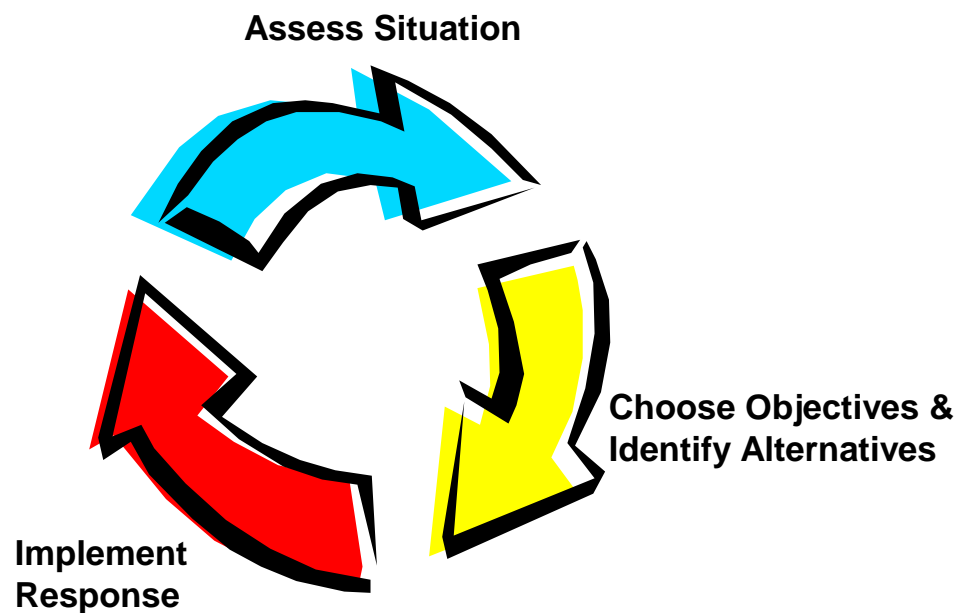


Disaster Emergency Needs Assessment



Disaster Preparedness Training Programme



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Background and uses

This module is one of nine modules that have been prepared by INTERWORKS for the International Federation of Red Cross and Red Crescent Societies Disaster Preparedness office in Geneva. This module can be used as for independent study, as a reference guide on the subject, and to provide participants at a workshop training event on this topic. It is intended to accompany the trainer's notes on this topic. Their intended use is global, and they are written for generalists, planners and professionals with disaster preparedness and/or emergency response responsibilities both within the Federation and in the National Societies. Non-governmental organisations interested in disaster preparedness and preparedness planning, government emergency commissions, local disaster committees and civil defence training units may also find these modules useful.

This material can be used as:

- A general reference material on disaster preparedness
- Training and workshop modules and trainer's guides
- An orientation to disaster preparedness for Delegates and NS officers
- A guide for assessing or planning disaster preparedness capabilities

All nine of these modules are revised and updated versions of modules that were initially developed for the Central Asia IFRC Disaster Preparedness Regional Delegation DP project in 1998. This project resulted from recommendations and training needs expressed by Central Asian National Society and Emergency Commission staff attending the IFRC sponsored regional disaster preparedness conference held in Tashkent, Uzbekistan from June 24-26, 1996.

The overall aim of the Central Asia DP training project was to support the National Societies in further developing their own structures for preparedness in conjunction with those of the Emergency Committees, Ministries and Civil Defence organisations in each of the five countries in the region. To date, disaster preparedness in the region has been typified by highly response oriented, well maintained and trained Civil Defence organisations; and largely unprepared, and untrained local populations and non-governmental organisations. Disaster management has traditionally consisted of preparedness for efficient and centralised emergency response, not the development of community-based or localised preparedness capacity. The Central Asia DP training programme was one attempt to change this emphasis and was proposed as a starting point from which revisions, and modifications for use on a country-by-country basis were expected and welcomed.

This material is based on a “multi-hazard” approach, and is typically applicable to preparedness in all of the hazard situations represented. However, the specific country context of the readers and trainees will necessitate a focus on the hazard types that are most applicable to their situation. While the modules and accompanying trainer’s notes are written for use at national level workshops, individuals with training responsibilities are encouraged to use and adapt the material for use at more local regions and towns.

The nine disaster preparedness modules and trainer's notes

Disaster Preparedness	Preparedness Planning	Risk Reduction
Increasing Community Disaster Awareness	Disaster Emergency Needs Assessment	Disaster Programme Information and Reporting
Improving Coordination	Improving Basic Training Skills	Project Planning

Acknowledgements

These nine modules and their accompanying trainer's notes were prepared for the International Federation by INTERWORKS, a consulting group with disaster management training and consulting experience in over 60 countries worldwide. Review and critique of these modules were provided by a team of Central Asian disaster management specialists, the disaster preparedness officers of five Central Asia National Societies, the Federation disaster preparedness staff in Geneva and delegates in Central Asia, the Caribbean and East Africa.

The following documents served as references for the compilation and writing of this particular module:

1. *Building Capacities for Risk Reduction*, Lynne Bethke, Paul Thompson, James Good of InterWorks for UN DHA Disaster Management Training Programme. 1997.
2. *Disaster Assessment*, 1st edition, Module prepared by R.S. Stephenson, Ph.D., UNDP/UNDRO Disaster Management Training Programme, 1991.
3. *Humanitarian Charter and Minimum Standards in Disaster Response*, The Sphere Project, 1999 web page, <http://www.sphereproject.org>.
4. *IFRC Handbook for Delegates*, 1997, Needs Assessment, Targeting Beneficiaries.
5. *Introduction to Hazards*, 3rd edition. Sheila Reed of InterWorks for UN DHA Disaster Management Training Programme. 1997.
6. "Preparation of an Appeal for International Assistance for Disaster Response Operations: Guidelines for Pacific Red Cross National Societies," revised RDS - September 1997.

Disaster Emergency Needs Assessment

Aims and audience

This module introduces basic concepts and approaches related to disaster situation and emergency needs assessments and presents post-disaster assistance needs typically associated with various types of natural hazards. In addition, this module presents a disaster assessment reporting format that National Societies can use for reporting purposes. This module is appropriate for staff and personnel with little experience in conducting disaster needs assessments or completing international appeals forms following a disaster, but who have responsibility for these functions. This module does not cover address needs assessments for identifying specific and detailed sectoral needs—this is usually the work of sectoral specialists.

Main points

- the purpose of disaster needs assessment
- the link between disaster needs assessments and emergency response decision making
- basic methods and tools for collecting assessment information and ways to minimise assessment bias
- typical adverse effects and post-disaster needs commonly arising from specific hazard types
- disaster needs assessment reporting format
- priorities in emergency response and needs assessment
- sample format for survey of household emergency needs

1. Overview of disaster needs assessment

1.1 *Role of National Societies in disaster response*

In the event of a disaster causing extensive damage and/or loss of life or casualties, the responsibility of the National Society (NS) in that country is to provide humanitarian assistance to those affected by the disaster.

The actual form of assistance to be provided and the specific role of the NS in disaster relief operations should be negotiated with the Government beforehand and incorporated into the NS Disaster Preparedness Plan and the Government Plan where possible. The NS in such an operation will always act as an auxiliary to the Government within the mandate of the Fundamental Principles of the Red Cross and Red Crescent Movement. Once the NS has established its specific role in the relief operation, it is then essential to proceed as quickly as possible to implement it. A disaster needs assessment will help guide implementation of the response.

1.2 Purpose of disaster needs assessments

A disaster needs assessment will serve two primary purposes for the NS. First, it will inform the NS's own response priorities and plans. Second, it can support the NS's international appeal for outside assistance should the disaster be of such a magnitude that the NS cannot meet its humanitarian obligation within the limits of its own resources. The format included in Annex 1 can be used to form the basis of an international appeal for assistance coordinated through the Federation or can be used to facilitate a disaster needs assessment, even when an appeal is not required.

In the latter case, the disaster needs assessment will help NS emergency response decision-makers determine and implement appropriate emergency response measures. To plan effective response efforts, decision makers need to know:

- ✓ whether or not an emergency exists
- ✓ the demographics of the affected population and the number of people affected
- ✓ the details of the emergency (cause, location, magnitude of disaster, etc.)
- ✓ the condition of the affected population (mortality and morbidity rates)
- ✓ the local response capacities and available resources, including organisational and logistical capabilities
- ✓ the extent and type of life-saving needs and priorities
- ✓ the likelihood of additional future problems or needs

The starting point for any assessment is identification of the eventual users of the information and their particular information needs. Data, which include perceptions, numbers and facts, only become useful information when they are meaningful, relevant and understandable at particular times and places, for specific purposes.

1.3 Emergency response priorities

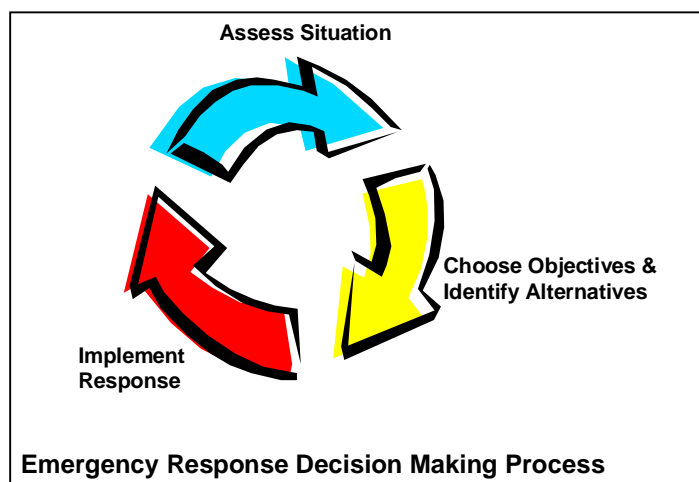
Disaster emergency response should address the immediate and priority needs resulting from a disaster. Common priority emergency needs following a disaster include the following list. The disaster assessment will need to determine the existence of these needs as well as their scope.

1. Provide basic life support needs: drinking water and sanitation, adequate food, appropriate medical assistance, shelter (through housing and clothing) and fuel (for cooking and heating)
2. Protect disaster victims from physical violence and aggression, particularly in disasters involving refugees and internally displaced persons
3. Address the psychological and social stress caused by the disaster, providing the victims with psychological and social support

National Societies and the Federation are invariably active at the first level, occasionally at the second and increasingly at the third. Once the basic life support needs are met, attention can be directed to other less urgent but important needs.¹

2. Emergency response based on emergency assessments

Organisations involved in emergency response should assess the emergency situation and choose their objectives before implementing response activities. Organisations that provide relief without first assessing the disaster impact, the resulting needs, and the local response capacities will most likely offer assistance that is unnecessary and inappropriate and which supplants local efforts. Ideally, an emergency response should consist of the following three stages: assessing the situation, choosing objectives and identifying intervention alternatives, and implementing response based on the objectives and alternatives.



As the diagram implies, disaster assessment should be an ongoing and repetitive process. This reflects the fact that circumstances, information availability, and emergency needs change over time. When and how often different assessments are conducted will depend on the type of disaster, available resources and specific information needs. Generally, information should be collected more frequently the more a situation changes and when there are critical developments, such as a secondary disaster, new population movements or an epidemic outbreak. The objectives of the assessment and the data-gathering techniques will change as the response evolves. Initial assessments can be quick and unrefined, but should improve as more time and data become available.

It is clear that effective interventions are time-critical and rely greatly on resources already present in the affected area. Most of these can be pre-planned. In the immediate aftermath of a disaster, there will be insufficient time for extensive or detailed assessments and the organisation of large-scale external support. For earthquakes, in particular, search and rescue and early emergency medical care must rely substantially on local resources. Accurate and credible information telling decision-makers what is not needed can help reduce the overall complexity of the logistical response.

¹ IFRC Handbook for Delegates (1997): Needs Assessment, Targeting Beneficiaries. p. 657.

2.1 *Assessing the situation*

At the outset of any emergency, initial assessments should be timely and inform emergency responders about critical and immediate life-saving needs. In disasters—especially rapid onset disasters or sudden population influxes—there will be great uncertainty about the actual problems. Therefore, decision makers should use a systematic assessment approach to develop a picture of where people are, what condition they are in, what they are doing, what their needs and resources are, and what services are still available to them. After an initial assessment, more in-depth emergency needs assessments need to be conducted to collect information related to critical sectors and technical areas of concern.

The minimum humanitarian standards in disaster response developed by the Sphere Project can assist organisations in prioritising information collection needs and planning an appropriate level of response.² It is important that before the field assessment is conducted, the logistics of conducting the assessment and the standards that will be used are agreed upon by everyone on the assessment team. Assessment tasks should be assigned accordingly. The Sphere Project includes information on the following sectors:

- Water supply and sanitation
- Nutrition
- Food aid
- Shelter and site planning
- Health services

In addition to these sectors, assessment teams may want to collect information on personal and household needs; agricultural, economic and infrastructure damage; and the political and security situation.

2.2 *Choosing objectives and identifying alternatives*

Initially, this stage requires **analysis and interpretation** of the data with a focus on identifying the risks to various populations. There should be an attempt to define alternatives for reducing immediate risks. It is important to have a detailed understanding of the general risks associated with a particular type of emergency and how these may change (see Section 7 of this paper for more detail). Some general risks frequently present in the emergency phase are:

- Continuing presence of hazard agents—secondary flooding, fire, landslides, extreme cold, chemical pollution, etc.
- Loss of “lifeline services”—clean water, waste disposal, medical treatment
- Inadequate supply of emergency clinical services

² The entire manual, *Humanitarian Charter and Minimum Standards in Disaster Response*, can be downloaded from the **The Sphere Project** website <http://www.sphereproject.org>, or can be ordered through Oxfam publishing at Bournemouth Book Centre (BEBC), PO Box 1496, Parkstone, Dorset BH12 3YD, Tel: +44 (0) 1202 712933, Fax: +44 (0) 1202 712930. The Sphere Project can be contacted at: P.O. Box 372, 1211 Geneva 19, Switzerland, Tel: (41 22) 730 4501 Fax: (41 22) 730 4905.

- Inadequate supply of essential foods
- Effects of severe climatic conditions exacerbated by lack of shelter, warm clothing or heating fuel

Given adequate information, central decision makers will be able to gauge local response capacity (including government, Red Cross and Red Crescent) and decide how best to use existing resources for immediate relief. In addition, they will determine their own agency's response objectives and intervention alternatives. If the affected population is in need of food aid, an agency must decide how best to provide it. Should it purchase the food outside of the affected area and transport it in? Should they attempt to purchase food on the local market? Or, should food be provided as part of a "Food-for-Work" program?

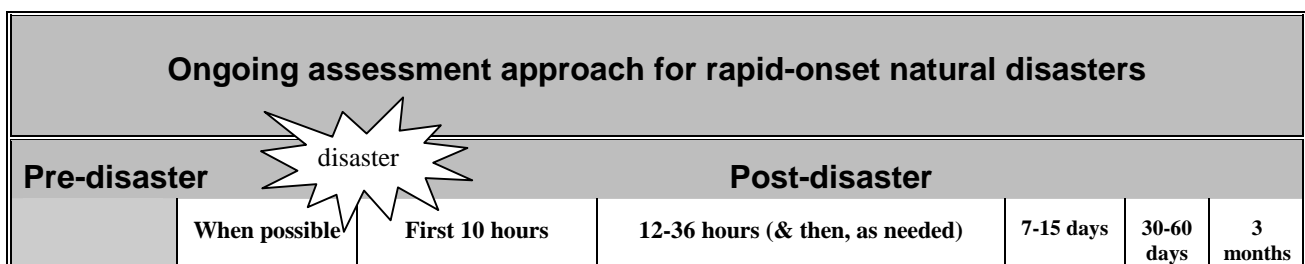
A second important element in this stage is forecasting—an attempt to develop a set of predictions based on the relationship between needs, resources and changing conditions over time. In particular, assessors should judge whether resources can actually be made available in time to deal with particular problems before their importance fades. Forecasting is particularly critical early on, when the pattern of need is changing very quickly. For example, decisions on emergency medical care and search and rescue during earthquakes are so time-sensitive that even a few hours delay can lead to an almost total waste of resources. There will also be a need to identify major secondary threats to survivors, such as secondary flooding or landslides, damage to chemical plants or fuel storage fires, etc.

2.3 Implementing response plans

In the early phases of a disaster, assessment activities give decision makers the information they need to set the objectives and policies for emergency assistance. In addition, assessment information helps decision-makers take account of the priorities of the affected population and decide how best to use existing resources for relief and recovery. Response planning and implementation involve allocating and scheduling resources—including people, equipment and supplies—to meet specific relief objectives and later to fulfil recovery and development goals. During this stage, assessments provide information on the progress of recovery, highlighting areas requiring further analysis and intervention.

3. Disaster needs assessment reporting

While the precise assessment approach to use depends on the exact type of hazard, the following diagram illustrates the concept of conducting ongoing and repetitive assessments throughout the phases of a disaster. The diagram is followed by a more in-depth discussion of the different types of assessment reporting needs.



Assessment type	Forecasting & early warning	Disaster (early) notification	More detailed disaster needs assessment	Ongoing monitoring of situation and needs
Information needs	<p>Collect and disseminate early warning information (especially for flash floods, tsunamis, storms, volcanoes, forest fires, etc.)</p>	<p>Alert headquarters</p> <ul style="list-style-type: none"> • Disaster type, date • # casualties reported • # properties damaged and type of damage • Immediate emergency priority needs (e.g. search & rescue, first aid) 	<p>Assessment team</p> <ul style="list-style-type: none"> • Disaster magnitude • Geographic area affected • Detailed assessment of needs and resources and other responders • Define intervention for ensuing weeks and months (if necessary) 	<p>Continued monitoring and assessment</p> <ul style="list-style-type: none"> • Ongoing situation, response and needs • Changes in status and needs • Need for longer-term assistance and rehabilitation (after 3 months) • Plan of action for assistance to continue past 3 months

3.1 Forecasting and early warning

For many types of natural disasters—flash floods, storms, forest fires, volcanoes, tsunamis—forecasting and early warning information and communication systems need to be in place. Assessments for these systems collect and disseminate information on the potential development of the disaster, and determine the extent to which affected populations are taking measures to protect lives and facilities from expected hazard impact. Capable organisations will also want to prepare for the implementation of post-disaster response and assessments.

3.2 Disaster early notification

In the first few hours of a disaster, decisive action is necessary. In sudden onset disasters, local officials should issue a preliminary “disaster early notification” as soon as possible after the disaster occurrence—preferably within the first 10 hours after a disaster. This early notification alerts headquarters that a disaster has occurred and approximates the magnitude and location of the disaster and immediate priorities, such as search and rescue, and on-site first aid.

3.3 Disaster needs assessment

Early notification is followed by a more complete disaster needs assessment usually within the first 12-36 hours after the disaster occurs. This assessment will provide additional general information about the disaster: the damage, urgent needs and priorities, and actual response measures being taken. Disaster needs assessments will need to be updated as more information becomes available and as the situation changes. For a sample format that National Societies can use to conduct a disaster needs assessment, refer to *Annex 1: Disaster Needs Assessment Reporting Form*.

Usually within 36-72 hours after a disaster occurs, a team of sectoral specialists should conduct a rapid, yet detailed assessment of specific damages, resources, response mechanisms and precise needs within the different sectors: water and sanitation, emergency health, food and nutrition, shelter and household needs, infrastructure and communications, etc. Their job will be to forecast sectoral needs for the next 3-7 days, 7-28 days and 28-90 days. If it appears that the emergency will extend from weeks into months, then these specialists should help define specific interventions for the ensuing months.

3.4 **Monitoring**

After the first three days, additional assessments should be planned as needed, e.g. 7-15 days, 30-60 days, and 3 months after the disaster occurrence. Newly evolving circumstances, local efforts and capacities and official response measures will all affect the status of the emergency situation and needs. It is important to monitor the situation and the evolving needs over time to gauge whether additional or longer-term assistance is required. The performance of the emergency response program also needs to be monitored for effectiveness, and modifications made accordingly.

4. **Assessment sources and methods**

Information for the assessment report can be compiled from existing literature, relevant historical material, pre-emergency data and from discussions and interviews with appropriate, knowledgeable people including donors, agency staff, government personnel, local specialists, female and male community leaders, elders, participating health staff, teachers, traders and so on. There are a variety of assessment methods that can be used to collect data. On-site visual inspection, interviews and sampling are commonly used methods.

4.1 **On-site visual inspection**

On-site visual inspection is an excellent way to become familiar with a disaster situation. Experienced observers can gather information quickly if they know what they are looking for. Further investigation is often needed, however, as some details may be hidden from view. Combined with interviews, on-site visual inspection is a good method for an initial assessment.

On-Site Visual Inspection Tasks

- Observe people's physical condition and activities; ask questions
- Visit homes or shelters, water sources, clinics, distribution centres
- Observe children, the elderly and the sick
- Observe the daily lives of women (use women as interviewers)
- Observe the services, vehicles, sanitation systems
- Make sketches, take photographs or use videos. Photos, video footage and even hand sketches are extremely useful in communicating to others the reality of the situation.

4.2 **Interviews**

Interviewing techniques can include interviews with individuals or with groups. **Loosely structured interviews** are conducted with key informants in the government, NGOs and within particular groups of the affected population including: local officials, local (non-official) leaders and experts, local media sources, and leaders of the affected population. The focus is on obtaining factual information that is cross-checked with other sources.

Group interviews, conducted with the affected population, local leaders, or officials, can be useful for cross-checking information with a number of respondents. In some cases group interviews may be valuable for getting a sense of the issues affecting all members of the group (rather than individual issues). Over-reliance on group interviews, however, may leave information gaps because there may be issues that are not discussed in groups or because some people may not be represented in public groups (especially women).

4.3 Sampling

Sampling is a method by which a generalisation about an entire population is made based on the characteristics of a subset (or sample) of the population. Attributes or proportions of a population are estimated through interviews or surveys with a representative section or sample of the population. Information collected through sampling methods includes written questionnaires and interviews.

There are two types of sampling techniques: **probability and non-probability**. Probability sampling is based on rigorous statistical methods. It is expensive and time-consuming to implement and requires special training to be used correctly. **Non-probability** methods are commonly used and rely on interviews with those who are most accessible (convenience sampling) or with individuals that are believed to be representative of the population of interest (purposive sampling).

4.4 Relying on secondary sources

National Societies will sometimes depend on government agencies, non-governmental organisations or community groups for their information. When relying on information provided by another organisation, it is important to carefully consider its accuracy and whether information from one source contradicts information from another. Especially, when using secondary data, check for consistency between multiple sources of similar data if possible. When evaluating assessment information, consider:

- Who did the assessment? What experience/expertise do they have in this area?
- How much time did the assessment team spend on-site? Did they visit the site?
- Whom did the assessment team interview? What important beneficiary groups did they fail to consider?
- If the assessment report contains statistical data, are they primary or secondary data? If they are secondary data, what is the original source? Does the team have the expertise to judge the validity of statistical information? If not, which experts should they consult?
- What is the possibility of a segment of the population (e.g. an ethnic, class, national, geographic, religious, or vulnerable group) being inadequately assessed?
- Considering the source of information, what biases may be reflected in the assessment findings?
- Does the NGO or government have an interest in presenting biased information?
- What are the government's interests in presenting biased information? Does the government's information appear misleading?

5. Minimising assessment bias

All data collection methods are subject to the problem of bias. Bias leads to misinterpretation of answers or mistaken analysis that draws conclusions from information which is not representative of the affected population. In the worst cases, programs based on biased information have caused harm to the populations they were meant to help and negatively affected agencies' reputations. Bias can result from leading questions (those which propose an answer), poorly worded or poorly understood questions, poor sampling techniques, or the particular bias of the assessors or reviewers. Specific forms of bias include:

Spatial bias

Issues of comfort and ease for the assessors determine the assessment site. Rather than travel into an area, the assessors conduct a "windshield" survey, never leaving the comfort or straying far from their truck.

Project bias

The assessor is drawn toward sites where contacts and information are readily available and may have been assessed before by many others.

Person bias

Key informants tend to be those who are in a high position and have the ability to communicate in a language known to the assessor. They may or may not be conscientious, insightful or respected by those they are purporting to represent.

Season bias

Assessments are conducted during periods of pleasant weather or areas cut off by bad weather go unassessed. Thus, many typical problems go unnoticed.

Mandate or specialty bias

The specialty or mandate of the assessor blinds them to needs outside of his/her specialty. For example, a shelter specialist may primarily only assess shelter needs, neglecting nutrition and water needs.

Political bias

Informants present information that is skewed toward their political agenda. Assessors look for information that fits their political or personal agenda.

Cultural bias

Incorrect assumptions are made based on one's own cultural norms. Assessors do not understand the cultural practices of the affected populations.

Class/ethnic bias

Needs and resources of different classes of people or different ethnic groups are not included in the assessment. Local assessors may have this ethnic bias, or the key informants may only represent one social class or ethnic group.

Interviewer or investigator

Assessors may have a tendency to concentrate on information that confirms preconceived notions and hypotheses, causing them to seek consistency too early and overlook evidence inconsistent with earlier findings. Assessors may also exhibit partiality to the opinions of elite key informants.

Key informant bias

Biases of key informants are carried into assessment results.

Gender bias

Assessors only speak to men or male interviewers survey women, or vice versa.

Time of day or schedule

The assessment is conducted at a time of day when certain segments of the population may be over- or under-represented.

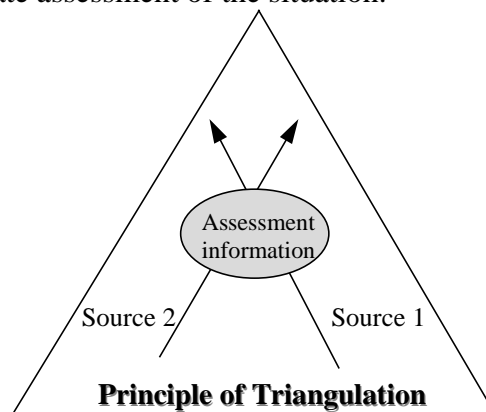
Sampling bias

Respondents are not representative of the population.

Being aware of different types of bias is the first step in minimising its impact on your assessment.

5.1 Triangulation

Triangulation is one method for minimising bias that requires the assessors to seek out, compare and correlate several sources of information. Triangulation is based on the principle that data must be obtained from at least two other known points (see picture below). Information for emergency assessments must come from different sources to provide a relatively accurate assessment of the situation.



Triangulation may be achieved through the use of different assessment techniques or approaches or by using different indicators of the same phenomenon and consulting different sources. The different approaches or indicators may be compared to the two arrows in the diagram above. The key to using different approaches is to find dissimilar methods or techniques that will not be subject to the same type of bias. Do not rely on a single method or a single measure of a problem. Triangulation can be applied to almost all aspects of the preparation and implementation of an emergency assessment.

5.2 Team and joint assessments

Using a team assessment approach, and paying attention to the composition of the assessment team is another way to minimise bias. By including a variety of specialists and generalists on the team and by striking a gender balance, many types of biases can be avoided. The following box provides an overview of roles and competencies that might be considered when composing assessment teams.

Assessment Teams

- √ Team coordinator/liaison
- √ Logistics specialists
- √ Public health—epidemiologist
- √ Food and nutrition specialists
- √ Shelter specialists
- √ Environmental health/water supply specialists

To add additional perspective and diversity to the team, the team may also include a mix of local and external team members. Local people may know the local situation and customs but may also bring certain types of local biases and preconceptions damaging to the accuracy of the assessment. The external "outsider," on the other hand, while less familiar with the situation, may be able to provide the expertise and perspective of distance that is also needed in making useful assessments.

6. Assessment tools

Checklists, gap-identification tables, and questionnaires are assessment tools that can assist in conducting systematic emergency situation and needs assessments.

6.1 Checklists

Checklists are perhaps the easiest and most complete tools for a rapid initial assessment. A checklist is an abbreviated list that prompts assessors to remember key points and ask certain questions; they can also be useful for documenting responses. (For examples of checklists, see Annex 2 "Rapid Needs Assessment Checklist," or the attached Sphere Sample Checklist for Initial Health Assessment in Annex 4).³ The categories represented on reporting Form ENA-1 in Annex 3 can also serve as a checklist of questions to ask and information to collect.

6.2 Gap identification charts

Gap identification charts, illustrated in the following diagram, are used to organise information and highlight "gaps" between needs and resources in an emergency response.

³ The Sphere Project Manual has additional checklists and questionnaires for the various sectors.

Emergency response gap identification chart								
Emergency response needs	Affected Populations	Local Government	National Government	Civil Defence	Red Cross/ Red Crescent	Ministry of Health	United Nations Agencies	Other International organisations
Medical								
Public health								
Food								
Shelter								
Water								
Sanitation								
Clothing								

The emergency response needs are listed in the first column and the various emergency response actors, including local populations, are listed in the top row. The table is completed by identifying the resources provided by the affected population and by governments and organisations responding to the emergency. Using this chart for analysis will help emergency responders ensure that emergency needs are met most efficiently and effectively.

6.3 Questionnaires

When conducting individual key informant or group interviews, the assessor may want to develop or use questionnaires. A questionnaire is simply a list of questions for an individual or group of people to answer orally or in writing. The recorded results are later tabulated and analysed. (See Annex 3, "Sample Questions for a Survey of Family Needs.")

7. Finding recurrent patterns in emergencies

In sudden-impact disasters the key to effective life-saving relief is specific, precisely targeted interventions against demonstrated causes of death. Patterns abound in emergencies and there is sufficient scientific evidence to suggest typical adverse effects and disaster assistance needs. This is not to say that all emergencies are the same; they are not. To argue that they are all completely unique, however, rules out very important information gained by those who have been part of other emergency responses.

The following section provides an overview of typical adverse effects and disaster needs related to different types of hazards. Knowing this information can assist assessors in planning their assessments and disaster response. The hazards considered are:

- Earthquakes
- Volcanic eruptions

- Land instabilities
- Flood and water hazards
- Storms (typhoons, hurricanes, tropical storms and tornadoes)
- Droughts
- Chemical and industrial accidents

While not a natural hazard, massive populations movements displaced by natural disasters or civil strife create serious humanitarian emergencies and so also are included in this discussion.

7.1 Earthquakes

<p>General characteristics</p>	<p>Shaking of earth caused by waves on or below the earth's surface causing: surface faulting; aftershocks; tsunamis; tremors, vibrations; liquefaction; and landslides.</p>
<p>Typical adverse effects</p>	<ul style="list-style-type: none"> • <i>Physical damage</i>—Damage or loss of structures or infrastructure. Fires, dam failures, landslides, flooding may occur. • <i>Casualties</i>—Often high, particularly near epicentre, in highly populated areas or where buildings are not resistant. • <i>Public health</i>—Fracture injuries most widespread problem. • <i>Water supply</i>—Severe problems likely due to damage to water systems, pollution of open wells and changes in water table. • <i>Secondary threats</i> due to flooding, contaminated water supply, or breakdown in sanitary conditions.
<p>Typical disaster assistance needs</p>	<p>The immediate impact of an earthquake affects all sectors of a community. Local authorities should initially emphasise search and rescue assistance. Emergency medical assistance must be provided, especially during the first 72 hours. An emergency situation and needs assessment should be conducted during the first 36-72 hours. Finally, the survivors will require relief assistance such as food, water, and emergency shelter. Attention should be given to re-opening roads, re-establishing communications, contacting remote areas and conducting disaster assessments.</p> <p>At the end of the emergency period, long-term recovery needs to take priority. The post earthquake period presents an opportunity to minimise future risks through enactment or strengthening of land use and building codes as rebuilding takes place. The focus should be on:</p> <ul style="list-style-type: none"> • repair and reconstruction of water, sewer, electrical services and roads • technical, material and financial assistance for repair and reconstruction of houses and public buildings (preferably by incorporating earthquake resistant techniques) • programs to rejuvenate the economy • financial assistance for loans to individuals and businesses for economic recovery

7.2 Mud and debris flows

General characteristics	Mud and debris flows can arise as a result of heavy storms, abundant rains, breaks of mountain (usually glacial) lakes, or in hot weather as a result of intensive glacier melting. This is a process whereby considerable mud flows are carried out along the bottom of mountain valleys. Very often debris flows cut off rivers. When this occurs, a dam may form resulting in flooding upstream. A break in this dam, however, may cause flooding down the river stream.
Typical adverse effects	<ul style="list-style-type: none"> • <i>Physical damage</i>—Everything in the path of debris flows is usually destroyed, including roads, bridges, electric lines, and constructions. Often irrigation nets are destroyed and agricultural areas are covered with silt. • <i>Casualties</i>—People in the path of a mud flow may perish. In addition, people may be lost and injured as a result of secondary floods.
Typical disaster assistance needs	In the direct impact area of mudslides, there may be a need for search and rescue of victims. In isolated locations there may be a need to use special equipment. Emergency shelter may be required for those whose homes have been lost or damaged. Secondary effects of mud flows, such as flooding, may require additional assistance measures.

7.3 Landslides

General characteristics	Landslides vary in types of movement (falls, slides, topples, lateral spreads, flows), and may be secondary effects of heavy storms and earthquakes. Landslides are more widespread than any other geological event.
Typical adverse effects	<ul style="list-style-type: none"> • <i>Physical damage</i>—Anything on top or in the path of a landslide will suffer damage. Rubble may block roads, lines of communication or waterways. Indirect effects may include loss of agricultural or forest land productivity, flooding, reduced property values. • <i>Casualties</i>—Fatalities have occurred due to slope failures. Catastrophic debris flows and mudflows have killed many thousands.
Typical disaster assistance needs	Needs for the direct impact area of a landslide include search and rescue equipment and personnel, and possibly use of earth removal equipment. Emergency shelter may be required for those whose homes have been lost or damaged. Experts trained in landslide hazard evaluation should be consulted to determine whether slide conditions pose an additional threat to rescuers or residents. If the landslide is related to an earthquake or flood, assistance to the landslide-affected area will be part of the total disaster assistance effort.

7.4 Volcanic eruptions

<p>General characteristics</p>	<p>Types of volcanoes are cindercones, shield volcanoes, composite volcanoes and lava domes. Magma flowing out to the surface is lava and all solid particles ejected are tephra. Damage results from the type of material ejected such as ash, pyroclastic flows (blasts of gas containing ash and fragments), mud, debris, and lava flows.</p>
<p>Typical adverse effects</p>	<ul style="list-style-type: none"> • <i>Settlements, infrastructure and agriculture</i>—Complete destruction of everything in the path of pyroclastic, mud or lava flows, including vegetation, agricultural land, human settlements, structures, bridges, roads and other infrastructure. Structures may collapse under the weight of wet ash. Transportation by land, sea and air may be affected. • <i>Crops and food supplies</i>—Destruction of crops in path of flows, livestock may inhale toxic gases or ash, grazing lands may be contaminated. • <i>Casualties and health</i>—Deaths from pyroclastic flows, mud flows and possibly lava flows and toxic gases. Injuries from falling rock and burns, respiratory difficulties from gas and ash. Fracture injuries are the most widespread problem.
<p>Typical disaster assistance needs</p>	<p>Response to a volcanic eruption must be swift and efficient. Effective warning systems must be in place. Initially, local authorities must ensure that the area is evacuated and medical care is provided to victims. Search and rescue will also be important. Feeding and shelter is normally required and may be assisted by donations or personnel from foreign sources.</p> <p>The secondary response by local authorities involves relocating victims and providing financial assistance for replacement housing, agriculture and small businesses. Volcano disasters occasionally require temporary shelters, but more often, large volcanoes such as Ruiz, Pinatubo, and Mt. St. Helens, continue to erupt in a manner that threatens large populations for months to years. This may necessitate permanent resettlement of residents or long-term emergency settlements. Emphasis should also be placed on re-establishing infrastructure and communications that have been damaged or disrupted.</p> <p>Cleanup of ash is an important step in the recovery process. Volcanic ash makes excellent foundation material for roads, runways and building sites.</p>

7.5 Tsunamis

General characteristics	Tsunami waves are barely perceptible in deep water and may measure 160 km between wave crests. They may consist of ten or more wave crests and can move up to 800 km per hour in deep ocean water, diminishing in speed as they approach the shore. They may strike shore in crashing waves or may inundate the land. Whether or not there is severe flooding will depend on the shape of the shoreline and tides.
Typical adverse effects	<ul style="list-style-type: none"> • <i>Physical damage</i>—The force of water can raze everything in its path but the majority of damage to structures and infrastructure results from flooding. Withdrawal of the wave from shore scours out sediment and can collapse ports and buildings and batter boats. • <i>Crops and food supplies</i>—Harvests, food stocks, livestock, farm implements and fishing boats may be lost. Land may be rendered infertile due to salt water incursion. • <i>Casualties and public health</i>—Deaths occur primarily by drowning and injuries from battering by debris.
Typical disaster assistance needs	<p>Initial local responses include:</p> <ul style="list-style-type: none"> • Implement warning and evacuation procedures (before the event) • Perform search and rescue in the disaster area • Provide medical assistance • Conduct disaster assessment and epidemiological surveillance • Provide short-term food, water and shelter <p>Secondary responses include:</p> <ul style="list-style-type: none"> • Repair and reconstruct buildings and homes • Provide assistance to agricultural areas.

7.6 Droughts

<p>General characteristics</p>	<p>The reduction of water or moisture availability is temporary and significant in relation to the norm. Meteorological drought is reduction in rainfall and hydrological drought is reduction in water resources. Agricultural drought is the impact of drought on human activity influenced by various factors: the presence of irrigation systems, moisture retention capacity of the soil, the timing of rainfall and adaptive behaviour of farmers.</p>
<p>Typical Adverse Effects</p>	<ul style="list-style-type: none"> • <i>Economic</i>—Losses in production of crops, dairy and livestock, timber and fisheries; loss of national economic growth and development; income losses for farmers and others directly affected; losses from tourism and recreational businesses; loss of hydroelectric power and increased energy costs; decline in food production and increased food prices; unemployment from drought related production declines; revenue losses to government and increased strain on financial institutions. • <i>Environmental</i>—Damage to the habitat of animal and fish species; wind and water erosion of soils; damage to plant species; effects on water quality (salination); effects on air quality (dust, pollutants, reduced visibility) • <i>Social/ health</i>—Food shortage effects (malnutrition, famine); loss of human life from food shortage or drought-related conditions; conflicts between water users; health problems due to decreased water flow; inequity in the distribution of drought impacts and relief assistance; decline in living conditions in rural areas; increased poverty, reduced quality of life; social unrest and civil strife; population migration for employment or relief assistance.
<p>Typical disaster assistance needs</p>	<p>The drought affected population will need assistance to replace assets lost during the period of temporary food insecurity and, where realistic, to re-establish their livelihoods. The severity of the food insecurity episode will determine the nature and scale of rehabilitation requirements. Thus, if migration to camps and significantly increased morbidity has occurred, a comprehensive rehabilitation program will be required. This may involve health care, counselling, assisting the migrants back to their homes and material support to re-establish their homes and productive activities. Such provisions may include seeds, tools, cooking utensils, blankets, and support until households are capable of supporting themselves. If the impact of the temporary food insecurity episode has not been severe and most households have not been obliged to sell productive assets (e.g. consume seed stocks and breeding livestock) then a rehabilitation program may not be required. Therefore rehabilitation needs should be carefully assessed and interventions tailored to each particular situation.</p>

7.7 Floods

General characteristics	<p>There are several types of floods:</p> <p><i>Flash floods</i>—accelerated runoff, dam failure, breakup of ice jam</p> <p><i>River floods</i>—Slow buildup, usually seasonal</p> <p><i>Coastal floods</i>—Associated with storm surges, tsunami waves, tropical cyclones</p>
Typical adverse effects	<ul style="list-style-type: none"> • <i>Physical damage</i>—Structures damaged by washing away, becoming inundated, collapsing, and impact of floating debris. • <i>Casualties and public health</i>—Deaths from drowning but few serious injuries. Possible outbreaks of malaria, diarrhoea and viral infections. • <i>Water supplies</i>—Possible contamination of wells and groundwater. Clean water may be unavailable. • <i>Crops and food supplies</i>—Harvests and food stocks may be lost due to inundation. Animals, farm tools and seeds may be lost. • Secondary threats due to landslides from saturated soils and debris flows. Damage greater in valleys than open areas.
Typical disaster assistance needs	<p>The initial response to flooding by local authorities should include:</p> <ul style="list-style-type: none"> • Search and rescue • Medical assistance • Disaster assessment • Short term food and water provision • Water purification • Epidemiological surveillance • Temporary shelter

7.8 Tropical cyclones

General characteristics	When the cyclone strikes land, high winds, exceptional rainfall and storm surges cause damage with secondary flooding and landslides.
Typical adverse effects	<ul style="list-style-type: none"> • <i>Physical damage</i>—Structures lost and damaged by wind force, flooding, storm surge and landslides. Erosion could occur from flooding and storm surges. • <i>Casualties and public health</i>—Generally there are relatively few fatalities but there may be numerous casualties requiring hospital treatment. Storm surges usually cause many deaths but few injuries among the survivors. Injuries that do occur may be caused by flying debris or flooding. Contamination of water supplies may lead to viral outbreaks and malaria. • <i>Water supply</i>—Open wells and ground water may be contaminated by flood waters and storm surges. Normal water sources may be unavailable for several days. • <i>Crops and food supplies</i>—High winds and rain can ruin standing crops, tree plantations and food stocks. Plantation crops such as bananas and coconuts are extremely vulnerable. • <i>Communication and logistics</i>—Severe disruption is possible as wind brings down telephone lines, antennae and satellite disks. Transport may be curtailed.
Typical disaster assistance needs	<p>The initial response by local authorities, organisations and population will include:</p> <ul style="list-style-type: none"> • evacuation and emergency shelter • search and rescue • medical assistance • provision of short term food and water • water purification • epidemiological surveillance • reestablishment of logistical and communications networks • disaster assessment • brush and debris clearance • provision of seeds for planting

7.9 Chemical and industrial accidents

<p>General characteristics</p>	<p>Chemical and industrial accidents release hazardous (toxic) substances into the environment. These accidents may occur when trains carrying chemicals derail, when trucks overturn, when pipelines rupture releasing dangerous chemicals and gases into the environment, and when chemical or nuclear power plants develop accidental leaks and releases. Hazardous substances released into the air or water can travel long distances.</p>
<p>Typical adverse effects</p>	<ul style="list-style-type: none"> • <i>Physical damage</i>—Damage or destruction may occur to structures and infrastructure. Transportation accidents damage vehicles and other objects on impact. Industrial fires may reach high temperatures and affect large areas. • <i>Casualties</i>—Many people may be killed or injured and require medical treatment • <i>Crop, livestock and food supplies</i>—May contaminate crops, food supplies and livestock. • <i>Environmental</i>—Contamination of air, water supply, and land may occur. Areas may become uninhabitable. Ecological systems may be disrupted even on a global scale.
<p>Typical disaster assistance needs</p>	<p>In the event of a chemical disaster, medical and emergency teams should remove all injured persons from the scene of the emergency. All persons should leave the area unless protected by special equipment. They should stay away until safe return to the area has been determined and announced to the public. In the case of water contamination, alternate sources have to be provided.</p> <p>Clean up of the effects of the disaster may require more resources than are locally available; international emergency assistance may be required. The affected areas should be monitored continually following the disaster. Thorough investigation and documentation of the emergency must occur.</p>

7.10 *Displaced populations*

General characteristics	Displaced populations may include people settling in temporary settlements or camps after a mass population movement; non-combatant individuals and families forced to leave their homes due to consequences of conflict but who remain inside their country; people expelled or fleeing a country, especially as an ethnic or national group, forced out for economic or political reasons; and people forced to leave their homes as a result of drought, famine, or other disaster, usually in search of food.
Typical adverse effects	Loss of means of livelihood, loss of normal sources of food, lack of fuel for cooking, lack of potable water, communicable diseases and overcrowding, possibly large numbers of unaccompanied children, lack of shelter and household necessities
Typical emergency needs	<p>While needs will vary according to the situation, in general they will include:</p> <ul style="list-style-type: none"> • Water supply and sanitation • Short-term and long-term food distributions • Nutritional and epidemiological surveillance • Emergency shelter • Blankets, household fuel, and other household goods • Medical supplies, immunisation, public health • Community social services, especially for unaccompanied children • Tracing, protection and security

Annex 1a: Disaster Needs Assessment Report Form with instructions

Based on format developed by the International Federation Pacific Region disaster preparedness office.

PREPARED BY: Name of person preparing the report	COUNTRY: Indicate the country where disaster occurred	DISTRICT/REGION: Indicate the country where disaster occurred
YOUR ORGANIZATION: Indicate the name of your organisation/branch.	DATE: Indicate the date that the report is being prepared.	REPORT NUMBER: Indicate the number of this report, if it to be followed by others.

When preparing the form, provide the most complete & recent information available. In addition, note the source of this data or information. For example, "10,000 deaths reported by the local mayor's office." If the information is not known, write, "Not known at this time."

I. The Disaster
<p>A. Type of Disaster: (Circle one)</p> <p>Indicate the type of disaster (e.g. Cyclone, earthquake, etc.)</p>
<p>B. When did the disaster event occur?</p> <p>Indicate the date of occurrence of the disaster event. Indicate "dates" if there were multiple events in succession. For example, earthquake aftershocks.</p>
<p>C. Briefly describe the disaster (attach additional sheets if necessary)</p> <p>Provide a brief narrative descriptive summary of the disaster. What were its characteristics (magnitude, wind speed, etc.)? How severe is the damage? In narrative summary fashion, what is the extent of the losses and what are the likely short-term and long-term needs. How many people are affected and how many regions, districts, or city's? This narrative should be no more than 2 to 4 paragraphs long. You are just creating a quick picture of the disaster and the resulting losses and needs.</p>
<p>D. Precise geographic areas and locations impacted (districts, states, towns?)</p> <p>Describe the geographical range involved, including specific areas affected by secondary disasters (e.g. storm surge, landslides, flooding), name the affected districts, states, towns, villages, etc... ..</p> <p>.....</p>

II. Disaster Impacts/Effects

A. How many people are affected and what percentage of the overall population is this number?

Indicate the number of people that have been affected—either through death, injury and /or loss of property and homes, and then calculate what percentage of the overall population in this area is affected. If possible, also identify the gender, age and other demographic details of the population affected.

B. How many deaths have been attributed to this disaster?

Indicate how many deaths have been attributed to this disaster. Also indicate the source of this information.

C. How many injuries have been attributed to this disaster? If possible, specify the gender and age composition of those affected, and the cause of their injuries.

D. How many people are displaced or evacuated? Also identify where they have gone and if possible, specify the gender, age and family composition of those affected.

E. How many families are affected? If possible, specify the gender and age composition of those affected.

F. How many households or dwellings have been completely destroyed?

Indicate how many homes and dwellings have been destroyed beyond repair.

G. How many households or dwellings have been partially damaged but not completely destroyed?

Indicate how many homes and dwellings have been partially damaged, but can still be repaired when materials become available.

H. What is the physical and/or financial damage to other property, buildings and infrastructure in the affected area?

Indicate the amount of physical damage and financial losses to business, government or private property buildings (except for homes), and indicate what damage has occurred to infrastructure (roads, bridges, communication lines, etc.)

I. What is the physical and/or financial damage to crops and livestock?

Indicate the amount and extent of physical and financial damage to crops and livestock.

J. What are the expected financial damages and costs to businesses in the affected area?

Indicate the amount of financial damages and costs that businesses will incur resulting from this disaster.

III. Local Financial, Material and Human Resources

A. What resources and capacities do the local population have for responding to this disaster, and how might these resources be used? Indicate these below.

LOCAL CAPACITY OR RESOURCE	SUGGESTIONS FOR USE
E.g. Local neighbourhood association volunteer group	Prepare and serve food for displaced and homeless
.....
.....
.....

B. What transport and storage facilities (commercial, government, Red Cross/Red Crescent) are available locally for immediate use?

Indicate what transport and storage facilities can be made available for immediate use in transporting and storing emergency relief supplies

C. What is the availability, location and condition of roads, airports, ports and railways?

If emergency relief supplies will need to be brought in by truck, airplane, boat or train, it is important to indicate the condition of roads, airports, ports and railways.....

D. What is the capacity of the local and national RC Society for dealing with this disaster?

What have local and national RC Society done so far in response. What can it do in the future?

.....

IV. Immediate Needs

Provide the most complete and up-to-date answers as you can to these questions:

- A. Has a detailed needs assessment been carried out?** Please attach a copy if available or give a summary of the priority needs below.

Describe the unmet needs in shelter, water, sanitation, food, household supplies (clothes, blankets, cooking utensils, cooking fuel, etc.) and health (medical supplies, equipment, facilities). Quantify and qualify the targeted needs (for example, 110 adults and 200 children need food and water for at least the next 20 days.) Attach additional sheets as necessary.

- B. Who carried out the needs assessment?**

Indicate who conducted the needs assessment.

- C. What is needed immediately and who will supply it? Please check or fill in the boxes below as appropriate.**

Complete the matrix for this section shown in the disaster needs assessment form.

		TO BE SUPPLIED BY:			
ITEM	QUANTITY NEEDED	GOVERNMENT	RED CROSS	NGO'S (specify)	OTHERS (specify)

V. Longer-Term Needs

- A. What will be needed in the longer term (after the first month) and who will supply it?** One should anticipate serious problems or needs that may arise in the coming months resulting from the disaster and potential future events (winter or rainy season approaching, etc.)

Complete the matrix for this section shown in the disaster needs assessment form.

		TO BE SUPPLIED BY:			
ITEM	QUANTITY NEEDED	GOVERNMENT	RED CROSS	NGO'S (specify)	OTHERS (specify)

VI. National Society Operation

A. Give a brief description of what the National Society proposes to do. (Attach additional sheets if necessary)

Indicate what your National Society or branch proposes to do to respond to this emergency.....

B. What is the proposed duration of this NS operation?

Indicate how long you expect to be implementing an emergency response operation.....

C. Which groups of people were chosen for assistance and why?

Indicate and specify who will benefit from your emergency response operation, and explain why you have selected this group or population over others.

D. What transport will be required and who will provide it?

Indicate what transport support you will require to support the emergency relief operation. Also indicate your plan for getting this transport.

E. Who will carry out the operation (e.g. NS volunteers, staff, etc.)?

Indicate and specify the human resources that you have available to carry out this emergency response operation.

F. Who is responsible for reporting to donors and when will the reports be made?

Indicate who will be communicating and reporting to donors. Indicate how often you will submit emergency situation and emergency operation progress reports?

G. What items are required for the operation and from where can they be obtained?

Complete the matrix below for each item that is required for the relief operation.

Item	Total Number Required	Number Available In Country	Number Needed From Outside	Nearest Country From Where They Can Be Obtained

VII. Additional Comments, Requests, or Information

Feel free to add any important information not reflected in responses to this form. This might include political context, local ethnic tensions, history of disasters and response in the area, and other such contextualizing factors.

If this form is used for an international appeal, please provide further details in the Budget Table below.

VIII. Budget

Complete the budget matrix (number required, cost per item and total cost).

Budget Items	Number Required	Cost Per Item (Specify Currency)	Total Cost
• Supplies			
• Equipment			
• Transport			
• Personnel expenses			
• Travel expenses			
• Administration expenses			
• Communications expenses			
• Other expenses associated with the operation			
TOTAL COST			

Annex 1b: Disaster Needs Assessment Report Form

Based on format developed by the International Federation Pacific Region disaster preparedness office.

PREPARED BY:	COUNTRY:	DISTRICT/REGION:
YOUR ORGANIZATION:	DATE:	REPORT NUMBER:

When preparing the form, provide the most complete & recent information available. If the information is not known, write, "Not Known at this time."

I. The Disaster
<p>A. Type of Disaster: (Circle one)</p> <p>Cyclone Earthquake Flood Landslide</p> <p>Drought Tsunami Volcanic eruption</p> <p>Chemical explosion or spill Other (specify)</p>
<p>E. When did the disaster event occur?</p> <p>.....</p>
<p>F. Briefly describe the disaster (attach additional sheets if necessary)</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>G. Precise geographic areas and locations impacted (districts, states, towns?)</p> <p>.....</p> <p>.....</p> <p>.....</p>

II. Disaster Impacts/Effects

K. How many people are affected and what percentage of the overall population is this number?

.....

L. How many deaths have been attributed to this disaster? If possible, specify the gender and age composition of those affected.

.....

M. How many injuries have been attributed to this disaster? If possible, specify the gender and age composition of those affected, and the cause of their injuries.

.....

N. How many people are displaced or evacuated? Also identify where they have gone and if possible, specify the gender, age and family composition of those affected.

.....

O. How many families are affected? If possible, specify the gender and age composition of those affected.

.....

P. How many households or dwellings have been completely destroyed?

.....

Q. How many households or dwellings have been partially damaged but not completely destroyed?

.....

R. What is the physical and/or financial damage to other property, buildings and infrastructure in the affected area?

.....

S. What is the physical and/or financial damage to crops and livestock?

.....

T. What are the expected financial damages and costs to businesses in the affected area?

.....

III. Local Financial, Material and Human Resources

E. What resources and capacities do the local population have for responding to this disaster, and how might these resources be used?

LOCAL CAPACITY OR RESOURCE	SUGGESTIONS FOR USE
E.g. Local neighbourhood association volunteer group	Prepare and serve food for displaced and homeless
.....
.....
.....

F. What transport and storage facilities (commercial, government, Red Cross/Red Crescent) are available locally for immediate use?

.....

G. What is the availability, location and condition of roads, airports, ports and railways?

.....

H. What is the capacity of the local and national RC Society for dealing with this disaster?

.....

IV. Immediate Needs

Provide the most complete and up-to-date answers as you can to these questions:

B. Has a detailed needs assessment been carried out? Please attach a copy if available or give a summary of the priority needs below.

Describe the unmet needs in shelter, water, sanitation, food, household supplies (clothes, blankets, cooking utensils, cooking fuel, etc.) and health (medical supplies, equipment, facilities). Quantify and qualify the targeted needs (for example, 110 adults and 200 children need food and water for at least the next 20 days.) Attach additional sheets as necessary.

.....

.....

.....

.....

C. Who carried out the needs assessment?

.....

D. What is needed immediately and who will supply it? Please check or fill in the boxes below as appropriate.

		TO BE SUPPLIED BY:			
ITEM	QUANTITY NEEDED	GOVERNMENT	RED CROSS	NGO'S (specify)	OTHERS (specify)

V. Longer-Term Needs

- E. **What will be needed in the longer term (after the first month) and who will supply it?** One should anticipate serious problems or needs that may arise in the coming months resulting from the disaster and potential future events (winter or rainy season approaching, etc.)

		TO BE SUPPLIED BY:			
ITEM	QUANTITY NEEDED	GOVERN- MENT	RED CROSS	NGO'S (specify)	OTHERS (specify)

VI. National Society Operation

H. Give a brief description of what the National Society proposes to do. (Attach additional sheets if necessary)

.....
.....
.....
.....

I. What is the proposed duration of this NS operation?

.....

J. Which groups of people were chosen for assistance and why?

.....
.....
.....

K. What transport will be required and who will provide it?

.....
.....

L. Who will carry out the operation (e.g. NS volunteers, staff, etc.)?

.....
.....
.....

M. Who is responsible for reporting to donors and when will the reports be made?

.....
.....
.....

VI. National Society Operation (continued)

What items are required for the operation and from where can they be obtained?

Item	Total Number Required	Number Available In Country	Number Needed From Outside	Nearest Country From Where They Can Be Obtained

VII. Additional Comments, Requests, or Information

Feel free to add any important information not reflected in responses to this form. This might include political context, local ethnic tensions, history of disasters and response in the area, and other such contextualizing factors.

If this form is used for an international appeal, please provide further details in the Budget Table on the next page.

VIII. Budget			
Budget Items	Number Required	Cost Per Item (Specify Currency)	Total Cost
Supplies			
Sub-total			
Equipment			
Sub-total			
Transport			
Sub-total			

Budget Items	Number Required	Cost Per Item (Specify Currency)	Total Cost
Personnel Expenses			
Sub-total			
Travel Expenses			
Sub-total			
Administration Expenses			
Sub-total			
Communications Expenses			
Other Expenses associated with the operation			
Sub-total			
TOTAL COST			

Annex 2: Rapid Needs Assessment Checklist

- Number of affected people requiring assistance.** This figure will determine all other estimates and calculations, and therefore, needs to be established as precisely as possible.
- Water needs.** Ideally each person should be provided with 15 litres of potable water per day to cover drinking, cooking and personal hygiene needs. For hospitals the target is 100 litres per person per day for patients and staff. There should be one water point per 250 people and the maximum distance from any shelter to the nearest water point should be 500 metres. Each family should have two water collecting vessels of 10-20 litres, plus water storage vessels of 20 litres.
- Shelter needs.** If using tents, calculate one tent for 4-6 people—ideally of the same family. Decide whether you need summer or winter tents. Do they have to be waterproofed or coated? Can locally made emergency shelter be used instead? Is an extra roof for protection against heat or rain needed? Should a canvas floor be included? Are plastic sheets needed for roofing? If using public buildings, calculate 3.5 m² of floor space for every person. Is shelter heating planned? If yes, with kerosene or diesel stoves?
- Nutritional needs.** A food ration ideally should provide a minimum of 2,100 kilocalories per person per day. The survival energy level for an adult is a minimum of 1,000 kilocalories per day. For supplementary feedings add what is needed to reach the total of 2,100 kilocalories per day, as well as special food to treat severely malnourished individuals. Monitor malnutrition using international standards (e.g. Sphere minimum standards) and methods such as weight-for-height, etc.
- Sanitation needs.** Maximum of 20 people per toilet. Use of toilets is arranged by household and/or segregated by sex. Toilets should be no more than 50 metres from dwellings or no more than a one minute walk. Toilets should be at least 30 metres away from any groundwater sources and the bottom of the latrine should be at least 1.5 metres above the water table. Containers or a system must exist for disposing of solid waste. One 100-litre refuse container should be available per 10 families where domestic refuse is not buried on site. Identify the need and methods for vector control (flies, rats, etc.)
- Fuel needs.** Access of people to firewood, coal or other fuel is often overlooked in needs assessments. There is no general rule for calculating the needs, since climate, traditions and quality of fuel vary considerably. Assessments should specify what type of fuel is appropriate, where to get it, how to transport and distribute it and an estimate of the need.
- Health care needs.** There should be approximately one small clinic per 10,000-35,000 people and there should be one referral hospital facility with surgical capacity for every 250,000-500,000 people. Mortality and morbidity should be monitored using generally accepted international standards and methods (e.g. Sphere minimum standards).

Annex 3: Sample Questions for a Survey of Family Needs

These questions may be used to prepare surveys of post-disaster family needs. Responses to some questions should be referred to public health authorities or to the public works (or appropriate utility) department.

Survey Data

Name of respondent: _____

Pre-disaster address: _____

Post-disaster address: _____

Demographic Data

1. Family composition (indicate number)
 - a. Head of household _____
 - b. Spouse _____
 - c. Number of teenagers (ages 13-18) _____
living at home _____
 - d. Number of children (ages 1-12) _____
living at home _____
 - e. Others living at pre-disaster address _____
 - f. Total people living at pre-disaster address _____
2. Casualties (write in number)
 - a. Number with minor injuries (first aid required?) _____
 - b. Number with broken bones or seen by doctor (unhospitalized) _____
 - c. Number hospitalized _____
 - d. Number killed _____
3. Have all survivors been located? Yes _____ No _____
4. If no, how many are missing? _____

Water

5. Prior to the disaster, where did households obtain drinking water (circle all that apply)?
 - a. Water line to house
 - b. Well on property
 - c. Public water faucets
 - d. Public well
 - e. River or stream
 - f. Lake or reservoir
 - g. Other _____
6. Where do you get your water now?
 - a. Same place as noted in question 5 _____
 - b. Water tank truck provided by _____
 - c. Temporary water tank serviced by _____
 - d. Other _____
7. Does this water appear to be dirty? Yes _____ No _____
8. Is your normal water supply working now?
 - a. Yes, full-time
 - b. Intermittently
 - c. No, not at all
9. If paying for emergency water supply, how much are you paying and to whom?
 - a. Amount _____ per _____ litre
 - b. Paid to _____
10. Since the disaster, has anyone in the family had
 - a. Severe diarrhoea? Yes _____ No _____
 - b. Vomiting? Yes _____ No _____

Food

11. Was the family able to recover food from their house? Yes _____ No _____
12. If yes, how long will it last?
 - a. 1-2 days
 - b. 3-7 days
 - c. more than one week
13. Can you purchase adequate food from local markets? Yes _____ No _____

14. If no, how much food do you estimate that you will need?
 - a. 1-week ration
 - b. 2-week ration
 - c. more than 2-week ration
15. Was any member of the family receiving food from any of the following before the disaster?
 - a. Government
 - b. Church or Church Agency
 - c. Red Cross/Red Crescent National Society
 - d. Other? _____

Family goods

16. Remembering that many people need help, does the family require any of the following?
- | Type of goods | Quantity |
|-------------------------------|----------|
| a. Blankets | _____ |
| b. Bedding | _____ |
| c. Plastic Tarp | _____ |
| d. Flashlights/lanterns | _____ |
| e. Storage boxes | _____ |
| f. Clothing for adult males | _____ |
| g. Clothing for adult females | _____ |
| h. Clothing for teens | _____ |
| i. Clothing for children | _____ |

Fuel

17. What type of cooking and heating fuel did you use before the disaster (circle all that apply)?
 - a. Gas supplied by gas line
 - b. Bottled gas
 - c. Kerosene
 - d. Firewood
 - e. Other _____
18. If (a) or (b), is any gas leaking now? Yes _____ No _____
19. If (a), has gas service been restored to your line? Yes _____ No _____

Sanitation

20. What type of sanitary facilities did you have before the disaster (circle all that apply)?
 - a. Flush toilet in dwelling
 - b. Communal flush toilet in building
 - c. Access to public toilets
 - d. Bucket latrine
 - e. Pit latrine (earthen)
 - f. Other _____
 - g. None
21. If (a) or (b), is the toilet working now? Yes _____ No _____

Shelter needs

22. Will the family require assistance for any of the following (circle all that apply):
 - a. Temporary shelter
 - b. Building materials/tools for shelter
 - c. Building materials/tools for housing repair

Annex 4: Sample Checklist for Initial Health Assessment

(Sphere Project, adapted from CDC, 1992, "Famine-Affected, Refugee, and Displaced Populations: Recommendations for Public Health Issues.")

Preparation

- Obtain available information on the disaster-affected population and resources from host country ministries and organisations.
- Obtain available maps or aerial photographs.
- Obtain demographic and health data from international organisations.

Field assessment

- Determine the total disaster-affected population and proportion of children <5 years old.
- Determine the age and sex breakdown of population.
- Identify groups at increased risk.
- Determine the average household size and estimates of female- and child-headed households.

Health information

- Identify primary health problems in country of origin if refugees are involved.
- Identify primary health problems in the disaster-affected area if no refugees are involved.
- Identify previous sources of health care.
- Ascertain important health beliefs, traditions and practices.
- Determine the existing social structure and the psycho-social dimensions of the situation.
- Determine the strengths and coverage of local public health programmes in people's country of origin.

Nutritional status

- Determine the prevalence of protein-energy malnutrition (PEM) in population <5 years of age.
- Ascertain prior nutritional status.
- Determine hierarchical food allocation practices as they affect the nutritional status of women and different social and age groups.
- Determine the prevalence of micronutrient deficiencies in the population <5 years of age.

Mortality rates

- Calculate the overall mortality rate (crude mortality rate - CRM).
- Calculate the under-5 mortality rate (age specific mortality rate for children under five years old).
- Calculate cause-specific mortality rates.

Morbidity

- Determine age, and sex-specific incidence rates of major health problems and diseases that have public health importance, including sexual violence/rape.

Environmental conditions

- Determine climatic conditions; identify geographic features; ascertain local disease epidemiology; assess access to affected population; assess the level of insecurity and violence.
- Assess local, regional and national food supplies (quantity, quality, types), distribution systems, coordination and services of existing organisations, logistics of food transport and storage, feeding programmes and access to local supplies.
- Assess existing shelters and availability of local materials for shelter, access, amount of land and building sites, topography and drainage, blankets, clothing, domestic utensils, fuel, livestock, money.
- Identify and assess water sources, quantity, quality, transport and storage.
- Assess sanitation including excreta practices, soap, vectors and rats, burial sites.

Resources available

- Identify and assess local health services including: access to facilities, health personnel, interpreters, types of facilities/structures, water, refrigeration, generators at facilities, drug and vaccine supplies.

Logistics

- Assess transport, fuel, storage of food, vaccines and other supplies, communication.