}) / (\text{weight on admission (kg)} \times \text{duration of treatment (days)})$ .

- 7. Protocols:** internationally accepted protocols, including definitions of failure to respond, are found in the references in Appendix 9. In order to implement treatment protocols, clinical staff require special training (see Health systems and infrastructure standards, page 258). Individuals admitted for therapeutic care who are tested or suspected to be HIV-positive should have equal access to care if they meet the criteria for admission. This is also applicable to TB cases. PLWH/A who do not meet admission criteria often require nutritional support, but this is not best offered in the context of treatment for severe malnutrition in disasters. These individuals and their families should be supported through a range of services including community home-based care, TB treatment centres and prevention programmes aimed at mother-to child-transmission.
- 8. Breastfeeding and psychosocial support:** breastfeeding mothers require special attention to support lactation and optimal infant and young child feeding. A breastfeeding corner may be set up for this purpose. Emotional and physical stimulation through play is important for severely malnourished children during the rehabilitation period. Care givers of severely malnourished children often require social and psychosocial support to bring their children for treatment. This may be achieved through outreach and mobilisation programmes (see General nutrition support standard 2).
- 9. Carers:** all carers of severely malnourished individuals should be enabled to feed and care for them during treatment through the provision of advice, demonstrations and health and nutrition information. Programme staff should be aware that discussions with care givers may expose individual human rights violations (e.g. deliberate starvation of populations by warring parties) and they should be trained in procedures for dealing with such situations.

## Correction of malnutrition standard 3: micronutrient malnutrition

Micronutrient deficiencies are addressed.

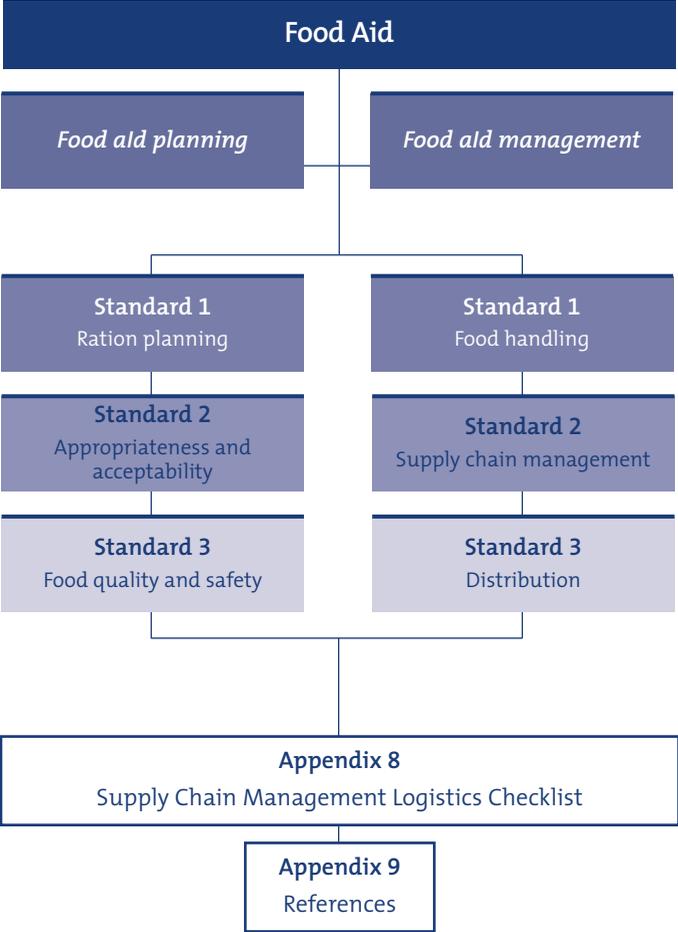
**Key indicators** (to be read in conjunction with the guidance notes)

- All clinical cases of deficiency diseases are treated according to WHO micronutrient supplementation protocols (see guidance note 1).
- Procedures are established to respond efficiently to micronutrient deficiencies to which the population may be at risk (see guidance note 2).
- Health staff are trained in how to identify and treat micronutrient deficiencies to which the population is most at risk (see guidance note 2).

### Guidance notes

- 1. *Diagnosis and treatment:*** diagnosis of some micronutrient deficiencies is possible through simple clinical examination. Indicators of these deficiencies can then be incorporated into health or nutritional surveillance systems, although careful training of staff is required to ensure that assessment is accurate. Other micronutrient deficiencies cannot be identified without biochemical examination. In such instances, case definition is problematic and in emergencies can often only be determined through the response to supplementation by individuals who present themselves to health staff. Treatment of micronutrient deficiencies or those at risk of deficiency due to disease should take place in the health system and within feeding programmes.
- 2. *Preparedness:*** strategies for the prevention of micronutrient deficiencies are given in General nutrition support standard 1. Prevention can also be achieved through the reduction of the incidence of diseases such as acute respiratory infection, measles, parasitic infection, malaria and diarrhoea that deplete micronutrient stores (see Control of communicable diseases

standards on page 273). Treatment of deficiencies will involve active case finding and the development of case definitions and protocols for treatment.



# 4 *Minimum Standards in Food Aid*

If a community's normal means of accessing food is compromised by disaster (for example, through loss of crops due to natural disaster, deliberate starvation by a party to an armed conflict, commandeering of food by soldiers, or forced or non-forced displacement), a food aid response may be required to sustain life, protect or restore people's self-reliance, and reduce the need for them to adopt potentially damaging coping strategies.

Whenever analysis determines that food aid is an appropriate response, this should be undertaken in a manner that meets short-term needs but also, as far as possible, contributes to restoring long-term food security. The following should be taken into account.

- General (free) distributions are introduced only when absolutely necessary, targeted to those who need the food most, and discontinued as soon as possible.
- Dry rations for home preparation are provided wherever possible. Mass feeding (the provision of cooked food that is eaten on the spot) is organised only for an initial short period following a major sudden disaster or population movement when people do not have the means to cook for themselves, or in a situation of insecurity when the distribution of dry rations could put recipients at risk.
- Food assistance to refugees and IDPs is based on assessment of their situation and needs, not on their status as refugees or IDPs.
- Food commodities are imported only when there is an in-country deficit or no practical possibility of moving available surpluses into the disaster-affected area.

- Where there is a risk of food aid being commandeered or used by combatants in an armed conflict, measures are put in place to avoid it fuelling the conflict.

Arrangements for food aid distribution must be particularly robust and accountable in view of the high value and high volume involved in most disaster relief programmes. Delivery and distribution systems should be monitored at all stages, including at the community level. Programme evaluation should be carried out regularly, and findings disseminated to and discussed with all stakeholders, including the affected population.

The six Food Aid standards are divided into two sub-categories. Food Aid Planning covers ration planning, appropriateness and acceptability of food, and food quality and safety. Food Aid Management deals with food handling, supply chain management and distribution. Appendix 8 at the end of the chapter provides a logistics checklist for supply chain management purposes.

## **i) Food Aid Planning**

Initial assessment and analysis of an emergency situation should identify people's own food and income sources, as well as any threats to those sources. It should determine whether food aid is required and, if so, the type and quantity needed to ensure that people are able to maintain an adequate nutritional status. When it is determined that free distribution of food is necessary, an appropriate general ration must be established to enable households to meet their nutritional needs, taking account of the food they are able to provide for themselves without adopting damaging coping strategies (see Food security analysis standard 1, guidance note 3 on page 113 and Food security standard 1, guidance note 3 on page 122).

When it is determined that a supplementary feeding programme (SFP) is needed, an appropriate supplementary ration must be established. In such cases, the SFP ration is in addition to any general ration to which individuals are entitled (see Correction of malnutrition standard 1, guidance note 1 on page 147).

In all cases, the commodities provided must be carefully chosen, in consultation with the affected population. They must be of good quality, safe to consume, and appropriate and acceptable to recipients.

## Food aid planning standard 1: ration planning

Rations for general food distributions are designed to bridge the gap between the affected population's requirements and their own food resources.

**Key indicators** (to be read in conjunction with the guidance notes)

- Rations for general distribution are designed on the basis of the standard initial planning requirements for energy, protein, fat and micronutrients, adjusted as necessary to the local situation (see guidance note 1; see also General nutrition support standards on pages 137-144 and Appendix 7).
- The ration distributed reduces or eliminates the need for disaster-affected people to adopt damaging coping strategies.
- When relevant, the economic transfer value of the ration is calculated and is appropriate to the local situation (see guidance note 2).

## Guidance notes

1. **Nutritional requirements:** where people are displaced and have no access to any food at all, the distributed ration should meet their total nutritional requirement. However, most disaster-affected populations are able to obtain some food by their own means. Rations should then be planned to make up the difference between the nutritional requirement and what people can provide for themselves. Thus, if the standard requirement is 2,100 kcals/person/day and the assessment determines that people within the target population can, on average, acquire 500 kcals/person/day from their own efforts or resources, the ration should be designed to provide  $2,100 - 500 = 1,600$  kcals/person/day. Similar calculations should be made for fat and protein. Agreed estimates must

be established for the average quantities of food to which people have access (see Food security assessment standard on page 111).

- 2. Economic context:** where little or no other food is available and people can be expected to consume all (or almost all) of any food distributed, the ration should be designed strictly on the basis of nutritional criteria, taking into account issues of acceptability and cost-effectiveness. Where other foods are available and beneficiaries may be expected to trade some of their ration to obtain them, the ration's transfer value becomes relevant. The transfer value is the local market value of the ration i.e. what it would cost to buy the same quantities of the same items on the local market.

## Food aid planning standard 2: appropriateness and acceptability

The food items provided are appropriate and acceptable to recipients and can be used efficiently at the household level.

**Key indicators** (to be read in conjunction with the guidance notes)

- People are consulted during assessment or programme design on the acceptability, familiarity and appropriateness of food items, and results are factored into programme decisions on the choice of commodities (see guidance note 1).
- When an unfamiliar food is distributed, instructions on its preparation in a locally palatable manner, with minimum nutrient loss, are provided to women and other people who prepare food, preferably in the local language (see guidance note 1).
- People's ability to access cooking fuel and water, and the duration of cooking times and requirements for soaking, are considered when selecting commodities for distribution (see guidance note 2).
- When a whole grain cereal is distributed, recipients either have the means to mill or process it in a traditional home-based manner or have access to adequate milling/processing facilities reasonably close to their dwellings (see guidance note 3).

- People have access to culturally important items, including condiments (see guidance note 4).
- There is no distribution of free or subsidised milk powder or of liquid milk as a single commodity (see guidance note 5).

## Guidance notes

1. **Familiarity and acceptability:** while nutritional value is the primary consideration when choosing commodities for a food basket, the foods distributed should be familiar to the recipients and consistent with their religious and cultural traditions, including any food taboos for pregnant or breastfeeding women. In assessment reports and requests to donors, the reasons for the choice of particular commodities or the exclusion of others should be explained. When there are acute survival needs and there is no access to cooking facilities, ready-to-eat foods must be provided. In these circumstances there may sometimes be no practical alternative to providing unfamiliar items. Only in such instances should special 'emergency rations' be considered.
2. **Fuel requirements:** when assessing food requirements, a fuel assessment should also be undertaken to ensure that recipients are able to cook food sufficiently to avoid adverse effects to their health, and without degradation of the environment through excessive collection of fuel wood. When necessary, appropriate fuel should be provided or a wood harvesting programme established that is supervised for the safety of women and children, who are the main gatherers of firewood. In general, items should be provided that do not require long cooking times or the use of large quantities of water. The provision of milled grain or of grain mills will reduce cooking times and the amount of fuel required.
3. **Grain processing:** milling is a particular concern for maize, as milled whole maize has a shelf life of only 6-8 weeks. Milling should therefore take place shortly before consumption. Where household-level grinding is part of the recipients' tradition, whole grain can be distributed. Whole grain has the advantage of a longer shelf life and may have a higher economic value for recipients. Alternatively, facilities for low-extraction commercial milling can be provided: this removes the germ, oil and enzymes, which cause rancidity. This greatly increases the shelf life of the grain, although at the

same time it reduces its protein content. National laws relating to the import and distribution of whole grain should be complied with.

4. **Culturally important items:** the assessment should 1) identify culturally important condiments and other food items that are an essential part of daily food habits; and 2) determine the access people have to these items. The food basket should be designed accordingly, especially where people will be dependent on distributed rations for an extended period.
5. **Milk:** powdered milk, or liquid milk distributed as a single commodity (this includes milk intended for mixing with tea), should not be included in a general food distribution or a take-home supplementary feeding programme, as its indiscriminate use may give rise to serious health hazards. This is especially relevant in the case of young children, for whom the risks of inappropriate dilution and germ contamination are very high (see General nutrition support standard 2 on page 140).

### Food aid planning standard 3: food quality and safety

Food distributed is of appropriate quality and is fit for human consumption.

**Key indicators** (to be read in conjunction with the guidance notes)

- Food commodities conform to national (recipient country) and other internationally accepted standards (see guidance notes 1-2).
- All imported packaged food has a minimum six-month shelf life on arrival in the country and is distributed before the expiry date or well within the 'best before' period (see guidance note 1).
- There are no verifiable complaints about the quality of food distributed (see guidance note 3).
- Food packaging is sturdy, convenient for handling, storage and distribution, and is not a hazard for the environment (see guidance note 4).

- Food packages are labelled in an appropriate language with, for packaged foods, the date of production, the 'best before' date and details of the nutrient content.
- Storage conditions are adequate and appropriate, stores are properly managed and routine checks on food quality are carried out in all locations (see guidance note 5).

## Guidance notes

1. **Food quality:** foods must conform to the food standards of the recipient government and/or the Codex Alimentarius standards with regard to quality, packaging, labelling, shelf life, etc. Samples should be systematically checked at the point of delivery by the supplier to ensure their quality is appropriate. Whenever possible, commodities purchased (either locally or imported), should be accompanied by phytosanitary certificates or other inspection certificates that confirm their fitness for human consumption. Random sample testing should be carried out on in-country stocks to ensure their continued fitness for consumption. When large quantities are involved or there are doubts and could be disputes about quality, independent quality surveyors should inspect the consignment. Information on the age and quality of particular food consignments may be obtained from supplier certificates, quality control inspection reports, package labels, warehouse reports, etc.
2. **Genetically modified foods:** national regulations concerning the receipt and use of genetically modified foods must be understood and respected. External food aid should take such regulations into account when any food aid programme is being planned.
3. **Complaints:** recipients' complaints about food quality should be followed up promptly and handled in a transparent and fair manner.
4. **Packaging:** if possible, packaging should allow direct distribution of goods, without the need for repacking.
5. **Storage areas** should be dry and hygienic, adequately protected from climatic conditions and uncontaminated by chemical or other residues. They should also be secured, as far as possible, against pests such as insects and rodents. See also Food aid management standard 2 on page 165.

## **ii) Food Aid Management**

The goal of food aid management is to deliver food to those people who need it most. Generally speaking, this involves delivering the right goods, to the right location, in the right condition, at the right time and for the right price, with minimal handling loss.

The weight and volume of food aid required to sustain a large population severely affected by disaster may amount to thousands of tonnes. The physical movement of food commodities to points of distribution may involve an extensive network of purchasers, forwarding agents, transporters and receivers, and multiple handling and transfers from one mode of transport to another. These networks, or supply chains, are put together using a series of contracts and agreements, which define roles and responsibilities, and establish liabilities and rights to compensation, among the contracting parties. All of this requires proper and transparent procedures that contribute towards establishing accountability.

Setting up and managing the supply chain entails cooperation among donors, the recipient government, humanitarian actors, local authorities, various service providers and local community organisations engaged in the food aid programme. Each party will have specific roles and responsibilities as a link, or series of links, in the supply chain. As a chain is only as strong as its weakest link, all parties involved in food aid logistics share responsibility for maintaining the flow of sufficient commodities to meet distribution targets and schedules.

Equity in the distribution process is of primary importance and the involvement of people from the disaster-affected population in decision-making and implementation is essential. People should be informed about the quantity and type of food rations to be distributed, and they should feel assured that the distribution process is fair and that they receive what has been promised. Any differences between rations provided to different groups must be explained and understood.

## Food aid management standard 1: food handling

Food is stored, prepared and consumed in a safe and appropriate manner at both household and community levels.

**Key indicators** (to be read in conjunction with the guidance notes)

- There are no adverse health effects resulting from inappropriate food handling or preparation at any distribution site (see guidance note 1).
- Recipients of food aid are informed about and understand the importance of food hygiene (see guidance note 1).
- There are no complaints concerning difficulties in storing, preparing, cooking or consuming the food distributed (see guidance note 2).
- Every household has access to appropriate cooking utensils, fuel and hygiene materials (see guidance notes 3-4).
- Individuals who cannot prepare food or cannot feed themselves have access to a carer who prepares appropriate food in a timely manner and administers feeding where necessary (see guidance notes 4-5).
- Where food is distributed in cooked form, staff have received training in safe storage, handling of commodities and the preparation of food and understand the potential health hazards caused by improper practices.

### Guidance notes

1. **Food hygiene:** changed circumstances may disrupt people's normal hygiene practices. It may therefore be necessary to promote food hygiene and actively support measures compatible with local conditions and disease patterns e.g. stressing the importance of washing hands before handling food, avoiding contamination of water, taking pest control

measures, etc. People should be informed about how to store food safely at the household level, and care givers should be provided with information on the optimal use of household resources for child feeding and safe methods for food preparation (see Hygiene promotion standard on page 59).

- 2. Sources of information** may include programme monitoring systems, focus group discussions with recipients and rapid household surveys.
- 3. Household items and fuel:** each household should have access to at least one cooking pot, water storage containers with a capacity of 40 litres, 250g of soap per person per month, and adequate fuel for food preparation. If access to cooking fuel is limited, foods requiring a short cooking time should be distributed. If this is not possible, then external sources of fuel supply should be established to bridge the gap (see Water supply standard 3 on page 69 and Non-food items standards 2-4 on pages 232-236).
- 4. Access to grinding mills** and other processing facilities, and access to clean water, are very important in that they enable people to prepare food in the best form of their choice and also save time for other productive activities. Care givers spending excessive amounts of time waiting for these services could otherwise be preparing food, feeding children or engaging in other tasks that have a positive effect on nutritional outcomes and/or long-term self-reliance. Household-level food processing (including grinding) can reduce the time (as well as the quantities of water and fuel) required for cooking.
- 5. Special needs:** although not an exhaustive list, those who require assistance with feeding usually include young children, older people, disabled people and people living with HIV/AIDS. See General nutrition support standard 2 on page 140.

## Food aid management standard 2: supply chain management

Food aid resources (commodities and support funds) are well managed, using transparent and responsive systems.

**Key indicators** (to be read in conjunction with the guidance notes)

- Food aid resources reach the intended beneficiaries.
- An assessment is made of local supply chain management (SCM) capabilities and logistics infrastructure and a co-ordinated, efficient SCM system is established, using local capacity where this is feasible (see guidance notes 1-2).
- The assessment considers the availability of locally sourced food commodities (see guidance note 3).
- The award of contracts for SCM services is transparent, fair and open (see guidance note 4).
- Staff at all levels of the SCM system are adequately trained and observe procedures relating to food quality and safety (see guidance note 5).
- Appropriate inventory accounting, reporting and financial systems are in place to ensure accountability at all levels of the SCM system (see guidance notes 6-7).
- Care is taken to minimise losses, including through theft, and all losses are accounted for (see guidance notes 8-10).
- The food pipeline is monitored and maintained in such a way that any interruption to distribution is avoided (see guidance note 11).
- Information on the performance of the supply chain is provided to all stakeholders on a regular basis (see guidance note 12).

### Guidance notes

1. **Supply chain management (SCM)** is an integrated approach to food aid logistics. Starting with the choice of commodity, it includes sourcing,

procurement, quality assurance, packaging, shipping, transportation, warehousing, inventory management, insurance, etc. The chain involves many different players, and it is important that their activities are coordinated. Appropriate management and monitoring practices should be adopted to ensure that all commodities are safeguarded until distribution to recipient households.

- 2. Using local services:** an assessment should be made of the availability and reliability of local capability before sourcing from outside the area. Reputable local or regional transporters and freight forwarders can be contracted to provide logistics services. Such organisations have valuable knowledge of local regulations, procedures and facilities, and can help to ensure compliance with the laws of the host country as well as expediting delivery operations.
- 3. Local sourcing vs. importation:** the local availability of food commodities, and the implications for local production and market systems of food being either sourced locally or imported, should be assessed (see Food security assessment and analysis standard on page 111; Food security standard 2 on page 124; and Food security standard 4 on page 131). Where a number of different organisations are involved in supplying food, local sourcing including purchases of commodities should be co-ordinated as far as possible. Other in-country sources of food commodities may include loans or reallocations from existing food aid programmes or national grain reserves, and loans from, or swaps with, commercial suppliers.
- 4. Impartiality:** fair and transparent contracting procedures are essential in order to avoid any suspicion of favouritism or corruption. Food aid packaging should not carry any messages that are politically or religiously motivated or divisive in nature.
- 5. Skills and training:** experienced SCM practitioners and food aid managers should be mobilised to set up the SCM system and train staff. Particular types of relevant expertise include contracts management, transportation and warehouse management, inventory management, pipeline analysis and information management, shipment tracking, import management, etc. When training is carried out, it should include the staff of partner organisations.

6. **Reporting:** most food aid donors have specific reporting requirements; supply chain managers should be aware of these requirements and establish systems that meet them as well as day-to-day management needs. This includes reporting promptly any delays or deviations in the supply chain. Pipeline information and other SCM reports should be shared in a transparent manner.
7. **Documentation:** a sufficient stock of documentation and forms (waybills, stock ledgers, reporting forms, etc.) should be available at all locations where food aid is received, stored, and/or dispatched in order to maintain a documented audit trail of transactions.
8. **Warehousing:** dedicated (food-only) warehouses are preferable to shared facilities. When selecting a warehouse, it should be established that no hazardous goods have previously been stored there and there is no danger of contamination. Other factors to consider include security, capacity, ease of access, solidity (of roof, walls, doors and floor) and absence of any threat of flooding.
9. **Disposal of commodities unfit for human consumption:** damaged commodities should be inspected by qualified inspectors, such as medical doctors, public health laboratories etc., to certify them as fit or unfit for human consumption. Methods of disposal of unfit commodities may include sale for animal feed, burial or incineration. In the case of disposal for animal feed, certification must be obtained to certify the commodity's fitness for this purpose. In all cases it must be ensured that unfit commodities do not re-enter the human or animal food supply chain and that their disposal does not cause harm to the environment or contaminate water sources in the vicinity.
10. **Threats to the supply chain:** in a situation of armed conflict, there is a danger of food aid being looted or requisitioned by warring parties, and the security of transport routes and warehouses should be taken into consideration. In all disaster situations, there is the potential for loss through theft at all levels of the supply chain, and control systems must be established and supervised at all storage, hand-over and distribution points to minimise this risk. Internal control systems should ensure division of duties/responsibilities to reduce the risk of collusion. Stocks should be regularly checked to detect any diversion of food. If diversion is detected,

measures should be taken not only to ensure the integrity of the supply chain, but also to analyse and address the broader political and security implications (e.g. the possibility of diverted stocks fuelling an armed conflict).

- 11. Pipeline analysis:** regular pipeline analysis should be carried out and relevant information on stock levels, expected arrivals, distributions, etc. shared among all those involved in the supply chain. The regular tracking and forecasting of stock levels along the supply chain should highlight anticipated shortfalls or problems in time for solutions to be found.
- 12. Providing information:** the use of local media or traditional methods of news dissemination should be considered as a way of keeping people informed about food supplies and operations. This reinforces transparency. Women's groups may be enlisted to help provide information about food aid programmes to the community.

### **Food aid management standard 3: distribution**

The method of food distribution is responsive, transparent, equitable and appropriate to local conditions.

**Key indicators** (to be read in conjunction with the guidance notes)

- Recipients of food aid are identified and targeted on the basis of need, by means of an assessment carried out through consultation with stakeholders, including community groups (see guidance notes 1-2).
- Efficient and equitable distribution methods are designed in consultation with local groups and partner organisations, and involve the various recipient groups (see guidance notes 1-3).
- The point of distribution is as close as possible to recipients' homes to ensure easy access and safety (see guidance notes 4-5).
- Recipients are informed well in advance of the quality and quantity of the food ration and the distribution plan (see guidance notes 6-7).
- The performance and effectiveness of the food aid programme are properly monitored and evaluated (see guidance note 8).

## Guidance notes

- 1. Targeting:** food aid should be targeted to meet the needs of the most vulnerable in the community, without discrimination on the basis of gender, disability, religious or ethnic background, etc. The selection of distribution agents should be based on their impartiality, capacity and accountability. Distribution agents may include local elders, locally elected relief committees, local institutions, local NGOs, or government or international NGOs (see Participation and Initial assessment standards on pages 28-33 and Targeting standard on page 35).
- 2. Registration:** formal registration of households receiving food aid should be carried out as soon as is feasible, and updated as necessary. Lists developed by local authorities and community-generated family lists may be useful, and the involvement of women from the affected population in this process is to be encouraged. Women should have the right to be registered in their own names if they wish. Care should be taken to ensure that female or adolescent-headed households and other vulnerable individuals are not omitted from distribution lists. If registration is not possible in the initial stages of the emergency, it should be completed as soon as the situation has stabilised. This is especially important when food aid may be required for lengthy periods.
- 3. Distribution methods:** most distribution methods evolve over time. In the initial stages, general distributions based on family lists or population estimates provided by local communities may be the only feasible method. Any system should be monitored closely to ensure that food is reaching the intended recipients, and that the system is fair and equitable. Particular emphasis should be given to the accessibility of the programme to vulnerable groups. However, attempts to target vulnerable groups should not add to any stigma already experienced by these groups. This may be a particular issue in populations with large number of people living with HIV/AIDS (see Participation, Targeting, Monitoring and Evaluation standards in chapter 1).
- 4. Distribution points** should be established where they are safe and most convenient for the recipients, not merely on the basis of logistic convenience for the distributing agency. The frequency of distribution and the number of distribution points should take into account the time spent by recipients

travelling to/from centres, and the practicalities and cost of transporting commodities. Recipients should not be made to walk long distances to collect rations, and distributions should be scheduled at convenient times to minimise disruption to everyday activities. Waiting areas and potable water should be provided at distribution points (see Correction of malnutrition standards 1-2 on pages 145-152).

- 5. Minimising security risks:** food is a valuable commodity and its distribution can create security risks, including both the risk of diversion and the potential for violence. When food is in short supply, tensions can run high when deliveries are made. Women, children, elderly people and people with disabilities may be unable to obtain their entitlement, or may have it taken from them by force. The risks must be assessed in advance and steps taken to minimise them. These should include adequate supervision of distributions and guarding of distribution points, including the involvement of local police where appropriate. Measures to prevent, monitor and respond to gender-based violence or sexual exploitation associated with food distribution may also be necessary.
- 6. Dissemination of information:** recipients should be informed about
  - the quantity and type of ration to be distributed and the reasons for any differences from established norms;
  - the distribution plan (day, time, location, frequency) and deviation, if any, due to outside circumstances;
  - the nutritional quality of the food and, if needed, special attention required to protect its nutritional value; and
  - the requirements for the safe handling and use of the food commodities.
- 7. Changes to the programme:** changes in the food basket or ration levels caused by insufficient availability of food must be discussed with the recipients, through distribution committees or community leaders, and a course of action should be jointly developed. The distribution committee should inform the population of changes and the reasons behind them, how long changes will continue and when the distribution of normal rations will be resumed. It is essential to communicate clearly what people should receive. For example, ration quantities should be displayed

prominently at distribution sites, written in the local language and/or drawn pictorially, so that people are aware of their entitlements.

8. **Monitoring and evaluation** of food aid distribution should be carried out at all levels of the supply chain. At distribution points, random weighing should be carried out of rations collected by households to measure the accuracy and equity of distribution management, and exit interviews should be conducted. At community level, random visits to households receiving food aid can help to ascertain the acceptability and usefulness of the ration, and also to identify people who meet the selection criteria but who are not receiving food aid. Such visits can also ascertain if extra food is being received and where it is coming from (e.g. as a result of commandeering, recruitment or exploitation, sexual or otherwise). The wider effects on the food distribution system should also be considered. These may include implications for the agricultural cycle, agricultural activities, market conditions and availability of agricultural inputs.

# Appendix 1

## Food Security Checklist for Methodology and Reporting

Food security assessments should:

1. include a clear description of the methodology
  - overall design and objectives
  - background and number of assessors (whether they are working individually or in pairs)
  - selection of key informants (are they representative of all groups?)
  - composition of focus or other discussion groups
  - criteria for selecting informants
  - timeframe of the assessment
  - framework for analysis and methodological tools, including PRA tools and techniques;
2. be based on a qualitative approach, including review of secondary sources of quantitative information;
3. use terms correctly e.g. purposive sampling, key informant, focus group, terms for specific techniques;
4. involve local institutions as partners in the assessment process, unless inappropriate e.g. in some conflict situations;
5. employ an appropriate range of PRA tools and techniques (which are applied in sequence to analyse and triangulate findings);
6. involve a representative range of affected population groups or livelihood groupings;
7. describe the limitations or practical constraints of the assessment;
8. describe the coverage of the assessment, including its geographic spread, the range of livelihood groups included and other relevant stratification of the population (e.g. gender, ethnicity, tribal group, etc.);

9. include interviews with representatives of relevant government ministries and public services, traditional leaders, representatives of key civil society organisations (religious groups, local NGOs, advocacy or pressure groups, farmers' or pastoralists' associations, women's groups) and representatives of each of the livelihood groups under consideration.

**The assessment report findings should cover:**

1. the recent history of food security and relevant policies prior to the current situation;
2. a description of the different livelihood groups and their food security situation prior to the disaster;
3. food security pre-disaster for different livelihood groups;
4. the impact of the disaster on the food system and food security for different livelihood groups;
5. identification of particularly vulnerable livelihood groups or those vulnerable to food insecurity in the present situation;
6. suggested interventions, including means of implementation, advocacy and any additional assessments required;
7. the precise nature, purpose and duration of any food aid response, if a response is considered appropriate. Food aid responses should be justified on the basis of the above data and analysis.

# Appendix 2

## Food Security Assessment Checklist

Food security assessments often broadly categorise the affected population into livelihood groupings, according to their sources of, and strategies for obtaining, income or food. This may also include a breakdown of the population according to wealth groups or strata. It is important to compare the prevailing situation with the history of food security pre-disaster. So-called 'average years' may be considered as a baseline. The specific roles and vulnerabilities of women and men, and the implications for household food security should be considered. Consideration of intra-household food security differences may also be important.

This checklist covers the broad areas that are usually considered in a food security assessment. Additional information must also be collected on the wider context of the disaster (e.g. its political context, population numbers and movements, etc.) and possibly in relation to other relevant sectors (nutrition, health, water and shelter). The checklist must be adapted to suit the local context and the objectives of the assessment. More detailed checklists are available in, for example, the Field Operations Guide of USAID (1998).

### Food security of livelihood groups

1. Are there groups in the community who share the same livelihood strategies? How can these be categorised according to their main sources of food or income?

### Food security pre-disaster (baseline)

2. How did the different livelihood groups acquire food or income before the disaster? For an average year in the recent past, what were their sources of food and income?
3. How did these different sources of food and income vary between seasons in a normal year? (Constructing a seasonal calendar may be useful.)

4. Looking back over the past 5 or 10 years, how has food security varied from year to year? (Constructing a timeline or history of good and bad years may be useful.)
5. What kind of assets, savings or other reserves are owned by the different livelihood groups (e.g. food stocks, cash savings, livestock holdings, investments, credit, unclaimed debt, etc.)?
6. Over a period of a week or a month, what do household expenditures include, and what proportion is spent on each item?
7. Who is responsible for management of cash in the household, and on what is cash spent?
8. How accessible is the nearest market for obtaining basic goods? (Consider distance, security, ease of mobility, availability of market information, etc.)
9. What is the availability and price of essential goods, including food?
10. Prior to the disaster, what were the average terms of trade between essential sources of income and food, e.g. wages to food, livestock to food, etc.?

### **Food security during disaster**

11. How has the disaster affected the different sources of food and income for each of the livelihood groups identified?
12. How has it affected the usual seasonal patterns of food security for the different groups?
13. How has it affected access to markets, market availability and prices of essential goods?
14. For different livelihood groups, what are the different coping strategies and what proportion of people are engaged in them?
15. How has this changed as compared with the pre-disaster situation?
16. Which group or population is most affected?
17. What are the short- and medium-term effects of coping strategies on people's financial and other assets?

18. For all livelihood groups, and all vulnerable groups, what are the effects of coping strategies on their health, general well-being and dignity? Are there risks associated with coping strategies?

# Appendix 3

## Food Security Responses

The range of interventions possible to support, protect and promote food security in emergencies is wide. The list below is not exhaustive. Each intervention must be designed to suit the local context and strategy for supporting food security, and therefore is unique in its objectives and design. It is important to consider a range of responses and programming options based on analysis and consideration of expressed needs. ‘Off-the-shelf’ interventions that do not take account of local priorities rarely work. The responses are categorised into three groups, which relate to the Food Security standards 2-4:

- primary production
- income and employment
- access to market goods and services.

General food distribution provides free food assistance directly to households and thus is of great importance in ensuring food security in the short term.

### Primary production

- *Distribution of seeds, tools and fertiliser:* provided to encourage agricultural production, as starter packs to returnees, or to diversify crops. Often combined with agricultural extension services and possibly technical training.
- *Seed vouchers and fairs:* based on the provision of seed vouchers to potential buyers. Organising a seed fair to bring together potential sellers stimulates local seed procurement systems while allowing buyers access to a wide range of seeds.
- *Local agricultural extension services*
- *Training and education in relevant skills*

- ***Livestock interventions:*** can include animal health measures; emergency destocking; restocking of livestock; distribution of livestock fodder and nutritional supplementation; livestock refuges; and provision of alternative water sources.
- ***Distribution of fish nets and gear, or hunting implements***
- ***Promotion of food processing***

## Income and employment

- ***Cash-for-work (CFW)*** provides food-insecure households with opportunities for paid work.
- ***Food-for-work (FFW)*** provides food-insecure households with opportunities for paid work that at the same time produce outputs of benefit to themselves and the community.
- ***Food-for-recovery (FFR):*** a less structured form of food-for-work. Activities can contribute to initial recovery and should not require outside technical supervision.
- ***Income generating schemes*** allow people to diversify their sources of income in small-scale, self-employment business schemes. These include support of people in the management, supervision and implementation of their businesses.

## Access to market goods and services

- ***Market and infrastructure support:*** includes transportation to allow producers to take advantage of distant markets.
- ***Destocking:*** provides herders with a good price for their livestock in times of drought, when there is pressure on water supplies and grazing and market prices of livestock are falling.
- ***Fair price shops:*** sale of basic items at controlled or subsidised prices, or in exchange for vouchers or goods in kind.
- ***Food or cash vouchers:*** for exchange in shops for food and other goods.

- ***Support and technical assistance to government services:*** including agricultural extension services and veterinary services.
- ***Microfinance projects:*** including e.g. the provision of credit and methods for saving assets, which may involve grants, loans, cattle banks, cooperative savings accounts, etc.

See also the Food Security references in Appendix 9.

# Appendix 4

## Nutrition Assessment Checklist

Below are sample questions for assessments examining the underlying causes of malnutrition, the level of nutritional risk and possibilities for response. The questions are based on the conceptual framework of the causes of malnutrition (see page 136). The information is likely to be available from a variety of sources and gathering it will require a variety of assessment tools, including key informant interviews, observation and review of secondary data (see also Initial assessment and Participation standards on pages 28-33).

1. What information on the **nutritional situation** exists?
  - a) Have any nutrition surveys been conducted?
  - b) Are there any data from mother and child health clinics?
  - c) Are there any data from existing supplementary or therapeutic feeding centres?
  - d) What information exists on the nutritional situation of the affected population prior to the current crisis (even if people are no longer in the same place)?
  
2. What is the **risk of malnutrition related to poor public health**?
  - a) Are there any reports of disease outbreaks which may affect nutritional status, such as measles or acute diarrhoeal disease? Is there a risk that these outbreaks will occur? (See Control of communicable diseases standards on page 273.)
  - b) What is the estimated measles vaccination coverage of the affected population? (See Control of communicable diseases standard 2 on page 275.)
  - c) Is Vitamin A routinely given in measles vaccination? What is the estimated Vitamin A supplement coverage?

- d) Has anyone estimated mortality rates (either crude or under five)? What are they and what method has been used? (see Health systems and infrastructure standard 1 on page 259).
  - e) Is there, or will there be, a significant decline in ambient temperature likely to affect the prevalence of acute respiratory infection or the energy requirements of the affected population?
  - f) Is there a high prevalence of HIV/AIDS, and are people already vulnerable to malnutrition due to poverty or ill health?
  - g) Have people been in water or wet clothes for long periods of time?
3. What is the **risk of malnutrition related to inadequate care?**
- a) Is there a change in work patterns (e.g. due to migration, displacement or armed conflict) which means that roles and responsibilities in the household have changed?
  - b) Is there a change in the normal composition of households? Are there large numbers of separated children?
  - c) Has the normal care environment been disrupted (e.g. through displacement), affecting access to secondary carers, access to foods for children, access to water, etc?
  - d) What are the normal infant feeding practices? Are mothers bottle feeding their babies or using manufactured complementary foods? If so, is there an infrastructure that can support safe bottle feeding?
  - e) Is there evidence of donations of baby foods and milks, bottles and teats or requests for donations?
  - f) In pastoral communities, have the herds been away from young children for long? Has access to milk changed from normal?
  - g) Has HIV/AIDS affected caring practices at household level?
4. What is the **risk of malnutrition related to reduced food access?** See Appendix 2 for food security assessment checklist.

5. What formal and informal **local structures** are currently in place through which potential interventions could be channelled?
  - a) What is the capacity of the Ministry of Health, religious organisations, HIV/AIDS community support groups, infant feeding support groups, or NGOs with a long- or short-term presence in the area?
  - b) What is available in the food pipeline?
  - c) Is the population likely to move (for pasture/assistance/work) in the near future?
6. What **nutrition intervention or community-based support** was **already in place** before the current disaster, organised by local communities, individuals, NGOs, government organisations, UN agencies, religious organisations, etc.? What are the nutrition policies (past, ongoing and lapsed), the planned long-term nutrition responses, and programmes that are being implemented or planned in response to the current situation?

# Appendix 5

## Measuring Acute Malnutrition

### Children under five years

The table below shows the commonly used indicators of different grades of malnutrition among children aged 6-59 months. Weight for height (WFH) indicators should be taken from the NCHS/CDC reference data. The WFH Z score is the preferred indicator for reporting anthropometric survey results and WFH percentage of the median is preferred to determine eligibility for treatment. Mid Upper Arm Circumference (MUAC) should not be used alone in anthropometric surveys, but it is one of the best predictors of mortality, partly because it is biased towards younger children. It is, therefore, often used as part of a two-stage screening for admission to feeding programmes. The cut-offs commonly used are <12.5cm: total malnutrition and <11.0cm: severe malnutrition, among children aged 12-59 months.

	Total* malnutrition	Moderate malnutrition	Severe malnutrition
Children 6.0-59.9 mths	• <-2Z scores WFH or 80% median WFH <i>and/or</i> nutritional oedema	• -3 to <-2 Z scores WFH or 70% to <80% median WFH	• <-3Z scores WFH or <70% median WFH <i>and/or</i> nutritional oedema

\* sometimes known as global malnutrition

There are no agreed anthropometric cut-offs for malnutrition in infants below six months, apart from the presence of nutritional oedema. The NCHS/CDC growth references are of limited use since they are drawn from a population of babies fed artificially, whereas breastfed babies grow at a different rate. This means that malnutrition will tend to be overestimated in this age group. It is important to assess infant feeding practices, particularly access to breast milk, and any medical conditions in order to determine whether malnutrition in this age group may be a problem.

## **Other age groups: older children, adolescents, adults and older people**

There are no internationally accepted definitions of acute malnutrition in other age groups. This is partly because ethnic differences in growth start to become apparent after the age of five years, meaning that it is impractical to use a single reference population to compare all ethnic groups. A further reason is that, in most circumstances, information on the nutritional status of the group aged 6-59 months is sufficient for planners to make their decisions, and thus there has been little impetus to undertake research into malnutrition in other age groups.

However, in major nutritional emergencies, it may be necessary to include older children, adolescents, adults or older people in nutrition assessments or nutritional programmes. Surveys of age groups other than children aged 6-59 months should only be undertaken if:

- a thorough contextual analysis of the situation is undertaken. This should include an analysis of the causes of malnutrition. Only if the results of this analysis suggest that the nutritional status of young children does not reflect the nutritional status of the general population should a nutrition survey for another age group be considered;
- technical expertise is available to ensure quality of data collection, adequate analysis and correct presentation and interpretation of results;
- the resource and/or opportunity costs of including other age groups in a survey have been considered;
- clear and well-documented objectives for the survey are formulated.

Research on defining the most suitable indicators of malnutrition for people aged more than 59 months is currently being undertaken, and this information is liable to change in the next few years.

### **Older children (5-9.9 years)**

In the absence of alternative measures of nutritional status in older children, use of the NCHS/CDC references is recommended to

determine WFH Z score and percentage of the median and the same cut-offs as for younger children should be applied (see table above). As for younger children, nutritional oedema should be assessed.

## **Adolescents (10-19.9 years)**

There is no clear, tested, agreed definition of malnutrition in adolescents. Guidance on assessment can be found in the list of references in Appendix 9.

## **Adults (20-59.9 years)**

There is no agreed definition of acute malnutrition in adults, but evidence suggests that cut-offs for severe malnutrition could be lower than a Body Mass Index (BMI) of 16. Surveys of adult malnutrition should aim to gather data on weight, height, sitting height and MUAC measurements. These data can be used to calculate BMI. BMI should be adjusted for Cormic index (the ratio of sitting height to standing height) to make comparisons between populations. Such adjustment can substantially change the apparent prevalence of undernutrition in adults and may have important programmatic ramifications. MUAC measurements should always be taken. If immediate results are needed or resources are severely limited, surveys may be based on MUAC measurements alone.

Because the interpretation of anthropometric results is complicated by the lack of validated functional outcome data and benchmarks for determining the meaning of the result, such results must be interpreted along with detailed contextual information. Guidance on assessment can be found in the references.

For screening individuals for nutritional care admission and discharge, criteria should include a combination of anthropometric indices, clinical signs and social factors (e.g. access to food, presence of carers, shelter, etc). Note that oedema in adults can be caused by a variety of reasons other than malnutrition, and clinicians should assess adult oedema to exclude other causes. Individual agencies should decide on the indicator to determine eligibility for care, taking into account the

known shortcomings of BMI, the lack of information on MUAC and the programme implications of their use. Interim definitions of adult malnutrition for screening for treatment can be found in the references.

MUAC may be used as a screening tool for pregnant women (e.g. as a criterion for entry into a feeding programme). Given their additional nutritional needs, pregnant women may be at greater risk than other groups in the population (see General nutrition support standard 2 on page 140). MUAC does not change significantly through pregnancy. MUAC <20.7 cm (severe risk) and <23.0cm (moderate risk) have been shown to carry a risk of growth retardation of the foetus. The risk is likely to vary according to the population.

## **Older people**

There is currently no agreed definition of malnutrition in older people and yet this group may be at risk of malnutrition in emergencies. WHO suggests that the BMI thresholds for adults may be appropriate for older people aged 60-69 years, but these are subject to the same problems as in younger adults. In addition, accuracy of measurement is problematic because of spinal curvature (stooping) and compression of the vertebrae. Arm span or demi-span can be used instead of height, but the multiplication factor to calculate height varies according to the population. MUAC may be a useful tool for measuring malnutrition in older people but research on appropriate cut-offs is currently still in progress.

## **Disabled people**

No guidelines currently exist for the measurement of individuals with physical disabilities and thus they are often excluded from anthropometric surveys. Visual assessment is necessary. MUAC measurements may be misleading in cases where upper arm muscle might build up to aid mobility. There are alternatives to standard measures of height, including length, arm span, demi-span or lower leg length. It is necessary to consult the latest research findings to determine the most appropriate way of measuring disabled individuals for whom standard weight, height and MUAC measurement is not appropriate.

# Appendix 6

## Measures of the Public Health Significance of Vitamin A and Iodine Deficiency

### Indicators of vitamin A deficiency (xerophthalmia) in children aged 6-71 months

(prevalence of one or more indicators signifies a public health problem)

Indicator	Minimum prevalence
Night blindness (present at 24-71 mths)	> 1%
Bitot spots	> 0.5%
Corneal xerosis/ulceration/keratomalacia	> 0.01%
Corneal scars	> 0.05%

### Indicators of iodine deficiency (goitre)

The indicators shown in the table below are those that may be possible to measure in a disaster. The prevalence of at least one and, more definitely, two indicators signifies a public health problem. These indicators of iodine deficiency may be problematic: biochemical indicators may not be possible to measure in many emergency contexts, and clinical assessment risks high levels of inaccuracy. Nevertheless, while assessment of urinary iodine is necessary to obtain a full picture of iodine status, a rough indication of the severity of the situation can be obtained by clinical examination of a valid sample of children aged 6-12 years.

Indicator	Severity of public health problem (prevalence)			
	Target population	Mild	Moderate	Severe
Total goitre rate (% of population)	school-age children*	5-19.9	20-29.9	$\geq 30.0$
Median urinary iodine level ( $\mu\text{g/l}$ )	school-age children*	50-99	20-49	$< 20$

\*preferably children aged 6-12 years

# Appendix 7

## Nutritional Requirements

The following figures can be used for planning purposes in the initial stage of a disaster:

Nutrient	Mean population requirements
Energy	2,100 kcals
Protein	10-12% total energy (52g-63g), but <15%
Fat	17% of total energy (40g)
Vitamin A	1.666 IU (or 0.5mg retinol equivalents)
Thiamine (B1)	0.9mg (or 0.4mg per 1,000 kcal intake)
Riboflavin (B2)	1.4mg (or 0.6mg per 1,000 kcal intake)
Folic acid	160 µg
Niacin (B3)	12.0mg (or 6.6mg per 1,000 kcal intake)
Vitamin B12	0.9 µg
Vitamin C	28.0mg
Vitamin D	3.2 - 3.8 µg calciferol
Iron	22mg (low bio-availability ie 5-9%)
Iodine	150 µg
Magnesium*	201 mg
Zinc*	12.3 mg
Selenium*	27.6 µg
Vitamin E*	8.0 mg alpha-TE
Vitamin K*	48.2 µg
Biotin*	25.3 µg
Pantothenate*	4.6 µg

Reference: WHO, 2000, *Management of Nutrition in Major Emergencies*

\*provisional requirements. Reference: FAO/WHO, 2002 *Human Vitamin and Mineral Requirements*. Report of a joint FAO/WHO expert consultation, Bangkok, Thailand. FAO, Rome.

There are two important points to consider before using the requirements listed above. Firstly, the mean per capita requirements for population groups incorporate the requirements of all age groups and both sexes. They are therefore not specific to any single age or sex group and should not be used as requirements for an individual. Secondly, these requirements are based on a particular population profile, as follows:

<b>Group</b>	<b>% of population</b>
0-4 years:	12
5-9 years:	12
10-14 years:	11
15-19 years:	10
20-59 years:	49
60+ years:	7
Pregnant:	2.5
Breastfeeding:	2.5
Male/female:	51/49

As the demographic structure of different populations varies, this will affect the nutritional requirements of the population concerned. For example, if 26% of a refugee population is aged under five, and the population consists of 50% males and 50% females, the energy requirement is reduced to 1,940 kcals.

Energy and protein requirements should be adjusted for the following factors:

- the demographic structure of the population, in particular the percentage of those under five years old and the percentage of females (this may change in populations affected by HIV/AIDS);
- mean adult weights and actual, usual or desirable body weights. Requirements will increase if the mean body weight for adult males

exceeds 60kg and the mean body weight for adult females exceeds 52kg;

- activity levels to maintain productive life. Requirements will increase if activity levels exceed light (ie 1.55 x Basal Metabolic Rate for men and 1.56 x Basal Metabolic Rate for women);
- average ambient temperature and shelter and clothing capacities. Requirements will increase if the mean ambient temperature is less than 20°C;
- the nutritional and health status of the population. Requirements will increase if the population is malnourished and has extra requirements for catch-up growth. HIV/AIDS prevalence may affect average population requirements (see General nutrition support standard 2 on page 140). Whether general rations should be adjusted to meet these needs will depend on current international recommendations.

If it is not possible to incorporate this kind of information into the initial assessment, the figures in the table above may be used as a minimum in the first instance.

# Appendix 8

## Supply Chain Management Logistics Checklist

1. Purchase contracts provide for delivery-linked payments, the return of damaged goods and penalties for any deviations in fulfilment of the contract, other than in situations of force majeure.
2. Transporters and handling agents assume total liability for food commodities in their care and reimburse any losses.
3. Storage facilities are safe and clean, and protect food commodities from damage and/or loss.
4. Steps are taken at all levels to minimise commodity losses.
5. All losses are identified and accounted for.
6. Commodities in damaged containers are salvaged as far as possible.
7. Commodities are inspected at regular intervals and any suspect commodities are tested. Unfit items are certified and disposed of in accordance with clearly defined procedures and national public health regulations. Recycling of unfit commodities into the market is avoided.
8. Physical inventory counts are undertaken periodically by knowledgeable persons in the area of inventory management not associated with the project under review, and are reconciled with stock balances.
9. Summary inventory reports are compiled at regular intervals and made available to all stakeholders.
10. Waybills properly document all commodity transactions.
11. Stock ledgers provide details of all receipts, issues and balances.
12. Auditing, including process management auditing, is carried out at all levels of the supply chain.
13. Vehicles used to carry food commodities are in good running order;

cargo spaces have no protruding edges that may damage packaging and are adequately protected from bad weather (e.g. by tarpaulins).

14. Vehicles do not carry other commercial and/or hazardous materials along with food commodities.
15. Vehicles have not carried hazardous materials in the past and there are no residues.

Sources: WFP, *Emergency Field Operations Pocketbook* (2002) and CARE, *Food Resource Management* handbook.

# Appendix 9

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Thanks to the Forced Migration Online programme of the Refugee Studies Centre at the University of Oxford, many of these documents have received copyright permission and are posted on a special Sphere link at: <http://www.forcedmigration.org>

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