Guidelines for Policy Development for Emergency Management by the Health Sector

Guidelines for Policy Development

for Emergency Management

by the Health Sector[1]

Part 1

General Health Sector Policy

[1] The information presented here is adapted from material developed by the Sphere NGO Project;

Preamble

The Republic of the Philippines (RP) is exposed to a wide variety of hazards, which each year cause high levels of suffering, disruption and destruction. Since 1978, successive governments have invested considerable resources in developing a national emergency response network and in general, this network functions well. However, the systems are entirely focussed on natural hazards, and on relatively short relief periods. In the recent past, other hazards have begun to appear and there is a need to adapt some elements of the emergency response system to cope with these new threats. In particular, civil unrest has exposed the inadequacy of current policies to provide for the needs of people who are displaced from their homes for long periods and thus totally dependant on external support for their most basic needs.

This series of documents represents a distillation of current international best practice in health sector response, adapted to the administrative and socio-cultural environment of the Philippines, and modified to reflect the realities of resource constraints in a developing country. Where possible, the highest standards are sought, but it is recognised that circumstances may not always allow these standards to be met. Emphasis is therefore given on providing the widest coverage of a set of agreed minimum standards to victims of an emergency, and on providing administrative procedures which allow local staff to meet those standards without undue bureaucratic constraints.

These are intended to be 'living' documents: as development in the Republic of the Philippines proceeds and higher levels of human skills and material resources become available, providing higher standards in relief becomes more realistic. Also ongoing technological developments and new paradigms in best practice need to be reflected in national policy and practice as they become acceptable, available and affordable.

The policy applies to any situation where normal means for support of communities have failed as a result of a hazard, natural or otherwise. They apply to the acute phase of the emergency, when a rapid response is required to get the situation under control. They do not deal specifically with preparedness, mitigation or vulnerability issues, though the importance of these in achieving long term effective and efficient relief is obvious and understood.

The intention of this series is to present templates for creating effective policy instruments which suit the particular needs and circumstances of the various communities that make up the Republic of the Philippines. They are widely applicable to different emergency situations, fit easily within the national development policy framework and do not conflict with the operational procedures of local governments and their agencies.

Introduction

By definition, an emergency implies a period of increased morbidity and mortality from both physical and psychological causes. Trauma, diarrhœal diseases, acute respiratory infections, malnutrition, measles and malaria (where prevalent) are the principal health problems associated with emergencies. The levels of morbidity and mortality that are reached will depend on the type of hazard involved, the existing vulnerabilities of the affected communities, the level of readiness of government and non-governmental response agencies and the environmental factors to which people are exposed (crowding, insecurity, inadequate quantities and quality of water, poor environmental sanitation, inadequate shelter and inadequate food supply).

The immediate implications of an emergency are initial confusion about what has happened and what needs to be done and by whom. There may be disruption of normal health services delivery, an increased burden on functioning health services and rapid depletion of existing stocks and resources. There also may be a need for deployment of staff and/or the establishment of temporary services at the site, as well as in some cases problems of potential danger for health sector staff and possible continuing damage to health sector infrastructure.

Whatever the cause of the emergency, the most difficult problems faced by emergency managers throughout the world are always the same – information flow, co-ordination between sectors and services and the need to work under stressful, unfamiliar and sometimes dangerous circumstances. Unless governments and their agencies have very clear policies, procedures and plans to give authority and guidance to local level decision makers in responding to an emergency, these three constraints will not be overcome and the relief and recovery operations will not meet the needs of the victims and their communities.

For the health sectors and health-related aspects of other sectors, it is the responsibility of the Department of Health (DOH) to set and maintain overall policy for emergency management, to ensure that that sectoral policy reflects national emergency management policy and that the policy is developed in co-ordination with other Departments and national agencies. Each office of the Department of Health must produce regularly updated technical and administrative guidelines in support of the policy, and all agencies involved in health relief (both governmental and non-governmental) must maintain plans for implementing national policy according to the guidelines. International agencies working in relief and in development are expected to operate within this broad framework.

A policy framework (policy, procedures and plans) covers the following areas:

- Management issues:
  - Declaration of emergency;
  - Delegation of authority;
  - Allocation of roles and responsibilities (national, regional and technical);
  - Planning requirements and formats;
  - Links to risk management activities (hazard reduction, emergency preparedness, vulnerability reduction);
  - Allocation of resources;
  - Co-ordination with other sectors and agencies;
  - Definition of the role of international support;
  - Provision of special services for displaced people and refugees;
  - Public information;
  - Reporting, monitoring and evaluation requirements and formats.

- Administrative issues:
  - Procedures needed to implement policy;
  - Restrictions on authority and penalties for abuse of authority;
  - Amendments to routine procedures, job descriptions and entitlements under emergency conditions;
  - Application for, release of and accounting for special funds and resources;
  - Mobilisation of resources, including international resources (customs

arrangements, exemptions for certain import restrictions, exemptions from taxes and duties, storage, transport etc);
- ☛ Logistic arrangements in support of emergency response;
- ☛ Each office of the DOH (including non-technical units such as finance, budget, personnel, public information etc.) must prepare and maintain supplementary administrative guidelines for its own staff and resources, when appropriate.

- ♦ Technical issues:
  - ☛ Each office of the DOH (including non-technical units such as finance, budget, personnel, public information etc.) is responsible for the preparation and maintenance of the national technical guidelines, on those issues relevant to its function within the DOH;
  - ☛ Each office of the DOH, at national, regional and local level, as well as all other agencies working in the health sector, must prepare and maintain plans for emergency response and recovery, based on national policy, procedures and guidelines.

This series of documents will concentrate on presenting policy options governing technical issues.

Health services in emergencies

The main purpose of an emergency management policy is to reduce the overall mortality and morbidity rates from any and all hazards in a community. The specific purpose of emergency relief is to prevent excess mortality and morbidity[2] in affected communities. Relief can only be provided effectively if interventions are made based on policies, plans and procedures that are determined in advance, and if they respond to immediate priorities that have been identified through rapid and proper assessment, and evaluated by ongoing monitoring and surveillance. It is equally important to ensure that specific interventions are planned, implemented and monitored in co-ordination with all the actors in the relief action.

In addition to defining preventative and curative care services, policies should give special attention and guidance to DOH staff for those health care measures that depend on inter-sectoral co-ordination for their successful implementation (first aid, search and rescue, mass casualty management, decontamination, water, food distribution, sanitation and shelter, public information, evacuation centres, security etc.)

The specific aims of health sector relief, as well as those of the other sectors, flow from a wider humanitarian goal to alleviate suffering through protecting and preserving life in ways that maintain human dignity and support a durable recovery. Translating this goal into practice requires a clear commitment by governments and their agencies to humanitarian principles and to the application of certain minimum standards. Governments have a responsibility to provide the policy and organisational framework to enable this to happen and to ensure systems of accountability.

There are fundamental humanitarian principles governing the basic rights of affected communities to receive humanitarian assistance. Ensuring that these rights are met can be helped by setting policies that define minimum standards for the provision of humanitarian services. The standards for water supply and sanitation, nutrition, food

[2] mortality (and morbidity) beyond that caused by the initial impact;

programming, shelter and site arrangements, and health services, build on these principles and demonstrate how the humanitarian rights of people affected by emergencies can be realised in practice.
Of equal importance to effective relief programmes are transparent and accountable organisational policies and practices. These best practices are important in ensuring that goods and services are delivered in ways that put affected communities at the heart of humanitarian relief, and in ensuring that the wider impact of programmes is considered.
The standards set out in this series describe what people need as a minimum for their health and dignity. Agencies should strive to do better wherever possible.

Assumptions

To achieve the minimum standards as laid out in the policy, in a wide variety of emergency contexts, it is assumed that:

- The Government is committed to the principles of humanitarian assistance;
- Agencies of the government are committed to best organisational practices;
- Resources are available to meet the standards;
- All other sectors are striving to meet the same standards (as described in the general national emergency management policy).
- Lack of security is not an absolute constraint to effective programming.

Audience

This series is to be used by:

- Senior staff of the DOH to set policy, issue guidelines and develop plans as well as to determine recruitment needs, financial implications, staff development needs and resource development needs.
- Regional DOH staff, to plan and manage their relief programmes, to calculate resource needs and to monitor the quality of service provided.
- Local level staff, to better understand the objectives of national policy and their roles and responsibilities within that policy, and to monitor and review progress.
- Representatives of the affected communities, to validate adequacy of services.
- National and local co-ordinating bodies, to plan, monitor and review work, and to ensure that all those who are eligible for humanitarian relief receive adequate assistance.
- Academics and professional evaluators, for measuring the effectiveness of specific programmes and contributing to emergency management research.
- Donors and international development and relief agency officials for the planning and management of bilateral and multilateral aid programmes.

Structure of these documents

Each of the sections includes the following components:

1. The policy overview. An discussion of why each standard is important and may include: specific points to consider when applying the standard in different situations; guidance on tackling practical difficulties; advice on priority issues
2. The key policy components. These are details of policy that are needed contribute to achieving the minimum standard. They provide indicators for assessing both the impact, or result, of programmes as well as the process, or methods, used. They may be qualitative or quantitative.

Progress in achieving standards in one area determines the importance of progress in other areas. For instance, a good health information system identifies problems which then leads to appropriate control, preventative and curative activities.

Links with other sectors

Reference to the technical standards used by other sectors are made where relevant. The purpose of this is to highlight how work in one sector is closely linked to work in other sectors, and that progress in one is dependent on progress in other areas.

General Policy Development

Human morbidity, mortality and distress are the most visible features of an emergency. Unless the health sector is ready with appropriate policies and plans, response efforts will be poorly organised and inappropriate. This paper is an attempt to guide DOH staff in preparing policies and guidelines which suit local needs and local conditions, but which meet internationally accepted standards of humanitarian assistance.

The emergency health care policy has the following features. For each sector, it:

- defines roles, responsibilities and limits of authority.
- identifies the minimum standards that are to be met.
- identifies objectives which address priority public health issues.
- is co-ordinated with policies of other sectors to ensure that priorities are met and gaps and overlaps are avoided.
- provides measures to ensure that private or foreign agencies work within national guidelines under national supervision and that donated relief assistance meets national standards.
- considers local development contexts - economic, social, political and environmental.

National plans and procedures based on the policy:

- set a general framework for action, to be further elaborated in detailed local and event specific plans;
- allow a rapid initial response to specific needs as identified by first assessments;
- ensure the safety of staff, volunteers and beneficiaries involved in programme implementation;
- are organised and implemented using promotional and participatory techniques;
- are phased, addressing immediate needs then achieving minimum standards as quickly as possible, giving priority to the most important needs at the

time;

- are rapid in impact, but long term in perspective, creating opportunities for future development;
- are implemented by staff with appropriate qualifications and experience for the duties involved, and who are adequately managed, resourced and supported;
- are routinely and systematically monitored to ensure the progress of planned activities and to allow well-timed programme changes where needed.
- involve a representative cross section of the beneficiary community in decision making and in project implementation (design, construction, operation and maintenance), according to their authority and responsibility to participate in these activities.
- recognise the needs of the entire community as well as those directly affected by the event.
- provide equipment and facilities which are sensitive to the traditional practices of the beneficiaries and which ensure a minimum level of dignity and comfort.
- are sensitive to the varied needs of different social groups, at the household level and at the community level, and the impact of the programme on them.

Information Policy

In emergencies, if the needs of affected communities are to be met, there must be a clear understanding of the evolving situation and its context. National authorities, their local agencies and especially those affected need to know that proposed interventions will be appropriate and effective. If problems are not correctly identified and understood, it will be difficult, if not impossible, to make an appropriate response. Analysis of the effects of the event, and later of the impact of the health relief programme itself, are therefore critical in providing effective relief on a regular basis. Continuous monitoring of early warning information and assessment of institutional readiness for an appropriate response are both critical to mounting a successful rapid response. Readiness means having policy, management, resources, general and specialist personnel, logistics and information system arrangements in place and accessible to all who need them, ***before*** a crisis occurs.

Guidelines for policy Development

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by the Health Sector[3]

Part 2

Emergency Health Services policy

[3] The information presented here is adapted from material developed by the Sphere NGO Project;

Policy Framework

Epidemiology

Standardised methods of analysis that are used across the sectors have great potential to identify rapidly acute humanitarian needs and to ensure that resources are directed accordingly. Epidemiology is such a tool for decision makers.

This section sets out standards and indicators for collecting and analysing the basic information required to identify needs, to design relief programmes, and to monitor and evaluate their effectiveness. The analysis standards apply throughout the programme cycle, from planning to implementation to evaluation.

Analysis starts with an immediate assessment that identifies the impact of the emergency as well as whether and how to respond. It continues with monitoring, which identifies how well the programme is meeting needs and whether changes are required; and concludes with evaluation, which determines the overall effectiveness of the programme and identifies lessons for the future.

Epidemiology has a crucial role in defining the type of information that is needed, how it should be expressed and the meaning of technical terms that should be used, as well as in collecting, filtering and analysing it. It is the principle planning tool of the health sector under emergency conditions. Epidemiologists should be in the forefront of setting policy, issuing technical guidelines, determining reporting formats and developing response plans for each department and level of the Department, as well as in collecting and evaluating information during response and recovery.

The Bureau of Epidemiology will maintain also its own procedures and plans for supporting relief actions of the Department, including maintaining databases of baseline data relevant to planning a particular emergency response (e.g. health and social data desegregated to community level, hazard analyses, resource maps, etc.) and issuing guidelines for undertaking damage and needs assessments, surveillance, sentinel sites, special surveys, reporting and monitoring.

Documenting and disseminating information from the analysis process contributes to a broad understanding of the adverse public health and other consequences of emergencies. It is essential if hazard prevention, hazard mitigation, emergency preparedness and emergency response programmes are to be continuously improved.

Assessment and reporting Standards

An assessment report, presented in a pre-determined format using standard terms and expressions, must cover key areas (as above) and make specific recommendations for each. Assessment findings are shared with local authorities, representatives of the affected communities and participating agencies.

The first assessment should be carried out by the local authorities as soon as possible after impact or commencement of the emergency. If required, there should be an immediate response to critical needs at the same time. As a general rule during an emergency phase, an initial report should be generated within 4 hours and updated every 24 hours, though clearly this depends on the particular event and the wider situation.

Assessments should be interpreted in terms of both immediate relief actions and the needs of the recovery period. Interventions to meet immediate emergency requirements should facilitate the recovery of the affected community.

Co-ordination between the different humanitarian agencies and the different sectors is essential to ensure that activities respond to actual needs and are effective.
If survey teams are required, they must be capable of collecting reliable information from all groups in the affected community in a culturally acceptable manner (teams should include women, as well as members able to speak the local language).
An assessment procedure should be agreed upon by all participants before field work begins and specific tasks contributing to the assessment should be assigned accordingly.
Techniques for information gathering must be determined by the senior epidemiologist present, and are chosen carefully to match the situation and the type of information required. As a general rule, information should be gathered more frequently when the situation is changing more rapidly, and when there are critical developments such as new community movements or an epidemic outbreak of diarrhœa. Initial assessments may be quick and unrefined but analysis improves as more time and data are available. Checklists prepared in advance are essential in ensuring that all the key issues will be examined.
Analysis should demonstrate an awareness of underlying structural, political, economic and environmental issues operating in the area. It is imperative that prior experience and local understanding are taken into consideration when analysing the dynamics and impact of the new situation. Authorities must ensure that local expertise and knowledge is used effectively in data collection and the analysis of resources, capacities, vulnerabilities and needs. The pre-emergency living conditions of displaced and non-displaced people in the area must also be considered.
The needs of groups that are at risk of excess morbidity such as pregnant and lactating women, unaccompanied children, the elderly, the disabled (physical, social and mental) and people in institutions (prisons, hospitals, etc.) must be considered.

Although each emergency generates particular health needs and problems, the following broad areas of activity are likely to be common to all: surveillance, control of communicable diseases, measles immunisation, food and nutrition, adequate supply of safe water, sanitation, prevention services, curative health care, the referral system, reproductive health, women and child health, community services, health education, medical supplies, personnel and the organisational resources required to establish and operate these services in an interrelated and co-ordinated manner. The psycho-social dimension of the situation should be considered as an area to be included in the assessment process. These should all be considered in health planning.

Health activities should address the assessed needs, as well as the predicted needs of the affected communities.
The initial assessment provides information for subsequent monitoring and evaluation. A more complete assessment will be needed later in the relief phase and will be necessary for planning recovery, rehabilitation and reconstruction of infrastructure and services.
The emergency health information system should be periodically assessed to determine its accuracy, completeness, simplicity, flexibility, and timeliness.
The emergency health information system should be integrated into the HIS as soon as possible, and it should monitor both the affected communities and the host community situation, if appropriate.
Emergencies are volatile and dynamic by definition. Current information is therefore vital in ensuring that programmes remain relevant.

Information derived from continual monitoring of programmes should be fed into programme reviews and evaluations. In some circumstances a shift in strategy may be required to respond to major changes in the context or needs. Any change to the programme has to be justified on the basis of information concerning the health situation of the affected communities.
Evaluation is important because it measures programme effectiveness, identifies lessons for future preparedness, mitigation and response, and promotes accountability. Evaluation refers here to two, linked processes. Internal programme evaluation is normally carried out by staff as part of the regular analysis and review of monitoring information.
The agency must also evaluate the effectiveness of all its programmes in a given emergency situation or compare its programmes across different situations. External evaluation may by contrast be part of a wider evaluation exercise by agencies and donors, and may take place, for example, after the acute phase of the emergency. When evaluations are carried out it is important that the techniques and resources used are consistent with the scale and nature of the programme, and that the report describes the methodology employed and the processes followed in reaching conclusions. Outcomes of evaluations should be disseminated to all actors in the emergency response, including the affected communities.
Monitoring and evaluation activities require close co-operation with other sectors[4], local authorities and their agencies. As for the assessment, reports should be distributed to all interested parties, including the affected communities. The means of communication used (dissemination methods, language and so on) must be appropriate for the intended audience.

Control of Communicable Diseases (CCD) policy

In emergencies, the major causes of morbidity and mortality, after trauma, are measles, diarrhœal diseases, acute respiratory infections, malnutrition and, in areas where it is endemic, malaria). Other communicable diseases, such as meningococcal meningitis, hepatitis, typhoid fever, typhus, relapsing fever, etc may also be responsible for outbreaks in some settings.
If possible, local NGO should be part of the control effort and should work under the authority of the responsible agencies. Affected communities also play an important part in disease prevention and control, through the application and adherence to good public health practices. Prevention is a key priority in communicable disease control and therefore successful implementation of other sector activities such as water, sanitation, nutrition, food and shelter, is of vital importance.
For instance, in situations of crowding, such as refugees, contamination of water supply, poor sanitation and low quality shelter all contribute to the rapid spread of disease. Improvements in environmental conditions contribute to disease prevention. Poor nutrition, particularly among young children, increases susceptibility to disease and contributes to high rates of mortality.

Measles Control policy Issues

Because measles vaccination is so important in the early stages of an emergency, vaccination should not be delayed. Other EPI vaccines are introduced only when the

[4] see chapters on Water Supply and Sanitation, Nutrition, Food Aid, Shelter and Site

immediate needs of the displaced community have been met. It is not harmful to revaccinate already immunised children with measles vaccine.
Individual health records for recording measles vaccinations may not always be available or issued in an emergency situation; this should not delay the implementation of measles vaccination activities.
The WHO recommendation for administration of supplemental vitamin A during a mass campaign is:

- <12 months of age 100,000 IU
- >12 months of age 200,000 IU

Measles may occur in new arrivals who are incubating the disease at time of arrival or when they are vaccinated.
Vaccines must be maintained at the recommended temperature to maintain potency. Vaccine should not be used if the indicator on the vial has changed colour indicating that the vaccine vial has been exposed to heat. The use of autodestruct syringes ensures safe administration of measles vaccines.

Health Care Services

Emergency health care must be freely available to both affected communities and unaffected communities, and must take into account the geography, ethnicity, language and gender characteristics of the affected area.
As the acute phase of the emergency stabilises, a return to the normal primary health care should be systematically introduced and local health services must be encouraged to assume greater responsibility for the health care of the community.
The establishment of field hospitals should be avoided if at all possible.

Human Resources policy

All aspects of the humanitarian response rely on the skills, knowledge and commitment of staff and volunteers working in difficult and often insecure conditions. The demands placed on them can be considerable and if they are to conduct their work competently and carefully, to a level where minimum standards are assured, it is essential that they are adequately managed and supported both in the field and from headquarters. In designing programmes, human resource capacity issues must be addressed and specific training and support should be incorporated as necessary. Those likely to be targeted include expatriates, national staff, government or local authority counterparts, community volunteers and members of the community affected by the emergency.
Concepts such as 'skills', 'knowledge,' 'experience' are not measurable unless they are attached to specific anticipated outcomes. The standards for health training can be found in WHO manuals and guidelines for case management of disease.
In the often unpredictable environment of emergency operations, where the sudden withdrawal of national staff or international agencies may occur, continual training of local staff is important if services are to be sustainable.

First Aid

The first aid policy should be based on standards developed jointly by IFRC and WHO.

Medical supplies

The medical supply policy should be based on WHO standards and donors, international agencies and NGO should be informed that only items from this list will be accepted for relief, unless there is a specific request from the Department of Health for certain items. The customs authorities need to enforce this regulation. Examples of Kosovo where there were numerous outbreaks of illness following the distribution of expired food and pharmaceutical donations.

Hospital Services policy

Laboratory services and Blood Banks policy

Medical Transport policy

Forensic and Mortuary Services policy

Monitoring, evaluating and reporting policy

Community participation policy

Information policy

The public

The media

International support policy

Logistics and procurement policy

Guidelines for Policy Development

for Emergency Management

by the Health Sector[5]

Part 3

Emergency Shelter Policy

[5] The information presented here is adapted from material developed by the Sphere NGO Project;

Policy Framework

Introduction

Along with water supply, sanitation, food and health care, shelter is a critical determinant of survival in the initial stages of an emergency. Good shelter is not only important for reasons of human dignity and to enable people to sustain family and community life as far as possible; it also enhances resistance to disease and provides protection from the environment. The purpose of shelter and site programmes therefore is to meet the needs of individuals, families and communities for safe, secure and comfortable living space within the constraints of the emergency situation. For the purposes of this paper, shelter includes discussion of issues of selecting sites for alternative or temporary accommodation as well as providing clothing, household items and energy supply.

An emergency creates three possible scenarios which will determine the basic shelter needs of a community. These scenarios are determined by the type of disaster, the numbers of people involved, the political context and the coping capacity of the community.

Scenario A. People stay at home

Communities that are affected by natural disasters will want to stay in or near their homes. Even if their homes are destroyed or damaged, assistance to people 'where they are' is more sustainable, and helps restore normality more quickly than assistance which encourages them to move away in search of temporary shelter. Inputs are directed into the area where people live and know each other, where social structures can be maintained, and where life remains as normal as possible. At the height of an emergency people may have to be assisted with temporary lodging in schools, places of worship or even large tents, but often one member of the family will remain behind to guard property and land. If this scenario is handled well by government and aid agencies, it is likely that the emergency will be short lived and normality will quickly be restored.

Scenario B. People are displaced and stay in host communities

During civil conflict, and after some natural disasters such as extensive flooding, entire communities may be forced to flee their homes and home area. In this situation it is much better if displaced populations are absorbed into a local host community, possibly with family members or people who share historical, religious or other ties. Governments and agencies need to consider providing assistance to the entire population according to need, since both resident and displaced persons are affected by the disaster. Security considerations, the long-term effects on the environment, and the possibilities of sharing shelter, facilities such as clinics, schools, and shops all mitigate in favour of an integrated approach to assistance. Such assistance can have a lasting positive effect on the host communities even after the displaced people have returned home.

Scenario C. People are displaced and stay in clusters

The least preferred scenario is that of the refugee or displaced persons camp. This may arise because there are political problems, or because the displaced communities are too large for the local population to absorb. There may be immediate security

problems, or the displaced people may fear persecution and violence from elements within their own communities or the host community. Often in these cases a site has already been selected, usually around water and sanitation points, by the host government, the displaced people themselves or by the first assistance agency to arrive. It may be necessary to chose more permanent and suitable sites, leaving the old one as a transit camp, or abandoning it altogether. Ideally camps should be planned and the infrastructure installed before people settle but this rarely happens. Sometimes the initial campsite may have to be re-organised to achieve the minimum standards, because there are no alternative sites.
All assistance has to be provided, and no structural improvements can be made to the area. The host community suffers from the strain on the local economy and the environment. Increased health hazards, perceived and real, become an issue. For their part, the displaced people become dependent on external aid.
This chapter focuses on the standards needed for the provision of clothing, household items and shelter, which are common to all three scenarios, and on the selection of site, and camp management, which are relevant to the third scenario.

Features of an emergency shelter policy

An emergency shelter policy should have the following features. It must:

- define roles, responsibilities and limits of authority.
- identify the minimum standards that are to be met.
- identify objectives which address priority public health issues.
- be co-ordinated with policies of other sectors to ensure that priorities are met and gaps and overlaps are avoided.
- provide measures to ensure that private or foreign agencies work within national guidelines under national supervision and that donated relief assistance meets national standards.
- consider local development contexts - economic, social, political and environment.

National plans and procedures based on the policy should:

- set a general framework for action, to be further elaborated in detailed local and event specific plans;
- allow a rapid initial response to specific needs as identified by first assessments;
- ensure the safety of staff, volunteers and beneficiaries involved in programme implementation;
- be organised and implemented using promotional and participatory techniques;
- be phased, addressing immediate needs then achieving minimum standards as quickly as possible, giving priority to the most important needs at the time;
- be rapid in impact, but long term in perspective, creating opportunities for future development;
- be implemented by staff with appropriate qualifications and experience for the duties involved, and who are adequately managed, resourced and supported;
- be routinely and systematically monitored to ensure the progress of planned activities and to allow well-timed programme changes where needed.

- involve a representative cross section of the beneficiary community in decision making and in project implementation (design, construction, operation and maintenance), according to their authority and responsibility to participate in these activities.
- recognise the needs of the entire community as well as those directly affected by the event.
- provide equipment and facilities which are sensitive to the traditional practices of the beneficiaries and which ensure a minimum level of dignity and comfort.
- be sensitive to the varied needs of different social groups, at the household level and at the community level, and the impact of the programme on them.

Information Policy

In emergencies, if the needs of affected communities are to be met, there must be a clear understanding of the evolving situation and its context. National authorities, their local agencies and especially those affected need to know that proposed interventions will be appropriate and effective. If problems are not correctly identified and understood, it will be difficult, if not impossible, to make an appropriate response. Analysis of the effects of the disaster and of the impact of the shelter and site programme itself, are therefore critical.

Assessment standard

In summary, an assessment report, presented in a pre-determined format using standard terms and expressions, must cover key areas (as above) and makes specific recommendations for each. Assessment findings are shared with local authorities, representatives of the affected communities and participating agencies.
This standard emphasises the importance of co-ordination between the different humanitarian actors and the different sectors in order to ensure that activities respond to need and are effective. Guidance is given on drawing up the demographic profile of the population, registration and screening, considerations for site selection and planning, co-ordination of responsibilities, funding issues, and evaluation.
Continuous monitoring of early warning information and assessment of institutional readiness for an appropriate response are both critical to mounting a successful rapid response. Readiness means having policy, management, resources, personnel, logistics and information system arrangements in place and accessible to all who need them, ***before*** a crisis occurs.
If there is an early warning that significant population displacement is likely to occur, relevant information needs to be collected immediately and the level of readiness analysed. As well as assessing of the response capacity of local authorities, contact with the UN system and major NGO should be made in case their support is needed.

Monitoring and evaluation standard

Evaluation of the shelter situation after a period of around six months allows for decisions to be made as to whether and how the programme should continue. On the basis of this information it becomes possible to plan for sustainable activities, long-term involvement of agencies, and to address issues of repatriation and reintegration etc. To do so at an earlier stage of the emergency is not realistic.

Information generated by the assessment process is used for monitoring and evaluation activities for the shelter and site programme. It should also contribute to the Health Information System.
Information collected should be directly relevant to the programme, in other words it should be useful and should be used, whether for the initial assessment, monitoring or evaluation. It should also be shared as needed with other sectors and agencies, and with the affected populations. The means of communication used (dissemination methods, language and so on) must be appropriate for the intended audience.
Evaluation is important because it measures programme effectiveness, identifies lessons for future preparedness, mitigation and response, and promotes accountability. Evaluation refers here to two, linked processes. Internal programme evaluation is normally carried out by staff as part of the regular analysis and review of monitoring information.
The agency must also evaluate the effectiveness of all its programmes in a given disaster situation or compare its programmes across different situations. External evaluation may by contrast be part of a wider evaluation exercise by agencies and donors, and may take place, for example, after the acute phase of the disaster. When evaluations are carried out it is important that the techniques and resources used are consistent with the scale and nature of the programme, and that the report describes the methodology employed and the processes followed in reaching conclusions. Outcomes of evaluations should be disseminated to all actors in the disaster response, including the affected population.

Shelter Policy

The purpose of the shelter programme is to help people repair homes that have been damaged by the disaster, to provide temporary shelter if needed, to assist in permanent relocation in some cases or to help host families improve or enlarge shared facilities. However, the sheer number of people needing assistance, the urgency of their needs and limited availability of materials or funding at the early stage of an emergency may well limit what can be achieved in the short term. Even so, agencies should aim to comply with minimum standards because a failure to do so risks perpetuating the acute phase when needs are greatest.

Accommodation Standard

There are no absolute values for temperature, relative humidity and air velocities as they are all inter-related. An increase in the mean air velocity increases the 'chill factor', so at low temperatures a higher air velocity will be less healthy and feel less comfortable. If relative humidity is higher at lower temperatures the effect will be the same. It is generally accepted that temperatures in a dwelling should be between 17ºC and 31ºC, and the relative humidity should be between 50% and 60%. In many cases people will have to live at higher temperatures and with higher relative humidity. This is less comfortable and less healthy as bacteria and fungi thrive in such an environment. When temperatures are lower and there is higher relative humidity, the limits are clearer, but the extent to which these can be put in place depend on cultural factors and on available clothing. Air velocity and replacement values are estimated.

Shelter standards depend on the climate and the size of the family. In a cold climate people need more space, as they spend more time inside than in a hot climate. Older people spend more time inside the covered area.

Ventilation (or air freshness) and replacement of air is based on maximum permissible values of fungi, bacteria, smoke, chemicals and also of CO_2: 0.35%, H_2S: 0.002, NH_3: 0.01%. In cold climates, especially where more families stay together, ventilation needs serious consideration: if natural ventilation is used, an opening of 100cm² per person on two sides of the enclosed structure is sufficient, taking into account outside wind speed and direction. If forced ventilation is used (ventilators and/or hot air blowers) a minimum level of 25m³ air replacement per hour per person is sufficient. A hot air blower must draw air from outside if it is to be used for air replacement, and air blown into also needs to get out.
In temperate and tropical climates, reinforced sheets of plastic HDPE (polyethylene) with support materials (plastic poles or hard paper tubes) are needed. Their durability is up to two years. See RedR, MSF and UNDP/IAPSO guidelines.[6] The average family of five people should receive at least one 4m x 6m sheet of plastic, preferably with reinforced holes (eyelets) at 95cm intervals on all sides. This is best provided in rolls for easy transportation, storage and distribution (4m x 60m for 10 families). However, sheets of 4m x 70m would give more head clearance.
Winterised tents with six month durability are provided in cold climates. Heating is more efficient if several (six to seven) families stay together in a tent that is centrally heated by a hot air heater. For privacy the multi-family tent should be divided into segments. However, this is not socially sustainable for long periods of time.
Depending on the climate beds, mats and/or mattresses that provide an insulated place to rest may be needed.
If people use wood fires, housing must include a separate shelter for cooking. Smoke and dust give cause to respiratory disease especially in children.
Shelter can have political implications: structures that appear to be more permanent could be interpreted by host authorities to mean that displaced people have firmly settled.

Environmental Standard

Structural supports for shelters may need to be supplied to avoid trees being cut down for this purpose.
Local materials (e.g. grass for roofs, bamboo structures) can be used without causing environmental damage. However careful and controlled 'harvesting' of these materials should be carried out to avoid wastage when there is significant demand.
Access to tools and nails should be provided to people who are able to make their own supports or structures, providing that this can be sustained by the environment.
As indicated above, plastics and tents have a limited life span and will need to be replaced. In the longer term more permanent structures need to be designed and/or procured.

Clothing Policy

People displaced by emergencies often do not have enough clothes - because of poverty or because they were unable to carry sufficient clothing with them. Those who are still close to their homes may have enough clothes, but these may well have been damaged or spoilt.

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[6] see Appendix

Clothing standard

The assessment takes into consideration climatic and cultural factors in order to ensure that blankets and clothing are appropriate to men, women and children, and to age. They are supplied separately, not in mixed bales.
Women need specialised clothing for reasons of hygiene and personal dignity. They must also receive appropriate material for their monthly sanitary needs. It is important that these materials are appropriate for their purpose and are suitably discrete, or women will not use them. Given the sensitivity of this issue, women must be involved in making decisions about what is provided.
Children, especially babies, need specialised clothing for physiological and hygienic reasons.
The insulation capacity of blankets and clothes decreases significantly (10 to 15 times) when they are wet. In other words, heat resistance is reduced, or more kcal thermal energy passes through wet materials.
Using many layers of clothing or blankets does not necessarily keep people warmer. Insulation capacity (thermal resistance) is based on the extent to which the garment or the blanket can retain tranquillised air. If there is more weight less air is tranquillised and there is less warmth. Buying cheap blankets is a false economy - it is better to spend more on one good quality blanket than to buy two cheap ones that are of poor quality.

Household Items Policy

People who have been displaced from their homes often arrive with only the things they can carry. Household needs are identified by the initial assessment, which should also take into consideration the local host community, since they may require as much assistance as those who have been directly affected by the disaster.
The household items described below are the minimum needed to help families become more self-reliant, so helping them to prepare for their return and reintegration into their home communities. Conservation of the environment is an important consideration.

Site Policy

Site selection

Good shelter provides people with a suitably healthy environment where they can live in dignity and at peace, where they can lead as sustainable a family life as possible, and where assistance can be provided with minimal damage to the environmental. Site selection and planning should produce the best living conditions possible under the circumstances.
Often a site is selected, usually around water and sanitation points by the host authorities, the displaced people themselves or by the first assistance agency to arrive. New, more permanent and suitable sites may need to be chosen, or if there are no alternatives, the initial site may need to be reorganised to achieve the minimum standards of assistance. Easy access to essential services is a key requisite.
Smaller displaced populations can benefit tremendously when settling close to a larger community. There is more likely to be access to roads, bridges, warehousing, communication facilities, an airport or air strip, clinics, religious services, electricity, security (police), waste management, economic opportunities, the availability of fuel (kerosene, gas), and the provision of supplies (shops). However, the pressures caused

by the arrival of a large number of people on the local environment, on the employment market if close to small local populations, and on local services can be considerable. It can also give rise to talk of prostitution or theft. Careful planning is critical in minimising possible negative impacts.

Topography standard

Breeding cycles and sites of local vectors for human, animal and plant diseases should be considered in site selection. Displaced people and their animals may be more susceptible to diseases that are not prevalent in their home area or country. By the same token, they may introduce diseases to which local populations may be susceptible.

The risks from other hazards, such as seasonal flooding of the site, must be considered, taking into account the climate and seasonal factors that influence the risk.

The soil must be workable for sanitation, water supply, burial grounds and agricultural activities. Rocks and lava should be avoided if possible as water needs to penetrate the soil for drainage and sewage[7].

Temperatures and rainfall patterns should be considered when making decisions about provision of shelter and clothing and identifying agricultural possibilities. Very high elevations are unsuitable because at certain times of the year the temperature drops to unacceptably low levels.

At lower elevations in regions far from the equator, there will be savings on transport, fuel and building materials, and people will be more comfortable. Close to the equator there are some advantages in locating sites at higher elevations.

Locating a site close to protected or fragile areas may result in extensive damage to the environmental heritage.

Physical Layout Standard

Revised UNHCR guidelines recommend a space requirement of 45m² per person, to include a small space for kitchen gardening. Planning should take into account the dynamic evolution and growth of a camp. Population growth and the arrival of more people may see the camp expand by up to 4.5% annually as has been the case in past refugee situations. For example: 50,000 people @ 45m² each amounts to a total area of 225 hectares. If the population grows by 4.5% over five years almost 10,000 more people will need 45 hectares of land. On the other hand early repatriation or reintegration should be planned for as well.

Limiting space does not encourage people to repatriate, it increases their dependency on the system and detracts from their general health. Large groups of people in a limited space pose an unacceptable strain on the environment, the local labour market, camp management and security. Limiting space is a false economy. Although initial costs may seem lower, the cost of restoring the environment and continuing to provide care for people will be high in the long term. Paying for these long-term costs is likely to be difficult because funding levels later on will be lower than the funding available at the start of the response programme. Funds should be invested appropriately right from the start to prevent long-term damage to the environment and to people's lives. The use of the 'building block' approach saves time.

[7] See Water Supply and Sanitation

Facilities for the traditional disposal of the dead must be provided. Graveyards must be located more than 30 metres from water sources (in soil and more in fractured rock formations), and at least two metres above the water table. No run-off water from graveyards should enter the camp. The customs of the local and displaced population should be respected[8].

Good maps that indicate land tenure, drainage patterns and available space should be obtained. Often the military have such maps at 1:50,000. More detailed maps (1:10,000) can be drawn during and after site visits and aerial photographs can be used, though expertise is needed to read aerial pictures. Contours and drainage patterns should be drawn. It is essential to use Abney level or Theodolite survey instruments. Geographical Positioning System (GPS) instruments are easy to use in determining location, boundaries, dimensions and elevation and can be used for marking the location of important features like roads, water points etc.

Information can be transferred onto a map that can be added to as the camp develops. Skill is needed in interpreting data on potential sites, such as topography, water sources, drainage, wooded area, land use, rainfall data, geological and hydro-geological data. It is important to be aware of possible gaps in the information and changes that may have occurred since it was gathered. A specialist is needed to interpret hydro-geological data.

Environmental standard

The impact of a large number displaced people on the environment can be immense, especially over a long period of time. This will not always be visible but long-term damage can take decades to rectify. Taking more water from an aquifer than flows into it causes a lowering of the water table. Using all available wood and roots for fuel increases soil erosion. In more complex environments such as tropical forests, species that are particularly valuable for building and furniture construction may disappear altogether.

Early warning mechanisms and emergency preparedness measures are critical if environmental damage is to be avoided. Early measures include: identification of potential sites for camps and settlement areas; field surveys of potential biomass and wood energy quantities; preparation for tree marking; identification of environmentally-sensitive areas (parks, game reserves, wetlands) and energy sources. It is imperative that fundamental principles governing protection of the environment inform decisions about camp size, location in relation to protected areas, topography, dispersion of sites, soil conditions, water quality and supply, and biomass capacity (fuel wood supply, building material).

Agencies with expertise on the environment (forestry, household energy, alternative energy, site planning and development, environmental education), particularly those staff with local knowledge, must be involved in detailed decision making as soon as possible.

Deciding the upper limit of the site population means finding a balance between the optimal number needed for efficient utilisation of services, and the social and physical impact the population may have on the local people and the environment.

No matter how much land is allocated to each family, people will return to the same areas to collect wood if there are no alternatives. On a sustainable basis, it is assumed that 500 people need 1.0km² of undisturbed forest to cater for their annual fuel wood

[8] See Water Supply and Sanitation Policy on solid waste disposal, guidance note relating to the dead

consumption need of 600-900 kg/person. Assuming however that only 20% of forest is undisturbed, only 100 people would be able to access the land.
To allow aquifers to be replenished, between 700 and 2800 people can be placed per square kilometre[9].
Overstocking of animals most not be allowed, even if this means slaughtering excess numbers. The number of animals per hectare depends on the soil type and climate, and thus on sustainable available fodder (biomass). The range is between one and ten animals per hectare.
Water, soil, wood for fuel and construction are serious points for consideration. The water table can be lowered when many new people arrive in the area, or there may be soil erosion[10].

Security Standard

Security for all people affected by the emergency and relief agency staff is of crucial importance. Careful site planning that takes into account internal and external risks, and identifies the needs of particular groups, especially women, will help reinforce security measures taken by host authorities and UN agencies[11].
Systems must be established for investigating criminal acts of all types. Detention and trial of suspects must preserve their rights and ensure justice is seen to be done. Special services for the victims of crime should be provided.

Co-ordination Policy

The humanitarian response involves a number of different actors - agencies, national and local authorities, donors, the affected populations - whose efforts must be co-ordinated if programmes are to be effective in meeting the needs of the people affected by the disaster. Co-ordination implies a willingness to co-operate with others, to share information and to work together to ensure that the response reflects humanitarian principles and attains minimum standards. Principles of co-ordination are addressed elsewhere in this chapter and in the chapters for water and sanitation, nutrition, food aid and health services. The purpose of this section is to identify common standards for co-ordination that relate to all sectors and to all agencies involved.

Immediate Response Standard

The standard of living of the affected population should be at a level that avoids generating envy among the host community, and minimises the 'pulling factor' for the people remaining in civil strife situations. If local standards are below the minimum standards given to the displaced, the local community must receive some assistance as well.

Planning Standard

The purpose of this standard is to identify key areas for co-operation between the sectors and agencies in the area of needs assessment and planning, and should

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[9] John Cosgrave, in ODI Disasters Volume 20, number 3: Refugee Density and Dependence

[10] see Water Supply and Sanitation chapter; and UNHCR and LWF Environmental Guidelines

[11] See Co-ordination Security Standard

therefore be read alongside the analysis sections for shelter and site, and for each of the sectors[12].
A rough figure for the population by age and sex must be established immediately in order to respond to identified needs. This can be done by choosing a number of shelters at random, counting the number of people in each and multiplying the number of shelters in the camp by the average number of people per shelter.
A census should be carried out for registration and screening purposes and to establish the demographic profile of the population. Each individual or family is counted in one day to avoid double counting, and skills are recorded. People who have been registered are marked with non-removable ink or are given a non-removable bracelet. Women, men, children (male/female and according to age as indicated in the clothing standard), unaccompanied minors, single headed households, elderly people, disabled people, wounded people, pregnant lactating women, ethnic breakdown, religious affiliation, family household size and structure all need to be recorded.
Attention needs to be given to the fact that family sizes and age profiles can differ considerably, and that vulnerable people may need more space. Sometimes single persons may need to come together in order to 'create' families. This helps minimise the possibility of families splitting up in order to obtain more supplies.
Questions relevant to all sectors include:

- Is the selected site, if separate from the host community, able to hold the expected number of people?
- Are the displaced people predominantly urban or rural?
- Are they arable farmers or farmers with livestock?
- How long are they expected to be displaced or in need of assistance?
- What season is it, and what is the climate?
- How do the local populations view the presence of the disaster affected people?
- What is the security situation?
- What is available locally in terms of food, clothing, shelter and health care?
- What physical resources do the disaster affected people have available to them?
- What is their current physical condition and how is this affected by their endurance of the disaster and/or poverty (especially women and children)?
- What is their social status (e.g. as women, children, families or soldiers)?
- What is their economic status?
- Will international support be needed?
- How will the assistance programme fit into the existing regional development plan?

Situation reports should be systematically reviewed for both methodology and content. There should be visits to villages and homes, leaders of the affected population. If international support is provided to the emergency, communication must be established with the relevant UN and NGO authorities at all levels. In respect to international support, the host country authorities retains overall responsibility, and identifies a lead Government agency for international staff to deal with.
Responsibilities of all stakeholders must be established as early as possible, including host country authorities, UN agencies, the agency with responsibility for co-ordination,

[12] See also the analysis section in Organisational Best Practices, Chapter 2

the people affected by the disaster (including the local population), agencies already operational in the area, and local NGO.
Planning must be driven by the needs of the people affected by a disaster, not by funding, and the disaster affected communities should be involved right from the start. Donors must commit themselves to the entire humanitarian programme, not only to the phase that attracts media attention, as has often been the case. Relatively higher levels of funding may be available at the beginning of an emergency, often as a result of media attention. This should be used wisely by investing in equipment that lasts and that needs little financial input for operation and maintenance.
Cheap vehicles, for example, are expensive to run in the long term. It is more cost-effective to pay more at the beginning for a vehicle that is cheap to run over a long period of time.
After a period of six months an evaluation of the situation is needed to decide whether plans should be extended beyond one year, to identify agencies that are still involved and whether they have the capacity for longer involvement[13].

Administration Standard

Key principles of co-ordination[14] are that all humanitarian actors, the disaster affected populations and host authorities co-ordinate their inputs to avoid omitting any essential services; all inter-agency projects are developed in regular sequence, in accordance with a common schedule; projects are only implemented with the signed consent of all concerned. The PCMT creates a uniform, systematic filing system, an accessible programme database and historical record.
Agencies must always maintain a position of neutrality in conflict areas. Although this can be difficult, it is absolutely essential, and questions of neutrality must be considered in all decision-making and in all activities. This means being aware of any political issues that may have a bearing on the efficient functioning of the humanitarian response system. Mishandling or misjudging such issues can be detrimental to the success of the assistance programme.
Procurement and logistics systems need to be established and maintained. (e.g. supply requisitions, consignment documents, and stock control)[15].
Financial and narrative reporting systems for accounting for international support must satisfy the requirements of the UN agencies, donors and NGO concerned.
Monitoring and evaluation systems are an essential component of the broader administrative system[16].

Maximum involvement of the affected population and all those agencies in the area needs to be ensured. Consultative structures for the affected population should be set up.

Education and training of staff and committees of displaced people for specific purposes (e.g. for hygiene promotion activities or mobilisation of community health workers) are essential to the functioning of the site.

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[13] See Analysis Standard: monitoring and evaluation

[14] A useful administrative model is the Project Cycle Management Tool (PCMT) developed by UNHCR and Lutheran World Fellowship in Nepal

[15] See section VIII Emergency Policies and Procedures Manual, CARE 1997. See also, Food Aid Standard: logistics

[16] See monitoring and evaluation standard

The local population should have the opportunity to be involved in the facilities provided to the people directly affected by the disaster, to participate in labour and construction activities and to tender for contracts for goods and services. Local people need to be paid more because recipients of aid receive additional benefits.
The leadership of the affected population should be involved in decision-making and in implementing activities, though it is important to be aware that power structures can be abused.
Camp or site activities should be carried out as far as possible with the involvement of the disaster affected populations, always on the basis of food or cash for work conditions. As both the host community and those directly affected by the disaster work together, they should receive equal treatment. Salary structures are co-ordinated between all agencies and do not exceed local standards.
The role of women at a time of crisis is critical. It is they who keep the family together, while husbands are otherwise occupied. The women look after the children, cater for food, collect water and arrange for shelter when men are not around.
'Small' energy saving measures can help minimise damage to the environment: Food that requires short cooking time should be provided where possible. Energy saving cooking measures that are acceptable to the people using them should be implemented including: use of fuel economic wood stoves; cooking on stoves that use external energy like gas, kerosene, and electricity. Cooking pots should have lids to conserve heat and lessen cooking times.
Fuel wood should be purchased externally, and/or fuel wood must be harvested in a controlled manner in conjunction with reforestation activities. People need to be trained to extinguish cooking fires, especially wood fires, after cooking. Potable water should be supplied to minimise fuel costs for boiling.

Services Standard

Even though early repatriation and/or reintegration is the most durable solution, experience has shown that the situations involving displacement last on average for seven years. Durable rather than short-term facilities should therefore be established from the start, especially considering that higher amounts of funding are likely to be available at the onset of the crisis.

Security standard

External security is important, but there can also be serious security risks within the population itself. Contributing factors include frustration caused by the events that led to the disaster, and lack of individual, psychological and social fulfilment. Certain groups may be at particular risk of violence or sexual harassment, and site planning can help minimise these and other risks. For example, latrines on the edge of a camp can force people, especially women and children to leave the camp at night, and isolated, rarely frequented places, should be avoided. Policing functions must be provided by the host authority or (not a UN agency or an NGO).
The co-ordinating agency should ensure that there is lighting in strategic areas at night and that female headed households and single women are placed closer together, in secure areas near facilities, but not in such a way that 'ghettos' are created.

Self Reliance Standard

People should have reasonable access to training and opportunities to profit from their training. This can be considered when deciding family space requirements.[17]

Human Resources Policy

All aspects of the humanitarian response rely on the skills, knowledge and commitment of staff and volunteers working in difficult and often insecure conditions. The demands placed on them can be considerable and if they are to conduct their work competently and carefully, to a level where minimum standards are assured, it is essential that they are adequately managed and supported both in the field and from headquarters. In designing programmes, human resource capacity issues must be addressed and specific training and support should be incorporated as necessary. Those likely to be targeted include expatriates, national staff, government or local authority counterparts, community volunteers and members of the population affected by the emergency.

The provision of training and support is a continual process. The skills of staff or community members need to be up-dated and refreshed regularly to ensure that the quality of service delivery is maintained, and improved.

Capability standard

Concepts such as 'skills', 'knowledge,' 'experience' are not measurable unless they are attached to specific anticipated outcomes. These could be specified and developed in the field, ensuring they are appropriate to the context, local priorities, resources and time-scale of operation.

In the often unpredictable environment of emergency operations, where sudden withdrawal of international staff or agencies may occur, training of national staff and volunteers is paramount if work is to continue.

[17] For best practices in this area see Chalinder, Andrew (1998), Good Practice Review: Temporary Human Settlements. ODI-RRN

Guidelines for Policy Development

for Emergency Management

by the Health Sector[18]

Part 4

Nutrition Policy

[18] The information presented here is adapted from material developed by the Sphere NGO Project;

Policy Framework

Introduction

Access to food and the maintenance of adequate nutritional status for health is a critical determinant of survival in any emergency in which there is significant displacement of people or disruption of basic services for long periods. In these cases, malnutrition can be a serious public health problem and may be a leading cause of death, whether directly or indirectly. Those most commonly affected are children between the ages of six months and five years, though younger infants, older children, adolescents and adults may also be affected.

The purpose of emergency nutrition programmes is to identify, treat and prevent malnutrition. Programmes aiming to correct malnutrition may include appropriate general rations, targeted feeding, medical treatment and/or supportive care. Preventative programmes aim to ensure that the affected community has access to food of adequate quantity and quality as well as the means to prepare and consume it safely, and that vulnerable individuals are identified and receive nutritional support as required.

There are close connections between the nutrition sector standards and those in food aid. There are overlaps between the two sectors in the types of information required for assessment of the situation and identification of needs. There is also commonality with respect to defining nutritional (and hence food) requirements. The two have been kept separate for three reasons.

Firstly, nutrition in emergencies is concerned with more than simply making decisions about food aid needs. Secondly, food aid programming carries with it specific requirements regarding financial and logistical management procedures; merging the two sectors would have made the chapter too long and too broad. Thirdly, food aid might be one component of a food security response and further standards are needed to cover this area.

Nutrition is not a subject that can be considered in isolation from others. Health, agriculture, water supply, economics, religious practices, traditional beliefs, social organisation and indigenous/institutional welfare systems are some of the important factors affecting nutritional status. Anthropological and sociological analysis of the underlying causes of baseline malnutrition is a complex process that may not have a place in a specific relief situation but such analysis is vital if long term preventative programmes are to be effective.

Features of an emergency nutrition policy

An nutrition policy for emergencies should have the following features. It must:

- define roles, responsibilities and limits of authority.
- identify the minimum standards that are to be met.
- identify objectives which address priority public health issues.
- be co-ordinated with policies of other sectors to ensure that priorities are met and gaps and overlaps are avoided.
- provide measures to ensure that private or foreign agencies work within national guidelines under national supervision and that donated relief assistance meets national standards.
- consider local development contexts - economic, social, political and environmental.

National plans and procedures based on the policy should:

- set a general framework for action, to be further elaborated in detailed local and event specific plans;
- allow a rapid initial response to specific needs as identified by first assessments;
- ensure the safety of staff, volunteers and beneficiaries involved in programme implementation;
- be organised and implemented using promotional and participatory techniques;
- be phased, addressing immediate needs then achieving minimum standards as quickly as possible, giving priority to the most important needs at the time;
- be rapid in impact, but long term in perspective, creating opportunities for future development;
- be implemented by staff with appropriate qualifications and experience for the duties involved, and who are adequately managed, resourced and supported;
- be routinely and systematically monitored to ensure the progress of planned activities and to allow well-timed programme changes where needed.
- involve a representative cross section of the beneficiary community in decision making and in project implementation (design, construction, operation and maintenance), according to their authority and responsibility to participate in these activities.
- recognise the needs of the entire community as well as those directly affected by the event.
- provide equipment and facilities which are sensitive to the traditional practices of the beneficiaries and which ensure a minimum level of dignity and comfort.
- be sensitive to the varied needs of different social groups, at the household level and at the community level, and the impact of the programme on them.

Information Policy[19]

An assessment report, presented in a pre-determined format using standard terms and expressions, must cover key areas (see below) and make specific recommendations for each. Assessment findings are shared with local authorities, representatives of the affected communities and participating agencies.

The first assessment should be carried out by the local authorities as soon as possible after impact or commencement of the emergency. If required, there should be an immediate response to critical needs at the same time. As a general rule during an emergency phase, an initial report should be generated within 4 hours and updated every 24 hours, though clearly this depends on the particular event and the wider situation.

Assessments should be interpreted in terms of both immediate relief actions and the needs of the recovery period. Interventions to meet immediate emergency requirements should facilitate the recovery of the affected community.

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[19] Before reading this section please see the definitions for access, food security, malnutrition and the social/care environment in Appendix 1

Co-ordination between the different humanitarian agencies and the different sectors is essential to ensure that activities respond to actual needs and are effective.
If survey teams are required, they must be capable of collecting reliable information from all groups in the affected community in a culturally acceptable manner (e.g. teams should include women, as well as members able to speak the local language).
An assessment procedure should be agreed upon by all participants before field work begins and specific tasks contributing to the assessment should be assigned accordingly.
Techniques for information gathering must be determined by the senior epidemiologist present, and must be chosen carefully to match the situation and the type of information required. As a general rule, information should be gathered more frequently when the situation is changing more rapidly, and when there are critical developments such as new community movements or an outbreak of diarrhœa. Initial assessments may be quick and unrefined but analysis improves as more time and data are available. Checklists prepared in advance are essential in ensuring that all the key issues will be examined.
Analysis should demonstrate an awareness of underlying structural, political, economic and environmental issues operating in the area. It is imperative that prior experience and local understanding are taken into consideration when analysing the dynamics and impact of the new situation. Authorities must ensure that local expertise and knowledge is used effectively in data collection and the analysis of resources, capacities, vulnerabilities and needs. The pre-emergency living conditions of displaced and non-displaced people in the area must also be considered.
The needs of groups that are at risk of additional harm such as pregnant and lactating women, unaccompanied children, the elderly, the disabled (physical, social and mental) and people in institutions (prisons, hospitals, etc.) must be considered.

Although each emergency generates particular health needs and problems, the following broad areas of activity are likely to be common to all: surveillance, control of communicable diseases, measles immunisation, food and nutrition, adequate supply of safe water, sanitation, prevention services, curative health care, the referral system, reproductive health, women and child health, community services, health education, medical supplies, personnel and the organisational resources required to establish and operate these services in an interrelated and co-ordinated manner. The psycho-social dimension of the situation should be considered as an area to be included in the assessment process. These should all be considered in health planning.

Health activities should address the assessed needs as well as the predicted needs of the affected communities.
The initial assessment provides information for subsequent monitoring and evaluation. A more complete assessment will be needed later in the relief phase and will be necessary for planning recovery, rehabilitation and reconstruction of infrastructure and services.

Analysis standards

Sources of information for these indicators might include: the initial assessment report; minutes of co-ordination meetings; project proposals; analysis of relevant existing data, e.g. health and nutrition surveillance; burial counts and so on. This information may be followed up with quantitative and/or qualitative data gathering exercises to enable a more thorough analysis of the problem. Basic principles of transparency, validity and

reliability must be respected and there are many different types of assessment protocol available which enable adherence to these principles. When anthropometric surveys are conducted, results must always be interpreted in the light of other factors relating to food security, public health and the social and care environment.

The indicators for programme design are presented separately but in practice many types of information may have to be considered concurrently. For example, information that informs commodity selection in a food aid programme would need to be considered alongside those factors that inform the method of distribution. The system of assessment and analysis is flexible rather than rigid, and there are many linkages and overlaps that must be understood and accommodated.
Information and sound methods must be accompanied by documented analysis. Assessment conclusions need to be internally coherent, clearly based on the information collected and linked to existing theory. See Nutrition analysis standard 1 and the UNICEF conceptual framework.
In order to assess the extent to which people are managing to meet their nutritional needs, it is necessary to have some reference for comparison. This is drawn from current WHO, UNHCR and WFP average requirements for community groups (see Appendix 2). However, there are two important points to consider before these requirements are used: Firstly, the mean per capita requirements for community groups incorporate the requirements of all age groups and both sexes. They are therefore not specific to any single age/sex group and should not be used to assess requirements for an individual.
Secondly, these requirements are based on a series of assumptions which, unless true for the particular community, will lead to errors[20].
Calculations for the requirements were based on a particular demographic profile:

Group	% of community
0 - 4 years	12.4
5 - 9 years	11.7
10 - 14 years	10.5
15 - 19 years	9.5
20 - 59 years	48.6
60+ years	7.2
pregnant	2.4
lactating	2.6
female/male	50.9/49.1

As the demographic structure of different communities varies, this will affect the nutritional requirements of the community concerned. For example 26% of an Iraqi refugee community were under 5 year olds, and the community was 50% males and 50% females. This profile reduces the requirement to 1,940 kcal.
Estimates of requirements must therefore be used with reference to information that is specific to the context. This enables the validity of the underlying assumptions to be tested.

The following information is needed:

- ☛ Size of the community;

[20] Joint WFP /UNHCR guidelines for estimating Food and Nutritional Needs in emergencies, 1997. WHO The Management of Nutrition in Major Emergencies, 1999.

- ☛ The demographic structure of the community, in particular the percentage under 5 and the percentage of females;
- ☛ Mean adult weights and actual, usual or desirable body weight. Requirements will increase if the mean body weight for adult men 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 (i.e. 1.55 x Basal Metabolic Rate for men and 1.56 x Basal Metabolic Rate for women);
- ☛ Average temperature, and shelter and clothing capacities. Requirements will increase if the mean ambient temperature is less than 20°C;
- ☛ Non-nutritional needs which affect food needs: i.e. the potential role of food as a social and economic resource. Requirements will increase if there are any non-nutritional food needs;
- ☛ The nutritional status of the community. Requirements will increase if the community is malnourished and has extra requirements for catch-up growth.

There are currently no estimates for community-level requirements for most of the minerals, despite evidence highlighting their importance[21].
For communities dependent on food aid, the choice of commodities (including decisions on fortification levels) should be based on the requirements of the community and the availability of foods which the community can access independently. Some of the food rations used currently for communities that are fully dependent on food aid may not be sufficient to meet requirements (particularly vitamin B2, niacin, vitamin C, iron and folic acid). All micronutrients are vital to maintain healthy life. Therefore, where the assessment suggests that certain micronutrient requirements will not be met by the community themselves, the intervention must plan to meet the shortfall.
Even if the foods provided to a community meet the specified requirements, this cannot be taken as a proxy of adequate intake and utilisation by the body of micronutrients. Discrepancies that can occur at ration distribution or as a result of meal sharing within households affect the quantity of food eaten by individuals. Micronutrient losses can occur in other ways as well. For example losses can occur during transportation and storage of food; during processing (e.g. the reduction of B vitamins during milling); as a result of prolonged cooking, particularly for the water-soluble vitamins; and as a result of nutrients combining with binding agents in the diet which prohibit their absorption in the gut (e.g. phytates impair the absorption of iron originating from vegetable sources). Losses may also occur as a consequence of disease, in particular parasite loads, where the body's ability to access and utilise the nutrients is restricted.

Monitoring and evaluation standards

Emergencies are volatile and dynamic by definition. Current information is therefore vital in ensuring that programmes remain relevant.
Information derived from continual monitoring of programmes should be fed into programme reviews and evaluations. In some circumstances a shift in strategy may be

[21] As an interim guide, and pending further consultation by WHO, minimum nutrient densities (per 100 kcal) are proposed in Appendix 3

required to respond to major changes in the context or needs. Any change to the programme has to be justified on the basis of information concerning the nutrition situation of the affected community.
Information generated by the assessment process must be incorporated into the Health Information System as well as used for the monitoring and evaluation aspects for the nutrition programme. Information collected should be directly relevant to the programme i.e. it should be useful and should be used. It should also be shared as needed with other sectors and agencies, and with the affected communities. The means of communication used (dissemination methods, language and so on) must be appropriate for the intended audience.
Monitoring programme activities can be constrained by the difficulty of gathering reliable, valid information in a volatile and changing situation. For example, when a community is in a continual state of flux, moving to and fro across a border, over a prolonged period of time, there can be no assurance that measurements made relate to the same community. In such situations, therefore, data needs to be interpreted very carefully.
Evaluation is important because it measures programme effectiveness, identifies lessons for future preparedness, mitigation and response, and promotes accountability. Evaluation refers here to two, linked processes. Internal programme evaluation is normally carried out by staff as part of the regular analysis and review of monitoring information.
The agency must also evaluate the effectiveness of all its programmes in a given disaster situation on a one-off basis. External evaluation may by contrast be part of a wider evaluation exercise by agencies and donors, and may take place, for example, after the acute phase of the disaster. When evaluations are carried out it is important that the techniques and resources used are consistent with the scale and nature of the programme, and that the report describes the methodology employed and the processes followed in reaching conclusions. Outcomes of evaluations should be disseminated to all actors in the disaster response, including the affected community.

General Nutritional Support to the Community

This section considers the nutritional resources and services required to ensure that the needs of the general community are met. Unless and until these needs are met, any targeted nutrition interventions are likely to have limited impact since those who recover would return to a context of inadequate nutritional support. They would therefore be likely to deteriorate once again.

General nutrition standard

Improving trends in malnutrition might be indicated by health centre records, growth monitoring (health centre or community based), random sample nutrition surveys, results from screening, reports from the community or reports by community workers.

Nutrition survey results provide an estimate of the prevalence of malnutrition. The most widely accepted practice is to assess the level of malnutrition in children under five years old as a proxy for the rest of the community. When there is reason to believe that other specific groups may be unduly affected, then they could also be assessed.

Deciding whether levels of malnutrition are acceptable[22], requires analysis of the current situation in the light of local norms. These might include levels of malnutrition in the community before the emergency; or levels of malnutrition in the host community if the affected community is displaced into a context where environmental and other external factors which increase mortality risk differ from those of their home area. Thus acceptable levels of malnutrition are those that are not associated with excess risk of mortality.
The risks associated with inadequate nutrient intakes for pregnant and breastfeeding women include: pregnancy complications, maternal mortality, low birth weight and impaired lactation performance. It is assumed that food allocations within households account for these extra nutritional needs[23]. In some situations though, this may not be valid and women may need to be monitored. The prevalence of low birth weight babies (below 2.5kg) may also be a useful monitoring tool in some contexts. WHO recommend that if the prevalence exceeds 15%, then this should trigger a public health response.

Supplementary Feeding Programmes (SFP)

Small children are particularly susceptible to a cycle of repeated infections and worsening malnutrition. Sick children must eat and drink, even if they have no appetite, are vomiting or have diarrhœa. They must receive additional food whenever possible. When malnutrition exists or the needs of vulnerable groups (infants, children, pregnant and lactating women, the sick and the elderly) cannot be met from the general ration, special arrangements are required to provide extra food. This is organised through a Supplementary Feeding Programme (SFP). The aim of an SFP is to supplement the existing diet with energy and protein rich, low bulk meals, once or twice a day, to those who need it. An SFP usually provides about 350 kcal per meal. Supplementary meals should be prepared as a porridge or soup as these are easily digestible and can be eaten by people of all ages as well as those who are ill. The food is generally based on cereal and legume blends with edible oil added to increase the energy content. Other ingredients (sugar, vegetables, fish, milk) can be added to provide additional nutrients and a variety of flavour. There are some pre-packed cereal/legume blended meals through UN agencies (e.g. CSM (com-soya-milk), WSB (wheat-soya-blend) etc.) that may be useful at the start of an emergency feeding programme if ingredients are familiar to the population. However, local foods should be substituted as quickly as possible and prepared in a more traditional and appropriate way. An SFP must be based on the active identification and follow-up of those considered vulnerable. This requires a regular house-by-house or family-by-family assessment, usually made by public health workers operating in a well organised referral and follow-up system.

Organisation of an SFP

The SFP can be organised using either the “take home” or “on-the-spot” method. Both require careful registration and control. The take home system is relatively simple to administer, but the food supplement is likely to be shared within the family. On-the-spot feeding is the preferred method.

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[22] see General Nutrition Standard

[23] Pregnant women on average require an extra 285 kcal per day; lactating mothers require an extra 500 kcal

Any SFP must be closely integrated with a community health care program, since the SFP will identify additional health problems that must be dealt with. Certain daily medications (e.g. iron, folate), may best be given in the course of the supplementary feeding. Mothers may have to be fed with children to ensure that vulnerable children receive special feeding. Parents must be made to understand that the SFP is given in addition to the normal meal. Otherwise some parents will think that young children get enough food at the centre and thus do not need to be fed at home.
One SFP centre can usually handle up to 500 beneficiaries. The centres should be run by trained local people. An experienced nurse should be able to supervise 4-5 centres. If different organisations establish and run separate SFP centres in a community, central co-ordination and standardised procedures for all centres are very important. Programmes must avoid depending on outside assistance to prevent their collapse when individuals or organisations leave.

Supplementary Food Quantities - Typical Daily Ration

The amount of food required for supplementary feeding is approximately 3 metric tons per 1,000 beneficiaries per month. This is illustrated in the chart below.

Item	Amount (gm)	Energy (kcal)	Protein (gm)	Monthly amount* (metric tonnes)
Cereal	60	210	6	1.80
Oil	10	90	-	0.30
DSM**	25	90	9	0.75
Sugar	5	20	-	0.15
Total	100	410	15	3.00

* Monthly amount for 10,000 in metric tonnes (Daily x 30 x 1,000).
** Dried Skim Milk (See Section on Infant Feeding and Milk Products).

Therapeutic Feeding Programmes (TFP)

Therapeutic feeding is given to treat infants and young children with severe protein-energy malnutrition (PEM). If severe PEM exists, therapeutic feeding will be the priority method to save lives. However, if the start-up of a SFP is delayed because resources, particularly trained personnel, are concentrated on a TFP, there may be a sudden deterioration in other less malnourished children. Food is the treatment for PEM. Unlike an SFP, a TFP is used solely for curative measures, and should only be administered as short-term programmes.

Criteria for admission to a TFP

In contrast to a SFP, a TFP is for individuals and takes place in a hospital. Therefore, one person who meets the criteria will initiate a TFP. The usual criteria for admission to a TFP is if an individual suffers from either œdema (kwashiorkor) or severe marasmus (weight-for-height less than 70% or a Z-Score of less than -3). Patients should remain on a TFP until they are free from illness, at least 80% of weight-for-height, and without œdema. Upon recovery, patients are discharged to a SFP.

Organisation of a TFP

Therapeutic feeding should take place on an in-patient basis whenever possible, as food must be given every 3-4 hours. Infection and dehydration are the major causes of death. The immunisation of children against measles is a priority due to the high mortality associated with this disease in a malnourished population. All children admitted to a TFP should be given a full course of Vitamin A, with doses on days 1,2,

and 7 of admission. A TFP must be run by experienced and qualified personnel. One centre can usually handle about 50 children and will require two experienced supervisors working full-time. The local people, and mothers of patients in particular, should be involved in the daily operation of the therapeutic feeding centre.
A TFP consists of a diet of at least 150 Kcal and 3-4g of protein per kilo body weight per day for each patient. This is administered during 5-7 meals at 3-4 hour intervals throughout a 24 hour period. Boiled water mixed with a dried skimmed milk/oil/sugar mixture, or with a UNICEF KMix II/oil mixture, can be used to initiate treatment. A mixed diet is introduced once the patient's condition starts to improve (usually after 4-5 days).

Micronutrients

The indicators for the General Nutrition Standard serve to highlight the importance of dietary quality. If these indicators are met, then deterioration of the micronutrient status of the community should be prevented.
There are a range of possible options for prevention of micronutrient deficiencies. These include: increasing the quantity of food in the general ration to allow more food exchanges; local purchase of commodities to provide nutrients otherwise missing in the ration; measures to promote local production of foods contributing nutrients estimated to be low; provision of micronutrient rich food stuffs as a supplement to rations; appropriate fortification of staple foods or blended foods; and/or medicinal supplementation.
Three micronutrient deficiencies (scurvy, pellagra and beri-beri) have been highlighted as these are the most commonly observed deficiencies to have resulted from inadequate humanitarian response. They are specified here because they are avoidable. Individual cases of scurvy, pellagra and Beri-Beri, presenting at health centres for example, are likely to be a result of restricted access to certain types of food and are therefore probably indicative of a community-wide problem. As such, they should be tackled by community wide-interventions[24].
Iron deficiency anaemia is one example of other micronutrient deficiencies which may be important contributors to mortality. The emergency may or may not have elevated the prevalence of the deficiency. In situations where a chronic endemic situation is exacerbated by the emergency, special attention must be paid to possible prevention and correction measures (see above and Targeted Nutritional Support Standard). Indicators of programme performance will be context specific.
Tackling micronutrient deficiencies within the first phase of an emergency is complicated by difficulties in identifying them (see Targeted Nutritional Support Standard). The exceptions are Xerophthalmia and goitre for which clear 'field-friendly' identification criteria are available. These deficiencies can be tackled by community level interventions (i.e. high-dose supplementation for children (see below) and salt iodisation respectively).

Indicators of clinical Vitamin A deficiency (xerophthalmia in children 6-71 months of age)

Prevalence of one or more indicators signifies a public health problem:

[24] In any context where there is clear evidence that these micronutrient deficiencies are an endemic problem, levels should be reduced to at least those that would have been expected had the emergency not occurred

Indicator[25]	Minimum Prevalence
Night blindness (XN) (present at 24-71 months)	>1%
Conjunctival xerosis with Bitot spots (X1B)	>0.5%
Corneal xerosis / ulceration / keratomalacia (X2, X3A, X3B)	>0.01%
Corneal scars (XS)	>0.05%

When measles or other immunisation is carried out, which is often routine in emergencies resulting in displacement, it is usual practice to provide a Vitamin A supplement (200,000 IU orally) to all children under five years of age[26].
This helps reduce mortality associated with measles. Furthermore it is recommended where feasible that pregnant women receive a reduced dose (20,000 IU) and lactating mothers receive a high dose of Vitamin A (200,000 IU orally) as soon as possible after delivery and within 8 weeks.

Indicators of iodine deficiency – goitre[27]

Prevalence of (ideally) two indicators signifies a public health problem:

Indicator	Target Group	Severity of Public Health Problem (Prevalence)		
		Mild	Moderate	Severe
Goitre grade >0	School age children*	5.0 - 19.9%	20.0 - 29.9%³	≥30.0%
Thyroid volume >97th centile by ultra sound	School age children	5.0 - 19.9%	20.0 - 29.9%³	≥30.0%
Median urinary iodine (µg/l) level	School age children	50 - 99	20 - 49	<20
Thyroid Stimulating Hormone >5U/l whole blood	Neonates	3.0 - 19.9%	20.0 - 39.9%³	≥40.0%
Median Thyroglobulin (ng/ml serum)	Children and adults	10.0 - 19.9	20.0 - 39.9³	≥40.0

*preferably children aged 6-12 years
These indicators of iodine deficiency may be problematic: the biochemical indicators may not be possible in many emergency contexts, and the clinical assessments risk high levels of inaccuracy. Nevertheless, while assessment of urinary iodine is necessary to get 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 to 12 years.

Dietary quality

These indicators measure the quality of the diet but do not quantify nutrient availability. This is impracticable as it would impose unrealistic requirements for information collection.

[25] Sommer, A (1995), Vitamin A deficiency and its consequences: a field guide to detection and control. WHO

[26] See Health Services standards for measles control

[27] WHO/UNICEF/ICCIDD. Indicators for assessing iodine deficiency disorders and their control through salt iodization

Indicators can be measured using information from various sources gathered by different techniques. These might include: monitoring the food basket at the household level; assessing food prices and food availability on the markets; monitoring the routes along which food is moved; assessing the nutrient content of distributed food using food composition tables (or Nutcalc[28]); examination of food aid distribution plans and records; conducting food security assessments; household surveys and/or reviewing existing literature e.g. agency reports.

Infant feeding

Breastfeeding is the healthiest way to feed a baby in most circumstances, but particularly in emergencies when normal hygiene procedures may have been disrupted and rates of infection may have increased. Artificial feeding requires access to a safe water supply, adequate fuel to sterilise feeding utensils and prepare the formula, a good knowledge of how to reduce the hazards of artificial feeding and access to enough formula to meet the infant's requirements for at least a year. Such conditions can rarely be guaranteed in an emergency.

In situations where some mothers are not breastfeeding their infants and can no longer prepare artificial feeds safely, relactation is the best alternative. To succeed in this however, mothers require information, support and encouragement from experienced individuals.

It is normally very rare for mothers not to be able to produce milk (only 1 or 2 per 10,000 mothers). However mothers may die or be separated from their infant. If it is not possible for the infant to have access to breast milk (either from the mother, a wet nurse or a milk bank), then the provision of infant formula will be necessary. Such cases might, for example, include unaccompanied infants. Whenever food commodities such as baby milk formula or commercial weaning foods are distributed, an intensive educational component must be an integral part of the work. This might involve intensive support for the infants' carers on methods for safe feeding (see General Nutrition Standard 4); training of health professionals in lactation management; and promotion of, and support for, pregnant women and mothers of new-borns to breast feed.

When infant formula is provided, there must be guarantee that its provision can continue for as long as the infant needs it. The procurement of infant formula in emergencies must also adhere to the stipulations of the International Code of Marketing of Breast milk Substitutes (WHO, 1981) which protects breastfeeding from commercial interests.

Young children require energy-dense foods since they are unable to eat large meals but have relatively high requirements given their body size. It is recommended that 30% of the energy content of their diet comes from fat sources. In cases where infants aged 6-24 months do not have access to breast milk, nutritious energy dense foods must be sufficient to fully replace the nutrients that would have been derived from breast milk and complementary foods.

The implications of severe malnutrition, trauma and stress on the capacity of the mother to breast feed are not known. Although the breastfeeding mechanism itself is robust, research has shown clearly that the psychological state of the mother can affect the release of milk. In situations where the breastfeeding mother is affected by

[28] Nutcalc is a simple software package for analysis of food rations run on MSDOS and developed by Action Contre la Faim (AICF).

severe malnutrition, trauma or stress, she should, in the first instance, received adequate care in order to encourage lactation.
Research has shown that breastfeeding can transmit the HIV virus from mother to infant. A child stands the greatest risk - believed to be 20% - of vertical or mother-to-child transmission during the time of late pregnancy and child birth. There is an additional 14% risk that an infant will become infected through breast milk. However in situations where sanitation is inadequate and families are poorly resourced, death from diarrhœa is 14 times higher in artificially fed infants that in those who are breast fed. In an emergency context these risks must be weighed up. It is important that breastfeeding is not undermined, particularly in situations where the HIV status of the mother is unknown.

Food Supply Standard

Information to find out whether the indicators have been achieved may be obtained from: quality control inspection reports, food labels, warehouse reports and protocols etc.
The purchase of commodities is best done by specialists, for example at headquarters, regional offices or in specialised agencies[29]. If errors are made, they are extremely difficult to correct at field level.

Food Acceptability standard

In any humanitarian response which involves the distribution of foods, it is important to monitor any sales and reasons why these are occurring. This would help interpret any change in trends as well as monitor any knock-on effect on the local economy. Looting or theft of food, for example before distribution to families when bulk quantities might be stolen, could indicate that the commodity is seen as more valuable economically than nutritionally. If the staple food is looted, this may have important implications for the viability of the food aid programme. All looting incidents should be reported to the co-ordinating authorities immediately.
In communities where the habitual practice in infant feeding was to use breast milk substitute, and where processed commercial products were given as weaning foods to young children, it might be necessary to support mothers in adopting new techniques during the emergency. Particularly important are measures to promote and support breastfeeding (see Food Standard). In this sense, the emergency can sometimes provide an opportunity to change practices which pose health risks. However, an emergency is rarely the right time to encourage behavioural change which is not an absolute necessity.
Powdered or modified milks which have not been mixed with other commodities should not be included in a general food distribution because their indiscriminate use could result in serious problems. Of particular concern are the potential health hazards which are likely to occur as a consequence of inappropriate dilution, germ contamination or lactose intolerance.

Food Consumption standard

Information for these indicators might include programme monitoring systems and rapid household surveys.

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[29] See Logistics Standard

If access to cooking fuel is inadequate, foods requiring less cooking time should be distributed (e.g. cereal flour rather than whole grain; parboiled pulses or rice). Where these foods are unfamiliar to the community, advice and support will need to be provided to ensure their proper use. If it is not possible to change the food commodities, then external sources of fuel supply should be established to fill the gap[30].

In the unusual situation of infants being fed formula milk, bottles should not be used as they are difficult to keep clean. Open cups (as opposed to feeding cups with a 'lip'), may be used instead. There should be capacity for boiling water and for the thorough sterilisation of the cup (and spoon or saucer). Individuals administering infant formula to babies should have an excellent knowledge of its proper and safe use (see Food Standard).

People's changed circumstances may disrupt their normal hygiene practices. It may therefore be necessary to promote food hygiene messages and measures compatible with local conditions and disease patterns[31]. It is also important to provide information to caregivers on the optimal use of household resources for child feeding and safe methods for food preparation.

Access to grinding mills, as well as other facilities such as clean water, is very important not only for food processing but to enable people to use their time in the best way. Caregivers spending excessive amounts of time waiting for these services could otherwise be preparing food, feeding children and engaging in other care-related tasks that have a positive effect on nutritional outcomes.

Nutritional Support

This section presents minimum standards for programmes aiming to correct existing malnutrition, including deficiencies in vitamins and minerals.

Malnutrition is associated with increased risk of death. The strength of this association largely depends on the patterns of disease and infection which, in turn, are influenced by the local environment. There is a synergistic relationship between malnutrition and infection, and their impact on mortality. In other words, the combined impact of malnutrition and infection is greater than would be expected from their total individual contributions to mortality. Understanding the underlying causes of malnutrition is vital in defining the appropriate programme responses, whether in nutrition or in the other sectors.

Before reading the standards, please see the definitions for Body Mass Index, defaulter from a therapeutic feeding programme, exits from a feeding programme and malnutrition in Appendix 1.

Targeted nutritional support - undernutrition

Information for monitoring adherence to this standard can be gathered from a wide variety of sources, including: programme monitoring data (including data from outside the nutrition sector); anthropometric surveys; feeding centre records (including rates of coverage); staff training protocols (particularly in anthropometric measurements); and / or project proposals.

Demonstrating a change in the indicator for the level of severe malnutrition may be difficult when the prevalence of severe malnutrition is low. Given the confidence

[30] See Shelter and Site

[31] See Water Supply and Sanitation

intervals around the prevalence estimate, it may not be possible to demonstrate a statistically significant change.
In contrast to the correction of severe malnutrition (see Targeted Nutritional Support Standard 2), moderate malnutrition can be addressed by programmes in many different ways. Programme design must be based on an understanding of the complexity and dynamics of the nutrition situation, and the factors contributing to and affecting it.
Surveillance is an important component of information gathering and monitoring of the situation. The information gathered must be analysed in the light of seasonal and disease patterns and used to initiate appropriate responses and inform other programmes.
Supplementary feeding programmes may be implemented in the short term before the Food Standard and Targeted Nutritional Support Standard 2 are met. An assessment of the situation must justify a decision to close a programme, but if the other standards have been achieved a supplementary feeding programme should not last longer than six months.

Targeted nutritional support standard - severe malnutrition

The time needed to achieve the indicators for a therapeutic feeding programme is between one and two months.
Achieving the indicators for therapeutic feeding depends on the achievement of the process indicators and of the standards in other sectors (e.g. the existence of a functioning water and sanitation system). All information required to assess achievement of the standard will be available from records kept at the site of the therapeutic feeding and also reports from follow-up home visits.
Adherence to this standard and Targeted Nutritional Support Standard 1 will have a positive impact on the levels of severe malnutrition in a community, if coverage of therapeutic feeding is maintained at a high level. An indicator for coverage has not been stipulated as it is influenced by many context specific factors. Most importantly, individuals cannot be forced to take up a service - the service can be offered and advice given to use it, but that is all. Nevertheless it must be remembered that very low coverage (such as less than 30-40%) will be indicative of a poorly designed programme.
Mean weight gain > 8g per kg per person per day applies to adults and children who receive therapeutic care. Similar rates of weight gain can be achieved in adults as in children when they are given the same diets.
As a rule of thumb, most cases of severe malnutrition should recover and be discharged after 30 to 40 days in a programme. HIV and TB may result in some malnourished individuals failing to recover. Such cases need to be documented and consideration of longer-term treatment or care should be made in conjunction with the health programme.

Targeted nutritional support standard - micronutrients

Sources of information to measure the indicators might include: health centre records, feeding programme records, nutrition surveys and case definitions for deficiency diseases.
Recognition of some micronutrient deficiencies (e.g. iodine and Vitamin A) is possible through simple clinical examination. Such indicators 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 bio-chemical examination (e.g. iron deficiency anaemia). For these reasons case definition of micronutrient deficiencies in emergencies is problematic and can often only be determined through the response to supplementation by individuals who present themselves to health staff.
Pregnant and breastfeeding women should receive daily supplements of iron and folic acid. This is to address nutritional anæmia and to prevent neural tube defects in babies. In emergencies, however, the provision of supplementation is problematic as compliance with the daily supplementation protocols has been shown to be very difficult to maintain.

Human Resource Capacity and Training

All aspects of the humanitarian response rely on the skills, knowledge and commitment of staff and volunteers working in difficult and often insecure conditions. The demands placed on them can be considerable and if they are to conduct their work competently and carefully, to a level where minimum standards are assured, it is essential that they are adequately managed and supported both in the field and from headquarters. In designing programmes, human resource capacity issues must be addressed and specific training and support should be incorporated as necessary. Those likely to be targeted include expatriates, national staff, government or local authority counterparts, community volunteers and members of the community affected by the emergency.
The provision of training and support is a continual process. The skills of staff or community members need to be up-dated and refreshed regularly to ensure that the quality of service delivery is maintained, and improved.

Support staff Capability standard

Concepts such as 'skills', 'knowledge', 'experience' are not measurable unless they are attached to specific anticipated outcomes. These could be specified and developed in the field, ensuring they are appropriate to the context, local priorities, resources and timescale of operation.
In the often unpredictable environment of emergency operations due to civil strife, where sudden withdrawal of national staff or agencies may occur, training local volunteers may be needed if work is to continue.

Definitions of Malnutrition

	Total malnutrition	Moderate malnutrition	Severe malnutrition
Children 6 to 59 months	<-2 Z scores WFH or <80% median WFH or <12.5cm MUAC and/or nutritional œdema	-3 to –2 Z scores WFH or 70 to 80% median WFH or 11.0 to 12.5cm MUAC	<-3 Z scores WFH or <70% median WFH or <11.0 cm MUAC and/or nutritional œdema
Children 5 to 9.9 years	<-2 Z scores WFH or 80% median WFH and/or nutritional œdema	-3 to <-2 Z scores WFH or 70 to 80% median WFH	<-3 Z scores WFH or <70% median WFH and/or nutritional œdema
Adults 20 to 59.9 years	BMI <17 +/or nutritional œdema	16 to 17 BMI	

Children: Guidance Notes Weight-for height (WFH) indicators use the NCHS/CDC reference data.
MUAC is one of the best predictors of death, partly as it is biased towards younger children. MUAC is best used for screening to select those most at risk.
WFH is the most commonly used indicator for assessing the severity of a nutritional problem. It is the preferred tool for assessments and surveys.
There are no agreed anthropometric cut-offs for malnutrition in infants below 6 months, apart from the presence of nutritional oedema.
The NCHS/CDC growth references are not useful since they are drawn from a community of artificially fed babies, whereas breast fed babies grow at a different rate. For this reason, it is important to assess infant feeding practices, particularly access to breast milk, and the implications for support of the lactating woman, in order to determine whether malnutrition in this age group is a potential problem.

Adolescents

There is no clear, tested, agreed definition of malnutrition in adolescents (defined as 10.0 - 19.9 years by WHO). Indicators currently used include: BMI-for-age, which is not applicable in contexts where growth retardation is prevalent and age is difficult to determine. In these circumstances, BMI-for-height could be used. Provisional cut-offs for both these indicators, are given below. Maturational indicators, specifically menarche and adult voice, improve interpretation of BMI reference data as the peak in the adolescent growth spurt occurs prior to these milestones. However, the BMI cut-offs have not been validated yet and should b used with caution. It is imperative that any assessment of nutritional status in adolescents is accompanied by clinical assessment.

Provisional definitions of malnutrition in adolescents[32]:

Total malnutrition	Moderate malnutrition	Severe malnutrition*
<-2 Z scores BMI-for-age* or <-2 Z scores BMI-for-height +/or nutritional œdema*	3 to -2 Z scores* BMI-for-age -3 to -2 Z sores BMI-for-height *	<-3 Z scores BMI-for-age or <-3 Z scores BMI-for-height* +/or nutritional œdema

These indicators are the NCHS/CDC reference standards.
It may also be possible to assess adolescents with respect to stage of maturation (rather than age or height), making it possible to use local patterns of maturation and thus negating the need for reference data. However, this is as yet at the concept stage and requires further investigation and validation.

Adults

Any assessment of severe malnutrition in adults should always be accompanied by clinical examination since, as with children, malnutrition associated with infection carries higher risks of death.
The cut-offs for adult malnutrition are indicators of chronic energy deficiency. There are no agreed cut-offs for rapid-onset malnutrition in adults, but evidence suggests that cut-offs for severe malnutrition could be lower than a BMI of 16. The cut-off must distinguish between those who require specialised food to recover (i.e. rapid-onset, severe, malnutrition) and those who don't (i.e. those chronically energy deficient). This needs verification. Furthermore, a universal cut-off for BMI has limited application since there are large variations in BMI between communities, occurring independently of nutritional status. Such variations would have to be corrected for. There are also dangers in using BMI as a tool for screening, since there are large variations in BMI within communities caused by body shape and not nutritional status. For this reason, adults should also be assessed with MUAC and appropriate cut-offs created.
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 community (see Nutrition analysis standard 2). MUAC does not change significantly through pregnancy. MUAC <20.7cm (severe risk) and <23.0cm (moderate risk) has been shown to carry a risk of growth retardation of the foetus[2]. The risk is likely to vary according to the community.

Elderly

There is currently no agreed criterion of malnutrition in the elderly and yet this group may be at risk of malnutrition in emergencies.
WHO suggests that BMI thresholds for adults may be appropriate for elderly aged 60-69 years. Measurement accuracy is problematic because of spinal curvature (stooping) and compression of the vertebrae. Armspan (the measurement form the tip of the middle finger on one hand to the tip of the middle finger on the other when arms are

[32] The Management of Nutrition in Major Emergencies. WHO, 1999

extended) can be used instead of height, but the multiplication factor to calculate height varies according to the community. BMI could b used on those elderly able to stand up straight. MUAC may be an useful tool for measuring malnutrition in the elderly but research on appropriate cut-offs is currently in progress.

Key Definitions

Access	This term describes the availability of enough food (e.g., through production, markets, gathering in the wild, gift, etc), and people's ability to acquire it (through their own labour, purchase, exchange, etc). Access is central to the concept of food security (defined below) and should take account of seasonal dynamics and supply mechanisms.
ACC/SCN	United Nations Administrative Committee on co-ordination / Subcommittee on Nutrition.
BMI	Body Mass Index (a nutritional index for adults): weight (kg)/height^2 (m)[33]
Defaulter from a therapeutic feeding programme	An individual who has not attended the feeding programme for more than 48 hours.
Exits from a feeding programme	Exits from a feeding programme are those no longer registered. The community of exited individuals is made up of those who have defaulted, recovered (those who are referred) and died.
Food Security	The World Bank's definition is used: Access by all people at all times to enough food for an active, healthy life.
IU	The International Unit measures Vitamin A. 1.0 IU = 0.3µg Retinol Equivalent
Malnutrition	Malnutrition is wasting (thinness) and/or nutritional oedema. Although micronutrient deficiencies are also forms of malnutrition, these are referred to specifically. Stunting is also a form of malnutrition but in disaster affected communities is an indication of longer term nutritional problems which preceded the disaster event. Correction of wasting and oedema reduces the risk of death. For these reasons, the nutrition standards only apply to nutrition activities which correct wasting and oedema (as well as micronutrient deficiencies).
Mean weight gain (g/kg/day)	(Weight on exit (g) - lowest weight recorded during recovery (g)) / (lowest recorded during recovery (kg)) x number of days between lowest weight recorded and exit.
MUAC	Mid Upper Arm Circumference NCHS/CDC: National Centre for Health Statistics / Centres for Disease Control, USA 1975 Nutritional Oedema:

[33] Physical Status: The Use and Interpretation of Anthropometry. WHO, 1995, Geneva

	Bilateral, symmetrical pitting oedema which cannot be accounted for by heart failure, gross proteinuria, renal or cardiac failure, liver disease or pre-eclampsia.
Proportion of exits defaulted	(Number of defaulters in the programme / number of exits) x 100% Proportion of exits died: (Number of deaths in the programme / number of exits) x 100% Proportion of exits recovered: (Number of individuals successfully discharged in the programme / number of exits) x 100% Recovered: To classify an individual as recovered from severe malnutrition he/she must be free from medical complications and have achieved and maintained sufficient weight gain (e.g. for two consecutive weighings).
Cut-offs for weight gain	(expressed as a nutritional index at discharge from therapeutic care will depend on whether the malnourished i.e. recovered here includes those individuals who are referred to supplementary feeding); the type of programme; and the nature of the nutritional problem. Established protocols suggest appropriate discharge criteria for therapeutic care. These discharge criteria should be strictly adhered to to avoid the risks associated with premature exit from the programme. Similarly, protocols 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).
Social and care environment	The provision in the household and community of time, attention and support to meet the physical, mental and social needs of household members[34]. Social norms and support mechanisms are important in considering the potential role and impact of individuals as carers in their household. There are six types of activities practised by caregivers: 1. Care for women; 2. Breastfeeding and feeding of young children; 3. Stimulation of children and adolescents and support for their development; 4. Food preparation and food storage practices; 5. Hygiene practices; and 6. Home health practices.
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WFH	Weight for height (a nutritional index for children). In children below 85cm (or under two years of age), recumbent length is taken instead of standing height.
WFP	World Food Programme
WHO	World Health Organisation

[34] Based on definition in: International Conference on Nutrition. Plan of action for Nutrition, Rome, 1992; Care and Nutrition. Concepts and Measurements. IFPRI, 1997; and The Care Initiative. Assessment Analysis and Action to Improve Care for Nutrition. UNICEF, Nutrition Section, New York, April 1997

Types of Food Distribution

The need for a fair, efficient, and regular ration distribution cannot be over emphasised. There are two types of food distribution: *dry* rations which are cooked at home, and *wet* (cooked) rations, which are cooked centrally in a special kitchen. Whichever is used, it is important that those distributing the food have exact instructions on the size of the rations. If scales are not available or become an inconvenient way to measure out food, cans or containers with a known weight/volume comparison for each commodity should be used.

Dry Rations

This method has major advantages over cooked food distribution. Dry ration distribution allows families to prepare their food as they wish, permits them to continue to eat together as a unit, and is generally more culturally and socially acceptable. Distribution is usually made at 7-14 day intervals. Where an accurate census is available and families have food distribution cards, some form of group distribution is possible. A designated family member or group leader becomes responsible for distributing the food. In the initial stages, however, the best way to guarantee a fair distribution may be to have every individual present.

In addition to cooking pots, fuel, and utensils, people need containers and sacks (e.g. empty cooking oil tins and grain sacks) to protect and store their food rations. Depending on the type of food distributed, there may be a need for grinding and milling facilities.

Wet Rations

This method requires centralised kitchens with adequate utensils, water, fuel (although obviously less than the amounts required for family cooking), and trained, healthy personnel. At least two meals must be provided per day, so the efficient organisation of a wet ration distribution for large numbers of people is difficult and resource intensive. Such distribution may be necessary during the initial stages of displacement, especially when families have insufficient cooking utensils or fuel.

Infant Feeding and Milk Products

Human milk is the best and safest food for infants and children under 2 years of age. Breast feeding also provides a secure and hygienic source of food, as well as antibodies that protect against some infectious diseases, Therefore, every effort must be made to promote lactation, even among sick and malnourished mothers.

UN agencies stress that infant formulæ, powdered milk products and feeding bottles are to be avoided as much as possible as they cause infections and diarrhœa. These problems are exacerbated in a displaced population situation. Infant formula, if it must be used, should be distributed from health or feeding centres under strictly controlled conditions and proper supervision. Infant feeding bottles must ***never*** be distributed and their use by families actively discouraged; they are almost impossible to sterilise and to keep sterile under even the best living conditions. Babies should be fed from a cup with a spoon.

Milk should not be distributed as part of the general ration if it is not a traditional part of the people's diet. Some populations may even have an intolerance to *lactose* (milk

sugar), which causes diarrhœa if they take dairy foods. When using dried milk powder, both hygiene and proper dilution are difficult to ensure. Powdered milk mixed with unsafe water or exposed to dust or flies can easily become contaminated and provide an ideal environment for bacterial growth.

In addition to infant formula, products commonly offered in emergencies include dried whole milk (DWM), dried skimmed milk (DSM), sweetened and unsweetened condensed milk and evaporated milk. Milk products are sometimes useful in an SFP and a TFP when administered under strict supervision in controlled and hygienic conditions, but they should otherwise be avoided by responsible relief agencies.

Conceptual Model of the Causes of Malnutrition

IMMEDIATE CAUSES	*Affecting the individual*	
	FOOD INTAKE	
	DISEASE	
STRUCTURAL CAUSES	*at the community or household level*	
	HOUSEHOLD FOOD SECURITY	**Access to food of sufficient quantity and quality** **Cultural, social and economic context of household**
	SOCIAL AND CARE ENVIRONMENT	**General availability of food** **Role, status and rights of women and children** **Infant and young child feeding practices** **Cultural, social and economic context of community** **Access to basic community services** **Quality of basic community services**
	PUBLIC HEALTH ENVIRONMENT	**Quality of household, urban and natural environment** **Prevailing disease patterns** **Access to curative and preventative health care** **Quality of curative and preventative health services**
	at the societal/national level	
	INFORMAL ACCESS TO RESOURCES	**Social and cultural structures**
	FORMAL ACCESS TO RESOURCES	**Civil society and government structures**
	STABILITY AND SECURITY CONTEXT	**Political and economic structures**

Adapted from UNICEF (1997b) and Oxfam (1997 draft).

Nutrient and logistics Tables

Food logistics

Minimum survival allocation for 10,000 people/week:	Approximately 36 metric tonnes assuming the following typical ration: ☛ 350-400 g of staple cereal for bulk energy and protein; ☛ 20-40 g of an energy rich food (oil/fat); ☛ 50 g of a protein rich food (beans).

Calorie and Protein content of selected foods

		gm/day	Kcal	Protein (gm)
Rice	Adults	533	1876	37.0
	Children under 5	267	940	19.0
Yellow beans	Adults	50	162	11.0
	Children under 5	25	81	5.5
Soya bean oil	Adults	33	297	0
	Children under 5	33	297	0
RDA(1)	Adults		1900(2)	51.0
	Children 4 to 6 years		1830	33.0

(1) Recommended Daily Allowance; Source: "The Management of Nutritional Emergencies in Large Populations"; C de Ville de Goyet et al.; WHO; 1978.

(2) UNHCR recommended calorie content of a basic ration.

Daily Micro-Nutrient content of Rations

RDA	Calcium (mg)	Iron (mg)	Vitamin A (µg)	Thiamine (mg)	Vitamin C (mg)	Folic Acid (mg)
Adults	450	19.0	750.0	0.93	30.0	200.0
Children (4 –6 years)	40-50	5-10	300.0	0.7	20.0	100.0

Nutritional values of commodities

Item	Energy (kcal)/gram	Protein (mg)/gm
Cereal	3.5	0.1
Oil	9.0	-
DSM**	3.7	0.4
Carbohydrate	4.0	-

Nutritional Requirements

The following figures can be used for planning purposes in the initial stage of an emergency[35]:

Nutrient	Mean requirements
Energy	2100 kcal
Protein	10-12% total energy (52-63g), but <15%
Fat	17% of total energy (40g)
Vitamin A	1666 IU (or 0.5mg RE)
Thiamine (B1)	0.9mg (or 0.4mg per 1000kcal intake)

[35] Adapted from: WHO "The Management of Nutrition in Major Emergencies" and "Joint WFP/UNHCR Guidelines for Estimating Food and Nutritional Needs in Emergencies".

Riboflavin (B2)	1.4mg (or 0.6mg per 1000kcal intake)
Niacin (B3)	12.0mg (or 6.6mg per 1000kcal intake)
Vitamin C	28.0mg
Vitamin D	3.2 - 3.8 µg calciferol
Iron	22mg (low bioavailability (i.e. 5-9%))
Iodine	150 µg

Provisional Nutritional Densities

In the absence of community requirements for these essential nutrients, the following nutrient densities are proposed as a provisional tool for planning purposes. Expert consultations in 1998 may result in new recommendations.

The Desirable Nutrient Densities relate to a refugee diet. The Lower Threshold Density is suggested as the minimum value below which the nutrient density of the whole diet should not fall.

Mineral	Unit	Density	Desirable Lower Threshold Density[36]
Potassium (K)	mg	190	74
Sodium (Na)	mg	60	26
Magnesium (Mg)	mg	30	10
Calcium (Ca)	mg	84	28
Phosphorus (P)	mg	70	21
Zinc (Zn)	mg	0.9	0.4
Copper (Cu)	µg	95	28
Selenium (Se)	µg	3.6	1.85
Manganese (Mn)	µmol	0.3	
Chromium (Cr)	nmol	2.0	
Molybdenum (Mo)	nmol	5.0	
Fluorine (Fl)	µmol	<1	

Source: Golden MHN, Briend A, Grellety Y. Report of meeting on supplementary feeding programmes with particular reference to refugee communities. European Journal of Clinical Nutrition (1995) 49, 137-145.

36 all values are per 100 kcal

Guidelines for Policy Development

for Emergency Management

by the Health Sector[37]

Part 5

Food Aid Policy

[37] The information presented here is adapted from material developed by the Sphere NGO Project;

Policy Framework

Introduction

All people need reliable access to adequate quantities of quality food for their survival and well-being.

If an emergency compromises the availability of food or the ability to access it, communities may require some form of food aid. If they cannot get enough food, people may engage in excessive disposal of household assets, which can lead to destitution. Such short term measures have long-term negative consequences. Without regular food supply, people will also suffer a decline in their general health. Without enough food, other emergency interventions are less effective. Despite nutritional support programmes, cases of observable malnutrition will increase. Similarly, cases of illnesses compounded by lack of adequate nutritional intake will appear despite health interventions.

Even if there is adequate hygiene, people will become more susceptible to risk of disease because of weakened immune systems and diminished bodily reserves. Food aid is rarely the highest priority in the initial stages of disaster response. Most households can survive for days, even weeks, on a combination of household food stocks, wild foods and foraging, and other short-term adaptive strategies. However, given the time required to mobilise, source and deliver food to people affected by disaster, planning and implementation of a food aid programme should begin as soon as the need has been identified. Food aid represents one of the largest direct resource transfers from the humanitarian community to disaster affected households. It is a tangible manifestation of external support and also serves to help stabilise the situation after the disaster and support recovery efforts.

The goals of humanitarian food aid are to:

- ☛ Ensure the availability of adequate amounts of quality food for communities affected by emergencies.
- ☛ Reduce the incidence of protein-energy malnutrition in affected communities.
- ☛ Eliminate the need for affected communities to seek out harmful survival strategies, which have long-term negative consequences to human dignity, household viability and the environment.
- ☛ Provide an opportunity for families to use income transfer or food substitution strategies to preserve household resources for their recovery and thus ensure a quicker return to development.

Providing food aid to large numbers of people, often in very difficult circumstances, is a formidable task that requires careful planning and constant monitoring if it is to be effective. Badly conceived or poorly managed food aid can be more harmful than no food aid at all. Apart from the intricate logistics arrangements needed to acquire, transport, store and distribute large quantities of food items, the technical aspects relating to starting, evaluating and stopping a feeding programme are complex and demanding in terms of time, staff and resources.

Effective food aid cannot be achieved satisfactorily unless there is a clear policy and sound technical guidelines on all the issues to guide decision makers in their work.

Features of the policy

An emergency food aid policy should have the following features. It must:

- define roles, responsibilities and limits of authority.
- identify the minimum standards that are to be met.
- identify objectives which address priority public health issues.
- be co-ordinated with policies of other sectors to ensure that priorities are met and gaps and overlaps are avoided.
- provide measures to ensure that private or foreign agencies work within national guidelines under national supervision and that donated relief assistance meets national standards.
- consider local development contexts - economic, social, political and environmental.

National plans and procedures based on the policy should:

- set a general framework for action, to be further elaborated in detailed local and event specific plans;
- allow a rapid initial response to specific needs as identified by first assessments;
- ensure the safety of staff, volunteers and beneficiaries involved in programme implementation;
- be organised and implemented using promotional and participatory techniques;
- be phased, addressing immediate needs then achieving minimum standards as quickly as possible, giving priority to the most important needs at the time;
- be rapid in impact, but long term in perspective, creating opportunities for future development;
- be implemented by staff with appropriate qualifications and experience for the duties involved, and who are adequately managed, resourced and supported;
- be routinely and systematically monitored to ensure the progress of planned activities and to allow well-timed programme changes where needed.
- involve a representative cross section of the beneficiary community in decision making and in project implementation (design, construction, operation and maintenance), according to their authority and responsibility to participate in these activities.
- recognise the needs of the entire community as well as those directly affected by the event.
- provide equipment and facilities which are sensitive to the traditional practices of the beneficiaries and which ensure a minimum level of dignity and comfort.
- be sensitive to the varied needs of different social groups, at the household level and at the community level, and the impact of the programme on them.

Information Policy

Assessment standards

There is an increasing body of literature concerning the concepts and analytical frameworks relating to the effect of food security on the general well being of households and communities. This documentation should be reviewed for purposes of assessment and analysis, and when making policy and programming decisions.

Evaluation standard

Agencies carrying out food aid programmes are entrusted with a considerable resources for the benefit of people who have been severely compromised and are very vulnerable to exploitation. As with other resources, agencies have a duty to monitor how food aid and programme funds are used, as large food aid programmes provide ample opportunity for dishonest staff to profit personally somewhere in the process.
Emergencies are volatile and dynamic by definition. Current information is therefore vital in ensuring that programmes remain relevant. Information derived from continual monitoring of programmes should be fed into programme reviews and evaluations. In some circumstances a shift in strategy may be required to respond to major changes in the context or needs. Any change to the programme has to be justified on the basis of information concerning the food security situation of the affected population. Monitoring enables the agency to ascertain the impact of the food aid programme on the food security status of the population as a whole.
Information generated by the assessment process is used for monitoring and evaluation activities for the food aid programme. It must also be fed into the Health Information System.
Monitoring activity may include: regular audit review of inventory documents and reporting on commodity movements; review of distribution records and random checks on rations received; and random visits to households receiving food aid to ascertain the acceptability and usefulness of the ration.
The impact of the food aid programme on food security status may be measured using agreed indicators such as morbidity/mortality statistics, nutritional status, or income/self-provisioning proxies. Impact indicators and the means to measure them should be developed and agreed upon when the programme is designed and during implementation.
Documentation generated from the movement of commodities through the supply chain provides the basis for monitoring commodity flows.
Random, routine household visits provides information concerning the acceptability of the ration and how people use it. Household visits also enable identification of people who meet the selection criteria but who are not receiving food aid.
Monitoring information and analysis should be used to identify any gaps in the distribution system and take any corrective action necessary.
Monitoring information generated from the food aid programme is useful to other sectors and to the co-ordinators of the humanitarian response as a whole. The use of food aid by recipients (especially barter or sale) can indicate other unmet needs requiring further attention.
Information collected should be directly relevant to the programme, in other words it should be useful and should be used, whether for the initial assessment, monitoring or evaluation. It should also be shared as needed with other sectors and agencies, and

with the affected populations. The means of communication used (dissemination methods, language and so on) must be appropriate for the intended audience.
Evaluation is important because it measures programme effectiveness, identifies lessons for future preparedness, mitigation and response, and promotes accountability. Evaluation refers here to two, linked processes. Internal programme evaluation is normally carried out by staff as part of the regular analysis and review of monitoring information. The agency must also evaluate the effectiveness of all its programmes in a given disaster situation or compare its programmes across different situations. External evaluation may by contrast be part of a wider evaluation exercise by agencies and donors, and may take place, for example, after the acute phase of the disaster. When evaluations are carried out it is important that the techniques and resources used are consistent with the scale and nature of the programme, and that the report describes the methodology employed and the processes followed in reaching conclusions. Outcomes of evaluations should be disseminated to all actors in the disaster response, including the affected population.

Food Aid Policy

Participation

The people affected by the emergency have the most at stake in the humanitarian response, and their participation in all aspects of the food aid programme is essential. Their understanding and interpretation of their own needs should provide the basis on which programmes are designed and implemented. People should also have the opportunity to participate in making decisions, particularly where ration levels and selection criteria are concerned. This involvement helps to ensure that the programme is equitable.
Participation in the food aid programme may also serve to reinforce people's sense of dignity and worth in times of crisis. It generates a sense of ownership of the programme which can help ensure the safety and security of those who are receiving the aid and those who are responsible for its distribution.

Food aid standard

People can be involved in the food programme in different ways. For example: through provision of paid and volunteer labour for handling and distribution; through participation on distribution committees; through involvement in decision-making on ration levels and selection criteria; by disseminating information about food distributions; by supplying household lists; by assisting in crowd control and security. Involvement in monitoring might be by responding to monitoring questions, or identifying specific households.
Gender balance should be actively sought within food aid programmes, given women's key role in maintaining the well-being of the household. This is recommended by both WFP and UNHCR. In most situations where people have been displaced, there is an increased number of female-headed households, and these may be made more vulnerable if they are disenfranchised within their own society. Finding culturally appropriate ways to involve disenfranchised or minority groups can be facilitated by means of a good analysis of the social and cultural systems within the affected population.

Local authorities should have the primary responsibility for co-ordinating humanitarian response. This is often done in conjunction with a lead UN agency. Food aid programmes are generally co-ordinated by WFP.
All agencies involved in food aid programmes should establish regular meetings where information is exchanged, issues and problems are discussed and solutions are identified.
It is essential to co-ordinate significant local purchases of food commodities. Failure to do so can create problems such as agencies bidding against each other and increasing prices; or excess purchases that create shortages and price increases for the non-recipient population[38].
See Other Critical Issues below for discussion of issues relating to targeting and selection criteria and supporting recovery.
UNHCR and WFP recommend that a full ration of 2,100 kcal per person per day is used as the Initial Reference Value for Emergency Feeding, especially in the initial emergency period and/or for populations who are entirely dependent on external food aid (e.g. displaced people or refugees settled in camps).
Populations affected by natural disasters may have adaptive strategies that enable them to provide for a significant portion of their food requirements (e.g. early harvesting/salvage of crops, livestock sales, alternate cash labour). In this case a food basket and/or ration level may be adjusted down from the initial reference value.
An early use of food aid to meet expected shortfalls in response to slow-onset disasters can result in less food aid and less household de-capitalisation, making recovery easier.
Attention should be given to the adequate provision of essential non-food items (e.g. soap) as a lack may result in recipients trading food commodities to meet these needs. Excessive trading of food commodities to meet non-food needs will result in decreased nutritional intake among the recipient community.
Additional food commodities may be provided during selected times of the year (e.g. planting season) or for specific periods of increased activity and to meet caloric requirements. In cases of food insecurity it may be advisable to distribute food commodities at the same time as seed distribution. This serves to ensure that seed is not eaten or bartered/sold to obtain food, as well as to provide additional energy for clearing and planting fields.
The ICRC uses a ration requirement of 2,400 kcal per person per day as their reference point. The additional 300 kcal of food aid allows for bartering for condiments, fresh foods, or other household needs that are not met by the relief programme.
Periodic nutritional survey data may be used to gauge the effectiveness of the food basket provided and to test the initial estimate of self-provisioning capability, as this will change over time. An increase in malnutrition or disease related to poor nutrition may indicate that the ration scale and food basket require adjustment.
Co-ordination is especially critical in providing logistical support to deliver food aid to the affected population.

Co-ordination

Given that food aid represents a significant resource transfer to people whose assets and income have been severely compromised by the disaster, there must a commitment by all organisations involved in providing food aid to co-ordination.

[38] See Nutrition for more information and detail

Improperly co-ordinated food aid programmes can result in inequities in the humanitarian response that may exacerbate existing problems or create new ones. Some areas may be over-served, while others are under-served. Different ration scales, food baskets, and/or selection criteria may result in populations moving to where they think they can receive the most benefit. Working together to agree on food aid policies and activities helps ensure that programmes are effective and it also serves to stabilise an often volatile situation.

Requirements

The analysis and assessment of the emergency situation should indicate the quantity and type of food assistance required to maintain adequate nutritional status for the general population. The assessment should make an estimate of the self-provisioning capability of the affected population. The WHO basic nutritional requirement for an average population is used as a reference point for calculating food aid requirements[39]. Specific groups, such as pregnant and nursing women and children, may require food in addition to the daily requirement because of a higher consumption of calories.

Food aid requirements may be established for:

- A full ration: to provide a complete basket of food commodities in quantities equivalent to the WHO requirement.
- A complementary ration: to provide one or two food commodities to complement foods that are available and accessible to the affected population, for example, pulses and oil might be provided to complement locally accessible cereals.
- A supplementary ration: to provide a specific type of food as a supplement to existing food supplies in order to meet the needs of a specific group.

Resource management

Food commodities, like all resources, must be managed in an effective and accountable way. Many agencies have standardised commodity/inventory management procedures and accounting systems that are based on principles of sound, transparent resource stewardship. Inventory systems are essential for producing reports for donors. More importantly they provide programme planners and managers with information to make decisions about service priorities for the people receiving food aid.

Agencies are expected to take all reasonable measures to safeguard the food commodities in their care. Third party contractors acting on behalf of agencies, such as transporters and forwarding agents, must accept liability for commodities in their care as the theft or diversion of food aid cannot be tolerated.

Most bilateral and multilateral donors of food aid specify reporting requirements for food aid. Recipients of food aid via institutional donors should be aware of these requirements and establish the means to meet them[40].

Various guidelines and manuals that detail warehouse and commodity management and storage practices are available[41].

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[39] see Nutrition: Appendix 2

[40] Generally Accepted Commodity Accountability Principles published by Food Aid Management provides guidance in establishing a food aid accounting system. See Appendix 1

Fair and open contracting procedures are essential to avoid the impression of favouritism or personal financial reward. Most agencies have contracting and procurement guidelines that meet requirements for non-profit or charitable status.
Experienced food aid managers should be a part of all food aid programmes to manage and train permanent staff, and/or to establish inventory management systems. Computers and spreadsheet-based software have become valuable tools for commodity managers to assist in planning and management and to analyse inventory data.
A sufficient stock of inventory management documentation and forms (waybills, stock ledgers, reporting forms) must be available at locations where food aid is received, stored, and/or dispatched in order to maintain a documented audit trail of commodity transactions.
The use of local media or traditional methods for disseminating news should be considered as a way of keeping people informed about food aid supplies and operations. This reinforces transparency.

Logistics

Agencies must have sufficient capacity to manage the logistics of food aid programmes. If food aid is available, but agencies do not have adequate resources and systems to deliver it to the affected population, the programme will have failed. The goal of logistics management is to deliver the right goods, to the right location, in the right condition, at the right time, and for the right price.
The weight and volume of food aid required to sustain a population severely affected by disaster measures thousands of tons. The physical movement of food commodities to point of distribution involves an extensive network of purchasers, forwarding agents, transporters and receivers and involves 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 liability and compensation among the contracting parties.
Establishing the supply chain may entail co-operation with donors, UN agencies and NGO local and national level authorities.
Each party has specifically defined roles and responsibilities, serving 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 equal responsibility for maintaining the sufficient flow of commodities to meet distribution targets and schedules established by the food aid programme.

Logistics standard

Sourcing of food aid commodities may include: diversion (loan or reallocation) from existing programmes using food aid (either own or another NGO/non-profit and/or government grain reserves); loans from, or swaps with, commercial suppliers; commercial purchases (locally, regionally, internationally); institutional grants from bilateral and multilateral donor agencies.
In large scale emergencies, WFP usually plays a key role in the mobilisation of food aid and in primary logistics. WFP may be responsible for all food aid logistics up to the Extended Delivery Point (EDP), an inland destination close to the affected area. Implementing partners (government or sometimes NGO) assume responsibility for

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[41] See Appendix 1

transportation from the EDP to the distribution site and distribution to recipient households.
Local or regional freight forwarders and/or transport brokers can provide general logistics services to a client under contract and are a valuable source of knowledge on local regulations and procedures.
Tracking and forecasting of stock levels along the supply chain highlights anticipated shortfalls or problems with the supply of food commodities. Alternatives and solutions need to be sought to avoid or reduce problems in the supply chain. Logistics accounting and inventory systems generate valuable information for measuring performance. For example:
Food distribution plans can be compared with actual food deliveries. Extreme deviations from the plan can direct managers' attention to problems or bottle-necks in the logistics system.
Budgeted and actual costs for each activity in the logistics system (e.g. handling, clearance, storage, and transportation, distribution) can be compared to assess cost control within the logistics system. Extreme deviations from the budget can direct managers' attention to inefficiencies and/or economies of scale within the logistics system.
Ton-kilometres are frequently used to measure performance and productivity in trucking fleets. Extreme deviations from an acceptable range of activity can direct managers' attention to problems in truck tasking and/or transit and turn-around times.
Throughput is a measurement of warehouse activity that reflects the volume of goods handled and moved through the warehouse. It is useful for identifying the number staff needed for a specific level of activity, and can be used to produce cost-savings and productivity gains.
Pipeline analysis views the logistics network, from origin(s) to destination(s), as a network of pipelines through which food commodities move. It is useful for producing an estimation the expected duration of existing food aid stocks, and a schedule of delivery dates for shipments to avoid stocks dropping below requirement. Pipeline analysis is key to forecasting potential problems and to planning procurement and delivery schedules.
The principles of good logistics management, accountability and transparency apply equally to the planning and delivery of materials and supplies for water and sanitation programmes, shelter and household support and health services.
The logistics of food aid operations differ only from the other services in being more intensive.

Distribution

An appropriate distribution method is key to the success of the food aid programme and must be considered during the initial assessment. It is central to the design of the programme. Food aid may be distributed freely to the general population, or to specific segments or groups within a population. It may also be distributed as payment for work, or may be sold on the commercial market to address problems of supply.
Equity in the distribution process is of primary importance and the involvement of people from the disaster affected population in decision-making and implementation should be encouraged wherever possible. 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, for example adjusted rations provided to for at-risk groups must be explained and understood.

Distribution standard

The extent to which people for the affected population can be involved depends on the impact of the disaster on social structures of the affected population. Communities affected by slow-onset drought or other natural disasters may remain intact and continue to function well, enabling them to participate fully in the distribution process. Communities that are severely affected by war and civil strife, however, may not be able to take on a significant role in the distribution process at first, but as the situation stabilises and civil structures emerge are more likely to do so. Participation in distribution committees may also serve to stimulate civil society. See Standard 1: participation.

Random weighing of rations collected by households leaving the distribution site can measure the accuracy and competence of distribution management. This also helps ensure equity. WFP considers 90% - 110% of the planned ration to be within the acceptable range for equity.

The method of distribution should evolve over time. In the early stages, community managed distribution based on family lists or population estimates provided by local communities may be the only way possible to get food aid distributed among the affected population. Community managed distributions should be monitored closely by the responsible agency to ensure that stated distribution norms are met.

Changes in the food basket or ration level caused by insufficient availability of food aid must be discussed with the recipients via the distribution committee, or community leadership, and a course of action developed jointly. The distribution committee can inform the population of the change and why this has come about. WFP recommends the following substitution ratios, to be used for periods of less than one month when all commodities in the food basket are not available:

- Blended food and beans 1:1
- Sugar and oil 2:1
- Cereals and beans 2:1
- Cereal for oil 3:1

Formal registration of households receiving food aid and the issuing of ration cards are not always required as a precondition for the distribution of food aid. In the early stages of an emergency response, the lack of stability among a population that has been displaced makes registration impractical, if not impossible. In such situations UNHCR recommends registration after three months, when the population has stabilised and there is an expectation that food aid will be required for longer periods. The use of community-generated family lists and routine random monitoring may be sufficient to ensure accountability and equity within the distribution system.

Human Resources Policy

All aspects of the humanitarian response rely on the skills, knowledge and commitment of staff and volunteers working in difficult and often insecure conditions. The demands placed on them can be considerable and if they are to conduct their work competently and carefully, to a level where minimum standards are assured, it is essential that they are adequately managed and supported both in the field and from headquarters. In designing programmes, human resource capacity issues must be

addressed and specific training and support should be incorporated as necessary. Those likely to be targeted include expatriates, national staff, government or local authority counterparts, community volunteers and members of the population affected by the emergency.
The provision of training and support is a continual process. The skills of staff or community members need to be up-dated and refreshed regularly to ensure that the quality of service delivery is maintained, and improved.
Concepts such as 'skills', 'knowledge,' 'experience' are not measurable unless they are attached to specific anticipated outcomes. These could be specified and developed in the field, ensuring they are appropriate to the context, local priorities, resources and timescale of operation.
In the often unpredictable environment of emergency operations, where sudden withdrawal of international staff or agencies may occur, training of national staff and volunteers is paramount if work is to continue.

Other Policy Issues

Readiness and early warning

- Agencies should strive to prevent as well as to respond to humanitarian emergencies. Monitoring of early warning information and a continual state of preparedness are critical.
- Early warning information should be used to guide programming and to advocate for action and resources on behalf of the affected population. Information about increased levels of food insecurity should be communicated as a matter of course to local authorities and other humanitarian agencies.

Agencies working in disaster-prone areas or with populations vulnerable to disasters should identify and make use of all appropriate Early Warning Systems (EWS). These may include locally based agricultural and meteorological monitoring systems and extension networks, national monitoring systems or regional or international early warning systems sponsored by the UN or specific donor countries. They may monitor specific phenomena such as hurricane development or more general issues such as food security or crop production.

Targeting and selection criteria

Selection of recipients of food aid should be made on the basis of need and of vulnerability to food insecurity[42]. Vulnerabilities will change as assistance programmes evolve and so selection criteria and targeting may also need to change. Targeting also involves prioritising food allocation: therapeutic or supplementary feeding centres come first, then families with large numbers of children under 12, followed by female-headed households, and the general population.
Communities often have their own ways of identifying people in need and these systems can be used and supported to ensure that assistance gets to those who need it in culturally appropriate ways. Targeting criteria and methods should be developed in consultation with food aid committees and other groups among the population. The

[42] see article 2, Code of Conduct for the International Red Cross and Red Crescent Movement and NGO in Disaster Relief

community must be made aware of what the targeting and selection criteria are, and how decisions have been made.

Supporting recovery

Food aid programmes provide the affected population with time to recover from an event that has threatened life and livelihood, to consolidate resources, and to start to re-establish the conditions for a normal life.

Programming that aims to improve the availability, access and utilisation of food resources should be put in place at the same time as food aid distributions in order to support recovery of food production capability, initiation of income generating activities and/or recovery of health status.

People congregate at distribution sites, so these provide a natural focus for communication and dissemination of information - such as health and safety awareness, or ration entitlements - adding value to that provided by food distribution activities.

The food distribution infrastructure should also be used to distribute other material resources thereby avoiding duplication of costs and effort. Non-food relief items (jerry cans, kitchen sets, soap, shelter materials, and blankets) can be distributed in this way.

Seeds and agricultural tools or other productive items may also be distributed through the system at a later stage.

Transition and exit strategies

From the point of view of a agency providing emergency relief, one of the goals of any relief programme is to terminate it as soon as it is possible. This applies especially to food aid. Therefore, defining the criteria of termination is an essential part of the initial planning process. Setting these criteria first makes it easier to define the other, more technical goals and objectives of the programme, since the overall target has been defined by the exit strategy.

Departments and agencies that have responsibilities in emergencies are expected to define in advance their area of operation, the duration of their involvement and the desired outcomes of the intervention. They should also define a strategy for ending their programmes, or making a transition to recovery and the resumption of their normal development activities in that sector.

Local people have a right to know the extent of an agency's commitment so that they can make better decisions about how to employ household resources. By discussing with them the objectives of the programme, indicators of success and outcomes, problems that would otherwise result from differing expectations can be avoided.

Interpreting nutritional data

Indicators of improved nutritional status must be interpreted with great care and should be used in conjunction with information relating to the population's food security status. Figures showing significantly improved levels of nutrition may mean that the ration mix, the quantities provided and the distribution of food have been effective.

It may not mean that people's independent access to food has improved. If people are still unable to provide for their own minimum household food requirements, terminating the aid programme may result in an erosion of the nutritional gains that have been made and precipitate a return to emergency conditions.

Guidelines for policy Development

for Emergency Management

by the Health Sector[43]

Part 6

Water and Sanitation policy

[43] The information presented here is adapted from material developed by the Sphere NGO Project;

Policy Framework

Introduction

Inadequate sanitation systems and water supply are the commonest cause of morbidity and mortality in communities affected by a disaster. The most important of these is diarrhœal diseases, which are spread in contaminated water and food. The likelihood of transmission is increased when people living in crowded conditions have insufficient water for personal and domestic hygiene, when pre-prepared food is not stored or handled correctly, and when expired food items are distributed in relief packages. Other important diseases include those carried by vectors, whose life cycles depend on or are facilitated by the presence of solid waste or water.

Plans for the provision of a temporary service should be part of every communities emergency management plan because disasters always cause damage and/or disruption to water supply and sanitation arrangements, and often people are displaced into temporary shelters which will require temporary arrangements for water supply and hygiene.

This paper provides guidance to national authorities in developing policies and guidelines to assist local communities in establishing a safe, durable temporary service whenever necessary.

Water supply and sanitation in emergencies

The immediate goal of providing a temporary water supply in an emergency is to prevent any additional loss of life. In addition, good water supply and sanitation programmes break the transmission routes of common and exotic fæco-oral diseases and they reduce exposure to disease-bearing vectors. Also, an important goal is to establish conditions that allow people to live and to perform daily tasks such as going to the toilet and bathing with dignity, comfort and security.

The aims of water supply and sanitation programmes, as well as those of the other sectors, flow from a wider goal which is the cornerstone of humanitarian practices. This goal is to alleviate human suffering brought about by calamity or conflict through protecting life with dignity, in ways that support durable recovery.

Progress in achieving standards in one area determines the importance of progress in other areas. For instance, in situations where excreta disposal and hygiene facilities are inadequate, it is more urgent to reach the minimum water quantity standard than in situations where the environment is relatively free of pathogens due to adequate sanitation and hygiene conditions. Priorities should be decided in the field, on the basis of sound information shared between sectors, as the situation and the emergency response evolve.

The minimum standards describe the conditions necessary for stabilising the emergency situation and providing an acceptable level of health and protection of life with dignity in the short to medium term. They do not describe the absolute minimum necessary for short-term survival, and are not expected to be achieved immediately. Survival standards of water supply and sanitation should be established as soon as possible in order to prevent avoidable disease and death in the early stages of a prolonged emergency. These should be seen as steps on the way to achieving minimum standards which are acceptable over the longer term.

The minimum standards equally may not be appropriate for evacuee situations which last for a number of years, and so, should not be seen as maximum standards. Water

supply and sanitation interventions should be matched to the type and severity of the emergency, by working towards minimum standards as quickly as possible, as well as responding to urgent needs with intermediate solutions. Minimum standards for water supply and sanitation should be reached within three to six weeks of the start of a typical long-term evacuee programme. For most emergencies, the priority will be the provision of short term temporary systems, while repairing and restoring the normal system of that community.
Reference to other sectors' technical standards are made where relevant. The purpose of this is to highlight how work in one sector is closely linked to work in other sectors, and that progress in one is dependent on progress in other areas.

Features of an emergency water supply and sanitation policy

An emergency water supply and sanitation policy should have the following features. It must:

- define roles, responsibilities and limits of authority.
- identify the minimum standards that are to be met.
- identify objectives which address priority public health issues.
- be co-ordinated with policies of other sectors to ensure that priorities are met and gaps and overlaps are avoided.
- provide measures to ensure that private or foreign agencies work within national guidelines under national supervision and that donated relief assistance meets national standards.
- consider local development contexts - economic, social, political and environmental.

National plans and procedures based on the policy should:

- set a general framework for action, to be further elaborated in detailed local and event specific plans;
- allow a rapid initial response to specific needs as identified by first assessments;
- ensure the safety of staff, volunteers and beneficiaries involved in programme implementation;
- be organised and implemented using promotional and participatory techniques;
- be phased, addressing immediate needs then achieving minimum standards as quickly as possible, giving priority to the most important needs at the time;
- be rapid in impact, but long term in perspective, creating opportunities for future development;
- be implemented by staff with appropriate qualifications and experience for the duties involved, and who are adequately managed, resourced and supported;
- be routinely and systematically monitored to ensure the progress of planned activities and to allow well-timed programme changes where needed.
- involve a representative cross section of the beneficiary community in decision making and in project implementation (design, construction, operation and maintenance), according to their authority and responsibility to participate in these activities.
- recognise the needs of the entire community as well as those directly

affected by the event.

- provide equipment and facilities which are sensitive to the traditional practices of the beneficiaries and which ensure a minimum level of dignity and comfort.
- be sensitive to the varied needs of different social groups, at the household level and at the community level, and the impact of the programme on them.

Information policy

If relief programmes are to meet the needs of affected communities, they must be based on a clear understanding of the specific situation that has occurred. The people affected, relief agencies and the local authorities need to know that interventions being undertaken are in fact appropriate and effective. If problems are not correctly identified and understood from the beginning, then it will be difficult, if not impossible, to make significant changes in programming at a later date. An immediate and accurate analysis of the overall effects of the event and its impact on the water supply and sanitation situation itself, is therefore critical to a durable response.

General Assessment Standard

An assessment report, presented in a pre-determined format, covers key areas and makes specific recommendations for each. Assessment findings are shared between local authorities, representatives of the affected communities and participating agencies.

Timeliness is of the essence for the initial assessment, which should be carried out by the local authorities as soon as possible after the impact. There should be an immediate response to critical needs at the same time. As a general rule, an initial report should be generated within 4 hours and updated every 24 hours, though clearly this depends on the particular event and the wider situation.

If required, survey teams which are able to collect information from all groups in the affected community in a culturally acceptable manner should be formed (teams should include women, as well as members able to speak the local language).

Details of the assessment should be agreed upon by all participants before field work begins and specific tasks contributing to the assessment should be assigned accordingly.

Techniques for information gathering are determined by the senior epidemiologist present, and are chosen carefully to match the situation and the type of information required. As a general rule, information should be gathered more frequently when the situation is changing more rapidly, and when there are critical developments such as new community movements or an outbreak of disease. Initial assessments may be quick and unrefined but analysis improves as more time and data are available. Checklists prepared in advance are essential in ensuring that all the key issues will be examined.

Analysis should demonstrate an awareness of underlying structural, political, economic and environmental issues operating in the area. It is imperative that prior experience and local understanding are taken into consideration when analysing the dynamics and impact of the new situation. Authorities must ensure that local expertise and knowledge is used effectively in data collection and the analysis of resources, capacities, vulnerabilities and needs. The current and pre-emergency living conditions of displaced and non-displaced people in the area must also be considered.

The needs of groups that are at risk of excess morbidity such as pregnant and lactating women, unaccompanied children, the elderly, the disabled (physical, social and mental) and people in institutions (prisons, hospitals, etc.) must be considered.
Assessments should be interpreted in terms of both immediate relief actions and the needs of the recovery period. Interventions to meet immediate emergency requirements should facilitate the recovery of the affected community.
Co-ordination between the different humanitarian actors and the different sectors is essential to ensure that activities respond to actual needs and are effective.

Monitoring and Evaluation Standard

Emergencies are volatile and dynamic by definition. Current information is therefore vital in ensuring that programmes remain relevant. Information derived from continual monitoring of programmes should be fed into programme reviews and evaluations. In some circumstances a shift in strategy may be required to respond to major changes in the context or needs. Any change to the programme has to be justified on the basis of information concerning the water supply and sanitation situation of the affected community. See Appendix 3 for suggesting reading on assessment, monitoring and evaluation.
Information generated by the assessment process is used as an initial baseline for the Health Information System and for monitoring and evaluation activities for the water supply and sanitation programme.
Information collected should be directly relevant to the programme, in other words it should be useful and should be used, whether for the initial assessment, monitoring or evaluation. It should also be shared as needed with other sectors and agencies, and with the affected communities.
The means of communication used (dissemination methods, language and so on) must be appropriate for the intended audience.
Evaluation is important because it measures programme effectiveness, identifies lessons for future preparedness, mitigation and response, and promotes accountability.
Evaluation refers here to two, linked processes. Internal programme evaluation is normally carried out by staff as part of the regular analysis and review of monitoring information.
The agency must also evaluate the effectiveness of all its programmes in a given disaster situation or compare its programmes across different situations. External evaluation may by contrast be part of a wider evaluation exercise by agencies and donors, and may take place, for example, after the acute phase of the disaster. When evaluations are carried out it is important that the techniques and resources used are consistent with the scale and nature of the programme, and that the report describes the methodology employed and the processes followed in reaching conclusions.
Outcomes of evaluations should be disseminated to all actors in the disaster response, including the affected community.

Excreta Disposal policy

Proper excreta disposal creates the first barrier to excreta-related disease, helping to reduce disease transmission through direct and indirect routes. Excreta disposal is therefore a first priority, and in most emergency situations should be addressed with as much speed and effort as water supply.
Appropriate arrangements for defæcation are one of a number of emergency interventions essential for people's dignity, health and well-being.

Priority should be given to restoration of the normal waste disposal systems. If these are significantly disrupted or damaged, or there are groups of people who have been displaced, arrangements should be made for providing temporary facilities, according to the criteria set out below.
Successful excreta disposal programmes are based on an understanding of peoples' varied needs, and on the participation of the users in the use of facilities which they may not be accustomed to and which they may not find easy or attractive to use. Design, construction and location of toilets must take account of the preferences of the intended users.
Particular attention should be given to children's fæces, which are commonly more dangerous than those of adults. Parents need to be involved in design and planning, and facilities should be designed and installed with children in mind.
Water should be provided in toilets for communities which use it. For other people it may be necessary to provide some sort of paper or other material for anal cleansing. Users should have the means to wash their hands after defæcation, and should be encouraged to do so if necessary. This provides an important barrier to the spread of disease.
Women and girls of reproductive age should have access to suitable materials for the absorption and disposal of menstrual blood. If these materials are to be provided by the agency, women should be consulted on what is appropriate. Where cloths are washed, dried and re-used, women should have access to a private place to do this in a hygienic way.
If toilets are not kept clean, they may be a focus for disease transmission and people will prefer not to use them. Cleaning and maintenance of all types of toilet should be addressed. Toilets are more likely to be kept clean if users have a sense of ownership. This is encouraged by having them close to where people sleep, avoiding large blocks, and involving users, where possible, in decisions about their design and construction.
It is not possible to provide one toilet per 20 people or per family immediately. In the short term, shared facilities are usually needed. Access to these shared facilities can be ensured by working with the intended users to decide who will have access to the toilet and how the sharing and responsibility for cleaning will be organised. It may be that men and women use different toilets, or that several families all use the same toilet. As the numbers of toilets are increased the sharing arrangements will change.
In some situations it may be necessary to provide, clean and maintain public toilets for some or all of the community. It is important both that sufficient numbers of toilets are available and that every person can identify and gain access to a toilet when necessary.
The distances given above may be increased for fissured rocks and limestone, or decreased for fine soils. Groundwater pollution may not be an immediate concern if the ground water is not consumed.

Water Supply policy

Water is essential for life. It is needed for drinking, cooking and personal and domestic hygiene. In extreme situations, there may not be enough water available to meet physiological needs, and in these cases providing enough potable drinking water for survival is the most urgent and important priority of all. In most cases however, the main health problems associated with inadequate water supply are caused by poor

hygiene due to lack of water, and by the consumption of water that has been contaminated.

Priority should be given to restoration of the normal water supply and distribution systems. If these are significantly damaged or there are groups of people who have been displaced, arrangements should be made for providing temporary water supply, according to the criteria set out below.

The exact quantities of water needed for domestic will may vary according to the climate, the sanitation facilities available, people's normal habits, the food they cook, the clothes they wear etc. In some situations water may be needed in large quantities for specific purposes, for instance to keep an existing sewer system or urban water distribution system functioning, or to water animals which may be vital to the livelihoods and well-being of the people affected by the disaster.

In most emergency situations, water-related disease transmission is due as much to insufficient water for personal and domestic hygiene as to contaminated water supplies. When applying standards for microbiological water quality in an emergency situation, consideration should be given to the risk of excess infection from water-borne disease posed by the water supplied, and what other water sources people may be likely to use.

Water disinfection: water should be treated with a residual disinfectant such as chlorine if there is a significant risk of water source or post-collection contamination. This risk will be determined by conditions in the settlement, such as community density, excreta disposal arrangements, hygiene practices, the prevalence of water-borne disease etc.

As a general rule, any piped water supply for a large and concentrated community should be treated with a residual disinfectant such as chlorine, and in the case of a threat or existence of a diarrhœa epidemic, all drinking water supplies should be treated at source or in the home.

Chemical and radiological contamination: where hydro-geological records or knowledge of industrial activity suggest that water supplies may carry chemical or radiological health risks, those risks should be assessed rapidly in the most logical way possible. A decision that balances short-term public health risks and benefits should then be made. A decision about using possibly contaminated water for longer term supplies should be made on the basis of a more thorough assessment and analysis.

Palatability: while taste is not a direct problem for health, if the safe water supply does not taste good to the consumers they may drink from unsafe sources and put their health at risk. This may also be a risk when chlorinated water is supplied. Palatability depends on what the consumer is used to and should therefore be verified in the field to make a final decision on whether or not the water is acceptable, or whether promotional activities are needed to ensure that only safe supplies are used.

Water quality for health centres: apart from small quantities of very pure water needed for some medical equipment, water supplied to health centres does not need to be of better quality than that supplied to the general community, unless the concentration of certain chemicals is particularly high. However, given the likely numbers of pathogenic organisms present in health centres and the vulnerability of patients, water should be disinfected with chlorine or another residual disinfectant, and water storage equipment designed and managed to control contamination.

Quality / quantity: during the emergency attention must be given to the quantity of water that is available as well as its quality. Until minimum standards for both

quantity and quality are met, the priority should be to provide equitable access to an adequate quantity of water of intermediate quality, rather than to provide an inadequate quantity of water which meets the minimum standard for quality. If there are serious doubts about the microbiological quality of the water, it should be treated with a residual disinfectant as a first measure to improve quality.
Access and equity: even if sufficient quantity of water is available to meet minimum needs, additional measures may be needed to ensure that access is equitable. Unless water points are sufficiently close to people's dwellings, they will not be able to collect enough water for their needs. In urban situations it may be necessary to have water supplied into individual buildings to ensure that sanitation facilities continue to function. Water may need to be rationed to ensure equity, even if there is enough for everyone's basic needs.
Water use facilities: People need vessels to collect water, to store it and to use it for washing, cooking and bathing. These vessels should be hygienic and appropriate to local needs and habits, in terms of size, shape and design. People may also need a space where they can bathe in privacy. If this is not possible at the family shelter, some central facilities may be needed. Washing clothes is an essential activity for hygiene, particularly for children, and cooking and eating utensils need washing. It is not possible to define universal standards relating to these activities, but if some facilities are needed for them to be carried out then they should be available. The design, numbers and location of these facilities should be decided in consultation with the intended users.

Vector Control policy

Vector-borne diseases are a major cause of disease and death in many emergency situations. Although malaria is probably the vector-borne disease of greatest public health concern, a number of others can pose a major threat to health. Flies may play an important role in the transmission of diarrhœal disease. The control of vector borne disease involves efforts in several areas, including health services, shelter, site selection and planning, and environmental health services, including water supply, excreta disposal, solid waste management and drainage.
Although the nature of vector borne disease is complex and addressing vector-related problems often demands specialist attention, there is much that can be done with simple and effective measures once the disease, the vector and their interaction in the beneficiary community have been identified.
Although not of primary public health concern, so-called nuisance vectors, such as bed bugs can cause significant discomfort and loss of sleep and are often worthy of attention for their indirect impact on health.

Links with other sectors

Site selection is important in limiting the exposure of the community to vector-borne disease risk. The risk of vector-borne disease is one of the key questions considered when choosing possible sites. Health service activities may help reduce pathogen prevalence by effective treatment, immunisation or prophylaxis, and vector-borne disease control should be undertaken with activities in both the health sector and the water supply and sanitation sector. Both health service and nutrition activities can help reduce vector-borne disease incidence by their impact on general health and nutritional status.

Defining vector-borne disease risk

Decisions about vector control interventions should be based on an assessment of excess disease risk, as well as on clinical evidence of a vector-borne disease problem. Factors influencing this risk include:

1. Immune status - previous exposure, nutritional stress and other stresses;
2. Pathogen type and prevalence - in both vectors and humans;
3. Vector species and ecology;
4. Vector numbers (season, breeding sites etc);
5. Existing individual protection and avoidance measures.

Individual protection measures

It is recommended that if there is a risk of excess malaria, individual protection measures such as treated bednets are provided systematically and at an early stage. Impregnated bednets have the added advantage of giving some protection against lice, bedbugs and sandfly vectors of Leishmaniasis. Other individual protection measures which may be appropriate and which are commonly used already by people familiar with mosquitoes include the use of long sleeved clothing, household fumigants, mosquito screens and repellents. It is vital to ensure that users can accept and use these individual protection measures if they are to be effective.

Environmental and chemical vector control

There are a number of basic environmental engineering measures which can be taken to reduce the opportunities for vector breeding within the settlement. These include as excreta and refuse disposal for controlling flies, and drainage of standing water for controlling mosquitoes. Most priority environmental health measures such as excreta disposal and refuse disposal will have some impact on the communities of some vectors, but not all. However, it may not be possible to have sufficient impact on all the breeding, feeding and resting sites within and nearby the settlement, even in the longer term, and localised control measures or individual protection measures may be needed.

In some circumstances, space spraying may be justified and effective in reducing numbers of adult insects, for example in anticipation of, or during, a diarrhœa epidemic.

Household and personal insecticide treatment

Household treatment with residual insecticide can be effective in controlling the spread of malaria. Louse-borne typhus and relapsing fever may be avoided by personal treatment for the control of body lice by means of a mass campaign, and as newly displaced people arrive in a settlement.

Indicators for vector control programmes

The only practicable indicators for measuring the impact of most vector control activities are disease incidence and parasite counts (for malaria). However, these are insensitive indicators which should be used with caution and interpreted in the light of other factors.

Vector control programmes may have no impact on disease if they target the wrong vector, use ineffective methods, or target the right vector in the wrong place or at the wrong time. Health data can help identify and monitor a vector problem, but designing an effective response requires more detailed study and, often, expert advice.

This advice should be discussed with national and international health organisations, to ensure that national and international protocols are followed to identify the appropriate response and to ensure the correct choice and application of any chemicals used. Local advice should be sought on local disease problems, breeding sites, seasonal variations in vector numbers etc.

Solid Waste Disposal policy

If organic solid waste is not disposed of, the major risks posed are fly and rat breeding (see vector control) and surface water pollution. Uncollected and accumulating solid waste and the debris left after a natural disaster or conflict may also create a depressing and ugly environment, discouraging efforts to improve other aspects of environmental health. Solid waste may block drainage channels and lead to environmental health problems associated with stagnant and polluted surface water.
Refuse type and quantity: refuse in emergency settlements varies widely in composition and quantity, according to the amount and type of economic activity and the staple foods consumed. The extent to which solid waste has an impact on people's health should be assessed in a logical manner to identify whether action is needed and what that action should be.
If solid waste is recycled within the community this should be encouraged, as long as it presents no significant health risk. Distribution of commodities which produce a large amount of solid waste because of the way they are packaged or processed on site should be avoided.
Participation: most solid waste management programmes depend on the participation of the community concerned for placing their refuse in containers provided, or burying it where appropriate. Parents and children should be made aware of the dangers of playing with or recycling medical wastes.
Medical waste: special provision is needed for medical waste. It should be disposed of within the perimeter of a medical facility, cholera isolation centre, feeding centre etc, and not mixed in with the general settlement refuse. Responsibility for disposing of medical waste should be clearly decided.
Market waste: most market waste can be treated in the same way as domestic refuse. Slaughter house waste may need special treatment and special facilities to deal with the liquid wastes produced, and to ensure slaughtering is carried out in hygienic conditions.
The dead: mortality rates are often high during the early stages of emergencies, demanding mass management of dead bodies. In special cases such as during cholera or typhus epidemics, human remains may pose special health risks. However, in general, families should be allowed to bury or cremate their own dead in their traditional way. Cemeteries or cremation facilities should be planned for and provided early on in the life of a new settlement, in consultation with members of the affected community. (legal issues, forensic issues, low risk of transmission)
Provision should be made for monitoring funerals for mortality data. It may be necessary to provide cloth or other materials for families to wrap their dead before burial or cremation.
Disposal of solid waste: whatever means of final disposal is chosen, for instance burial or incineration, this should be done in a location and in such a way as to avoid creating health and environmental problems.

Surface water drainage policy

Surface water in and near emergency settlements may come from household and water point wastewater, leaking latrines and sewers, rain water and rising floodwater. The main health problems associated with this water in emergencies are contamination of water supplies and the living environment, damage to latrines and shelters, vector breeding, and drowning.

Surface water in and near the settlement may provide health and other benefits, enabling people to wash themselves, their utensils and their clothes. An appraisal of the benefits and risks presented should be made when deciding whether or not to drain such water bodies. This section addresses small scale drainage problems and activities. Large scale drainage is generally determined by site selection and development, and are addressed in the Shelter and Sites chapter.

Site selection and planning: the most effective way to avoid drainage problems is in the choice and lay out of the emergency settlement (see Shelter and Site). It may not be practicable to address the drainage problems of some sites, or of nearby water bodies.

Promotion: where small scale drainage works are necessary to protect latrines and shelters, and to avoid stagnating household and water point wastewater, it may be appropriate to involve the community concerned. Technical support and tools may then be needed. It may also be necessary to provide information and alternatives if local water bodies pose health risks such as schistosomiasis or hazards from consumption of the water.

Hygiene promotion policy

Hygiene behaviour is a crucial factor in the transmission of water and sanitation-related disease, and hygiene promotion is widely considered to be an essential element of an effective emergency water supply and sanitation response. However it is difficult measure the impact of such programmes in emergency situations, and the evidence of their success in emergencies is limited. Nevertheless, it is possible to assess, plan and implement effective hygiene promotion activities in emergency situations, as long as this is done with clear objectives which are focused on a very small number of important practices which can be rapidly influenced. It must be stressed that hygiene promotion should never substitute for good sanitation and water supplies, which are the key to good hygiene.

Definition of hygiene promotion

Hygiene promotion is defined here as the mix between the community's knowledge, practice and resources, and agency knowledge and resources which together enable risky hygiene behaviours to be avoided. Effective hygiene promotion relies on an exchange of information between the agency and the affected community in order to identify key hygiene problems, and to design, implement and monitor a programme to promote hygiene practices that will deal with these problems. This definition recognises that hygiene behaviour and the material means for healthy living should be promoted together.

Agencies and beneficiaries share responsibility for hygiene practice: as with all of the other standards, action by agencies on hygiene promotion will not necessarily be required, but these are points which need monitoring so that action can be taken if necessary. The ultimate responsibility for hygiene practice lies with the affected community. The responsibility of humanitarian agencies is to enable hygienic practice

by ensuring that both knowledge and facilities are accessible, and to be able to demonstrate that this is achieved.
Targeting priority hygiene risks and behaviours: the objectives of hygiene promotion activities and communication strategies should be clearly defined in order to avoid diluting key messages, confusing people or sending messages to the wrong people. The understanding gained through assessing hygiene risks should be used to plan and prioritise material assistance, so that information flows usefully between the agency and the community concerned.
The two most important hygiene behaviours are safe stool disposal and hand washing with soap (or alternative) after contact with stools (defæcation or handling children's' stools). These are likely to be the two most important practices for hygiene promotion programmes to target. In most emergency situations other practices such as covering food or burying refuse are likely to be of secondary importance. An assessment is needed to identify the key behaviours to be addressed and the likely success of promotional activity. This assessment should look at resources available to the community as well as behaviours, so that messages do not promote the impossible.

Human resource capacity and training policy

All aspects of the humanitarian response rely on the skills, knowledge and commitment of staff and volunteers working in difficult and often insecure conditions. The demands placed on them can be considerable and if they are to conduct their work competently and carefully, to a level where minimum standards are assured, it is essential that they are adequately managed and supported both in the field and from headquarters. In designing programmes, human resource capacity issues must be addressed and specific training and support should be incorporated as necessary. Those likely to be targeted include expatriates, national staff, government or local authority counterparts, community volunteers and members of the community affected by the emergency.
The provision of training and support is a continual process. The skills of staff or community members need to be up-dated and refreshed regularly to ensure that the quality of service delivery is maintained, and improved.
Concepts such as 'skills', 'knowledge', 'experience' are not measurable unless they are attached to specific anticipated outcomes. These could be specified and developed in the field, ensuring they are appropriate to the context, local priorities, resources and timescale of operation.
In the often unpredictable environment of emergency operations, where sudden withdrawal of international staff or agencies may occur, training of national staff and volunteers is paramount if work is to continue.

Format for water and sanitation needs assessment

This list of questions is primarily for use to assess needs, identify indigenous resources and describe local conditions for evacuee emergencies. It does not include questions to determine external resources needed in addition to those immediately and locally available.

General

- Communities affected and distribution of people;
- Likely movements of people, security constraints etc.;
- Water and sanitation-related disease, distribution and evolution of problems;

- Water and sanitation-related risks;
- Key people;
- Vulnerable groups.

Excreta disposal

1. What is the normal excreta disposal arrangement in the community? What is its capacity and is it fully functioning? Can it be repaired, extended or adapted? Over what time period?
2. What are the local defæcation practices? If it is open defæcation, is there a designated area?
3. Is the current defæcation practice a threat to water supplies or living areas?
4. Is the current defæcation practice a health threat to users?
5. Which temporary arrangements are people prepared to use (latrines, defæcation fields, trenches etc)?
6. Is there sufficient space for these arrangements?
7. Are local people familiar with the construction use and maintenance of these arrangements?
8. What are local beliefs and practices concerning excreta disposal?
9. What is the slope of the terrain?
10. What is the level of the groundwater table?
11. Are soil conditions suitable for on-site excreta disposal?
12. What local materials are available for constructing toilets?
13. Do current excreta disposal arrangements encourage vectors?
14. Do people have access to soap and water for washing hands after defæcation?
15. Is there material or water available for anal cleansing?
16. How do women deal with menstruation? Are there materials or facilities they need for this?

Water supply

17. What is the normal water supply arrangement for the community. What is its capacity and is it fully functioning? Can it be repaired, extended or adapted? Over what time period?
18. How much water is available per person per day?
19. Is the water available at the source enough for short term and longer term needs?
20. Are water collection points close enough to where people live?
21. Is the current water supply reliable? How long will it last?
22. Do people have enough water containers of the right size and type?
23. Is the water source contaminated or at risk of contamination (microbiological and chemical / radiological)?
24. Is treatment necessary? Is treatment possible? What treatment is necessary?
25. Is disinfection necessary, even if supply is not contaminated?
26. Are there alternative sources nearby?
27. Are there any legal obstacles to using available supplies?

28. Is it possible to move the community if water sources are inadequate?
29. Is it possible to tanker water if water sources are inadequate?
30. What are the key hygiene issues related to water supply?
31. Do people have the means to use water hygienically in this situation?

Vector-borne disease

32. What are the vector-borne disease risks and how serious are those risks? (See vector section for determining risk)
33. If vector-borne disease risks are high, do people at risk have access to individual protection?
34. Is it possible to make changes to the local environment (by drainage, scrub clearance, excreta disposal, refuse disposal etc) to discourage vector breeding?
35. Is it necessary to control vectors by chemical means?
36. What national programmes, controls and resources for vector control and use of chemicals are there?

Solid waste disposal

37. Is solid waste a problem?
38. How do people dispose of their waste?
39. What type and quantity of solid waste is produced?
40. Can solid waste be disposed of on site, or does it need to be collected and disposed of off site?
41. Are there medical facilities and activities producing waste? How is this being disposed of? Who is responsible?

Drainage

42. Is there a drainage problem? (flooding shelters and latrines, vector breeding sites, polluted water contaminating living areas or water supplies)
43. Do people have the means to protect their shelters and latrines from local flooding?

Water quantities in addition to the minimum standard for basic domestic consumption

- Public toilets: 1-2 litre/user/day for hand washing and 2-8 litre/cubicle/day for cleaning toilet
- All flushing toilets: 20-40 litre/user/day for conventional flushing toilets and 3-5 litre/user/day for pour-flush toilets
- Anal washing: 1-2 litre/person/day
- Health centres and hospitals: 5 litre/outpatient and 40-60 litre/inpatient
- Additional quantities may be needed for some laundry equipment, flushing toilets etc
- Cholera centres: 60 litre/patient/day and 15 litre/carer/day, if appropriate
- Therapeutic feeding centres: 15 -30 litre/person/day and 15 litre/carer/day, if appropriate

- Livestock: 20-30 litre/large or medium animal/day and 5 litre/small animal/day