GUIDELINES FOR RAPID ENVIRONMENTAL IMPACT ASSESSMENT IN DISASTERS

Developed by:
Benfield Hazard Research Centre,
University College London
and
CARE International

Version 4.4
April 2005

Prepared by:
Charles Kelly
Affiliate, Benfield Hazard Research Centre

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Developed by:
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Version 4.4 incorporates changes to the rating forms and process following use of the REA in Sri Lanka and Indonesia. Comments on the REA or this document should be sent to Charles Kelly, at 72734.2412@Compuserve.com.

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COVER PHOTO CREDITS

1. Dead fish lie on the dry bottom of the Ding An reservoir on Hainan Island, China. Photo: AFP. http://www.smh.com.au/articles/2002/05/23/1022038458561.html
2. Results of Hurricane Georges in Dominican Republic 1988 http://www.paho.org/Images/PED/DomincanRepublicb10.jpg
3. Ashfall from Volcanoes-Montserrat. http://www.paho.org/Images/PED/montserratb6.jpg
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5. These scenes are from "Ibada-Elume spill-fire explosion. Spill lasted for several days before fire erupted. Ibada-Elume, Okpe L.G.A, Delta State. (ERA Field report #73)" http://www.waado.org/Environment/OilFires_2000/ElumeRiverFire/FireImages.html

USE AND STRUCTURE OF THE REA

The *Guidelines for Rapid Environmental Impact in Disasters* (REA) provide a means to define and prioritize potential environmental impacts in disaster situations. The *Guidelines* is composed of five main parts and ten supporting Annexes. The main parts include an **Introduction to the REA**, and modules on **Organization** and **Community Level Assessments**, **Consolidation and Analysis** of assessment results and **Green Review of Relief Procurement**. The Annexes include information sources, forms used in the assessment and information useful in managing the REA process.

Good planning and preparation are important to a rapid execution of the REA. It is strongly recommended that the *Guidelines* **Introduction** be fully reviewed before an assessment. At least the **Organization Level Assessment** and **Consolidation and Analysis** modules should be used in any disaster impact assessment, while completion of the **Community Level Assessment** is strongly recommended. The **Green Review** module can be used independently of the other modules.

The *Guidelines for Rapid Environmental Impact in Disasters* provides a comprehensive description of the REA process together with background information on key tasks needed to complete the assessment. A separate *Quick Guide* to the REA process is also available. The *Quick Guide* includes the rating forms and instructions found in the *Guidelines* but only a minimal amount of additional information on the REA process.

A *Guidelines*-based rapid environmental impact assessment can be conducted as a stand-alone exercise or as part of, and using information collected during, other standard disaster impact assessments. When done as part of another type of assessment the REA process should not result in any significant increase in workload in the field or during analysis.

EXECUTIVE SUMMARY

The **Rapid Environmental Impact Assessment in Disaster** (REA) is a tool to identify, define, and prioritize potential environmental impacts in disaster situations. A simple, consensus-based qualitative assessment process, involving narratives and rating tables, is used to identify and rank environmental issues and follow-up actions during a disaster. The REA is built around conducting simple analysis of information in the following areas:

- The general context of the disaster.
- Disaster related factors which may have an immediate impact on the environment.
- Possible immediate environmental impacts of disaster agents.
- Unmet basic needs of disaster survivors that could lead to adverse impact on the environment.
- Potential negative environmental consequences of relief operations.

The REA is designed for natural, technological or political disasters, and as a best practice tool for effective disaster assessment and management. The REA does not replace an EIA, but fills a gap until an EIA is appropriate. A REA can be use from shortly before a disaster up to 120 days after a disaster begins, or for any major stage-change in an extended crisis.

The REA does not provide answers as to how to resolve environmental problems. It does provide sufficient information to allow those responding to a disaster to formulate common sense solutions to most issues identified. Where solutions are not evident, the REA provides sufficient information to request technical assistance or to advocate action by a third party. The REA contributes to activity and environmental M&E, but does not replace a formal M&E system.

The REA does not require expert knowledge. Primary REA users are people directly involved in disaster response operations, with a basic knowledge of the disaster management process but no background in environmental issues. The REA process can be used by disaster survivors with appropriate support. The best results are expected to come when the REA is completed with structured input from survivors and organizations providing relief assistance. Sections of the REA can also be used for needs assessment and environmental impact screening during relief project design and review.

REA development is a Benfield Hazard Research Centre-CARE International collaborative effort, with financial assistance of the joint UNEP/OCHA office in Geneva, Royal Norwegian Ministry of Foreign Affairs, Office of Foreign Disaster Assistance, USAID and CARE International.

REA Modules and Outcomes

Module	Outcomes
Organization Level Assessment	Identification of critical environmental issues related to the disaster from the perspective of organizations providing relief and recovery assistance.
Community Level Assessment	Identification of critical environmental issues related to the disaster from the perspective of communities and groups affected by a disaster.
Consolidation and Analysis	An identification and prioritization of environmentally-linked issues involving significant immediate threat to lives, well being and the environment.
Green Review of Relief Procurement	A screening of the procurement of relief commodities and services to minimize negative environmental impacts.

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OVERVIEW OF THE PROCESS

The Rapid Environmental Impact Assessment in Disasters (REA) process involves completing four modules according to the specific tasks indicated below, preferably though a group-based process. The REA process should begin with a review of the material contained in the ***Introduction to the REA*** *section of the Guidelines, and proceed through the four modules summarized below.*

MODULE ONE: ORGANIZATION LEVEL ASSESSMENT

1. Collect background information and identify assessment participants.
2. Draft three paragraphs describing the disaster for Section One.
3. Complete Section One: The **Context Statement.**
4. Complete Section Two covering **Factors Influencing Environmental Impacts.**
5. Complete Section Three covering **Environmental Threats of Disasters.**
6. Complete Section Four covering **Unmet Basic Needs.**
7. Complete Section Five covering **Negative Environmental Consequences of Relief Activities.**
8. Rank issues by importance within each section as indicated in the *Guidelines.*

Note that Sections Two to Five can be completed in break-out sessions.

MODULE TWO: COMMUNITY LEVEL ASSESSMENT

1. Decide on how information on community perceptions of the environment will be collected.
2. If a questionnaire or focused discussion method is used, plan, test and administer the method in communities. See Annexes F and G on community data collection.
3. Compile the results of the community level assessment into usable form (a report or completed questionnaire) for each community.
4. If data from other assessments are used, ensure that all the information needed for this module is collected or extracted from existing assessment reports.
5. Complete the Community Assessment Summary Form based on the information collected or drawn from other assessments.
6. Rank the issues by relative importance within each section of the form.

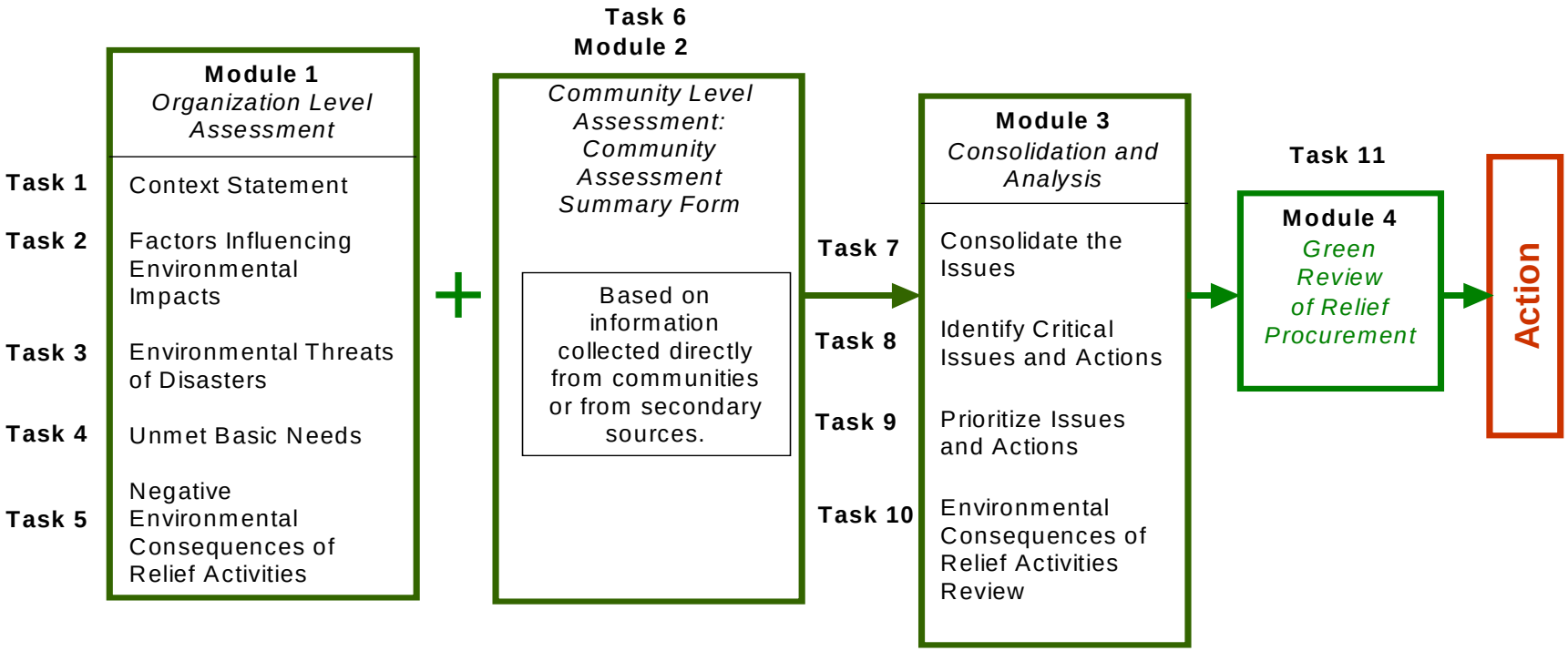
MODULE THREE: CONSOLIDATION AND ANALYSIS

1. Include three to five issues from each section of the Organization and Community Level Assessments on the Issues Consolidation Table and consolidate the issues into a single list.
2. Place the single list of issues on the Issues and Actions Table and identify initial actions and issues and actions.
3. Prioritize these issues and actions according to the impact on life, welfare and environment hierarchy.
4. Review the potential environmental impact of the actions and make changes are appropriate.

MODULE FOUR: GREEN REVIEW OF RELIEF PROCUREMENT

1. Review the guidance provided in Green Review of Relief Procurement module.
2. Complete the procurement screening table provided in the module.
3. Make changes to procurement plans as appropriate.

The REA process



INTRODUCTION TO THE REA

Background

There is a strong link between environmental damage and disasters. Identifying, evaluating and responding to critical environmental issues during a disaster are key to effective disaster relief and recovery operations. In normal, non-disaster, situations an environmental impact assessment (EIA) can be used to identify possible environmental impacts and mitigation measures.

However, as indicated in the box below, a disaster is radically different from normal conditions, making an EIA inappropriate[1]. Most governments and humanitarian assistance organizations specifically allow for not doing an EIA in emergencies, recognizing that a full EIA would considerably slow emergency assistance.

These guidelines for a **Rapid Environmental Impact Assessment** (REA) fill a gap in the range of tools available to assess environmental impacts during disasters. The REA is designed to provide input on environmental conditions in disaster situations in a way which is convenient for the fast moving, time compressed operational environment faced in responding to a disaster2.

Contextual Differences:
Normal & Disaster Environmental Assessments

Normal Conditions	Disasters
• Considerable lead time	• Sudden onset
• Legal requirement often exists (country &/or donor)	• Rarely a legal requirement but some donor may ask for it
• Deliberate & pro-active	• Reactive
• Will take time, be thorough & extensive: comprehensive data collection	• May need to be partial in coverage
• "No project" option is a possible outcome	• "No project" outcome is not an option
• Location chosen	• Unpredictable location
• Duration planned	• Uncertain duration
• Beneficiary population identifiable & static	• Beneficiary population heterogeneous & dynamic
• Environmental goals may be made compatible with socio-economic ones	• Priority given to "life saving" activities sometime difficult to reconcile with environmental goals

Source: UNHCR and CARE International

The REA is one of several initiatives to improve the linkages between sustainable environmental management and disaster response. Leaders in this area include United Nations Environment Program (UNEP, see: www.reliefweb.int/ochaunep

[1] For further information on environmental impact assessments, see www.iaia.org, the environment section of the Food Aid Management web site (www.foodaidmanagement.org/ewg.htm) or the Environmental Assessment Capacity Building Program (www.encapafrica.org), which includes information and resources useful in post-disaster recovery activities.

2 The **Handbook for Estimating the Socio-economic and Environmental Effects of Disasters** (Economic Commission for Latin America) is a complementary effort which focuses on "the direct and indirect effects of the event and their consequences on the social well-being and economic performance of the affected country or area" (page vii). A similar approach has been developed by the Organization of Eastern Caribbean States.

and www.unep.org), CARE International, UNHCR (www.unhcr.ch/cgi-bin/texis/vtx/home?page=PROTECT&id=3b94c47b4), the World Wide Fund for Nature (www.bsponline.org) and Benfield Hazard Research Centre (www.benfieldhrc.org/SiteRoot/disaster_studies/rea/rea_index.htm). These organizations have not only focused on their own needs, but seek to develop means and methods to assist all interested organizations and communities to better deal with environmental issues before, during and after disasters.

The REA was developed as a collaborative effort of the Benfield Hazard Research Centre, University College London (www.benfieldhrc.org) and CARE International (www.care.org). The REA guidelines and background materials can be accessed at www.benfieldhrc.org/SiteRoot/disaster_studies/rea/rea_index.htm). Funding for this collaboration has come from the United Nations Environment Program, Royal Norwegian Ministry of Foreign Affairs, Office of U.S. Foreign Disaster Assistance USAID and CARE International. The REA development is guided by an international advisory board and in collaboration with over twenty non-governmental organizations (NGOs) and international organizations (IOs).

Concepts and Outcomes

The REA is based on the concept that identifying and incorporating environmental issues into the early stages of a disaster response will make relief activities more effective and lay a foundation for a more comprehensive and speedy rehabilitation and recovery. The process and structure of the REA recognize that those who respond to disasters have little time for in depth research and are not likely to be environmental specialists.

Key Terms Used in the REA

Advocacy: Act of pleading for, supporting or recommending, used in the sense of Advocate: one who pleads for or in behalf of another (Adapted from Merriam-Webster Online Dictionary, http://www.m-w.com/cgi-bin/dictionary.)

Disaster: An event beyond the immediate means of the affected populations to cope and which threatens lives or immediate well being. Disasters are caused by the interaction of people and a hazard. In the REA, "emergency" has the same basic meaning as "disaster".

Environment: See page 5.

Hazard: An event or condition which could result in a disaster, as in the hazard of flooding.

Livelihood: The capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. (Adapted from http://www.livelihoods.org/info/guidance_sheets_pdfs/section1.pdf and Chambers, R. and G. Conway (1992) Sustainable rural livelihoods: Practical concepts for the 21st Century. IDS Discussion Paper 296, Brighton.)

Mitigation: Steps taken before a disaster to reduce the impact of the disaster or steps taken during a slow onset disaster to mitigate negative impacts and reduce the need for relief assistance.

Prevention: Actions taken before a disaster to ensure a hazard has no impact.

Recovery: Process of supporting emergency-affected communities in reconstruction of the physical infrastructure and restoration of emotional, social, economic and physical well being.

Rehabilitation: Short-term recovery of basic services and initiation of repair of physical, social, and economic damages.

Relief: Immediate assistance to save lives and meet basic needs of disaster affected populations.

Remediation: Action to rectify a deficiency to an adequate standard of safety. Most often used with respect to technological disasters.

Response: Actions in the face of an adverse event aimed at saving lives, alleviating suffering and reducing economic losses.

Risk: The expected losses due to a particular hazard. Risk is the product of hazard and vulnerability.

Threat: The specific impending danger or harm that may result from the occurrence of a hazard.

Vulnerability: The degree to which a population may be affected by a hazard. (Interworks)

Based on: *Field Operations Guide* (USAID) and *Australian Emergency Management Glossary* (www.ema.gov.au) or as indicated.

Under these conditions, the first step in effective response is to identify and define the nature and importance of the challenges faced in dealing with the impact of a disaster. This is what the REA does: identify, frame and prioritize environmental issues in such ways as to allow the negative impacts to be minimized or avoided during the immediate response to a disaster.

A completed REA identifies critical environmental issues. Some issues arise from conditions existing before the disaster. Others are new to the location or population experiencing the disaster. The nature and impact of environmental issues will change during and after the disaster and new issues may arise. For these reasons, the output from an REA is not a static assessment but one to be reviewed and revised throughout the post-disaster period.

The REA **does not provide answers as to how to resolve the critical issues** identified in the assessment. A completed REA **does provide sufficient information to allow those involved in responding to a disaster to formulate common sense solutions** using information otherwise available to address, mitigate or avoid the issues raised in the assessment.

Where common sense solutions are not evident or issues are complicated or unclear, a REA **provides sufficient information to request appropriate technical assistance or advocate appropriate action** by a third party. Technical assistance can be secured by posing specific questions to specialists, or developing simple terms of reference for on-site specialized technical or material assistance. Sources of technical advice and assistance are identified in **Annex A**. Technical assistance is often available locally and this source should not be overlooked.

The Environment Defined

The REA uses the following definition of the environment, originally developed by the Sphere Project (www.sphereproject.org/):

> *The environment is understood as the physical, chemical and biological surroundings in which disaster-affected and local communities live and develop their livelihoods. It provides the natural resources that sustain individuals, and determines the quality of the surroundings in which they live.*

Approach

The REA uses a simple, guided, consensus-based qualitative assessment process incorporating narratives, rating tables and action lists to develop an overall assessment of critical environmental issues and follow-up actions during a disaster. The REA does not call for any quantitative data collection, recognizing that this is both time consuming and operationally difficult in most disasters.

However, quantitative data should be collected and used whenever possible if data collection and use will not slow the overall relief effort. In addition, a clear documentation of the REA process and collection of environmental data during a disaster will make an EIA for post-disaster recovery planning easier and more accurate.

REA Process

The REA process is designed to:

1. Collect information needed to assess environmental impacts,
2. Provide simple steps for analyzing this information to identify important issues and,

3. Review procurement decisions to reduce the potential negative environmental impacts of emergency assistance.

The REA process focuses on the perceptions and concerns about environmental issues and disaster-environment linkages at two levels. The first level is that of organizations involved in responding to a disaster. This level includes government, non-government and private organizations that provide external assistance and support in response to a disaster.

The second level is that of communities and groups within communities which are affected by a disaster. Experience shows that those providing disaster relief and those affected directly by a disaster often have different perceptions of the impact of a disaster and corresponding relief needs. Identifying organization and community perceptions separately and then consolidating these environmental concerns into one set of issues and actions will improve the efficiency of relief efforts by diminishing the gap in understanding between relief providers and survivors.

Assessment Modules

A complete REA is accomplished through four modules. The first two modules, an **Organization Level Assessment** and a **Community Level Assessment**, are designed to collect the basic information necessary to identify critical environmental issues. These modules focus on five areas:

1. The general context in which the disaster is taking place,
2. The identification of disaster related factors which may have an immediate impact on the environment,
3. The identification of possible immediate environmental impacts of disaster agents,
4. The identification of unmet basic needs of disaster survivors that could lead to an adverse impact on the environment, and,
5. The identification of negative environmental consequences of relief operations.

Information on the first two areas establishes the overall context of disaster-environment interactions. The next three topical areas focus on issues which have direct links to relief operations. These topical areas are discussed in greater detail in the **Organization Level Assessment** module described below.

The information collection process differs between the two modules. The **Organization Level Assessment** uses a combination of narrative and rating tables which correspond closely to the five topical areas summarized above.

The **Community Level Assessment** can use one of several sources, including a specifically designed questionnaire, focused discussions, or information collected during other types of assessments (e.g., a food security assessment). The tasks to complete these two assessments are described in more detail in the respective modules below.

It is possible to complete a rapid environmental impact assessment using only the **Organization** or the **Community** level assessment module. Using only the **Organization Level Assessment** is conceivable when there is no opportunity to collect information from communities, as is likely in rapid onset disasters. Given this possibility, the **Organization** level module also provides basic guidance on how to link assessment outcomes to immediate relief actions.

It is **strongly recommended** that if only an **Organization Level Assessment** is initially done, a **Community Level Assessment** should be completed as soon as possible to avoid any gaps between organization and community level perceptions of environmental issues

and how these issues should be addressed.

On the other hand, sometimes only a **Community Level Assessment** can be completed and analyzed. However, limiting the REA to only community level input presumes those organizations (and their personnel) responding to a disaster do not have their own perceptions of environmental issues and will completely accept the community perceptions. The reality is that organizations (and especially their funding sources) usually hold strong views on the nature and modalities of relief assistance. Conducting both **Organization** and **Community Level Assessments** ensures that assistance providers and survivors are, at the least, not working at cross purposes.

The consolidation and analysis of issues identified in the assessment occurs in the two assessment modules and through a separate **Consolidation and Analysis** module. In the **Organization Level Assessment,** a preliminary ranking of issues occurs as the result of the issue rating process. In the **Community Level Assessment,** a preliminary ranking of issues occurs through the process of extracting information from a questionnaire, reports on focused discussions or from other assessment reports.

The **Consolidation and Analysis** module moves the analysis process further by providing simple procedures to help consolidate and prioritize the issues identified in the assessments. The consolidation and analysis process does not identify specific solutions to the issues identified, but does provide a simple approach to initiate the process of addressing the issues identified.

The final module, on **Green Review of Relief Procurement**, aids relief organizations in identifying whether the services and material assistance they are providing in response to a disaster have the least negative environmental impact possible. This module lays out the background to green (sustainable) procurement and provides a simple evaluation tool for use in emergency procurement.

A number of sources of information can be used to support the completion of the rapid environmental impact assessment. Annexes to this *Guidelines* include sources of information on environmental and disaster issues (**Annex A**), general guidance on managing group meetings (**Annex C**) and on participatory rapid appraisal (**Annexes F** and **G**).

It is important that users fully complete the assessment process before taking any significant action to address identified environmental or disaster-related problems. The REA is an incremental process designed to draw together many diverse aspects of disaster-environment linkages. The most significant issues requiring highest priority action will not be fully evident until all the assessment results are consolidated and analyzed.

Good Practice and Standards

The REA has been developed as a good practice for rapid environmental impact assessment in disasters. The REA is expected to evolve to take into account changes in the way disasters are managed and new information sources and procedures.

The REA process has also been linked, where appropriate, to the minimum humanitarian assistance standards described in the Sphere Project Manual (see http://www.sphereproject.org/). However, completing the REA is not dependent on the Sphere standards, and the REA can easily be used in conjunction with alternates to the Sphere standards.

Applicability

The REA is designed for use in all types of disaster situations, including natural, technological and political events.[3] The REA supplements specific technical assessments and actions initiated following a technological disaster.

In political disasters, such as a civil war, there may be considerable periods when the affected populations are in disaster-like conditions. The REA is most useful when there is a significant rapid change in these conditions, such as a change in the mode of conflict, livelihoods or mechanisms of assistance. For instance, the REA process would be extremely useful in developing a rapid response to assist returning populations following a peace agreement ending a civil war.

However, an assessment of rapid changes in a long-term situation needs to take into consideration that there are likely to be overlapping short-and long-term environmental issues. Some of these issues can be addressed through immediate relief efforts, but others need more substantial long-term solutions. These longer term solutions need to be based on a more detail environmental impact assessment than that provided in a REA.

The REA can be used in multiple or concurrent disasters. In these situations there is a need to differentiate between the impacts of the different disasters, and corresponding different relief options and operations. For instance, the human and environmental impacts of an earthquake and a drought are different. Addressing environmental issues arising from each disaster will occur in different time frames and require different types of assistance. These differences need to be taken into account in the assessment process, and in the process of linking actions to issues identified during the assessment.

The REA can be used to provide input into a Monitoring and Evaluation (M&E) system (discussed below). It also has uses as the basis for an environmental impact check list in relief project design and as a basis for reviewing plans and operations. This process is best done in collaboration with the persons designing or running the relief operation.

The REA can be modified to reflect the typical disasters and relief and recovery modalities of a specific region or country. Such modification should focus on changing terminology to reflect local approaches to disaster management, eliminating unneeded items from various rating tables, focusing the community assessment process on local conditions and established assessment procedures and integrating the REA process and analysis into other routinely done disaster assessment procedures or protocols. Significantly changing the REA process or eliminating modules is not recommended.

When to Do an REA

The REA is designed for use during the critical disaster response period, from when a warning of a disaster is first received until conditions have stabilized, normally within 120 days after a trigger event. This 120-day period provides time to begin an EIA as part of the recovery and rehabilitation process. The REA, besides identifying immediate environmental factors relevant to the relief operations, provides data and insight that can be incorporated into the EIA.

The REA should be started as soon as practicable after a warning or start of a disaster. The initial (baseline) assessment should be followed by periodic updates to ensure the REA

[3] UNHCR has developed information and assessment tools for considering environmental impacts in refugee situations. These materials are useful for internal displacements and are a valuable supplement to the REA. See www.unhcr.ch/cgi-bin/texis/vtx/home?page=PROTECT&id=3b94c47b4

accurately represents current environmental and disaster conditions. The frequency of the updates depends on the nature of the disaster. They should be more frequent in large, quickly evolving events than smaller, more stable disasters.

The immediacy of disaster impact and urgency of relief should be taken into account in deciding on whether to use a REA or a formal environmental impact assessment process. For instance, the REA can provide a quick identification of critical environmental issues following a major earthquake leading to considerable damage and relief needs over a large area. On the other hand, a REA may not be as urgent, or even appropriate, for a drought which develops over several years, where impacts are seasonal and time is available to develop a formal EIA.

The REA can be used before a disaster to anticipate environmental issues and impacts. However, if there is any significant early warning (e.g., in excess of 60 days), it is more useful to initiate an EIA as part of the pre-disaster planning and mitigation efforts.

The REA provides a “snap-shot” of environmental conditions at the time it is completed. By setting out prioritized critical issues the REA allows for some anticipation of environmental impacts. These impacts, and the impact of REA-identified actions, can be assessed through revisions of the initial REA.

Because the REA is based on perceptions and (often) incomplete data, it should not be used to make hard-and-fast predictions of environmental impacts. The REA results, like much in the relief phase of a disaster, are subject to uncertainty and unanticipated changes.

Steps can be taken to prepare for a REA as part of disaster preparedness efforts. Pre-disaster tasks can include:

1. Training staff in the use of the REA,
2. Collection of background information (particularly for **Section One: Context Statement**),
3. Reviewing potential hazards and their impacts on potential disaster areas and survivors (**Section Three: Environmental Threats of Disasters)**,
4. Screening possible relief interventions for negative environmental impacts (**Section Five: Negative Environmental Consequences of Relief Activities**), and,
5. Developing skills and systems to quickly collect information from communities for the **Community Level Assessment** module.

Taking these steps will considerably shorten the time needed to conduct the REA during a disaster.

Link to Formal Environmental Impact Assessments

A REA does not replace a formal EIA. Rather, it fills the gap between the start of a disaster and when the formal EIA process can be initiated. This gap is expected to correspond closely to the120 day relief operations period, with the EIA process coming to play with the design and planning of recovery programs.

Data collected and data collection systems established through a REA can provide important inputs into an EIA. A well-documented REA will aid considerably in defining the scope and coverage of an eventual EIA and data collected as part of the REA or subsequent M&E efforts may have use in completing a normal EIA.

Users

The REA is intended to be used by persons with no specific background in environmental issues and relatively little background in disaster management. The primary REA users are expected to be government, NGO or IO staff conducting field assessments or directly managing relief operations.

The REA can be used by communities experiencing a disaster, although this will require additional planning to ensure community participants understand the REA concepts and procedures. In any case, **community involvement in the REA should be sought whenever possible**. The **Community Level Assessment** module is specifically designed for this purpose.

The REA can be used by headquarters or donor staff to screen projects under design or review. In particular, Sections Four and Five of the **Organization Level Assessment** module can be used to quickly assess whether a proposed project has considered and is addressing salient environmental issues. The **Green Review of Relief Procurement** module is designed to screen whether procurement proposed under a project has taken into account steps to minimize negative impacts on the environment.

Personnel Requirements

Ideally an initial REA will be completed by a group of persons directly involved in the disaster response. A group approach promotes the presentation of various views and perspectives on environmental issues and disaster impact. This limits the chance that issues or problems will be missed in the initial assessment or an individual's own personal views will result in a narrow perspective of environmental conditions. This group process should be managed by one person charged with leading the assessment process, collecting background information, and recording and keeping a file of the assessment results. (See **Annex J, REA Leader: Key Criteria**.)

The REA can be done by a single person. Care is needed, however, to ensure that this person has adequate time and means to collect the information needed to accurately complete the REA modules. In addition, having one person completing all four modules of the REA will likely take considerable time and detract from the rapid nature of the assessment.

The assessment process laid out in the **Organization Level Assessment** module is best completed by a group of ten to twelve persons. This allows for a diversity of views and for the larger group to be broken-up into working groups for work on the rating forms. When the REA involves planned or on-going projects, the key staff of these projects should be involved in completing and updating the REA.

The **Community REA Questionnaire** (provided for in the **Community Level Assessment** module) can be done by one person, although it is preferable for at least two persons to work together on completing the questionnaire. To cover as many communities as possible, several teams can concurrently administer an assessment questionnaire or other data collection procedure to a number of communities.

The REA results should be updated periodically and this updating done by the same group which completed the original assessment. A single person can update a REA, although this person needs to have a good knowledge of how the disaster is progressing and of changes in impacts and relief requirements.

As noted, the REA can be done with (or even by) disaster survivors. This will involve more pre-assessment preparation to ensure the community understands the concepts and basis for the REA process, and adds to the time and workload of the overall assessment. However, the benefits, in improved understanding of local concerns for the environment and closer links between survivor needs and assistance plans, can be significant and warrant the extra workload.

Time Required for Completion

The time needed to complete a full REA depends on:

- The nature of the disaster,
- Whether both **Organization** and **Community Level Assessments** are completed,
- The level of preparation of those completing the assessment work, and
- The amount of training on the REA which has been provided.

The time needed to complete the **Organization Level Assessment** can range from under four hours to one and one half days, depending on participant familiarity with the REA and the *Guidelines*, the need for translation and the extent of preparations. It is recommended that four to six hours be allocated to preparation for the **Organization Level Assessment**, covering the collection of background information, drafting parts to the **Context Statement**, and translation of key materials as needed.

If a number of organizations are involved in the **Organization Level Assessment**, a second meeting of the participants in the initial assessment is recommended to validate results once the REA has been completed. This validation meeting can require up to two hours with a similar period of time for preparation of briefing materials.[4]

Time Needed for REA Completion

Organization Level Assessment: 4 hours to 1 1/2 days depending on preparation. 4 to 6 hours of preparation will greatly shorten the time needed for group assessment. A follow-up validation meeting (recommended if several parties are involved the assessment) should require 2 hours.

Community Level Assessment: 1 day per community. 1 to 2 days to extract and complete preliminary analysis of information, depending on source of information.

Consolidation and Analysis: 3 hours up to 2 days (if large group discussions are involved), including time to write-up results.

Green Review of Relief Procurement: No additional time required if integrated into procurement process.

Time needed to complete the **Community Level Assessment** depends on whether the assessment can be based on existing information sources (i.e., other assessments) or whether there is a need for a separate community data collection effort. Experience indicates that administering a questionnaire or focus discussion process in a community requires two to four hours per group contacted. In practical terms, this means collecting information from one community per day if the communities are reasonably accessible, with the total number of days dependent on the number of communities included in the assessment and the number of survey teams.

The extraction and preliminary analysis of community information, whether from questionnaires, focused discussions or other assessment reports requires anywhere from

[4] Note that the REA is intended to provide input into planning and operations and will not necessarily generate a detailed assessment report. In the absence of a formal report, meeting with assessment participants may be the most effective way to share the results of the assessment.

four hours to one day depending on how well records are kept and the number of groups covered in the assessment. Needing to read several assessment reports to become familiar with the information available can add to the time required.

Completing the preliminary analysis at the end of each community visit can shorten the time required to complete a preliminary analysis. As with the **Organization Level Assessment**, good planning and preparations are critical to a rapid completion of the assessment process.

Completing the **Consolidation and Analysis** module can require from three hours to up to a day and a half of group discussions and up to an additional one half day to write-up results. The time needed for this module can be shortened by having the analysis done by one person, although the advantage of using a group process for validation and buy-in to the assessment results is significant.

Dealing with Unknowns

Information is often scarce or unreliable in a disaster. It is likely that in most disasters there will be insufficient information to complete all the individual items in REA rating and ranking tables.

If there is insufficient information to rate or rank a REA item, or to answer a question posed in the rating process, the item involved should be identified as a priority for action. (The action will most likely be to collect more information to ascertain whether the item poses a threat to human lives or the environment.)

The work needed to complete the **Green Review of Relief Procurement** module is relatively short if information is available on the services or materials to be procured. Ideally, the check list review should be completed as procurement specifications are developed or procurement plans are reviewed. In this situation, the **Green Review of Relief Procurement** should not add measurably to the time needed to complete the normal emergency procurement process.

When considering the time needed to complete the REA it should be kept in mind that the REA is a **rapid, not a comprehensive**, assessment. The REA is not designed to clarify all possible environmental issues linked to a disaster, or to provide detailed answers to issues which are identified as being critical. Efforts to address issues identified during the assessment should take place after the assessment and not unnecessarily lengthen the assessment process itself.

Completion of the whole REA by a single individual will take somewhat longer than completion with group participation, particularly because of the time needed to contact and interview knowledgeable persons. Updating or revising an initial REA, if done regularly and by persons knowledgeable about the disaster and who participated in the initial REA, should take no more than a couple of hours.

The REA will generate follow-up activities. This work is closely related to tasks necessary for an efficient relief operation and should not add significantly to the disaster-related work load. However, these follow-up activities may lead to work in areas where relief operations have not been given sufficient attention, and generate new workloads.

Diversity

The gender, social, cultural, ecological, and economic diversity of the area covered by a rapid environmental impact assessment should be considered in organizing and conducting the assessment. Perception of environmental conditions, salient issues and ways to address environmental issues can vary by gender, age, social status, culture and economic status.

Participants in the REA should reflect the gender, social and cultural diversity of the population within the area for which the assessment is being conducted. This is particularly

true for the **Community Level Assessment** where contacts with communities should include an accurate representation of the different groups within a community. In turn, this implies that persons participating in the REA be aware of the diversity of groups within the assessment target area. The REA is of little value if it does not represent the social environment of the area affected by a disaster.

Monitoring and Evaluation

The REA can contribute to the monitoring and evaluation (M&E) of relief activities and environmental impacts. The initial REA provides a baseline on environmental conditions and issues, and an indication of possible environmental impacts of relief activities.

REA updates provide information useful to monitor progress toward objectives and changes in impact on the environment. This information can be used in evaluating relief and environmental interventions. The REA can also point to environmental issues to be included in the follow-up to emergency interventions as well as identify possible indicators for a formal M&E system.

Users are cautioned that REA is not a stand-alone M&E system but a tool available to a formally organized and managed M&E process. Over time the REA results will likely become less important as formal M&E data collection systems are instituted. The UNHCR *Environmental Indicator Framework: A Monitoring System for Environment-Related Activities in Refugee Operations* provides a process and indicators which can be adapted to most disaster response situations and complement monitoring data collected through the use of the *Guidelines*.

A Note on Rating Metrics

Although specific rating procedures and scales are set out in the *Guidelines*, these methods or scales can be changed to reflect local preferences. However, the original intent of the scaling should be maintained. Any new methods and scales should be used consistently during the assessment and any assessment updates. (Numerical scales, used in previous versions of the REA, can lead to pseudo-statistical comparisons which have no validity.)

A second issue is the value assigned to specific rating steps in a rating range (e.g., low, medium, high). When the rating is done in a group setting, a common set of values for each step is established by consensus. However, these values may be different if a REA is updated by a group different from that which originally conducted the assessment.

Ideally, REA updating should be done by substantially the same group which did the initial REA. If no significant continuity between initial REA and update groups exists, it may be best to consider the “update” as a new REA, reflecting new conditions and new perceptions of these conditions. This means, of course, that the whole REA process should be completed anew.

REA MODULE ONE: ORGANIZATION LEVEL ASSESSMENT

*The **Organization Level Assessment** module focuses on critical environmental issues from the perspective of government, non-government and private relief organizations. The assessment uses narrative and rating forms covering environmental issues which can arise in a disaster and provides limited guidance on how to address these issues. This assessment can be done without the companion **Community Level Assessment** as an immediate input into needs assessments and the planning of relief operations, particularly during short onset disasters. However, completion of the **Community Assessment** is recommended when time allows. The assessment can be completed by an individual, but is best done by a group of ten to twelve field personnel and can take as little as four hours if a comparable period is dedicated to preparations.*

Introduction

The **Organization Level Assessment** identifies critical environmental issues linked to a disaster from the perspective of staff working for government, non-government and private organizations providing relief and recovery assistance. The assessment is accomplished by completing a narrative and a set of rating forms covering most environmental issues which can arise in a disaster. The narrative and rating process, involving five Sections, is described below, with the purpose, process and expected outcomes for each Section covered. The narrative outline and rating forms are provided in **Annex B**.

How to Complete the Module

This module can be completed by an individual. However, it is recommended the module be completed by a group of between ten and twelve individuals. These individuals should have at least general knowledge of the disaster event or location in which the disaster is taking place. If a larger (or very diverse) group is used to complete this module then additional preparation is recommended to minimize the actual group work time. It is also optimum for the group doing the assessment to be from a variety of backgrounds and diversity of experiences. Suggestions on how to manage a group assessment process are provided in **Annex C**.

If more than seven people are involved in completing this module, a combination of single and break-out group sessions is recommended. With this approach, the **Context Statement** is completed in a single group of all the assessment participants. The remaining four module Sections are completed by break-out groups.

The results of the break-out group ratings can be compared and compiled into a single list for each Section, at the end of each Section session or once all the Sections are completed. The compilation process is accomplished by presenting the issues and rankings for each Section made by each break-out group in a single table (e.g., on a flip chart) and reaching agreement within the group as to a final rating based on the individual break-out group scores.

Break-out groups provide more opportunity for discussion and reduce the likelihood of a few individuals dominating deliberations. **It is critical that all the break-out groups use the same rating scales and procedures**. These scales and procedures need to be made clear at the beginning of the break-out sessions and monitored during the assessment by the assessment leader.

Once all the Sections of the **Organization Level Assessment** are completed by the break-out groups, a single group session is needed to compile a single ranked list of issues. For the **Context Statement** this involves participants identifying critical issues highlighted in the

statement through a moderated discussion led by the assessment leader and agreement on the ranking of issues these from most to least important.

Ranking issues from the other four Sections in the module is based on ranking each issue within a Section by the rating it received. (Comparison of issues between Sections is done later in the **Consolidation and Analysis** module.) The ranking method for each Section is described below. In addition, a simple hierarchy for deciding importance is provided in the **Consolidation and Analysis** module.

Planning and Resources

Completing the **Organization Level Assessment** module can require anywhere from under four hours to 1 1/2 days. Factors which can lengthen the module completion include a lack of preparation, the verbatim translation of *Guidelines* during assessment sessions, a lack of unfamiliarity with the REA and *Guidelines* on the part of the participants, and participation of a large and diverse group in the assessment.

Preparations for completing the module should cover the following points:

- Ensure it is clear who will lead the overall assessment, including coordination of follow-up actions, and integration of results into project design and management.
- Identify and collect key background information, including maps and reports.
- Draft a preliminary **Context Statement** for review by assessment participants. Providing a draft **Context Statement** helps participants to have a common understanding of the disaster under assessment and facilitates the identification of additional information to be included in the statement.
- Decide which parts of Rating Form 2 (**Environmental Threats of Disasters**) and Rating Form 4 (**Negative Environmental Consequences of Relief Activities**) do not apply to the disaster under assessment and can be eliminated. Care should be taken to avoid inadvertently eliminating any important aspect of the disaster-environment linkage. And it should be kept in mind that environmental impacts may change and evolve during a disaster. These changes should be taken into account when up-dating an assessment.
- Determine the appropriate rating scales for Rating Forms 1 and 3. See **A Note on Rating Metrics** above.
- Review Rating Form 3 and decide whether the assessment will focus on the twelve basic needs alone, or cover each indicator.
- Review Rating Form 4 to ensure it includes local coping mechanisms and actions if they are known.
- Identify assessment participants and ensure that they will be available as needed for group assessment sessions and follow-up activities.
- Review the terms used in the assessment and ensure that they are understandable to participants. This is particularly important if the assessment will be completed by persons who are not native English speakers. See the **Key Terms Used in the REA** box in the **Introduction** for a starter list of terms.
- Provide rating forms, background information and a list of key terms to participants early enough before assessment sessions that time is available for review.
- At the start of the assessment, review the instructions for using the *Guidelines* to ensure they will be understood by participants.

The **Organization Level Assessment** requires minimal resources. Copies of the REA forms (**Annex B**) should be available to each participant, with extra copies to be used for summarizing results. A writing board or overhead projector and flip charts will be useful. The

following resources will also facilitate the assessment work:

- A map of the disaster area (several copies are recommended).
- Contact lists of persons and organizations involved in responding to the disaster and local environmental concerns (including a local phone directory). Note that this list forms part of the **Context Statement**.
- Disaster situation reports, development project documents and environmental impact assessments covering the area and population being assessed.
- Background information on the culture, economy, history and environment of the disaster affected area.

Section One: The Context Statement

The **Context Statement** places the disaster in the context of overall impact, providing a summary of the emergency situation, response requirements and highlighting pre-existing salient factors which frame or impact an environmentally aware response. The **Context Statement** serves to ensure that all those working on the REA are "singing from the same sheet of music". To this end, the **Statement** identifies:

- The cause/s and impacts of the disaster,
- Whether changes to conditions at the disaster will affect environmental conditions and relief needs.
- Priority relief effort and areas of interest to the party completing the REA.
- Salient environmental issues existing before the disaster/assessment,
- Sources of information,
- Legal or policy requirements related to the management of environmental issues in a disaster,
- Environmental aspects of the emergency which may require actions only available from specialized organizations or companies[5] and,
- The need for further assessment/information collection and technical assistance[6] in addressing problems associated with environmentally unique locations.

The **Context Statement** (found in **Annex B**) is developed by providing a narrative summary of the disaster and answers to six questions. Comments on the significance of each section and guidance on addressing issues identified are provided in the form. These comments and guidance should be used as reference in the identification of critical issues to be considered in the **Consolidation and Analysis** module.

It is most efficient for an assessment team leader (in the case of a team assessment) to draft sections which cover the narrative requirement and provide answers to the six questions. This draft of the **Context Statement** can then be reviewed by the assessment team and changes made as appropriate. Note that most of the information needed for the **Context Statement** is the same as required for any disaster impact assessment.

Once the **Context Statement** is completed, participants should identify critical issues highlighted in the statement. This is best done through a moderated discussion led by the assessment leader and voting on the ranking of issues from most to least important. The critical issues thus identified are used in the **Consolidation and Analysis** module.

[5] A need for specialized response often arises from technology-related aspects of a disaster, but can also be critical in dealing with bio-diversity and natural resource issues, such as a disaster which affects an area inhabited by an endangered species.
[6] Technical assistance can be available from in-house experts or consultants providing advice from a distance or coming to the disaster site itself.

Specific notation of the geographic location of environmental problems, potential hazardous sites and locations where special attention is indicated should be made in completing the **Statement**. Marking key information on a map of the disaster area is recommended as a way to easily record and present the information assembled for the **Statement** and during the whole assessment process.[7]

Local sources of information, including communities, individuals and institutions, should be used whenever possible. The *Field Operations Guide for Disaster Assessment and Response* (Office of Foreign Disaster Assistance, www.usaid.gov/ofda/resources/fog/fog_v3.pdf) provides detailed guidance and checklists which can be helpful in completing this and other sections of the REA. When possible, quantitative data should be used in the REA and systematically collected for use in updating an initial assessment.

Section Two: Factors Influencing Environmental Impacts

There are a number of factors which may positively or negatively influence the severity of environmental impacts during and following a disaster. These factors are related to the spatial, social and economic conditions under which the disaster survivors live and indicate environmental impact issues which may need to be addressed as part of the disaster response. Identifying the importance of these factors aids in determining which relief activities to avoid or to use to mitigate negative environmental impacts, and where these interventions should be targeted.

The nature of these factors varies. Several factors, including population density, extent of the disaster area, whether the survivors are displaced, or resource availability, are clearly spatial (geographic). Other factors, such as self-sufficiency, sustainability, social solidarity[8], or environmental resilience[9] are facets of how people and place interact and therefore also have a spatial element. A number of the factors relate to the survivors themselves, for instance the density of settlements or social structure. Other factors, such as environmental resilience, sustainability and absorptive capacity, are essentially environmental but defined by human action.

The comparative subjective rating of Factors Influencing Environmental Impacts is accomplished using **Rating Form 1 (Annex B)**. The rating process involves two steps.

STEP ONE
A rating of each factor is completed based on the respective scale to indicate importance as a possible negative impact on the environment. Possible negative environmental implications for each factor are noted as guidance in the rating process. The rating scales are organized so that ratings of higher priority for action are to the right of the page.

The rating scales can be changed to suit user preferences. Specifically, the words used in the rating process can be changed to reflect local use and understanding. However, the same graduation of priority from left to right should be maintained on the form.

STEP TWO
Once each factor is rated, the factors are then ranked from lowest to highest priority. There is no problem if several factors have the same priority as the priority factors will be reviewed

[7] Computer-based geographic information systems (GIS) are invaluable in archiving and presenting data collected for the REA (see www.reliefweb.int for more on maps and GIS sources). However, a simple hand-drawn map may be largely adequate in the early phases of most disasters and a lack of technological tools should not limit the mapping process.
[8] The degree to which disaster survivors, and survivors and non-affected populations, work together.
[9] The ability of the environment to recover from the impact of the disaster or other shock.

further in the **Consolidation and Analysi**s module.

Note, however, that not all priority issues identified in the rating process will become targets for immediate action. Some issues may not be easily susceptible to relief interventions or should be deferred to the recovery phase.

Alternately, the environmental impact of other factors may resolve themselves. This would be the case where the population density in a temporary shelter decreases as people return to their normal homes. Changes in the importance of the factors should be reviewed with each REA update.

Section Three: Environmental Threats of Disasters

Hazards associated with a disaster can lead to direct or indirect negative impacts on the environment. Relief interventions to address impacts on the environment may be critical to eliminating threats to the lives or well being of the disaster survivors. An example is a tidal surge that passes through a fertilizer factory, contaminating nearby ponds used for drinking water. Here the need is to quickly identify the environmental problem and solutions and need for further assessment.

In other cases, hazards may require immediate and long-term responses. An example is the collapse of a mine tailings retention dam due to heavy rains, with the tailings contaminating a drainage basin and river bottom sediment. Here the need is to identify the problem in sufficient detail so that: (1) immediate steps can be taken to avoid contact with the contaminated area, and (2) for remediation to be included in the post-disaster EIA and recovery plans.

The identification and rating of possible immediate environmental impacts of different hazards present during a disaster provides a quick way to focus on significant immediate threats to lives and well being. Those threats with high rating values should receive greater and more immediate attention than threats with lower values.

The focus in this REA section is on hazards which can have an immediate impact on the environment. Hazards not normally associated with disasters are not explicitly considered. An example of what is not covered is the alkalization of soils due to improper irrigation, while soil contamination due to unusual flooding is covered.

Some hazards include a number of distinct threats to life, welfare or the environment. In this section, hazards are associated with specific threats to lives and well being to aid in the assessment process. An example of a hazard/threat combination is flooding (the hazard) which leads to the deposition of contaminated sediment which can cause health problems (the threat) on farm land used for rice cultivation.

Hazards expected to have a major contribution to the cause or impact of the disaster are identified using **Rating Form 2 (Annex B)**. The hazards, and threats posed by these hazards, should be rated and ranked according to the four step process described below.

STEP ONE
Rating Form 2 should be reviewed. All hazards which are not appropriate for the disaster being assessed should be eliminated. This can be done by simply crossing out each row containing the inappropriate threat, or by deleting the appropriate rows from an electronic copy of the form and printing the shortened form. (Shortening the form before doing the rating will make this part of the assessment quicker.)

Note that **Form 2** does not include all possible hazards which could be found in all disasters.

When necessary, new hazards should be added to the list, with information on the nature of the threat and ways to address the hazards also added.

Guidance on determining the significance of a specific hazard is provided to assess whether the threat should be eliminated. This guidance may refer to information not immediately available, for instance, the presence of chemicals exceeding acceptable levels. If it is not known whether a threat is real (an *unknown* threat), the threat should be not eliminated.

Discrete hazards combinations should be rated separately. For example, under **Disease**, measles and malaria would be rated separately if both are considered to be threats following a disaster.

When possible, quantitative data relative to specific threats identified as important in the initial assessment should be collected and used to update the initial assessment whenever possible.

STEP TWO
Once inappropriate threats are eliminated, the remaining threats should be characterized by whether they affect a large, medium or small area. Area affected is used as a determinant of significance of a threat for two reasons.

First, the larger the area affected, the greater the number of disaster survivors who are likely to be affected. Second, impacts affecting larger areas are likely to require more extensive responses and be significant within the overall disaster response. (Small intense threats from disasters and other sources are identified through the **Context Statement**.) Unknown threats should be assumed to affect a large area.

The determination of whether an affected area is *large, medium or small* should be made relative to the total area affected by the disaster. For instance, a hazard which affects only 10% of the total area of a disaster could be considered as affecting a relatively small part of the disaster area. A hazard which affects 80% of a disaster area can be considered as relatively large.

Note that setting the lower and upper limits to the size of the medium area also sets the upper limit to the small area and the lower limit for what is to be considered as a large area. The area size criteria can be changed to suit user preferences, but should not be made overly complex.

STEP THREE
Once an area affected has been identified for each hazard the selected hazards hazard should be ranked based on area affected (large, medium or small). Hazards which affect a large area have a higher priority than those affecting medium-sized areas, which should receive attention before hazards affecting small areas. The top priority hazards will be further ranked against other issues in the **Consolidation and Analysis** module.

Rating Form 2 also provides general indications as to response options and the need for specialized assessment, planning or response assistance. Each option requires further work to become an effective response. Other options may be identified in the course of further assessments and planning.

In some cases, information available locally combined with simple sampling methods will allow experts distant from the disaster to determine the significance of a threat and formulate plans for further assessments or response activities. Input from disaster survivors and neighboring non-affected populations should also be solicited.

In other cases, local or expatriate technical assistance may be needed on-site to deal with the threats. This assistance may involve considerable time and expense. Organizations doing the REA need to consider how deeply they are willing to be involved in dealing with threats to the environment. **Advocacy**, particularly after clearly defining an environmental threat, with government or specialized organizations, **may be more effective over the long-term** than taking on a new and complex role in dealing with complex environmental problems during a disaster.

The following steps can be taken to facilitate the work on this **Section** and post assessment assistance planning process.

1. Marking on a map the area(s) which have been identified as affected by the hazard threats and likely source area of the threat if one exists. Example: area flooded and location of the fertilizer factory that was flooded. The affected area would be downstream from the factory, not the whole area flooded.
2. Collecting contact information if the expected threat has a site-specific origin. Example: Names and phone numbers of factory managers. This information and information on local sources of technical assistance may already be collected as part of the **Context Statement**.[10]
3. Identifying sources of information on the physical nature of the threat. Example: Flow rates and levels of flood waters carrying possibly contaminated sediment.
4. Identifying, if possible, sources of pre-disaster data on environmental and health conditions related to the expected threat. Example: Tests of soil and human blood levels of organo-chloride pesticides before disaster.

This information should be included in a request for technical assistance. However, an initial alert report as to a possible threat should not be delayed while this information is being collected.

Some overlap between this **Section** and **Section One**, particularly Elements 3, 4, and 5, is to be expected. Responses to this **Section** and **Section One** should be cross-checked. This cross-checking will identify any small area but intense threats which should be identified as critical issues at the end of this assessment.

Section Four: Unmet Basic Needs

Identifying unmet basic needs highlights areas in which the survivors' own relief efforts and external assistance are not likely to be adequate. Needs which are not being met may result in environmental damage from a survivor's efforts to cover basic needs. These impacts can be direct (e.g., cutting wood for cooking fires) or indirect (e.g., cutting and selling wood to buy water). Links between the way needs are being met and possible environmental impacts are generally obvious, but may require quick investigation to ensure information is accurate and complete.

In some cases, the basic needs of a disaster-affected population were not being fully met before the disaster. Considering the change in how well basic needs are being met before and after a disaster can provide useful insight into the relative needs of the disaster survivors and provide an indication of where recovery assistance can also be used to improve the pre-disaster level of development of the affected populations.

It is important to determine whether meeting a basic need is taking place in a way which

[10] Also see Guidelines for Environmental Assessment Following Chemical Emergencies, Joseph Bishop, Joint UNEP/ECHO Environmental Unit, United Nations, Geneva, 1999 for further guidance on reporting.

could seriously deplete essential resources during relief and recovery periods. Excessive use will affect future supplies, and likely quality, of the resource. The result is that a resource may meet minimum needs at one point during the relief operation, but these needs will become unmet as the resource is depleted.

This will, of course, lead to problems with relief operations and may result in avoidable environmental damage. As a result, defining resource availability throughout the 120 day relief and recovery period is an important part of minimizing the environmental impacts of disasters.

It is important to note that in a disaster, damage to the environment can be accepted if this damage is an unavoidable consequence of saving lives and maintaining basic welfare. Noting this damage is important in planning remediation efforts as part of the recovery and rehabilitation phases.

Rating Form 3 (**Annex B)** provides a list of twelve basic need categories and thirty four indicators. A simple three step process, described below, is used to identify how well the basic needs of disaster affected populations are being met. This form should be completed based on actual conditions and not expectations or promises of aid.

The indicators used in **Rating Form 3** were selected based on (1) their general applicability, (2), their direct link to actions by survivors following a disaster, (3) the likelihood of information on the indicator would be available after a disaster and, (4) the link between the indicator and reported environmental impacts during or after disasters. Indicators are derived largely from the standards and indicators contained in the Humanitarian Charter and Minimum Standards in Disaster Response (www.sphereproject.org/), which reflects universally applicable human rights to life with dignity.

Specific countries or regions may use higher indicators based on laws or tradition. In this case the indicators in **Rating Form 3** can be changed as appropriate. Alternately, users can substitute other indicators which are more relevant to the specifics of a disaster or needs of an organization doing an assessment. But in no case should indicators be lowered below those currently found in **Rating Form 3**.

STEP ONE
Each of the basic needs (e.g., water, shelter, food) is rated on how well the need was being met before the disaster and under current (disaster) conditions.

Rating Form 3 uses four categories -- ***Not met at all, Lesser part of needs met than not met, Greater part of needs met than not met, Largely met, Totally met***-- to characterize each basic need. Alternate scales can be used, but should maintain the transition from needs not being met to needs which are being totally met.

The indicators provided to the right of each basic need can be used in deliberations on how well a need is being met. The more an indicator is met and the more indicators met for each need, the greater the score for a particular indicator.

Disaster situation and other reports are a good source of data and information on whether needs are being met. If quantitative data is used, the source of the data should be noted for future reference.

STEP TWO
For each need, a yes or no answer should be provided to the question “Will the quality or quantity of the resources used to meet this need deteriorate significantly in the next 120 days?”

This question is intended to identify needs which are being met at the time of the assessment but which may not adequately meet needs sometime in the near future. For instance, water supplies may be adequate at the time of the assessment, but the supply may run low (due to pumping) or deteriorate in quality in the near future. Thus, considering a need will continue to be met allows for planning and interventions to prevent a shortage or reduction in quality in the near future. This information is useful in identifying potential operational challenges for relief programs and negative environmental impacts.

STEP THREE
A prioritized list of unmet needs which require action to limit environmental damage is created by:

- Ranking the rated needs from highest to lowest priority for action. Based on the rating scale used in **Step One**, the order of priority is:
  1. **Not met at all.**
  2. **Lesser part of needs met than not met.**
  3. **Greater part of needs met than not met.**
  4. **Largely met.**
  5. **Totally met.**

  (A similar priority sequence should be used if the rating scales are changed.)
- Identifying the use of resources to meet a basic need will likely deteriorate in quantity or quality over the next 120 days. (The answer to the question posed in **Step Two**.)

Needs at the top of the list have a greater priority for action as they are more likely to lead to negative impacts on the environment as survivors attempt to meet these needs.

If a need is being met but at resource use rate which will lead to a deterioration of quantity or quality then there is a need for immediate mitigation measures to avoid future problems for relief operations and the environment.

Prioritizing needs which are being met in a way which can lead to resource deterioration in the ranked list depends on:

- How soon the deterioration is likely to occur and,
- How critical the need is for the survivors.

An immediate deterioration affecting a highly critical need would lead to this need being ranked at the top of the list regardless of whether the need was being met at the time of the assessment.

A comparison of the level of needs met before and after a disaster is possible by comparing the rankings in columns two and three of the rating form for each need. The expectation is that greater the difference in scores, the greater potential environmental impact, as well need for relief assistance.

However, the ratings are subjective and not necessarily based on the survivors' own priorities and actions. Any comparison of scores should be used cautiously. Any resulting analysis should be confirmed with survivors.

Some disaster relief operations focus on bringing conditions for an affected population back to the level existing before a disaster. This focus may generate an interest in using the difference between the before and after scores to define how much assistance is needed to recover from the impact of the disaster.

Since there may be significant gaps in whether basic needs were met before a disaster, this use of the rating information raises the question whether relief should be used to improve on

pre-disaster conditions. Some funding agencies promote such a developmental relief approach. Other agencies limit relief assistance to only a return to pre-disaster conditions however poor they may be. However, even when pre-disaster inadequacies cannot be addressed using relief, the identification of these inadequacies provides input into focusing developmental efforts after the disaster.

ALTERNATE RATING PROCESS

A second option is available for the needs rating process. In **Step One**, each of the indicators for the twelve basic needs (listed in the far right column) is rated separately as to whether the indicator is being met or not. This rating uses the same procedures as for the twelve basic needs.

These thirty four ratings, along with whether they are being met in a manner which will reduce the quantity or quality of resources to a point where minimum needs cannot be met in the 120 day period following the assessment, are then assessed as described in **Step Two**.

Once both **Steps One** and **Two** are completed, the ranking process of **Step Three** is complete as described. The ranking of needs can be done for each indicator or for each related basic need based on the indicator rating. As the REA is intended to be rapid, the guiding concept of the rating and ranking process should be to keep it as simple as possible.

A more detailed rating process allows for a more specific targeting of relief to address specific unmet needs which may be linked to negative environmental impacts. This more detailed assessment is very useful in an initial disaster assessment when immediate decisions are needed on targeting immediate relief and no in depth assessment is available.

At the same time, this process takes more time and information than only dealing with the twelve basic needs alone. The detailed assessment should only be done if specific information is available on each of the indicators.

Section Five: Negative Environmental Consequences of Relief Activities

Disaster relief activities focus on saving lives and stabilizing well being and living conditions. The need for an urgent response often does not allow time to assess possible negative environmental consequences or secondary impacts of emergency interventions. The rapid identification of potential negative environmental consequences of possible relief activities provides a way to quickly recognize and mitigate these negative impacts.

This Section focuses exclusively on relief efforts. It anticipates that some (and possibly most) relief activities will not be developed based on detailed pre-disaster plans. The need to act quickly requires a process where the objectives and the conduct of relief operations are decided on a daily basis in the field. Activities may be developed and implemented by organizations with no pre-disaster familiarity with an affected population or area. These conditions create a strong likelihood that environmental consequences will not be fully assessed and mitigated before relief operations begin.

An identification of negative impacts of relief assistance can lead to three outcomes.

- A decision to postpone or cancel a relief action because it will result in unacceptable environmental damage. This decision should not be taken lightly, as it may result in more immediate hardship for the disaster survivors.
- A change to ongoing activities or plans to incorporate environmental impact mitigation or avoidance measures. This outcome is preferred. The **Green Review of Relief Procurement** module is specifically designed help minimize negative

environmental impacts from the procurement of supplies and services.

- An acceptance of negative environmental impacts due to relief assistance as unavoidable and preferable to not providing assistance. This could be the case, for instance, with the use of pesticides to control an insect-related disease outbreak. In this case, impact mitigation and remediation actions should be included in other elements of the relief effort or in post-disaster recovery programs.

The identification of potential negative environmental consequences of possible relief activities is accomplished by completing **Rating Form 4** (**Annex B**) in a three step process.

STEP ONE
Each of the possible relief interventions listed are reviewed to determine (yes or no) whether the intervention is planned or underway as part of the disaster relief effort. This elimination of interventions which are not planned or underway can take place before the assessment, and will shorten the time needed to conduct the assessment in a group setting. However, this pruning should not eliminate possible future interventions. If it is unclear whether a relief intervention is underway or planned, then the intervention should not be eliminated from the list.

The interventions summarized in **Rating Form 4** cover the most common types of relief assistance. Other types of interventions are possible and need to be assessed for negative impacts.

If a **Community Level Assessment** has not or will not be done, then the coping strategies employed by the disaster survivors need to be added to the form and assessed in the same manner as the other interventions listed. Survivor coping strategies should not be ignored as they are likely to be significant in scale and scope (upwards of 80% of disaster relief can be provided by the survivors themselves), with consequent impacts on the environment.

STEP TWO
Relief interventions which are planned or underway are screened to determine whether potential negative environmental impacts have been addressed in project design or operations. This screening takes place by answering the questions in the third column with a yes or no in the fourth column. If there is insufficient information to answer a question, then the answer should be no.

Potential negative impacts which have not been addressed, that is have *no* answers, become issues which require follow-up as a result of the assessment. (All interventions should be monitored in real time for negative impacts and this list amended accordingly.)

The form also includes possible avenues for consequence avoidance or mitigation. This information can help identify ways to address negative impacts when they are identified.

STEP THREE
Identify which of the interventions for which potential negative impacts have not been addressed should be:

- Changed to avoid negative impacts,
- Implemented despite negative impacts, which should be in turn addressed through other short-or long-term interventions, or
- Canceled or avoided due to possible or actual negative impacts.

(See above for a summary of these options.)

These determinations will aid in the **Consolidation and Analysis** process (see **Module Two**) and in emergency project planning and design. Of course, canceled interventions do not need to be considered further unless they are judged to have already caused

environmental damage.

STEP FOUR
Rank the interventions identified from most to least significant impact on the environment. This ranking should be based on the following criteria:

- Canceled interventions which have already had negative impacts.
- Interventions which will have negative impacts but which need to proceed none the less.
- Interventions which should and can be modified before implementation to avoid negative impacts.

The prioritized interventions are carried over to the **Consolidation and Analysis** process.

To the degree possible, the disaster survivors and their neighbors should be involved in discussions about mitigating the negative environmental impacts of relief activities. **Decisions to accept environmental damage as necessary for effective relief delivery should not be taken without consultation with survivor representatives if at all possible.**

The avoidance/mitigation options listed on the form are indicative and require further development, possibly involving specialists and requiring community involvement, to be used effectively in countering the negative impacts noted. The **Key Resource** list in **Annex A** should be consulted as a starting point for information and advice on ways to avoid or mitigate environmental impacts.

REA MODULE TWO: COMMUNITY LEVEL ASSESSMENT

*The **Community Level Assessment** focuses on critical environmental issues from the perspective of communities affected by a disaster. The assessment can either use the direct collection of information from communities or information collected through other assessments to complete a simple process to identify environmental issues which are most prevalent in disaster-affected communities. The process of identifying and prioritizing community level issues requires one to two days, depending on sources of information and should involve at least three persons. Approximately one day per community is needed to collect information direct from a community, with at least two persons in each group working in community.*

Introduction

Community input into the identification and prioritization of environmental issues during a disaster is critical to the success of the REA and to the effective overall relief efforts. At one level, a considerable part of the post-disaster relief effort is undertaken by the disaster survivors themselves. The REA needs to identify and assess these efforts to anticipate and help define ways to address any resulting negative environmental impacts.

At another level, a best practice for relief operations is that they take into account the views and needs expressed by disaster affected populations. A community level assessment of environmental issues serves to incorporate these views and needs into the REA. This makes the REA results more representative of the local (as opposed to external organization level) views of the disaster and its impacts. The overall result is for relief operations to be more effective since they will respond more closely to the needs and expectations of the disaster survivors.

The **Community Level Assessment** module is intended to assist those doing a REA to collect and perform a preliminary analysis of community level information to identify critical environmental issues. The module contains two sections, one dealing with information collection and the other proving a simple process for using the information collected to identify issues. These sections are described below.

Information Collection Options

There are two basic options for collecting information on community perceptions about the environment and related relief needs and expectations. The first is to use a specifically designed data collection tool and conduct community level data collection from a sample of the communities (and groups within these communities as appropriate) in the disaster affected area.

The second option is to use other assessment efforts to collect needed information, and later extract the information on environmental issues using a method set out below. Using another assessment process, for instance those used for a household food security or a water and sanitation assessment, is possible because most of the information needed on environment-disaster linkages is also collected as part of these types of assessments.[11] (Sources on other types of assessments are provided in **Annex A.**)

The advantage of a separate REA community level survey is that it can focus on a more detailed understanding of environment-disaster linkages from the community perspective.

[11] There is a considerable overlap between the REA information needs and a generic livelihood assessment, although it is unlikely an extensive livelihoods assessment could be done in a rapidly evolving disaster.

The disadvantages are the time and resources needed to conduct a representative survey of communities in the disaster-affected area. The press of responding to a disaster may mean that organizations involved in providing relief may not have the time, resources or skilled personnel to devote to an extensive community survey without compromising the overall objectives of the emergency relief effort.

The advantage of using another assessment (either planned or already conducted) to collect REA-related data lies in the efficient use of resources. One assessment serving two purposes is more efficient than two overlapping assessments. The major disadvantages are that:

- The other assessments need to cover all the information requirements for the REA (a particular problem if an already conducted assessment is used) and,
- A depth of information on environmental issues may not be available from assessments which focus on other issues.

Further, to be compatible with the community assessment process set out below, data is needed for each community covered in the assessment. This level of information may not be available from summary assessment reports.

Basically, the information collected in another assessment needs to be sufficient to allow for the answering of the questions and identification of coping strategies covered in the **Community Assessment Summary** form (**Annex E**). Specific questions which can be used in other assessments can be gleaned from the **Community REA Information Collection Guide** in **Annex D**.

The choice of one or the other option depends on policies, resources and capacities of the organization(s) conducting the REA. In most quick onset disasters it is unlikely organizations will be able to devote time and resources to a stand-alone community level REA assessment. In these situations, incorporating REA information requirements into other assessments may be most effective.

There is a greater chance that a stand-alone community level assessment can be done for slow onset disasters, if only because these types of disasters often clearly involve environmental issues. However, parallel and competing surveys should be avoided. The REA assessment should incorporate (or be incorporated into) other assessment efforts whenever possible. The following three sections of this module discuss a REA-only community assessment approach.

Questionnaire versus Focused Discussion

The first issue in deciding to collect REA information directly from communities is selecting which data collection method to use, with a questionnaire or a focused discussion the most likely options. In the former, a fixed list of questions is asked of one or more groups in the community and the answers recorded for later use. In the later, communities are presented with a set of general topics and then allowed to discuss these topics and the resulting discussion recorded for later use. This later approach is often associated with participatory rapid appraisal (PRA, see www.worldbank.org/wbi/sourcebook/sba104.htm#top and other sources listed in **Annexes A** and **G**).

The advantage of the focused discussion approach is that participants can openly express their views without being closely guided by the interviewer. The advantage of the questionnaire approach is that it focuses the information collection effort, making the collection process more rapid than with open ended discussions. In addition, it takes less skill to administer a questionnaire than manage a focused discussion, an important consideration if there is limited time to train surveyors and complete the assessment.

The choice of whether to use the questionnaire or focused discussion approach is strongly governed by the time available to do the assessment and the skill levels of those who will do the community assessments. A compromise between the two methods is to use the questionnaire method but construct as many of the questions as possible in a way which allows for open-ended answers.[12] This approach allows for the community information collection process to proceed relatively quickly but provides community members opportunities to express their views on the topics being raised in the questionnaire.

The following section discusses the questionnaire approach in more detail on the presumption that this approach is the most convenient in the absence of any other on-going or already conducted assessment which can be used for this module. However, REA users should feel free to use the focused discussion approach, or other data collection methods more suited to an organization's means or the circumstances of a specific disaster. The bottom line is that whatever method is used, sufficient information to complete the **Community Assessment Summary** form in **Annex E** should be collected from a broad cross section of a community.

Community REA Information Collection Guide

The **Community REA Information Collection Guide** (**Annex D**) is a tool which can be used to rapidly collect information on environmental conditions in a community as well as the views of community members of these conditions. The guide is organized into seven sections:

1. General information about the community being assessed.
2. Information about the environmental and livelihood conditions in the community
3. Information about disasters which may have affected the community.
4. Whether and how the basic needs are being met.
5. A conclusion section which asks participants for views on the future of their community and environmental conditions.
6. Specific collection of information on coping strategies which may not have been collected elsewhere.
7. Observations about the sanitary and general conditions in the community.

The sections of the guide broadly follow the outline of assessment information needs presented in the **Introduction** to the *Guidelines* and collected in the **Organization Level Assessment**. As a result, assessment information from organization and communities can be compared in the **Consolidation and Analysis** module.

Information collected during the early parts of a community level meeting may answer questions posed later in the guide. These later questions can be skipped if information collected earlier in a session makes them redundant.

Community assessment meetings are managed through a group discussion process led by someone who is not a community member, aided by a translator when appropriate. Of various methods available, a moderated group discussion structured around the guide is considered the quickest, requiring the least complicated data collection process. Other methods can be used when appropriate. For more on information collection methods in a community, see **Annexes F** and **G** and

[12] This approach was used in the Ethiopian and Indonesian field test and was fairly successful in terms of time needed to collect information and the range of information and views collected.

www.worldbank.org/wbi/sourcebook/sba104.htm#top.

Ideally, the information collection guide should be used with a broad cross section of a community. This cross section should include men and women, the disabled, youth, senior citizens, community elders and others to represent the social, cultural and economic variability of the community surveyed and the objectives of the assessment.

Collecting data (based on the same questions) from community elders and women separately helps to identify if there is a diversity of views about the environment and disaster impact within the community. Meetings with other well defined groups within a community are appropriate if time allows. Group meetings should be complemented by narrative observations by the team conducting the assessment.

However, immediately after a disaster it is unlikely that a rapid assessment will be able to conduct more than one group meeting in each community surveyed. The most likely approach is to hold a single community meeting at which as many distinct groups in the community as possible are present, and manage this meeting in such a way as to draw out the views of these different groups. **Annex F** (**RAP and RRA Techniques in Emergencies**) discusses approaches to rapid information collecting in communities immediately after disaster.

Two approaches have proved useful in complementing the large group meeting approach when time is not available for an in depth assessment. The first is a walk-though of the community (normally after the group meeting), with time taken to speak to different members of the community. In this way, the representation of gender, age and social strata in the assessment can be increased.

The second approach is to hold side meetings during large group meeting. In this approach, one assessment team member sits apart from the rest of the team and engages people present at the meeting but who are not speaking by repeating the questions raised by the leaders of the assessment. This approach tends to work best in large meetings where discussions are dominated by an individual or small group.[13]

It is expected that a single group meeting in a community will take no more than three hours. This time limit anticipates the need for translation and clarification and that there will be a moderate level of discussion within a group in establishing a single answer to any questions posed. Based on experience, the total time in a community (formalities, meeting and follow-up) where only one group meeting takes place will be approximately four hours.

The administration of the questionnaire should follow standard community assessment practice, including transparency and non-discrimination. When possible, personnel conducting the community sessions should have practical or theoretical background in community assessment methods. **Annex G,** and www.worldbank.org/wbi/sourcebook/sba104.htm#top contain useful information on how to conduct an assessment in a community.

As with the **Organization Level Assessment,** the community assessment process is intended to be rapid and lead to an identification of issues related to the environment and the disaster. These issues may require additional investigation and clarification, but serve (initially or later) as input into disaster response planning and operations management.

The minimum staff requirement for the community-level data collection is one person.

[13] The side meeting approached was used effectively to collect women's views during community assessment work in Indonesia.

However, in most cases at team of at least two persons should conduct the community meetings, aided by a translator if needed. Ideally, the team administering the questionnaire will include men and women, and have experience in collecting information at the community level (preferably using PRA methods). Where only two people administer the questionnaire, one should lead the discussions and the second record the answers and observe the group participating in the session.

A good approach to speeding up the community data process and including as many communities as possible is to have several teams administer the questionnaire concurrently to a number of communities. This approach can be useful in increasing the number of communities reached, particularly when local conditions mean that only one community can be covered per team per day.

Persons administering the questionnaire should do so in a similar manner. A short training in PRA methods and the REA process, including a role play with the questionnaire, is recommended to ensure that all staff involved in the assessment have a similar background and will use similar methods.

The selection of communities in which to conduct the questionnaire will depend on a number of factors, including access, the impact of the disaster, time available to do the assessment and staff availability. It is recommended that communities be selected with input from locally knowledgeable persons and represent a cross-section of physical, cultural and social characteristics of a disaster-affected area.

Specific attention should be paid to the logistics and organization of conducting the community questionnaire. At a minimum:

- The questionnaire should be translated into the language in which it will be administered and terms and concepts clarified for the team and translator doing the community visits.
- The administration of the questionnaire should be tested before general use and those using the questionnaire should practice administering the questionnaire through a role play or other technique to work out how the questionnaire will be administered, and answers to expected questions from community members.
- Copies of blank questionnaire forms, writing paper and similar supplies should be available to each team. Adequate supplies of other resources such as flip chart paper or maps should be available before the community sessions begin.
- A logistics and security plan should be developed before the community visits begin and reviewed and shared with appropriate parties. This plan should include call-in and contact procedures if problems are encountered during or while traveling to and from communities.
- Each team using the questionnaire should establish roles and tasks within the team, including who will lead in administering the questionnaire, who will record information and who will deal with the cultural and courtesy aspects of meeting with a community group. This can include arranging drinks or contacting local security officials to explain the nature of the meeting.
- It is best if the assessment results are formally recorded and discussed by the team at the end of each day. If this is not possible, then a specific time in the assessment schedule should be set aside for compiling, recording and reviewing the results of the community level meetings.

Recording and Using Information Collected in Communities

Any well done community assessment generates considerable information about past problems, immediate conditions and plans and expectations of community members about the relief and recovery process. This information has considerable value beyond the REA. It has specific uses in project design and recovery planning and in framing longer term developmental objectives.

As a result, it is necessary that information collected in communities be recorded in a form and format which permits future use. The results of each community assessment should be written-up, preferably using a standard data form. A full narrative and statistical report of assessment results may not be possible immediately after a disaster. But a short summary of findings should be prepared and circulated to all potentially interested parties.

Each assessment should also have a mechanism to note and pass on issues and information from communities relating to the effectiveness, transparency and appropriate allocation of relief and recovery assistance. Any assessment will identify operational gaps and successes. These need to be signaled to the responsible parties to ensure that the disaster recovery effort is as effective as possible.

Generating Condensed Community Assessment Information

Information generated through the community assessment needs to be assembled and condensed into a format similar to that used in the **Organization Level Assessment**. With the community and organizational information in a similar format, the results of the two assessments can consolidated for analysis, as described in the following module.

The condensation and prioritization process is accomplished through a three step process using the **Community Assessment Summary** form in **Annex E**. The form contains a set of questions based on possible environmental issues which may be affecting a community.

STEP ONE
Answer each question with a *yes* or *no* using the information from the community questionnaire.

STEP TWO
The resulting identification of the prevalence of issues is then prioritized by scoring each answer according to whether the response for a community is a yes or no, as indicated in the form. Note that the significance of *yes* and *no* answers and the respective scoring changes between different sections of the form.

These scores are then totaled. Questions with the highest frequency of yes or no answers (depending on the respective section of the form) are considered to be the issues which the greatest prevalence and expected importance from the community perspective.

STEP THREE
Once the scoring and ranking is completed, the final section of the summary form, dealing with coping strategies and actions, can be completed. In this section, assessment results are used to identify relief and coping strategies used by the community and enter these actions in the first column of the form. Each action should be judged as to whether it is having a positive or negative impact on the environment (second column). Some actions can have both impacts concurrently or at different times. Details on the actions and strategies should be provided to understand the scope and overall impact of each action.

The rating and ranking process is overly simple as it is intended to quickly extract the information from the questionnaires for use in the overall REA. The issues identified in the

assessment should be validated with the communities (or community representatives) through community meetings or other methods as part of a formal project design process.

The same method can be used with the results of other assessments. Based on a review of the assessment reports or supporting documentation, the questions on the **Community Assessment Summary** form are answered and scored as described above and information on coping strategies and actions entered as indicated.

Personnel Requirements

The **Community Assessment Summary** form should be completed by a team of at least three persons. The process works best when all involved have reviewed all the questionnaires (or other assessment reports) and participate in the consolidation and ranking process. Ideally, members of the teams which conducted the assessment should complete the **Community Assessment Summary**.

The staff, resources and time needed to complete the **Community Level Assessment** depend on whether a separate REA questionnaire is used and the number of communities visited. At a minimum, two information collection teams of two persons each are recommended, with each requiring a vehicle (and translator if appropriate). Each team can complete one community per day, with the total time needed to collect data dependent on the number of communities visited. Completion of the assessment summary can take up to two days depending on how well the questionnaires are process or if other assessment materials need to be reviewed. However, with good preparation, the assessment summary should not take more than one half of a day.

REA MODULE THREE: CONSOLIDATION AND ANALYSIS

*The **Consolidation and Analysis** module focuses on critical environmental issues from the perspective of government, non-government and private relief operations. The assessment uses simple tables to list and rank environmental issues identified in the **Organizational** and **Community Level Assessments** or one assessment alone. The consolidation and analysis process can be completed using only one assessment, but it is recommended that both assessments be incorporated into the consolidation and analysis process when possible. The consolidation and analysis process can be completed by an individual, but is best done by a group of ten to twelve field personnel. The process can take as little as four hours if a comparable period is dedicated to preparations.*

Introduction

The purpose of the **Consolidation and Analysis** module is to develop a single prioritized list of environmental issues which should be addressed in relief and recovery efforts. This module is not intended to generate a detailed report on the REA assessment but provide a simple tabular presentation of critical issues identified in the assessment and an indication of further action to address these issues.

Four types of actions are anticipated as a result of the consolidation and analysis results:

1. The **modification or redesign** of existing relief or recovery efforts, often involving common sense changes to address negative environmental impacts.
2. The **design of new projects** to resolve or mitigate critical issues. An example is changing the location and manner in which building waste is disposed following an earthquake to limit ground, water and air pollution.
3. The **acquiring of additional information** to determine the nature, extent or importance of a specific issue. This information can come from local sources, from within an organization or from external experts. When additional information is available a decision on further action can be made (see 1 or 2 above or 4 below). An example is a concern that chemicals in drinking and washing water are toxic and pose an immediate threat to health. When the nature and level of this issue is defined, a decision can be made as to whether the issue needs to be addressed through a project format or advocacy. (See **Annex A** for sources of information.)
4. **Advocacy** on behalf of disaster survivors with appropriate authorities or organizations to address a critical issue. This type of action would be taken when an issue is outside the scope of ongoing or planned relief or recovery efforts, or where an issue is directly related to the mandate or legal responsibilities of another organization. An example is when local government authorities are not enforcing regulations governing logging and sustainable extraction of forest resources to the disadvantage of indigenous populations.

Decisions on which action to take with respect to individual critical issues depend on the mandate, policies and resources of a specific organization. However, it can be anticipated that there will be at least one organization with a potential role in addressing any critical issues arising during a disaster and that communities have an important role to play regardless of the nature of the issue.

Consolidating Issues

The first step in the consolidation and analysis process is to develop a simple listing of critical issues identified in the **Organization** and **Community Level Assessments**. This is accomplished by filling in the **Issue Consolidation** form in **Annex H**. Ideally three, but no

more than five, of the top ranked issues from each assessment form developed in the two assessments should be entered into the respective column in the form.

Critical issues identified during the assessment which may not be covered by the issues listed on the two assessment forms can be entered under **Other Critical Issues**. These types of issues are often specific to a location and a particular disaster.

Issues which may not be immediately critical but need to be considered for long-term recovery should be listed under **Recovery Issues**. These longer term issues will not be addressed as part of the REA, but passed on for consideration in the design of longer term recovery programs.

The point of the consolidation process, and the whole REA effort, **is to identify environment related issues which need immediate attention as part of critical disaster relief operations.** Overloading the consolidation list will prevent the most important issues being addressed and waste the limited resources available to respond to a disaster.

A single list should be developed by consolidating the two lists on the **Issue Consolidation** form. This is most easily done by eliminating any duplication in the issues identified is each assessment. This duplication can be both from within each assessment (e.g., water being mentioned several time in the community assessment) and between assessments (e.g., water being mention as an issue in both community and organization assessments). Duplicate items should be marked (e.g., with a star) as they indicate issues which have a higher frequency, and are likely more important in terms of disaster-environment linkages.

Identification of Critical Issues and Actions

The results of the consolidation process should be transferred to a second form dealing with **Issues and Actions** (**Annex I**). This form has three columns, one for the issues consolidated from the previous form, a second for an initial identification of actions to address these issues and a third for an overall prioritization of the issues listed. (A fourth column can be added to indicate who will have responsibility for specific actions if this is appropriate.)

The identification of actions to respond to the critical issues should be based on the four types of actions summarized above (modify an existing project, design a new project**,** collect more information, advocacy) and use of a rapid brainstorming approach to quickly identify the next steps in addressing the issues. Reference should be made to the original assessment documents if there is a need to clarify the origin and nature of an issue.

At this stage, **the focus of the REA is not to completely resolve issues which have been identified**, but to simply identify how best to start addressing an issue. A tendency to make this step more complicated than necessary should be recognized and avoided.

The process of identifying actions is less of a challenge for issues which relate directly to physical tasks and activities, and more of a challenge for issues which are more conceptual in origin. For instance, identifying an action to address a critical issue caused by poor water

The Nairobi Method

During a training on the REA in Nairobi, one group doing the consolidation and analysis process divided issues into conceptual and practical sections on the **Issues and Actions** table. This allowed the group to more easily focus on how to address the practical problems identified in assessment and to clearly identify which issues would need to be addressed in project design or advocacy efforts.

The Nairobi Method can be a useful way to segregating a large number of issues into more easy to manage groups. This approach is useful when groups

quality and quantity is more straightforward than identifying how to address a critical issue related to environmental resilience.

In most cases, conceptual issues (which generally come from the **Context Statement** and **Factors Influencing Environmental Impact** sections of the assessments) are addressed by incorporating them into the manner in which relief and recovery assistance is provided. For instance, if self-sufficiency is identified as a critical issue, then relief and recovery activities should be designed and implemented in a way which promotes self-sufficiency.

The items listed under the **Recovery Issues** section should be documented in a separate short report to those overseeing the relief and recovery process. Documentation and referral is important to ensure that information collected during the assessment is not lost and can have the most positive impact on recovery, reconstruction and development efforts following a disaster.

In addition to a report, passing on the medium and long term issues identified in the assessment can be facilitated by holding a short meeting on the REA results for representatives of organizations which focus on medium and long term post-disaster assistance. These organizations typically include government planning and disaster management offices, regional and international lending organization, the UN system of organizations and donors.

Of course, front line assistance organizations themselves should incorporate medium and long term issues in their own planning and program development. The report-and-meeting approach can generate interest and funding for in-house efforts to address these issues. This approach also provides an opportunity to advocate with other front line organizations for the adoption of issues which may be outside an organization's own mandate.

Prioritizing Issues and Actions

Once actions have been identified the next step is to prioritize the actions based on the nature of the corresponding issues. This step may not be necessary if only a few issues are listed. However, the shortage of time and resources, characteristic of a disaster, mean that some level of formal or informal prioritization will usually be necessary.

The simplest approach to prioritization is to review the issues and actions based on three questions:

- Does the issue pose an immediate threat to life?
- Does the issue pose an immediate threat to welfare? or
- Does the issue pose an immediate threat to the environment?

Issues for which the answer is yes to the first question are given top priority. Among these issues, the ones involving the greatest threat to life are given the highest priority.

Issues with yes answers to the other questions have correspondingly lower priority for action, and can be ranked according to the level of threat to welfare (second priority) or the environment (third priority), as appropriate.

The prioritization process should give attention to issues which were mentioned more than once at the consolidation stage (e.g. marked with a star). These issues are more likely to be of greater importance to communities and assistance providers and should be given priority within each priority category (i.e., threat to life, welfare or the environment).

If a large number of critical issues remain after an initial REA this may be due to the lack of

information on the issues and factors covered in the assessment. However, if a large number of issues remain after several revisions of the REA, this may indicate that relief operations are facing significant operational problems or that little or no attention is being paid to environmental issues.

This situation should be called to the attention of senior management within the organization doing the REA and those overseeing the overall relief operation. These operational problems and lack of attention to environmental issues may themselves become a topic of advocacy.

Reviewing Environmental Consequences of Relief Operations

A review of possible environmental consequences of on-going or planned relief operations is conducted in **Section Five** of **Module One**. This review needs to be conducted again once the specific actions are identified as a result of the consolidation and analysis process.

The review process is the same as set out in **Section Five**/**Module One** and based on completing **Form 4** in **Annex B**. Unanticipated or unwanted negative environmental impacts should be addressed by changes to the manner or nature of proposed actions and interventions. The environmental impact review should be conducted for each new action or intervention identified in the consolidation and analysis stage of the assessment.

Planning and Resources

The consolidation and analysis process can be done by a single individual, but is recommended to be done by the persons who participated in the **Organization** and **Community Level Assessments**. An open forum discussion format is ideal for presentation of the issues to be consolidated, brainstorming on actions and prioritization. The use of flip charts, overheads or computer generated projections will facilitate the consolidation and prioritization process and the recording of the final results.

The time needed to complete the consolidation and prioritization process can range from several hours to several days. Factors affecting the length of this process include participant familiarity with the assessment information, the complexity of the issues identified, the extent of preparation for the group session, the group management skills of the assessment leader and time needed to write up the results. Good preparation and group management skills should reduce the consolidation and prioritization process to less than one half day even in a disaster resulting in a number of complex environmental issues.

Using Assessment Results

Using the REA results in project planning and design is the same as using the products of other assessment tools. The results of the *Guidelines*-based assessment should be combined with other assessments (for instance, of household food security or health and sanitation) to develop a clear problem statement, goal and objectives addressing the specific problems which have been identified.[14]

In many cases, issues identified in the REA assessment relate directly to issues identified in other types of assessments, although the resulting problem statements and solutions (objectives) are not always specifically environmental in approach or process. Where the REA process, *Guidelines* results and environmental focus add value in the project design process is through a continued attention on environmental impacts and the provision of an

[14] The subject of emergency project design is too broad to be covered in this document. Reference can be made to The Oxfam Handbook of Development and Relief (Oxfam, 1995) or the Library pages at www.reliefweb.int for further guidance on emergency project design.

environmental focus for relief plans and projects.

Updating the REA Results

Updating the REA results involves a relatively simple process of verifying whether new issues can be classified as priorities by the three questions (impact on life, welfare or the environment) presented above. As a disaster evolves, the nature and importance of environmental issues will change, as will priorities for relief and recovery efforts. As a result, the whole REA assessment needs to be update regularly, and should eventually evolve into a formal EIA for longer term recovery and reconstruction programs.

REA MODULE FOUR: GREEN REVIEW OF RELIEF PROCUREMENT[15]

*The **Green Review of Relief Procurement** module focuses on a screening of the procurement of materials and services to ensure that these procurements have the least negative environmental impact possible under emergency procurement conditions. This assessment can be done independent of other modules of the REA, but is closely linked to Section Five (**Negative Environmental Consequences of Relief Activities)** of the **Organization Level Assessment**. The **Green Review** can be done by an individual or group. The **Review** will not add measurably to time required for procurement if integrated into the normal procurement planning and review process.*

Introduction

Possible negative environmental impacts of relief assistance are covered under **Section Five** of the **Organization Level Assessment** module. However, this level of the assessment is fairly broad and cannot be used to screen each item or service procured in the relief effort. The **Green Review of Relief Procurement** module provides a means, through the use of a simple check list, to screen individual procurement actions to ensure that these procurement result in the least possible negative impact on the environment. Also provided in this module is background on Green (or Sustainable) procurement and how the concept can be more generally applied to relief operations.

To date, green procurement appears to be largely a local and unconnected phenomenon for relief and development organizations. The UNHCR and WFP have green procurement policies and procedures, but the extent to which these are followed internally or are required to be followed by partners is unclear. Similar policies of other donors do not exist, are not well known or are not regularly followed.

NGOs in general do not appear to give much attention to green procurement in emergency response or development activities. Exceptions include CARE and other NGOs in Bangladesh, which have taken steps to make their disaster assistance more “green”, for instance reducing the use of plastic in the packaging of relief supplies. At the same time, green procurement is an area where relatively easy positive environmental gains can be achieved at minimal cost, or even cost savings.

Green Procurement

Green procurement is basically the

> *...selection of products and services that minimize environmental impacts. It requires a company or organization to carry out an assessment of the environmental consequences of a product at all the various stages of its lifecycle. This means considering the costs of securing raw materials, and manufacturing, transporting, storing, handling, using and disposing of the product.*
>
> *Green procurement is rooted in the principle of pollution prevention, which strives to eliminate or to reduce risks to human health and the environment. It means evaluating purchases based on a variety of criteria, ranging from the necessity of the purchase in the first place to the options available for its eventual disposal. (From **Green Procurement**, www.bsdglobal.com)*

[15] Redrafted from a memo on green procurement prepared for CARE Ethiopia, 31 October 2003.

Green procurement is part of the Sustainable Procurement approach promoted by the UNEP, whereby *organizations buy supplies or services by taking into account:*

- *the best value for money considerations such as price, quality, availability, functionality, etc.;*
- *environmental aspects ("green procurement": the effects on the environment that the product and/or service has over its whole lifecycle, from cradle to the grave);*
- *the entire Life Cycle of products;*
- *social aspects: effects on issues such as poverty eradication, international equity in the distribution of resources, labor conditions, human rights (From* ***Sustainable Procurement,*** *www.uneptie.org)*

The Sustainable Procurement approach goes beyond green procurement and requires consideration of social impacts. This broader view can be integrated into a rights-based approach to identifying, procuring and providing assistance.

A common tangible impact of green procurement is lower expenses for such things as fuel, utilities, supplies and maintenance. These savings usually off-set higher costs associated with procuring an item or resource with a lower negative impact on the environment. The bottom-line impact of savings exceeding costs is why many large businesses have adopted green procurement.

NGOs don't have a profit rational for pursuing green procurement. NGOs do have an obligation to use donated funds as wisely as possible. Wise use can mean (1) making funds go as far as possible, typically by holding down expenses, and (2) not spending funds today in ways which will result in otherwise avoidable expenses in the future, as would be the case if procurement led to avoidable environmental damage.

Conceptually, green procurement involves
...applying the 4 R's methodology (Reduce, Reuse, Recycle and Recover) at each phase of the materiel life-cycle (planning, acquisition, operations, utilization and maintenance, and disposal), procurement activities can be more environmentally responsible. When purchasing, environmental considerations should be integrated with other criteria such as performance, life expectancy, quality, and value for money (cost), as far as possible *(From* ***Green Procurement Checklist****, www.ec.gc.ca/eog-oeg/greener_procurement/Green_Procurement_Checklist.htm).*

Green Procurement in Disasters

The challenge of green procurement in emergency response is to manage the process of selecting a greener product or service in a way which does not delay the provision of assistance. Unlike normal green procurement, urgency can override the environmental impact assessment process normally used to select the most environmentally positive product or service.

The urgency-in-emergency reality means that much in the way of identifying and selecting more environmentally positive products and services should be done **before a disaster** as part of the preparedness and planning process. This pre-disaster process can follow the "4R" process summarized above and the procurement review checklist contained at the **Green Procurement Checklist** noted above (see Greener Procurement, www.ec.gc.ca/eog-oeg/greener_procurement/Green_Procurement_Checklist.htm). Also see **Environmentally Preferable Purchasing** at www.epa.gov/opptintr/epp/pilot/index.htm.

Four areas in which greener procurement criteria can be applied to emergency procurement are summarized below. These focus areas are drawn from work by WFP, UNHCR and other

sources.

ENERGY EFFICIENT EQUIPMENT
The focus here is on equipment which is designed to use less energy, such as by automatically going into a sleep mode when not being used. The best examples are copiers and “Green Star” computer equipment. Other energy efficient-rated equipment include items like refrigerators and air conditioners, which may have an “EnerGuide” label, or provide energy rating information on labels.

A focus on energy efficient equipment includes vehicles. Preference should be given to buying vehicles with which can provide greater kilometers per liter of fuel. The size of a vehicle (often a good indicator of fuel efficiency) should be matched with the expected task. A large 4x4 vehicle, and its higher fuel consumption and operating cost, is not needed if all the vehicle will be used for is running around a capital city.

WASTE REDUCTION
As with the Bangladesh example, the idea here is to reduce unnecessary waste, usually by reducing, changing or eliminating packaging. Waste reduction also means not providing unnecessary or unusable assistance, or food that people throw away for that matter.

Waste reduction also covers recurrent management (e.g., vehicle maintenance) and site management (e.g., buildings). For example, a vehicle which leaks oil is wasting oil and an office with air conditioners and open windows wastes energy. This aspect of waste reduction is less in the procurement domain that in those of fleet and facility maintenance[16].

RECYCLING
Attention to recycling usually focuses on finding new or alternate uses for once-used items. The reuse of scrap office paper is a good example, and should likely be institutionalized.

The recycling focus goes further to include purchasing items which have been recycled (printer cartridges) or which include recycled parts (some computers) or material (e.g., copy paper and envelopes). The recycling focus basically comes down to two questions:

1. Is there another use for this item once it is no longer needed for the reason it was bought, and
2. Does this item include recycled sections?

Complementing both questions is whether items can be recycled to the provider, as can be the case with printer cartridges, or other re-users.

REDUCTION OF ENERGY REQUIREMENTS
This area is similar to energy efficient equipment, but the focus is on minimizing the down-stream energy requirements needed to use assistance items. For instance, reducing energy requirements can be accomplished by providing food aid which requires the least energy possible to prepare at the beneficiary level. An example is milling maize before distribution, where this milling requires less energy and results in less short-term damage to the environment than preparation and cooking at the user level.

Green Procurement in Emergencies Checklist

The elaborate review process to define the sustainability or greenness of a procurement used in normal times will not work in emergencies. In disaster conditions, the objective is to

[16] Separate from, but related to, green procurement is green management, including tasks like ensuring vehicles are well maintained (and thus use less fuel), windows and doors work (to keep in or out cool air) and in-office recycling.

procure the greenest or most sustainable items without compromising the assistance effort.

The best way to do this is to use a simple yes/no screening process based on the focus areas summarized above. This approach has been formalized into the following checklist.

The checklist can be complete for each item or class of items to be procured. The best point at which to complete the checklist is when the results of needs assessments are being turned into assistance requests.

Alternatively, the checklist can be used by procurement staff to try to select the greenest product or service from a range of available options. Use by procurement staff would, of course, require ensuring that an item or service eventually selected was acceptable to field staff and beneficiaries.

Greenness Procurement Screening Checklist

QUESTION	YES	NO	NOT APPLICABLE
Is the piece of equipment selected rated as the most energy efficient of the type of items needed and available?			
Is the least possible packaging used?			
Have field personnel or beneficiaries identified this item or service as critical with a high likelihood of being used during the disaster?			
Does the item or service to be procured include recycled parts or materials, and are these parts and materials more costly than alternate items or services?			
Can the item (and packaging) selected for procurement be reused or recycled after it is no longer needed for the emergency?			
Will the supplier take back, or can another business be sold the item and recycle it, when it is no longer needed for the emergency?			
Have alternate, environmentally friendly, energy sources been chosen when they are economically justified and can be supported by local capacities?			
Do the items or services being procured require the lowest possible energy for proper and safe use by disaster survivors?			

Answering “no” does not preclude procuring an item or service. **A “no” answer does indicate that other items or services might be better if they can be secured without delaying the delivery of relief assistance**.

In some cases, more green items are available, but at a higher cost. For some organizations, environmental impact can be considered as part of the cost review of procurement actions, and a higher cost justified on this basis.

Answering “no” to one of the questions in the list also indicates that actions will likely be needed to address environmental impacts which occurred because the least environmentally negative item could not be procured. These impact mitigation actions need to be incorporated into relief and recovery planning to mitigate or remediate any negative environmental consequences.

ANNEXES

Annex A: Key Resources

WEB RESOURCES

- http://www.benfieldhrc.org: Disaster Studies and Management: Background documents on the REA Project.
- http://www.bsponline.org: Biodiversity Support Program (also available as CD).
- http://www.encapafrica.org: Environmental Assessment Capacity Building Program.
- http://www.foodaidmanagement.org/envmt3.htm: Resource and procedure documents on environmental impact assessments, including but not limited to food aid activities.
- http://www.fao.org/participation/ft_find.jsp: Participatory rapid appraisal information and links.
- http://www.forcedmigration.org: Online source of many humanitarian assistance related documents.
- http://www.humaninfo.org: World Environmental Library, Medical and Health Library, Collection on Critical Global Issues (also available as CDs)
- http://www.iaia.org: Information and resources on impact assessments.
- http://www.reliefweb.int: Information on current disasters, background on past disasters and assistance, library of key documents and links to other organizations involved in disaster management.
- http://www.reliefweb.int/ochaunep: Link to UNEP/OCHA office, with useful background information and numerous links to other disaster-related sites.
- http://www.sphereproject.org/: Sphere project materials and Handbook.
- http://www.unep.org: Links to environmental background resources and APELL program on preparedness for technological emergencies.
- http://www.unhcr.ch/cgi-bin/texis/vtx/home?page=PROTECT&id=3b94c47b4. Information on environmental impact of refugees, applicable to displaced populations in general.
- http://www.worldbank.org/participation/ Participatory rapid appraisal and related information.
- http://www.worldbank.org/wbi/sourcebook/sbhome.htm: additional information on participatory rapid appraisal.

DOCUMENT RESOURCES

- Australian Emergency Management Glossary, http://www.ema.gov.au.
- Confronting Disaster: New Perspectives on Natural Disasters, Alexander, D., Oxford University Press, Oxford, 2000.
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(http://www.lboro.ac.uk/departments/cv/wedc/publications/evc.htm).

- Engineering in Emergencies, A Practical Guide for Relief Workers, Davis, J. and Robert Lambert, IT Publications (for "RedR"), London, 1995.
- Environmental Documentation Manual, For P.L. 480 Title II Cooperating Sponsors Implementing Food-Aided Development Programs, Second Edition, Environmental Working Group, Food Aid Management, USAID, January 1999
- Environmental Guidelines for Irrigation, Tillman, R. E., U.S. Man and the Biosphere Programme; USAID, 1981.
- Environmental Guidelines for PVOs and NGOs: Potable Water and Sanitation Projects, Wyatt A., William Hogrewe and Eugene Brantly, Water and Sanitation for Health (WASH), for USAID Mission to Dominican Republic, (WASH Task No. 383), 1992.
- Environmental Guidelines for USAID Financed Housing Projects, Myton, B., Jennifer Myton and Claudia Quintanilla, USAID Honduras, 1999.
- Environmental Indicator Framework: A Monitoring System for Environment-Related Activities in Refugee Operations (User Guide), Engineering and Environmental Services Section (EESS) UNHCR, Geneva, 2002.
- Environmental Management Field Handbook for Rural Road Improvement Projects, Khan, M. K., and K. Fitzcharles, CARE Bangladesh, USAID, 1998.
- Environmental Sourcebook for Micro-finance Institutions, Pallen, D., Asia Branch, Canadian International Development Agency, 1997.
- Environmentally-friendlier Procurement Guidelines, UNHCR, 1997.
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- Food/Cash for Work Intervention in Famine Mitigation, Bryson, J. and Steve Hansch, Famine Mitigation Strategy Paper, Prevention, Mitigation and Preparedness Division, OFDA/USDA Famine Mitigation Activity, Washington, 1993.
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- Guidelines For Environmental Assessment Following Chemical Emergencies, Bishop, J., Joint UNEP/OCHA Environmental Unit, United Nations, Geneva, 1999.
- Healthcare Waste Management: A Who Handbook for the Safe Handling, Treatment and Disposal of Wastes, World Health Organization, 1997.
- Handbook on Environmental Assessment (draft), Ron Bisset, UNHCR, Geneva, 2002.
- Hygiene Promotion: A Practical Manual for Relief and Development, Ferron, S., J. Morgan and M. O'Reilly, Intermediate Technology Publications, 2000.
- Mitigation Practitioners' Handbook, Office of Foreign Disaster Assistance, Bureau of Humanitarian Response, USAID, Washington, 1998.
- The Oxfam Handbook of Development and Relief, (Vol. 1), Eade, D. and Suzanne Williams, Oxfam UK and Ireland, 1995.
- Rapid Assessment Procedures - Qualitative Methodologies for Planning and Evaluation of Health Related Programmes, Nevin S. Scrimshaw and Gary R. Gleason, Editors, International Nutrition Foundation for Developing Countries, Boston, 1992. Available at http://www.unu.edu/unupress/food2/UIN08E/uin08e00.htm#Contents
- Safe Water Systems for the Developing World: A Handbook for Implementing

Household-based Water Treatments and Safe Storage Projects, CARE, Centers for Disease Control, Pan American Health Organization, no date.

- Selected Bibliography of Food Security Resource Center Resources on Environmental Issues, Graef, J., Food Aid Management (www.foodaid.org), 1998.
- Trainer's Guide on Environmental Assessment of Industrial Townships, prepared by SEEDS for the Indian Human Settlements Programme, Housing and Urban Development Corporation, India, 1995.
- The World Bank Participatory Source Book, World Bank Group. No date.
- World Directory of Country Environmental Studies, World Resources Institute, No date.

Annex B: Organization Level Assessment Forms

Context Statement

A Provide three short paragraphs which summarize the (1) cause/s and most evident impacts of the disaster, (2) whether the weather or other conditions at the disaster site will change and if these changes will affect environmental conditions and relief needs, and (3) priority disaster relief efforts and specific programmatic areas of interest to the party completing the REA.

These three paragraphs ensure that the group completing the REA is in agreement as to the nature of the disaster and response priorities. In addition, the paragraphs identify what types of assistance the group completing the REA anticipates providing (e.g., health care for a medical NGO). This organizational mandate defines which issues identified in the REA will receive direct attention and be flagged for the attention of other organizations.

B What sources are likely to be able to provide information on the environment in the area affected by the disaster? Provide contact information and a description of the information available if possible. (A simple table with three columns covering information sources, a short description of the information and contact information is sufficient to answer this question.)

Sources to consider:

- Affected communities and key local resource persons.
- Local, regional and national government environment, development and planning offices.
- Trade associations (local, national and international).
- Local industry.
- Universities, including programs covering the Environment, Agriculture, Development, Urbanization, Planning, Geography, and Public Health, among others.
- NGOs, particularly local and international environmental NGOs.
- UN System, particularly UNEP, UNDP, WHO (health and sanitation), FAO (agro-chemicals and agro-bio-diversity information), ILO (worker health), UNICEF (women and children) and others.
- Donors with development projects in the disaster area, including international financial organizations (e.g., World Bank, Asia Development Bank).

List existing data collection systems and contact information for local specialists. The answers to this question should be updated as the relief operation progresses.

C Have there been, or are there currently, concerns about the release of potentially toxic substances affecting humans or the environment? If yes, summarize the information available and indicate how additional information can be collected.

The answer to this question should include input from disaster survivors as well as local government and assistance organizations if at all possible.

If the answer is yes it is likely that specialist technical advice and assistance will be needed to assess the impact and remediation of the releases.

Note whether these concerns are related to the disaster or not. It may be that after a disaster a community or group of disaster survivors are more worried about a pre-existing threat to their environment than the damage caused by the disaster. These pre-existing concerns may be major drivers in how the survivors wish to respond to the disaster. A delicate balance may be needed between responding to the immediate disaster impact and problems existing before the disaster.

Consider whether this is an action you wish to initiate. If yes, formulate an initial request for assistance that briefly describes the disaster, the nature of the toxic substances released or which may be released, the location of the release site and local contacts[17].

D Are there environmentally unique sites in the disaster area and have any been (or may be) affected directly or indirectly by the disaster?

An environmentally unique site is broadly any location where environmental conditions are significantly different from surrounding areas. These include concentration of industry, mines, nature reserves, natural parks, areas of unique bio-diversity or natural resources and, in many cases, historical and cultural sites.

If the answer to this question is yes, it is likely that technical advice and assistance will be needed to assess and address environmental impacts in or arising from the uniqueness of these sites.

Note that this question can cover a wide range of sites. Impacts can be direct (damaged buildings) or indirect (lack of electricity), and include impacts arising from a site (a chemical release from a factory) or impacts on a site (chemicals flowing into a river containing an endangered species).

A list of the locations, uniqueness (e.g., nature of industrial process or endangered species) and expected or known impacts of the disaster should be developed. The list should include contact information for those persons or organizations responsible for managing or knowledgeable about the sites.

Consider whether this is an action you wish to initiate. If yes, formulate an initial request for assistance that briefly describes the disaster and the nature and location of concern. Before making a request for assistance, attempt to contact the organization or individuals responsible for the site and ascertain what other assistance may be available and whether additional assistance is required[18].

Note that mines and industrial sites may have in-house capacities to deal with potential environmental problems following a disaster. These capacities (and any from the government) should be taken into account in considering whether to initiate a separate response or to work collaboratively with the affected organization. Similar sources of in-house and government capacities are less likely for other environmentally unique sites, but should be investigated.

[17] For industrial sites or technology-based problems, see Guidelines for Environmental Assessment Following Chemical Emergencies, Joseph Bishop, Joint UNEP/ECHO Environmental Unit, United Nations, Geneva, for guidance on hazardous incident reporting.
[18] See footnote 6.

E Were there concerns about environmental conditions before the disaster? Briefly describe the nature and cause of the concern, and whether these concerns are linked to the current disaster.

F Are there any concerns about the environmental impact of the disaster on the part of the survivors or neighboring communities? Briefly describe the nature and cause of the local concern and link to the disaster for each problem noted.

Answering this question requires contact with disaster survivors or those with close knowledge of the disaster survivors, for instance, staff of local environmental NGOs. The preference is for contact directly with the disaster survivors through, for instance, a community-level disaster impact assessment. Alternately, or before community-level assessments can be completed, information on local concerns about the disaster and the environment can be available from those who are in close contact with the affected communities or groups.

Environmental concerns on the part of the survivors or neighboring communities (the most immediate source of assistance) will be major drivers in framing the local response to the disaster. Disregarding these concerns risks creating a gap between external and internal response and reduces the effectiveness of relief operations. In addition, environmental concerns which existed before a disaster will likely be exacerbated by the disaster, and thus likely priority areas for intervention.

G Are there any local or national laws, or donor or organizational policies and procedures which impact how environmental issues will be assessed or managed? If yes, summarize the requirements and how they will be addressed.

Specific details of local and national laws and regulations may not readily be known to those involved in a disaster and require additional investigation. Donor and organizational policies should be known, or easily accessible, to those completing the REA. Normal rules, regulations and procedures related to the environment are often waived in disaster situations, but should be followed as closely as possible during a disaster.

Rating Form 1: Factors Influencing Environmental Impacts

FACTOR	RATING			IMPLICATION
Number of persons affected (relative to total population in disaster area).	Few	Some	Many	The greater number affected the greater potential impact on the environment.
Duration: Time since onset of disaster.	Days to weeks	Weeks to months	Months to years	The longer the disaster the greater the potential impact on the environment.
Concentration of the affected population.	Low	Moderate	High	The more concentrated (or dense) the living conditions of the survivors, the greater potential impact.
Distance disaster survivors have moved since the beginning of the disaster.	Close to point of origin	Not close or far	Far from point of origin	The further survivors have to move, the greater the potential impact on the environment.
Self-Sufficiency: After the start of the disaster, the ability of survivors to meet needs without recourse to additional direct extraction from the environment or external assistance.	High	Not high or low.	Low	Low self-sufficiency after the disaster implies greater risk of damage to the environment.
Social solidarity: Solidarity between disaster survivors and non-affected populations.	Strong	Not strong or weak.	Weak	Weak solidarity may indicate the likelihood of conflict over resources and limits to the ability of survivors to meet needs.
Cultural homogeneity: The similarity of cultural beliefs and practices between disaster survivors and non-affected populations.	High	Not high or low.	Low	A lack of common cultural structure may result in disagreement over resource use.
Asset distribution: The distribution of economic and other assets within disaster affected population after the start of the disaster.	Equitable	Partially equitable	Not Equitable	Concentration of assets with one part of a population can lead to tensions with less-well endowed groups over use of environmental assets.
Livelihood options: The number of options that disaster survivors have to assure their livelihoods after the start of the disaster.	Many	Some	Few	The fewer the number of livelihood options indicates the disaster survivors may pose higher pressure upon fewer resources of the environment.
Expectations: The level of assistance (local/external) which the disaster survivors expect to need to survive.	Low	Moderate	High	In the absence of adequate assistance, high expectations can lead to high demand on local resources.
Availability of natural resources, or	High	Moderate	Low	Excessive use of natural resources leads to environment

FACTOR	RATING			IMPLICATION
whether the available natural resources meet the needs of the disaster survivors in a way which can continue without degradation to the environment or future availability of the resources.				damage. Relief can be used to reduce excessive resource demand or repair damage done to the environment. The resources in question are water (for human consumption and for other uses), forest resources (timber, firewood), agriculture land (soil and water quality), et cetera.
Capacity to absorb waste: The environmental, social and physical structures available to handle waste produced by the survivors.	High	Moderate	Low	Low waste absorptive capacity will lead to environmental damage.
Environmental Resilience: Ability of eco-system to rebound from the disaster itself and from relief and recovery activities which cause environmental damage.	High	Moderate	Low	Low resilience likely means high fragility and greater possibility of long-term environmental damage.

Rating Form 2: Environmental Threats of Disasters[19][20]

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Flooding: Transport of contaminated sediment. Sediment contains hazardous organic or inorganic chemicals (including high levels of salt). Secondary risk from sediment when dried after a flood.	Chemicals (including salt) present at levels exceeding acceptable standards.		• Identify and assess level of chemicals present. • Limit use of water sources with contaminated sediment and plants and animals collected from these sites. • Specialized technical assistance likely needed for assessment and planning.
Flooding: Polluted Water. Water contains hazardous pathogens, or chemicals.	Pathogens or chemicals present at levels which exceed acceptable standards.		• Identify and assess level of pathogens or chemicals present. • Limit use of contaminated water and plants and animals collected from contaminated water. • Consider water purification to meet immediate needs. • Specialized technical assistance likely needed for assessment and planning.
Flooding: Transport of contaminated solids other than sediment. Flood waters contain physical items which pose a threat, including but not limited to, animal carcasses and hazardous materials containers.	• Presence of dead animals. • Presence of hazardous chemical containers. • Presence of significant level of floating debris in flood waters.		• Quantify number and volume of solids by three threat types (animals, hazardous chemical containers, other debris). • Develop and publicize ways to deal with solids. Consider special collection and safety activities, and ensure safe disposal procedures and locations. • Specialized technical assistance likely needed for assessment and planning and in handling disposal.
Flooding: Erosion (water). Flood waters remove usable soil and cover usable land with sediment.	• Loss of critical infrastructure, e.g. dikes, irrigation system. • Loss of immediately productive land, e.g., land for cultivation or harvesting natural resources.		• Remove or protect infrastructure under threat. • Remove plants and other productive assets from flooded land before loss or coverage with sediment. • Remove sediment after flooding. • Specialized assistance likely needed.

[19] Note that Hurricane/Cyclone/Typhoon should be treated under each impact agent: flooding, sea surge, and wind.

[20] Note that tsunami should be treated under each impact agent, e.g., sea surge, flooding.

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Flooding: Damage to Infrastructure (from erosion or force of flood waters). Flood waters damage or destroy built environment, limiting operation of critical functions (e.g. safe water delivery), or increasing risk of pollution (e.g. damage to sewage treatment plant)	Damage which (1) seriously limits or stops use of critical infrastructure, including roads, water treatment, power, emergency services, or (2) creates potential sources of pollution, e.g., industrial or mining sites, oil and gas transmission systems, garbage dumps, and chemical waste sites.		• Replace or remove infrastructure under threat. • Flood-proof and decommission sites at risk. • Identify nature of potential or actual pollution due to flooding/flood damage and develop response plans (see above). • Specialized assistance likely needed for any significant response.
Wind, including tornados. Damage/loss of crops, land cover and infrastructure.	Reduced food supply, economic (exploitable) natural resources and infrastructure, specifically shelter and public and commercial facilities.		• Short-term food and economic assistance to assist survivors until vegetation/crops recover or are replanted. • Assistance to replace/repair damaged infrastructure. • Dispose of debris in manner that does not increase air, land or water pollution.
Wild Fire: Damage to Infrastructure. Wild fire can damage or destroy infrastructure, limiting operation of critical functions or increasing risk of pollution.	Damage which (1) significantly limits or stops use of critical infrastructure, including roads, water treatment, power, emergency services, or (2) affects control systems for industrial sites, e.g., power supply to a chemical factory.		• Remove or decommission infrastructure under threat. • Identify potential or actual pollution due to wildfire damage and develop response plans (see above). • Specialized assistance likely needed for any significant response.
Wild Fire: Air Pollution. Air contains hazardous chemicals and high concentrations of particulate matter.	Chemicals and/or particulate matter present at levels which exceed acceptable standards.		• Identify and assess level of chemicals or particulate matter present. • Develop methods to purify air for individual and indoor use, with focus on persons with air-related health problem. • Technical assistance probably needed for assessment/response.
Wild Fire: Erosion (following fire). Wildfire removes land cover leading to increased erosion.	Immediate threat to (1) critical infrastructure, or (2) habitats providing food and income to disaster survivors.		• Institute erosion control measurers. • Identify and reinforce/remove critical infrastructure under threat.
Wild Fire: Loss of Habitat. Wildfire damages or destroys habitat resulting in negative impact on species using habitat before fire.	Lack of alternative habitats for species under threat.		• Institute activities to restore or modify damaged habitat. • Make alternate habitats available to species under threat.

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Drought: Wind. Unusually dry land more susceptible to aeolian (wind) erosion.	Significant dust clouds and evidence of wind movement of soils (e.g., soil forming dunes)		• Wind erosion control measures. • Shift to drought-tolerant crops/ground cover.
Drought: Wind. Chemical composition of dust.	Chemicals present at levels which exceed acceptable standards.		• Identify and assess level of chemicals present. • Limit movement of dust and institute measures to limit dust inhalation (see above and under wildfire). • Specialized assistance likely needed for assessment.
Drought: Wind. Drying effect of wind on vegetation (failure to mature, increased likelihood of fire).	Vegetation drying faster than normal.		• Institute modified cultivation or harvesting procedures, e.g., early harvesting, irrigation. • Develop fire management plan, including fire breaks, training and bio-mass reduction.
Drought: Drying of Crops. Lack of water (from rainfall or irrigations) for normal crop development.	Insufficient water for normal crop grown. Note that impact can due to a lack in total amount of water available, or periods of a lack or insufficient of water at critical crop development stages.		• As above. • Implement water conservation methods, e.g., mulching. • Consider temporary reallocation of available water supplies to ensure proper crop development (for irrigation-dependent crops). • Identify alternate used for crops which do not mature properly, e.g., as livestock feed.
Drought: Drying of water courses and lakes/ponds. • Lack of water supply for personal and commercial uses. • Increase health problems. • Decease in water quality. • Loss of income/food supply sources.	• Water less than 15 liters per person per day. • Increase in skin and other sanitation-related diseases above pre-drought levels. • Water does not meet international/local standards. • Significant reduction of food supply or income.		• Improve supply and quality of water. • Monitor and respond to health problems. • Develop alternative sources of food and income.
Hail. Damage to crops and land cover.	Loss of food supply and economic (exploitable) natural resources.		• Short-term food and economic assistance to assist survivors until vegetation/crops recover or are replanted. • Dispose of damaged vegetation in manner that does not increase air, land or water pollution.

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Snow, including associated high winds, and ice storms (unusually heavy or persistent). • Damage to infrastructure and natural resources. • Limiting access to fields and other natural resources. • Heavy runoff.	Snow or ice presence, in time or quantity, above average.		• Implement snow safety activities to protect infrastructure from damage. • Shift crops and planting methods to take into account late planting and soil moisture conditions. • Develop water management plan for runoff, including erosion prevention and flood management. • Develop management plan for damaged vegetation and snow removal.
Phytosanitary (Pest) Outbreak. Damage to economic crops from pests or disease.	Damage significantly above normal[21].		• Integrated pest management methods, with agro-chemical application as appropriate. Procedures for safer use of agro-chemicals should be followed (including user education) and containers disposed of according to international standards. • For medium to large scale pest disaster it is likely that special technical assistance and program management will be required.
Disease. Human Mortality and morbidity reducing social and economic activity and increasing personal hardship.	Disease incidence significantly above normal. Note that specific criteria and methods exist to determine if an epidemic is occurring or a threat, and should be used to assess threat significance.		Disease control-related measures focusing on environmental factors such as water supply and quality, sanitation, pollution reduction and living condition (e. g., other hazards like flooding or crowded conditions). Many responses are likely to be common sense and relate to other threats to disaster survivors.
Disease. Epizootia (animal, not human) Mortality and morbidity of non-human animals affecting food intake, assets and increasing personal hardship.	Disease incidence significantly above normal. Note that specific criteria and methods exist to determine if an epidemic is occurring or a threat, and should be used to assess threat significance.		• Improving water supply and quality, sanitation, pollution reduction and living condition, e. g., crowded conditions. • Safe and environmentally sound disposal of dead animals. • The general lack of experience with animal health emergencies indicates specialized technical assistance will be needed throughout the response.

[21] "Normal" is usually defined as average recorded losses over specific period. Can also be assessed based on qualitative assessment of agriculture community as to whether losses are significantly above normal.

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Land Mass Movement, including land slides, slumps, and other down slope movement. • Direct damage to infrastructure and natural resources. • Direct or indirect pollution of water sources.	Damage to infrastructure or other resources. Significant increase in water sediment load.		• Remove infrastructure at risk. • Install containment structures and filtration systems for contaminated water. • Specialist assistance is likely to be required to plan response.
Earthquake • Damage to critical infrastructure, leading to (i) threat to or loss of life and injuries, or (ii) hazardous materials incidents. • Changes in land forms (e.g., mass movement)	• Human death or injury • Any hazardous materials release. • Any damage that stops or significantly slows the delivery of critical services (water, health care, power, gas, heating, food) • Any land form change due to the earthquake.		• Develop rescue plans (best done before the disaster). • Develop and implement hazardous materials response plans (best done before the disaster). • Respond to damage to infrastructure as per other disasters. • Respond to land form changes as per "**Mass Movements**". • Develop solid waste disposal plan, including procedures for recycling as much waste as possible, minimizing air and water pollution and ensuring sanitary landfill standards are met. • Specialized technical assistance is likely to be required in design of waste disposal plan.
Volcano: Superheated ash, gas flows and large scale explosions. Rapid destruction of environment.	Volcano producing ash/gas clouds or evidence of large scale explosions in the past.		• Establish safety zones around volcano and attempt to limit human and other access to high-risk areas. • Likely require specialized assistance to assess nature of volcano, high-risk areas and effective safety precaution.

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Volcano: Ash falls (including materials deposited following a massive explosion) and lava flows. Covering and/or destruction of productive (natural) resources, damage or destruction of built environment, pollution of water resources, health impacts from air pollution.	• Significant loss of productive assets or infrastructure. • Air or water quality below standards. • Threat of sedimentation, flooding or erosion due to presence of ash or lava.		• Identity area at risk from ash falls and lava flows before eruption and implement evacuation and resource management plans. • Remove ash fall and lava. • Remove or maintain productive resources or infrastructure under threat. • Develop alternate uses for land covered with ash or lava, e.g., use for construction material. • Develop water and air quality monitoring program and remedial measures as appropriate. • Implement erosion and surface water management plan to manage sedimentation process and changes to water quality. • Specialized technical assistance likely needed to deal with water/air quality issues.
Armed Conflict (between and within countries): Active fighting by military units ("conventional warfare"). Intentional damage to infrastructure, including power, water, sewage and industrial capacity due to active fighting. Limitations on ability to deliver basic supplies to non-combatant populations.	• Active military efforts to cause damage • Inability or reduced ability to deliver minimum supplies of water, food, sanitation services and basic care due to fighting or infrastructure damage		• Development of protected systems for delivery of minimum supplies of critical items (water, food, sanitation services, health care). • Use of neutral parties to deliver supplies and manage efforts to address damage caused by fighting. • Debris should be recycled or disposed in a way to minimize air, water and land pollution.
Armed Conflict: Unconventional warfare (including terrorism and ethnic cleansing). Disruption of normal social and economic support systems (i.e., threat to ability of populations to meet basic needs). Damage to and disruption of infrastructure systems.			Development of protected systems for delivery of minimum supplies of critical items (water, food, sanitation services, health care).

HAZARD	GUIDANCE AS TO WHETHER HAZARD CONSTITUTES A THREAT	PHYSICAL AREA AFFECTED: Large: 1st priority Medium: 2nd priority Small: 3rd priority	INITIAL RESPONSE OPTIONS
Armed Conflict: Use of chemical, biological, nuclear, radiation or high yield conventional explosives (in conventional and unconventional warfare). Immediate or delayed death to non combatants and other living entities (e.g., cattle).	Releases of hazardous substances via air, water or land, with intention to due harm.		• Rapid response teams to limit releases of hazardous materials. • Decontamination of affected populations and areas. Note that decontamination efforts will require significant steps to properly dispose of contaminated materials.
Technological: Hazardous Material Release (fixed site and during transport, including road, water, rail or air accidents). Release of chemicals or compounds that pose immediate threat to life and well being.	• Level of release above established norm (local or international, as appropriate). • Rate of release (e.g., explosion) poses significant threat to life or well being.		• Limit additional damage by removing populations from affected areas and providing response teams with protective clothing and support. • Treat exposure symptoms as per standard medical response, taking care not to pass on contamination during treatment. • Dispose of contaminated items in way to limit additional land, water or air pollution. • Likely specialized assistance will be needed for all phases of the response.
Technological: Explosion, from fixed or mobile source (e.g., tank truck). Destruction of lives, productive assets and infrastructure.	• Humans at risk. • Potential or actual damage to productive assets (natural resources, commercial facilities or infrastructure).		• Before disaster, develop risk zoning and change land use to reduce risk from explosion. • Design facilities/vehicles to reduce risk of explosion. • Establish warning and evacuation plans and shelters. • After explosion, consider items in previous section.

Rating Form 3: Unmet Basic Needs

BASIC NEEDS	At what level were needs being met before the disaster?	Are needs being met at present?	Will the quality or quantity of the resources used to meet this need deteriorate significantly in the next 120 days? (Yes/no)	INDICATORS (Based on Sphere indicators. The closer the indicators are met in full, the higher the score. These indicators are guides. Use depends on available data and familiarity of users with Sphere Standards.)
	ANSWER: * Not met at all. * Lesser part of needs met than not met. * Greater part of needs met than not met. * Largely met. * Totally met.			
Water				• 15 liters of water per person per day. • Waiting time at point of delivery not more than 15 minutes. • Distance from shelter to water point no more than 500 meters. • Water is palatable and of sufficient quality to be used without significant risk to health due to water-borne diseases, or chemical or radiological contamination during short-term use. (Note: contaminates includes human and industrial waste and agro-chemicals.)
Food				• Minimum food needs met : On average, 2,100 kilo-calories per person per day, 10-12% of total energy from protein, 17% of total energy from fat, and adequate micro-nutrient intake. • Food supplies are accessible at affordable prices and supply and costs are stable over time. • Food distribution is equitable, transparent, safe and covers basic needs (together with other food items available).
Shelter				• At least 3.5 square meters of covered space per person providing protection from weather and fresh air, security and privacy. • In hot climates, shelter materials, construction and ventilation adequate to keep in-shelter temperature 10 degrees centigrade below outside temperature. • In cold climates, shelter material, construction, and heating ensure internal temperature no less than 15 degrees centigrade • Camps, temporary shelter sites or resettlement sites are safe and have adequate access to basic services. • 45 square meters space is available per person in temporary camps or shelters, with provision made for living, social and commercial activities.
Personal Safety				• Disaster survivors have sufficient personal liberty and security at all times. • Opportunities for violence are minimized to the extent possible. • Opportunities for violence should be noted and linked to specific environmental issues when appropriate.

BASIC NEEDS	At what level were needs being met before the disaster?	Are needs being met at present?	Will the quality or quantity of the resources used to meet this need deteriorate significantly in the next 120 days? (Yes/no)	INDICATORS (Based on Sphere indicators. The closer the indicators are met in full, the higher the score. These indicators are guides. Use depends on available data and familiarity of users with Sphere Standards.)
	ANSWER: * Not met at all. * Lesser part of needs met than not met. * Greater part of needs met than not met. * Largely met. * Totally met.			
Health Care				• Disaster survivors have adequate, timely and affordable access to care for injuries and health (including psychosocial) problems arising from the disaster. • Health management interventions are appropriate for chronic and acute health risks faced by disaster survivors and take into account age and gender. (See Sphere Standards for specifics.)
Waste management (liquid and solid)				• Toilets are clean and safe, with a maximum of 20 people per toilet and are no more than 50 meters from dwellings • Use of toilets is arranged by household(s) and/or segregated by sex. • Environment is acceptably free of solid waste contamination, including medical wastes. • Refuse containers are easily available and refuse is disposed of in a way to avoid creating health and environmental problems • No contaminated or dangerous medical wastes in living or public space.
Environmental Conditions				• Location of disaster survivors is not subject to immediate hazards, including flooding, pollution, landslides, fire, or volcanic eruptions, or effective mitigation measures have been taken. • Environment is free from risk of water erosion, from standing water and a slope of no more than 6%. • Smoke and fumes are below nuisance levels and pose no threat to human health. • Animal management minimizes opportunities for disease transmission, solid and liquid waste problems and environmental degradation. • Uncontrolled extraction of natural resources by disaster survivors is not taking place. • Graveyard (s) is appropriately located and sized.
Fuel				• Fuel availability meets immediate needs. • Low smoke and fuel-efficient wood stoves, gas or kerosene stoves and cooking pots with well-fitting lids are available.

BASIC NEEDS	**At what level were needs being met before the disaster?**	**Are needs being met at present?**	**Will the quality or quantity of the resources used to meet this need deteriorate significantly in the next 120 days?** (**Yes/no**)	**INDICATORS** (Based on Sphere indicators. The closer the indicators are met in full, the higher the score. These indicators are guides. Use depends on available data and familiarity of users with Sphere Standards.)
	ANSWER: * Not met at all. * Lesser part of needs met than not met. * Greater part of needs met than not met. * Largely met. * Totally met.			
Lighting				• Sufficient to meet security requirements and for normal economic and social activities.
Domestic Resources				• Each household unit has access to adequate utensils, soap for personal hygiene and necessary tools. (Specific minimum needs identified in Sphere Handbook Chapter 4, Section 2).
Clothing				• Clothing is appropriate for climatic conditions, gender, age, safety, dignity, and well-being.
Transport				• Adequate to deliver goods and services to displaced at reasonable cost and convenience. • Adequate to permit disaster survivors to reach goods and services at reasonable cost and convenience.

Rating Form 4: Negative Environmental Consequences of Relief Activities

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
Agro-chemicals		Is the danger to applicators and humans from exposure in the application, handling or storage of agro-chemicals addressed?		• Avoid or minimize use or use products with low toxicity. • Establish training and education programs on agro-chemical safety. • Establish system for safer handling, cleaning and disposal of containers and equipment. • Provide education and extension advice on use of agro-chemicals. Limit quantities available to actual agricultural needs. • Use Integrated Pest Management approaches.
		Are negative impacts on non-target organisms in soil, water and air avoided or minimized?		
Seeds[22], tools and fertilizer		Is the loss of agro-bio-diversity prevented?		• Use local seeds where possible, procured and distributed through existing channels. • Limit introduction of non-local seeds to varieties tested locally and known to local users. • Avoid introduction of genetically modified
		Is the introduction of species and varieties which are invasive or cannot be used without locally unavailable inputs avoided?		

[22] Note that food aid, if provided as whole grain, may be used as seed, and should be screened according to this section.
[23] This option applies to food aid grain provided as whole grain.

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
		Is damage to traditional seed management systems avoided?		seed varieties not already in use in the country23. • Provide environmental education on use of tools and develop resource extraction plan which avoids negative environmental impacts where appropriate. • Provide education and extension advice on use of fertilizers. Limit quantities available to actual agricultural needs.
		Is the potential for increased resource extraction due to availability of more effective means of farming addressed?		
		Is the potential for damage to soil and water from overuse of fertilizers addressed?		
Harvesting wild plants/fruits		Are steps taken to avoid harvesting rates which exceed production capacity or reduces future production capacity?		Establish harvest system based on a balance between rates of extraction and regeneration.
Expansion of Area or Type of Cultivation.		Is the potential for the loss of habitats and reduced bio-diversity addressed?		• Establish and use land use plans which take into account habitat diversity and sustainability of land use systems. • Re- and a- forestation programs. • Soil conservation activities.
		Is the possibility of deforestation addressed?		
		Is the potential for soil erosion addressed?		
Expansion of Livestock Use		Is the potential for the loss of habitats and reduced bio-diversity addressed?		• Develop and implement a land use plan which takes into account habitat diversity and sustainability of land use systems. • Establish/expand animal disease monitoring and control system.
		Is the potential for the introduction of new animal diseases or expansion of existing diseases addressed?		

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
New farming or livestock raising activities.		Is the potential for loss of habitats and reduced bio-diversity addressed?		• Develop and implement a land use plan which takes into account habitat diversity and sustainability of land use systems. • Establish/expand animal disease monitoring and control system. • Institute land conservation activities.
		Is the potential for the introduction of new animal diseases or expansion of existing diseases addressed?		
		Is the potential for land degradation and erosion from land clearing or grazing addressed?		
Irrigation (expanded)		Is the risk of increased disease transmission addressed?		• Increase preventive and curative health care. • Increase disease surveillance. • Establish management plan for water use which assures adequate water for current and future needs. • Change types of crops/cropping systems and water use. • Establish filtering system for weed propagules.
		Is potential for soil degradation and water logging addressed?		
		Is the potential for aquifer depletion addressed?		
		Is the potential for weed dispersal through irrigation water addressed?		
Fishing		Is harvesting which exceeds production capacity or reduces future production capacity prevented?		• Develop and follow a resource harvesting plan which assures adequate supplies for current and future needs. • Monitor aquatic resource use and undertake education program for resource users. • Limit or avoid introduction of new fish varieties and fish production methods.
		Is the potential for damage or destruction of habitats from fishing methods addressed?		
		Is the introduction of exotic species of fish, parasites and diseases prevented?		

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
Construction, including shelter, public buildings and infrastructure excluding roads.		Are plans and procedures established to prevent scarce natural resources from being over exploited for construction activities?		• Develop and follow resource management and land use management plans. • Assess hazards in area where construction will take place and change siting or methods accordingly. • Ensure construction methods reflect known hazards and risks and are used to reduce vulnerability.
		Are plans and procedures established to ensue that the construction site is not in an area of increased hazard compared to location or conditions before disaster?		
		Are plans and procedures in place to avoid increases risk of flooding, erosion or other hazards due to the construction?		
		Do construction methods and procedures take into account the risk of disaster?		
Roads, paved or other, new and existing.		Are there plans and procedures designed to avoid the exploitation of new lands or increased exploitation of existing lands due to the road?		• Develop and follow land use plans. • Limit access to roads. • Verify road design against flooding/drainage risk assessment. • Incorporate erosion mitigation measures in road construction activities.
		Are procedures and plans developed to prevent flooding and drainage problems due to the road work?		
		Are there plans and procedures to avoid landslides and soil erosion due to the road work?		
Water Supply		Are increased opportunities for disease transmission avoided?		• Establish and maintain water treatment system. • Design and maintain water supply structure to

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
		Are there plans and procedures to avoid an increase in population density having a negative environmental impact?		minimize standing water and vector breeding sites • Plan water provision based on anticipated need and use plan for delivery area which allows current and future needs to be met. • Establish water resource use plan and monitor use and supply. • Consider economic incentives to conserve water. • Use hazardous chemicals as recommended and limit inappropriate use through education.
		Is the overuse of ground or surface water supplies avoided?		
		Are chemicals used to clean or purify water managed in such a way to avoid human health dangers or contamination of the environment?		
Sanitation, including latrines, waste treatment and transport infrastructure, and solid waste management.		Is the creation of hazardous waste sites avoided?		• Establish and maintain sites for sanitary and safe waste disposal operating at international standards. • Limit waste movement through appropriate collection systems meeting accepted best practices. • Minimize opportunities for disease transmission and vectors. • Establish and maintain environmental monitoring program covering air, land and water pollution.
		Is additional pollution of land, water and air avoided?		
		Is an increase in disease transmission and presence of disease vectors avoided?		
Health Care		Is pollution from disposal of medical and other waste avoided?		• Establish system for safe disposal of all wastes (solid and liquid).

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
		Is an increased demand for traditional medical herbs and plants which exceeds sustainable yield avoided?		• Develop a resource management plan for harvesting of local medicinal herbs and plants.
Industry (new or re-starting)		Are plans and procedures in place to avoid and increase in air, soil and water pollution?		• Develop pollution mitigation and abatement plans, incorporating financial incentives where appropriate. • Develop site use plans incorporating transport and population support needs based on level of industrial operation. • Develop plans for the supply of services (e.g., water, education) for expected population in industrial area. • Develop and implement a sustainable resource use plan for target industry.
		Is the unplanned and unmitigated disposal of solid and liquid waste avoided?		
		Is an increase in road and other traffic avoided or mitigated?		
		Are there plans and procedures in place to address the environmental impact of increased population and demand for services?		
		Is an increased and unsustainable resource extraction avoided?		
Change in cooking or food processing procedures.		Is increased fuel harvesting avoided or mitigated?		• Use fuel efficient stoves and cooking methods. • Develop and implement a resource management plan for resources needed to cook or support costs of food preparation. • Consider organizing cooking process to reduce air pollution and fuel demand (e.g., communal kitchens, dining halls).
		Is increased air pollution avoided?		
		Is an increase resource harvesting to cover food preparation costs avoided?		
Creation of Small or Medium		Is unsustainable resource extraction avoided?		• Environmental impact review performed for each enterprise supported. A simple checklist may be sufficient if a number of similar types

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
Enterprises (SME)		Is the waste produced disposed of properly?		of SME are to be supported. • Waste disposal plans meeting appropriate standards incorporated into enterprise business plan and monitored. • Hazards and risks of location of enterprises assessed and appropriate mitigation measures identified before support provided.
		Are steps taken to avoid siting enterprises in hazardous locations.		
Relief Supplies		Are steps taken to ensure that relief packaging does not create a solid waste disposal problem?		• Use biodegradable, multi-use or recyclable packaging where possible. • Collect packaging as part of distribution program. • Develop program of education and facilities for safe disposal of personal hygiene materials. • Base assistance on needs assessment including survivor input. • Don't provide inappropriate materials. • Select assistance based on local social and economic conditions and sustainability of supply.
		Are steps taken to ensure that personal hygiene materials are disposed of properly and pose no health and sanitation problem?		
		Are steps taken to ensure relief assistance is appropriate or acceptable to survivors and not discarded?		
		Are there procedures to ensure that relief does not create new and unsustainable consumption habits on part of survivors?		
Rubble removal		Is the handling and disposal of rubble done in a way to avoid the creation of disease vector breeding sites, leading to increased disease levels?		• Develop and follow plans to recycle rubble and dispose of unusable materials in way

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
		Are rubble removal efforts also clearing obstructions to existing drainage/water flow systems so that flooding and sanitation problems can be avoided?		which minimizes negative environmental impact. • Some rubble, such as asbestos sheets, is hazardous to humans and environment and will require special handling and disposal methods.
		Is rubble being recycled to that greater natural resource extraction is not necessary?		
		Are individuals working in rubble removal provided with appropriate and adequate safety protection and training as needed to safely handle potentially dangerous materials?		
(Re)Settlement		Do resettlement plans address possible negative environmental impacts due to changes in land use and bio-diversity?		• Develop and follow land use plan in reconstruction and siting of settlements. • Conduct hazard and risk assessment of existing and new settlements sites and incorporate results into site selection, planning and construction methods.
		Are assessments and mitigation procedures been used to ensure that new settlements are not subject to new or greater hazards than before disaster?		
Training		Are steps taken to ensure that new skills do not lead to greater extraction of resources or production of waste?		Include environmental education and waste management options in training programs.
Demining and Unexploded Ordinances		Do demining/ordinance removal plans include procedures to avoid environmental damage to lands and resources which had not been previously exploited due to mines and unexploded ordinance?		Establish and follow land use plans for areas open to use following demining/clearance of unexploded ordnance.

Activity	Is the activity underway or planned? (Yes/No)	Questions on whether potential negative environmental consequences of activity have been addressed.	Yes/No answer to the question immediately to the left.	Selected Avoidance or Mitigation Options
Local Coping Strategies		To be added based on specific disaster conditions. Negative environmental consequences often involve a loss of natural resources, bio-diversity or conflict over scarce resources.		Avoidance/mitigation options should be developed specifically for each possible negative consequence. This process should involve input from survivors and can be facilitated with information collected through the **Community Level Assessment** module.

Annex C Guidance on the Management of Meetings

Individuals leading the REA process will be responsible for organizing and conducting meetings to undertake the **Organizational Level Assessment**. In order for these meetings to be run as effectively as possible, and to minimize the time necessary to achieve the objectives of the meetings, the following checklist may serve as helpful guidance. This checklist should be reviewed before each meeting. Additional points can be added to this list based on individual experience and local conditions.

- Review the Guidelines and develop a plan for the assessment and specific meetings needed to complete the assessment.
- Request that all participants of the meeting become familiar with the **Guidelines for Rapid Environmental Impact Assessment In Disasters** before they come to the meeting.
- Review the background of participants and tailor assessment sessions to the nature of the participants.
- Determine presentation methods and plans for each session.
- Anticipate issues which might arise during the assessment and collect any additional information which may help address these issues.
- Decide how questions will be handled. They can be taken during each session, at the end of the session, at the end of the day, and orally or in writing.
- Develop an agenda and schedule for the meeting.
- Schedule breaks at intervals of no more than 2 ½ hours.
- Decide whether food and drinks will be provided at breaks and how lunch will be provided.
- Assure the use of a common language for all participants or provide for simultaneous translation.
- Determine how to make break-out groups, including whether each group will remain together during the whole assessment or will be re-organized for each new task. Break-out groups should be no smaller than three persons and not larger than 10 persons if possible.
- Prepare handouts in advance (which may require translation) and ensure there are sufficient copies for all participants.
- Ensure that there are sufficient copies of the **Guidelines** in appropriate languages for the participants. (It is recommended to provide copies of the **Guidelines** to participants before the assessment, but it is likely that not all participants will bring their copies to the meeting.)
- Ensure that there are an adequate number of flip charts (at least one flip chart per break-out group), pens, pads, and other expendable supplies needed by participants to do the tasks needed to complete the assessment.
- Ensure that there is adequate space for breakout groups. (If the space is too small, the work of the groups may interfere with each other.) Break-out groups can meet in well separated parts of a larger meeting area or move to separate rooms, although this does make monitoring harder. Having groups meet in public spaces, such as corridors or lounges, should be avoided if possible.
- Have a safety plan, including information as to where first aid can be secured.
- Decide what to do about mobile phones. They can be turned off, or left with one person not attending the assessment who would take messages during the assessment sessions.

- Be early to the assessment meeting site to set-up the location and ensure there are no problems.
- Test all equipment. Have backup equipment at hand or quickly available to the assessment meeting site.
- Make sure people can find site, particularly ensuring that access is signed, security checkpoints know about the assessment and participants can be cleared through security sites and doors without difficulty.
- At the beginning of the assessment:
  - ✓ Review the agenda, schedule, logistics arrangements, and "ground rules", such as the use of mobile phones and asking questions.
  - ✓ Ask for questions and clarify any outstanding issues before proceeding.
  - ✓ Review the plan for completing the meeting and whole assessment. This plan is different than the agenda and schedule, and covers how each part of an assessment-related meeting is to be conducted.

Annex D Community REA Information Collection Guide[24]

The following document can be used as a guide in collecting information for the community level rapid assessment of environmental impacts. The information collected through this guide corresponds to the information required to answer the questions posed in the **Community Assessment Summary Form** (**Annex E**).

The guide should be used in conjunction with standard Rapid Rural Appraisal (PRA) and Rapid Assessment Procedures (RAP) methods and approaches. See **Annex F**, **RAP and PRA Techniques for Emergencies** and **Annex F, Guidelines on Community Assessments**, for additional information on PRA and RAP and data collection methods.

<u>This document should be reviewed before use and modified as appropriate for the community being assessed and the circumstanced of the disaster being investigated.</u>

A. GENERAL INFORMATION (completed by data collection team)

1. Date:
2. Time Started:
3. Time End:
4. Name of Community:
5. Person/s conducting the assessment :
    a. Facilitator:
    b. Recorder:
    c. Observer:
6. Distance of community from main road and district capital:
7. Nature of access to the community: paved, all season, dirt track, no road.
8. Ethnic group/s and religion diversity present in the community:
9. Description of the community. Including physical location, types of housing, physical layout and natural environment (agro-climatic zone, presence of rivers, lakes, parks, nature reserves etc). If possible, conduct a social mapping.
10. Description of the origin of the community (e.g., when settled and where first settlers came from).
11. Number of people currently living in the community:
12. Are there people who migrated/displaced from the area? If yes when, how many, in which direction and to where?

B. ENVIRONMENT AND LIVELIHOOD INFORMATION

Environment

13. How does the group describe the environment in which the community is located?

    Specifically ask about how the community has changed in the past ten years, noting changes to agriculture land, forests, pasture, supplies of raw materials, access and availability of water and pasture, and rainfall.

14. Is the community near any unique environmental areas (e.g., national park, industrial site)?

24 This document was developed by Samuel Tadesse, CARE Ethiopia, based on materials used in a field test of the REA in Ethiopia in 2002. The Guide was later used in the 2003 REA training in India.

15. Are there any areas which the community considers as special, such as holy sites, locations of natural resources or places which are protected by tradition? (Where possible, identify exact location.)
16. Does the community have any specific concerns about the environment? Specifically ask about fire, drought, floods, water and air pollution and other hazards, and recent changes to environmental conditions.
17. Does the group see the location of the community as one that is safe from floods, erosion, and other problems?
18. What are the rules that the community has governing the use of natural resources (agriculture land, forests, pasture, water)? Is there any difference for males and females?
19. How does the community resolve a dispute over the use of natural resources (forest, pasture or land use) water or other natural resources?

Livelihood/ economic activities

20. Nature of livelihood system: herding, agro-pastoral, farming, industry, other wage labor (indicate what type of labor). Indicate if more than one system is used, and number 1 to 5 in terms of importance.
21. What are major means of incomes and who involve from family members? Describe major occupation in terms of importance.
22. What are the criteria for wealth classification?

    Do (1) most families have about the same wealth, (2) are there a lot of poor and a few wealthy families in the community, or (3) are there some poor and wealthy, but most families have sufficient resources for all needs?
23. Are families supported by only one type of work, or by several family members with different occupations?
24. Are there any development projects working with the community and what do they do?

C. DISASTER INFORMATION

25. Has the community been affected by any of the following events in the past year.[25]

    ☐Flood

    ☐Wildfire

    ☐Strong Winds

    ☐Erosion

    ☐Crop pests or diseased

    ☐Human diseases

    ☐Animal diseases

    ☐Conflict

    ☐Accidents (e.g., fire burning someone)

25 This list should be revised to reflect a specific disaster event. See Rating Form 2 for additional hazards.

☐Drought

☐Ask if any similar events are not included in this list.

26. For each type of event identified, ask whether this event was considered a disaster, that is, why was it different than normal conditions?

For each item identified as a "disaster" above answer the following questions.

27. What was the cause and impact of the disaster?
28. What damage happened as a result? Describe human and material damages.
29. How many people have left the community due to the disaster, where did they go and when are they expected back?
30. When did the disaster start and how long is it expected to continue?
31. Has the type of work that people do to support families changed since the start of the disaster? If yes, note changes.
32. What has the community done to address the disaster? What coping mechanisms have been used?
33. Since the disaster began, how do people in the community get money and have these sources changed? (List sources and changes.)
34. Has the community been able to address (1) most, (2) some, (3) few of the impacts of the disaster from their own resources?
35. Has the community received any assistance from the government or NGOs to deal with the disaster? (Yes/no). If no, skip to number 39.
36. What kind of assistance was received? (List, including origin – government, donor, NGO, other communities, people who have left the community-- if possible)
37. Was this assistance considered to be (1) a lot of assistance, (2) enough assistance, (3) just some assistance, (3) little assistance?
38. Has this assistance (1) improved, (2) stabilized or (3) not had much impact on conditions in the community?
39. Has the assistance which has been provided caused any problems for the community? (Prompt for impact on the environment.)
40. When the disaster is over, how long does the community think it will take for environmental conditions to return to normal?

D. BASIC NEEDS

This section asks about conditions in the community affected by the disaster.

41. How did the community get water before the disaster: purchase, wells, cisterns, lakes, ponds etc.? Indicate more than one if needed)
42. How does the community describe the water quality before and after the disaster?
43. Is there enough water for everyone in the community? Compare before and after the disaster.
44. What types of shelter does the community use and has there been any change after the disaster? If yes, describe major changes.

45. How did community members get materials to build a house before the disaster: purchase, collect from country side, receive as gift, etc?
46. Does the community have any problems with shelter since the disaster? If there are problems, note what they are.
47. How does the community meet their clothing needs?
48. Are there any changes after the disaster? Describe.
49. How will additional clothing be secured: purchase, manufacture, and/or gift?
50. How do community members get food: own production, purchasing in market, gift etc.? (Indicate importance if more than one source.)
51. Do all the community members have enough food? If not, who is most affected by the lack of food?
52. How does the community get fuel for cooking and other uses? (purchase, free collection, other means – note)
53. Has the supply of fuel changed because of the disaster? If yes, describe how and why.
54. Have community members lost any household resources (utensils, soap for personal hygiene, bedding, tools etc.) due to the disaster?
55. How will these be replaced: sale of assets, gift, purchase, etc?
56. Do people in the community have any concerns about personal safety, either in the community or when outside the community? If yes, who is affected and why?
57. Is there adequate health care for the community?
58. Has the availability of health care changed since the disaster?
59. Is health care free, including drugs?
60. If health care is not free, how do community members pay the costs involved?
61. Does the community use latrines? If yes, indicate their type, location and ownership (family, group of families, communal).
62. Are there enough latrines?
63. If no, why people do not have them?
64. Is there any agro-chemicals use in the village? If yes, note type, sources and for what purpose the agro-chemicals are used.
65. Have agro-chemical users received training on safe use?
66. Is the community aware of the dangers of excessive application of agro-chemicals?

E. CONCLUSION

67. How would the group describe a good future for the community? (Prompt for types of work, types of housing, access to water, electricity, roads, education and health status and changes to the environment.)
68. What suggestions do community members make as to how environmental issues in the community should be addressed?

F. COPING STRATEGIES

69. If not indicated elsewhere during discussions with the community, note specific coping strategies which are being used in response to the disaster. Some of these coping strategies may only become evident in one-on-one or small group discussions since they may be illegal or not socially acceptable.

G. OBSERVATIONS

Observation should be made as to the way that human, animal and other waste is disposed.

70. Is the community clean of human/animal waste and garbage? (yes/no).
71. Are waste sites (where people throw waste or use as a toilet) distant from the community (yes/no).
72. Are there obvious insect breeding sites (particularly for flies and mosquitoes) in the community? (yes/no).
73. Is the community graveyard distant from housing and water supplies?
74. If there is a health facility in the community are medical wastes disposed of safely? (yes/no)

Additional observations by individuals conducting the assessment about disaster or environment-related conditions in the community.

Annex E Community Assessment Summary Form[26]

#	Item/Question	Community 1	Community 2	Community 3	Community 4	Importance Ranking[27]
Context Questions: Score Yes = 1 ("bad") or No = 0 Corresponds to Sections One and Two of the Organization Level Assessment.						
1	Did the community report environmental concerns?					
2	Did the community report environmental problems?					
3	Are there unique areas near the community?					
4	Are a large number of persons affected by the disaster?					
5	Has the disaster been going on for a long time?					
6	Are the disaster survivors concentrated?					
7	Have the survivors moved a great distance?					
8	Is level of self-sufficiency low?					
9	Is social solidarity low?					
10	Is culturally homogeneity low?					
11	Are most assets concentrated with a few individuals?					
12	Is livelihood base limited (not diversified)?					
13	Are expectations high?					
14	Will current resource use reduce adequate availability in the future?					
15	Is capacity to absorb waste limited?					
16	Does the environment have limited resilience?					
Disasters/Hazards, Yes = 1 ("bad") or No = 0. Corresponds to Section Three of Organization Level Assessment.						
17	Is drought a reported problem?					
18	Is wildfire a reported problem?					
19	Is conflict a reported problem?					
20	Is animal disease a reported problem?					

[26] Add columns equal to the number of communities or groups who participated in the assessment.

[27] The importance ranking is calculated by adding the number of similar answers based on one answer (e.g. yes) being 1 and the other 0.

21	Is human disease a reported problem?					
22	Are other hazards reported problems (note response for each hazard separately).					
Unmet Needs No = 1 ("bad") or Yes = 0. Corresponds to Section Four of the Organization Level Assessment.						
23	Are adequate supplies of potable water available for humans?					
24	Are adequate supplies of potable water available for animals?					
25	Is shelter adequate for local expectations?					
26	Is food adequate?					
27	Is fuel adequate?					
28	Are household resources adequate?					
29	Is personal safety adequate?					
30	Are human health conditions adequate?					
31	Is waste management appropriate?					
32	Is the control of insects and breeding sites adequate?					
32	Are agro-chemicals used safely?					

Community Relief/Coping Strategies.
Corresponds to Section Five of the Organization Level Assessment[28]

The assessment results should be used to identify relief and coping strategies used by the community. These actions should be entered in the first column.

Each action should be judged as to whether it is having a positive or negative impact on the environment. Some actions can have both impacts concurrently or at different times. Further details on the actions and strategies should be provided in the third column to understand the scope and overall impact of each action.

Strategy/Action	Indicate Positive (+) or Negative (-) Impact on Local Environment	Comments including whether the action is common for all or only a select number of communities or groups within the communities.

[28] Add additional rows as needed.

Annex F RAP and RRA Techniques in Emergencies

The application of RAP and RRA techniques in emergency relief programmes[29]

By Hugo Slim and John Mitchell
Hugo Slim And John Mitchell are with Rural Evaluations in UK.

This paper presents still another use for rapid qualitative assessment techniques borrowed from both RAP and RRA: their application to emergency relief programmes. The paper highlights both advantages and difficulties in using RAP and RRA techniques, and suggests how they can be used to complement wider quantitative information systems. They can also be used to start a participatory process that can help people in the affected community to take charge of their own relief, as a vital step in the process of recovery. - Eds.

THE AIM OF THIS PAPER is to look at the application of RAP and RRA techniques in emergency relief programmes and to highlight some of the advantages and some of the difficulties of using these techniques in relief programmes. In so doing, the paper draws on the experience of rural evaluations in food related emergencies in the Horn of Africa, in the recent floods in Bangladesh, and in Afghan and Vietnamese refugee camps.

A.1.1 The state of the art

Various forms of RRA are being increasingly used in the assessment and evaluation of all kinds of emergencies. The idea of the rapid assessment or rapid appraisal of emergency situations is not new. In most situations, the "rush job" is all there is really time for in the first stages of a crisis, and in this context the use of some RRA techniques has proved important.

Similarly, an increasing recognition that the kind of qualitative information that RRA can provide is acceptable and presentable means that RRA and RAP-type surveys are now being used to complement wider information systems in emergencies. The softer data produced by RRA are now being better presented in report form and are increasingly drawn on to fill out more quantitative surveys and to give a fuller living picture of particular areas and particular groups.

However, as RRA and RAP gain credibility as important sources of information in emergencies, experience to date has provided three main lessons.

1. Experience shows that, while RRA techniques are relatively easy to apply in non-emergency situations, their use is not so straightforward in the confusion of relief situations. This means that the RRA most commonly used in current relief practice tends to be a more condensed version and is seldom the stuff of which RRA training workshops are made. In the relief context, the acronym RRA might better refer to "Rough and Ready Appraisal."

2. Although only a handful of techniques are applicable in emergencies, the methods used do provide a valuable insight into conditions within individual households. Such insight, so quickly gained, is unobtainable by any other method.

3. Most quantitative data are aggregated over relatively large areas, such as crop forecasts, nutritional status and rainfall. This kind of information is likely to mask important differences within a region, as not everyone will be equally affected by the emergency. RRA can be used to zoom in on particular areas and groups to identify who has been worst hit and why. It can provide good depth of

29 From: **Rapid Assessment Procedures - Qualitative Methodologies for Planning and Evaluation of Health Related Programmes,** *Nevin S. Scrimshaw and Gary R. Gleason, Editors,* http://www.unu.edu/unupress/food2/UIN08E/uin08e00.htm#Contents. (c) Copyright 1992 International Nutrition Foundation for Developing Countries (INFDC), Boston, MA. USA. All rights reserved. Reformatted to fit page. Use requested (11/03).

information but not necessarily good breadth of coverage. It can fine-tune the wider information systems to the actual needs of people. This is the first step towards an effective relief programme.

A.1.2 RRA techniques appropriate to relief operations

In most emergency situations it is not possible to carry out a wide range of RRA techniques or to involve people's participation to the full. In food, flood and refugee emergencies, a combination of pressures make a variety of techniques unworkable. War or civil conflict; acute physical suffering; fear, grief and desperation inevitably limit the number of RRA techniques appropriate to the emergency situation.

While it may be possible for affected people to participate in some basic ranking exercises and in quite detailed interviews, other RRA techniques will be impractical. There is neither the time nor the right atmosphere to introduce or carry out a wide variety of RRA exercises and it is unlikely that the ideal multidisciplinary team will be available. In practice only two main RRA/RAP techniques are practical in emergencies: semi-structured interviewing and direct observation.

Semi-structured interviewing

Semi-structured interviewing involves individual interviews or group discussions with three groups: the affected population; the local authorities; and the local relief staff. Interviewing in emergency situations is often a very different process from interviewing in a less pressurized development context. It tends to require greater sensitivity to people who are often in new and frightening situations and who are not able to speak with the confidence of their normal surroundings.

The first feature of emergency interviewing is the problem of fear, mistrust, trauma and panic. These are ever present and cannot be underestimated. Because of fear or mistrust, people are often forced to say nothing, to play things down, or to exaggerate and lie [1]. Interviews are bound to have a difficult dynamic when they are carried out within a circle of armed guards; or with people who are desperate to secure refugee status; or when they are devastated by a disaster.

The second feature of emergency interviewing is a result of the relief process itself. Relief situations obviously tend to focus on the giving and receiving of critical and life-saving items like food, shelter and clothing. In their new circumstances people are often totally dependent on these relief items, and interviews can turn from discussions to occasions in which people seek only to lobby and coerce the RRA/RAP team. Distressed people's realization that an interview may have immediate results by releasing more relief items is a constant pressure in emergency interviewing. Discussions that set out to focus on an in-depth exploration of group problems and relief organization can quickly break down into tales of individual tragedy and a series of individual 'shopping lists.' Although much can be learned from these, they are difficult to interrupt and can side-track the group from organizing itself and presenting its case as a whole.

Conditions such as these form the background of many relief situations, and interviews become more difficult and listening becomes a more particular art. It is important to read between the lines on these occasions and a certain amount of 'lateral listening' is usually required [21.

Direct observation and checking

Whatever one hears in interviews should be verified by constant cross checking and direct observation where possible. This should be done by sensitive probing during the interviews and by as much direct observation as possible.

Distribution records should be checked to confirm or deny the testimony of the people and the authorities. Testimony that does not tally with what one is seeing should be looked into more thoroughly. If people are exaggerating, keeping silent or lying, the RRA/RAP team needs to try and work out why and to what extent. However, at all times, it is important to remember that the teams who are interviewing and observing are not always welcome. Often they are a threat to the authorities, to interpreters and to affected people. RRA/RAP teams can compromise these groups by

asking the wrong question, quoting their testimony to the wrong person, or being seen to notice the wrong thing. Insensitive action by teams can endanger people and have serious repercussions.

A.1.3 RRA information as a complement to quantitative data

Despite the difficulties of using RRA in relief situations, experience has shown that RRA has a vital function in emergencies. RRA - however rough and ready - serves three main functions in relief situations. First, it produces valuable qualitative information at a grassroots, household level. Second, it is able to work fast. Third, the very method of RRA can start a participatory process that can influence the running of the relief programme and begin to help break down fear and mistrust.

RRA insight at household level

The kind of interviewing and direct observation described above produces useful qualitative information about particular communities and particular circumstances. It is not hard information but provides a more personal insight about the people involved and the nature of their present circumstances.

Household insight provides detail of a kind that gives added depth to quantitative information and sharpens the focus on the picture gained from broader indicators [3]. For example, in food-related emergencies or refugee situations where relief planners are fixing standard food ration sizes, insight into food sharing and food consumption patterns discovered by RRA interviews and observation has clarified needs more precisely and determined general policy. Learning about how people are eating and sharing and how they are supplementing their diet has allowed planners to introduce more appropriate rations [4]. In the same way, after floods or natural disasters, when cash support is urgent for food purchase and house repair, RRA interviews and first-hand observation can provide important information about labour patterns, informal credit practices and details of accommodation preference and house-sharing [unpublished paper, Rural Evaluations June 1990].

Household insight can help in the interpretation of broader indicators at the local level. In most situations where large information systems give blanket definitions of need, the application of RRA helps to make the picture into something more like a patchwork quilt. By providing this focus, RRA is able to represent the ambiguities and particular circumstances of the situation more accurately and thereby complement hard data.

Speed

A second feature of RRA and RAP is their speed. This is a particularly important aspect for emergency relief programmes. Food emergencies can be well hidden and slow to emerge before they erupt or they can be brought about within days by destitution or displacement. Natural disasters or large refugee movements can happen overnight and the consequences can be sudden and disastrous. This means that there is a need for speed in life-threatening relief situations - particularly the needs assessment stage.

Rapid assessment teams may not be able to cover vast areas but they can quickly cover sample areas such as the worst affected areas. One advantage of these surveys is that the information that they produce can be very quickly processed and expressed. Also, they can cover broad issues (food, health, shelter, etc) and is not confined to a single sector or indicator.

RRA participation and community-managed relief

A further important contribution RRA can make in relief situations springs from its ability to start a process of participation and cooperation within the relief programme. If handled sensitively and diplomatically, the very methods of participatory RRA and RAP can start a process of community-managed relief and help to break down fear and mistrust.

The distinctive feature of RRA techniques is that they encourage the active participation of the population at risk. Even in emergencies, RRA techniques are dialogical and participatory. They

attempt to hear people's views of recent events, their perceptions of the present situation and their estimations of future conditions. However fragile, the participation involved in the interviewing and discussion phase of RRA emergency assessments is often a good starting point for designing more community-managed relief programmes [5].

The participatory RRA method allows people themselves, their representatives and local authorities, to contribute to the making of the relief agenda. By not being bound to a single discipline, an RRA survey can also allow the relief agenda to become broader and more appropriate to the circumstances of that particular locality. By looking at people's livelihoods within the particular emergency context, RRA is not focused on a single indicator and therefore is not bound to set up a single sector response.

Because of this, more imaginative and more appropriate relief strategies can be developed in consultation with the affected people themselves. An increasing example of this process is that solutions to some food emergencies are no longer discussed purely in terms of food aid. Instead, new non-food options such as cash, livestock support, labour support, and health support are now recognized as more appropriate, and are appearing on the relief agenda.

By introducing people's participation into the relief process from the start, RRA techniques can therefore contribute three important factors to the emergency programme. First, they allow the affected people to be heard and to help in setting the relief agenda. Second, by not being exclusively focused on nutrition, health or agriculture, RRA dialogue allows the relief agenda to be widened to include a variety of relief options. Third, sensitive interviewing and responsible reporting by RRA teams can bring various sides together in an emergency to improve cooperation and build the confidence of the affected community.

A.1.4 Conclusion

The use of RAP and RRA in emergency situations is, and always will be, compromised and unconventional. In some cases where NGOs work alongside vulnerable communities on a day-to-day basis, a more diverse RRA/RAP package can be used to assess problems and work out relief measures in advance. In the majority of rushed jobs however, the emergency scenario remains the same: things happen suddenly, access is intermittent and restricted, and people are often desperate or in fear. In these situations, only a limited package is possible and advisable.

An emergency is not the time to try to use a wide variety of techniques nor is it the time to expect the ideal team. Instead, an emergency is the time to get together with the affected community and its representatives and to listen and look as much as possible. This simple approach can be combined with broader surveys to understand the situation and to acquire details that only direct contact can provide. Added to this, 'rough and ready appraisal' can start a participatory process that can lead to a more community-managed relief programme. People in the affected community can begin to take charge of their own relief and break down some of the problems associated with being the victim. This in itself is always a vital step in the process of recovery.

A.1.5 References

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2. Mitchell J. Slim H. Hearing aids for interviewing. RRA Notes 9. London: The International Institute of Environment and Development, August 1990.
3. Buchanan-Smith J. Young 11. Recent developments in gathering and using early warning information in Darfur, Sudan. Disasters, 1991.
4. United Nations High Commissioner for Refugees/Rural Evaluations. A report on nutritional assessment and a study of food consumption on Pilau Bidong. Geneva: UNICEF, April 1990.
5. Slim H. Mitchell J. Towards community-managed relief: a case study from southern Sudan. Disasters 1990; 14(3): 265-69.

Annex G Guidelines on Community Assessments

The following information is reproduced (with permission) from a manual developed by CARE Uganda, and is presented here with kind approval of CARE Uganda. Note that the material presented below was created for use in monitoring and evaluating development programs and will need to be adapted for use in disasters.

CARE Uganda

Program Impact Evaluation Process

Module 2:
M&E Tool Box

Companion to:
Module 1 – Overview

By: Tom Barton, CRC September 1998

Table of Contents of Annex G

1. How to use the Tool Box
2. Reviewing and Analyzing Secondary Data
3. Focus Groups
4. Qualitative “Key Informant” Interviews
5. Ranking Exercises
6. Questionnaire-Based Data Collection
7. Rating Scales
8. Analyzing Questionnaire Results

1. How to use the Tool Box

The tools in this module include both qualitative and quantitative methods and tools, with an emphasis on participatory approaches that fit the category of "action research". In this regard, the tools are able to be oriented locally, i.e., to generate information and support decision-making processes useful for local levels as well as country office planning, implementation, monitoring and evaluation. The tools are designed to be action-oriented, i.e., to be able to collect data, process it, and return it to the various stakeholders in usable form within a relatively short time frame. In this way, essential decision-making and planning can be supported with timely information.

The tools selected for this tool box emphasize participation. While these tools are able to produce "fairly quick and fairly clean" information, they are also designed to be helpful in making participants aware of the implications of the issues being investigated and supporting them in undertaking relevant action. As such, the persons implementing the PIE will be expected to act more as a “facilitators” and less as “experts”. The exact tools to use will need to be selected and assessed from the perspective of "appropriate technology" and user-friendliness for the community.

As a caution, because of the problem identification and awareness raising that occurs during participatory exercises, fieldworkers should be careful not to create expectations that cannot be fulfilled. Conducting these exercises in the context of a program will help; doing participatory feedback sessions that explore the strengths and weakness of all stakeholders (including the community and CARE) will also help.

TOOLS BEFORE GOING TO THE FIELD

This section emphasizes the importance of preparatory work before going to the field – doing a careful budget, pre-testing tools and instruments, and reviewing relevant information that has been collected by other studies or monitoring activities. Attention to these steps and details before the field work will help to conserve resources and yield more useful results.

Tips from experience:

- ***Pre-test with the core evaluation team*** – if there is a core group of team leaders and/or supervisors who will be involved in the evaluation, try to get all of them participating in the pre-testing. If an even larger group of individuals will be involved in the data collection, let them be trained by core team members who have already tested the tools. This strategy will prevent the confusion of trying to determine if problems during pre-

testing are due to inexperienced data collectors versus poorly designed tools. It will also prevent the need for retraining the data collectors if changes are needed in the tools following lessons learnt in the pretest.

EXPLORATORY AND EXPLANATORY TOOLS

These tools are designed principally for gathering qualitative information, either from individuals or in group sessions. The tools may be called exploratory when they are used at an early stage of data gathering, for example, before a survey. In this way, they can help to understand the range and nature of the issues. They can also be used to narrow down the possible array of questions for a quantitative survey to a more useful and manageable size.

Used in an explanatory way, the tools in this section can be applied at the end of data collection, or even during the process of analysis in order to better understand why conditions are the way they are. They can also be used for cross-checking the validity and significance of information obtained in other ways, e.g., from a quantitative survey.

Tips from experience:

- ***Use visual approaches*** – together with skilful and non-intrusive facilitation, creative use of visual aids (drawing pictures, graphics, maps, etc.) is an important strategy for supporting group exercises in action research.
- ***Sorting, counting and ranking exercises*** – may be done in written form, but if literacy is low, it may be more effective to carry them out with everyday objects, such as seeds, stones or simple sketches on small slips of paper.
- ***Maps*** can be used very effectively in groups to describe and analyze the distribution in the community for features of special interest (e.g., natural resources, types of soil, vulnerable families, types of services, water points, land tenure patterns, etc.).
- ***Analytical matrices (e.g., column and row tables, Venn/chapati diagrams)*** – can be used on flip-charts or chalkboards for organizing and assembling the ideas developing in a brainstorming session with a group.
- ***Share responsibility*** - in these participatory exercises, aim to “hand over the stick” (or the marker) as early as possible after the participants have understood the task.
- ***Duration*** – The majority of the tools in this section will take approximately 30-60 minutes per tool to carry out in a small group. Rushing them faster will diminish the quality of information obtained; taking much longer can run the risk of boring the participants. It is also not advisable to do more than two tools back-to-back with a single small group of participants due to fatigue (and to the opportunity costs of keeping them away from their other employment or tasks around the home).

SURVEY METHOD AND TOOLS

The tools in this section are principally designed for collecting quantitative information, i.e., data that is best described in numbers. Quantitative information is particularly useful for understanding the prevalence or intensity of a given issue. At the same time, surveys can also be used for gathering some qualitative information from individuals or households, e.g., when open-ended questions are used and the full answers are recorded for later analysis.

The content in this section gives some suggestions about questionnaire design and sampling, as well as presenting some specific tools to address the requirements of the PIE indicators.

Tips from experience:

- ***Length*** – strive to keep surveys short, both in terms of questions and in the duration per interview. Unless they can see some compelling personal reason for participating, respondents generally begin to tire after 30-45 minutes of questions, and can start to give false answers just to get rid of the interviewer. The bigger the questionnaire, the more work to analyze all the data and make use of it.
- ***Be interactive*** – although it is more difficult to completely hand over the stick in a survey, it can be helpful to include questions that are interactive and/or rely on graphic responses (drawing a small map, choosing among pictured items, explaining an object or a photograph, etc.).
- ***Keep it simple*** - another consideration regarding participation is the level of language and conceptual difficulty of the survey instrument. If it is kept simple, it will be easier for the respondent to understand. A simple questionnaire may allow the use of local interviewers from the community itself, which enhances rapport, rather than using university students or other 'outsiders' that the respondents may have difficulty trusting.

ANALYSIS TOOLS

The analysis section presents several tools that support participatory analyzes of qualitative and quantitative data. Participatory analysis may take longer than relying on a single individual, but it can yield a more balanced and comprehensive result.

Tips from experience:

- ***Plan ahead*** – many texts and training manuals for PRA methods and even surveys only discuss the process up to the point of having a mountain of raw data. However, all of this data must be processed and extracted if one is going to get any benefit from the study other than learning how to collect data. It is crucial to plan for analysis at the time of creating the evaluation design and budget, otherwise one can be left with no time or resources to obtain any use from the study.
- ***Graphic representations*** – pie-charts or bar-charts (or better yet, pictograms that are graphs constructed of pictures) are suitable for processing and displaying quantitative information, even with non-literate participants. The pictograms (whose shape is often inspired by daily objects such as trees, animals, pottery or food) can be used to describe and analyze time trends; patterns of relationship among different actors; or sequences of causes, problems and solutions.

ORGANIZATION AND DATA MANAGEMENT TOOLS

This section of the tool box provides some ideas about how to organize the evaluation process (more details to be provided eventually in Module 3) and strategies for effective management of data.

Tips from experience:

- ***Document carefully*** – keep a master file of all steps, correspondence, and particularly, all decisions during the process of a study. This file will be invaluable for tracking information, for analysis and write-up, and for learning lessons to improve similar studies in the future.
- ***Back-up data regularly*** – always do regular back-ups of data and keep logs of data that has been collected. The loss of even a small amount of data can prove crucial to the analysis because it is so expensive to go back to the field.

- ***Remember to feed back results of the study to the community*** – while final written reports are useful for institutional or training purposes, active-learning workshops are considered the most important means for providing feedback to local institutions and the community at-large.

A NOTE ON SOURCES

The majority of the tools in this tool box have been prepared by the author over a period of nearly a decade in Uganda and used in various versions as self-learning handouts. Some of the information about the tools includes additional references – either when the tool is based more closely on the cited work, or if the cited work has very useful information for expanding the content beyond the short presentation included in this tool box module. Ideas about strengths and weaknesses of the tools when specifically applied to program impact evaluation will probably be refined after the pilot testing anticipated in early 1999.

2. Reviewing and Analyzing Secondary Data

A review of existing data has several potential benefits, such as: refining of specific objectives, identification of potential informants for interviews, further clarification of the target groups in the population, and summarizing what is known versus what remains to be answered in the field. Costs are very low, information can be gathered quickly and it can usually be done with a relatively small amount of local travel. Depending on its quality, existing data can also permit greater depth of analysis for the population and environment situation.

However, there are also some potential limitations. Data may be incomplete, biased, or unreliable. The methods originally used to collect the data may not be described. Access to the materials will vary; and some agencies may expect a fee to respond to information requests, others may not allow access without several permission letters. Nevertheless, on virtually every potential topic, some relevant materials can be found by applying persistence, creativity and problem-solving.

Potential sources of secondary data

- Academic institutions: university and departmental libraries, technical schools
- NGOs: some NGOs maintain libraries; most keep copies of their own products
- Government: ministerial and district libraries; national archives
- Individuals: professors, researchers, long-term consultants, etc.

Extracting content and meaning from secondary data will be improved if a set of open-ended questions are systematically posed to the data, such as the following:

Problems (nature, range, distribution)

- What information exists about problems that affect persons in this region?
- What do we know about the distribution of the leading problems? E.g., what are the influences and inter-relationships between gender, age, ethnicity, location of residence, family structure, educational status, etc.?

Behavior patterns

- What behaviors place the communities at risk? which behaviors are protective?
- What do we know about factors affecting behavior change among people in this region? E.g., social competencies, supportive attitudes, social groups, etc.?

Context

- What do we know about external factors affecting the problems? E.g., social norms, religion, economics?

Institutional responses

- What policies exist that aggravate or solve any of the problems?
- What programs and services are currently addressing the problems?
- What is their coverage and how effective are they?
- Who is funding and who is conducting these activities and services?
- What future activities are planned?

At the conclusion of the documents review, there are two other useful questions:

a) What additional information about the local situation is needed but not available?

b) For whom would this information be useful and why?

From: Barton, T. (1997) How Are We Doing: Guidelines to M&E, CARE Uganda

3. Focus Groups

Focus groups are semi-structured discussions with a small group of persons (usually 6-12 people) sharing a common feature (e.g., women of reproductive age, shareholders in an irrigation system, users of a certain service, etc.). A small list of open-ended topics, posed as questions or participatory tasks, is used to focus the discussion.

Purposes
Focus groups have been increasingly used in participatory evaluations and research to identify and describe insider perceptions, attitudes, and felt needs on a defined topic. Focus group methods are also used with PRA tools to discuss and record the results.

Steps in using the technique

* Design a discussion topic guide; i.e., an interview framework comprised of open-ended questions arranged in a logical way.

Facilitator tasks

1. The facilitator uses the discussion guide to keep the session on track.

2. Introduce discussion topics with a planned introduction. The facilitator does not need to be an expert on the topics, but should be familiar enough with them to pose relevant questions. Be lively and encouraging; also keep a sense of humor.

3. React neutrally; remember there is no right or wrong answer. Gestures and other non-verbal forms of communication such as nods or head shakes should not suggest agreement or disagreement with the participant's comments. Avoid reacting to the discussion or expressing personal opinions that could influence the participants.

4. Observe the participants and be conscious of their involvement and reactions. Encourage all to participate and do not allow a few individuals to dominate the discussion.

5. Listen carefully to move the discussion logically from point to point and to relate participants' comments to the next question. (e.g., 'Your point about the problem of teenage pregnancies reminds me I wanted to ask you what sources of community support are there for unmarried girls who do get pregnant, especially when they have to drop out of school?)

6. Guide the meeting into a discussion among equals, rather than a question and answer session. In the best sessions, the participants communicate among themselves and become less aware of the facilitator.

7. Build rapport with the participants and gain their confidence and trust in order to probe their responses and comments more deeply.

8. Be flexible and open to suggestions, changes, interruptions, and lack of participation.

9. Be subtle and not pushy about watching the time and moving from one topic to the next; do not appear to be 'watching the clock'.

10. Be aware of your tone of voice; an overly assertive, aggressive or imperative tone can intimidate the participants, particularly when asking probing questions. It might seem that the participant is being attacked if the tone of voice sounds unfriendly.

11. Review the meeting very promptly afterwards with the recorder (within 24 hours and before doing any other such groups).

Note taker/Recorder tasks

1. The note taker/recorder is present primarily to observe and take notes on the discussion.

2. The notes should include full labeling for the session:
   - Date, and time it began and ended,
   - Name of the community and a brief statement about any characteristics of it that might have a bearing on the relevant activities of the participants.
   - Venue, including any comments on how the setting could affect the participants (e.g., large enough, private enough, etc.).
   - Number of participants and some descriptive data on them, such as sex (gender), approximate age, and any other kinds of information relevant to the study (e.g., adolescent boys attending secondary school).

3. Pay attention to the vocabulary of the participants. If the session is being recorded, keep notes in English for the most rapid sharing with the evaluation or research team. The recorder should make an effort to note the participants' own words in the local language if the session is not being tape- recorded. In this case, arrange for translation of the notes and the tape as soon as possible.

4. Besides recording as exactly as possible what people are saying (direct or verbatim quotes), the recorder should make brief notes about the flow of the meeting. Record personal observations and impressions in parentheses ( ) or brackets [ ]. These observational notes might include comments about the level of participation, whether one or more are dominating the conversation, fatigue, anxiety, etc.

5. Pay attention to the interruptions and distractions. Note what makes people laugh, what makes them reluctant to answer, and how the discussion is concluded.

6. Make note of whether there seems to be a consensus or majority opinion on any topic, but do not force people's answers into any certain mould.

7. In general, the facilitator should be the one to talk, and the recorder should concentrate on observing and recording. However, if necessary the recorder could interrupt for clarification, to make suggestions about how to make the discussion more meaningful, or to help get things back on track if the facilitator seems to have lost control of the meeting.

8. If the session is tape recorded, the recorder is the person to operate the tape. While this is a bit of chore to keep track that the machine is operating properly, the resulting tape will help to amplify the written notes taken during the session. Just because there is a machine, however, do not count on the tape being audible – the note taker must still take notes.

9. Review the meeting very promptly afterwards with the facilitator (within 24 hours and before doing any other such groups). Expand and complete the notes and then promptly pass them on to the evaluation or research team.

Strengths and weaknesses of focus groups

+ Group interaction enriches the quality and quantity of information provided

+ Focus group discussions are quite good at disclosing the range and nature of problems, as well as eliciting preliminary ideas about solutions.

- Practice and experience in qualitative evaluation and research procedures are needed, especially thorough note-taking and sensitive facilitation.

- Large amounts of information are easily obtained, necessitating skills in extracting and summarizing for the analysis

4. Qualitative 'Key Informant' Interviews (KIs)

Qualitative and open-ended interviews rely on broad, open-ended questions to be addressed to knowledgeable individuals ('key informants') in a conversational, relaxed, and informal way. The interviewer is left free to rephrase these questions and to ask probing questions for added detail (e.g., "Who?", "Where?", "When?", and "How?") based on respondents' answers and conversation flow. This form of interview is more likely to yield in-depth opinions and perceptions than can be done with a rigid closed-ended questionnaire.

Purposes

Qualitative and key informant interviews can be used to obtain specific qualitative and quantitative information. Household features, gender issues, use of natural resources, household economics, and many other topics can be effectively explored.

Reliability and validity of the interview

Obviously, the first consideration is the knowledge that the respondent may be expected to have. Remember, too, that the respondent may be knowledgeable about some items and relatively ignorant about others. Therefore, the interviewer should ask himself the following questions with reference to each of the principal sub-topics in the interview.

- is the respondent's knowledge of the matter direct and first-hand?
- is the respondent in a position to provide accurate information?

Some people have a tendency to boast; others have a fertile imagination and unconsciously exaggerate; still others aim to enhance their self-importance by giving misleading answers. Questions to consider include:

- is the respondent eager to make strongly authoritative statements?
- does the respondent think before replying and perceptive about the issues?
- are the respondent's answers based on practical considerations?

Some respondents find it difficult to articulate their feelings, judgments, and opinions, especially to outsiders. This problem is compounded when the interviewer comes from a higher socio-economic stratum.

Respondents may have an ulterior motive for providing inaccurate information. Extension staff may exaggerate the performance and impact of agricultural extension activities. A health worker may magnify the problems encountered on reaching out to target populations. Staff directly involved in project efforts have a professional stake in promoting their activities and covering their shortcomings; often this bias is more sub-conscious than a deliberate attempt to mislead.

- was the respondent trying to paint only a positive picture?
- Is the respondent talking only of problems and difficulties to seek sympathy?

The social context of the interview also affects the expression of ideas and opinions by the respondents. For example, when a farmer is interviewed in the presence of government officials or project staff, he might not reveal the truth because he is afraid to antagonize them.

- were there people nearby who might have affected the person's answers?
- was he/she anxious that others might overhear him/her?
- was the location private enough to ensure confidentiality for the interview?

There is a tendency for respondents to give answers which they believe the interviewer wants to hear, either from politeness, hope of benefits, or in the hope of shortening the questioning. In such a case, it is particularly important to avoid giving the respondent clues regarding the interviewer's opinions. Questions for a checklist:

- did the respondent show undue deference?
- did the respondent seek the interviewer's opinion before replying?
- did the interviewer say anything which silenced the respondent or changed the thrust of his/her responses?

Finally, one should not forget that recent events can influence the views expressed by the informant. The mental and physical status of the respondent also affect his responses. When tired, he/she can be irritable and react negatively to questions.

Steps in using the tool

* Design an interview guide and a results summary form.

* Decide who is going to be interviewed (purposeful sampling procedures); and select appropriate interviewers (may mean matching respondents and interviewers by age or gender; will depend on topic and local cultural values)

* Pre-test the questionnaire guides with several individuals who are representative of the types of persons to be interviewed in the actual study (make sure the questions are comprehensible, that the answers are relevant, etc.)

* Conduct a training for all persons who will be doing the interviews (i.e., the interviewers); be sure the training includes a number of practice interviews with other interviewers or community members and subsequent review to improve performance.

* Teach the interviewers to make relatively brief notes during the interview, filling-out the summary form immediately after the interview; this will require practice to capture exact words and phrasing for quotations

* Arrange for daily (or nightly) editing of all forms for completeness, errors, etc.

* Hold daily discussions about problems encountered during the interviews and to review the preliminary results with other members of the team.

Strengths and weaknesses

+ Less intrusive than questionnaires; can be paced to fit the needs of the respondent

+ Encourages two-way communication.

+ Administered in an atmosphere that makes respondents feel at ease, which may include privacy and confidentiality, depending on topic.

+ Can obtain very detailed information and richly expressive quotations

- Practice and experience are needed for appropriately using this tool; requires sensitivity and the ability to recognize and suppress one's own biases.

- Interviewers should have good literacy, communication, and summarizing skills.

- Interviewers will need some grasp of the general topics covered in the interview.

- Facilitator support is needed for analyzing data.

From: Barton, T. (1997) How Are We Doing: Guidelines for M&E; CARE Uganda
Casley, D.J. and Kumar, K. (1988) The collection, analysis, and use of M&E data; World Bank

5. Ranking Exercises

Ranking exercises, which may be done with groups or individuals, are a way to enable people to express their preferences and priorities about a given issue. Rank order methods require informants to rank items (i.e., from most to least) in terms of a specific characteristic, for example, illnesses in terms of severity. The technique may generate insights about the criteria through which different individuals, groups or social actors make decisions on the kinds of issues under investigation.

Purpose
Ranking exercises have been used for a variety of specific purposes, such as:

- identification of needs, priorities and preferences
- quantification of opinion and preferences as elicited through interviewing or brainstorming;
- comparison of preferences and opinions as expressed by different social actors.

Complete rank ordering methods can work with literate informants by presenting them with a list of items that they are asked to order from "most" to "least" on a specified attribute by putting numbers next to each item. With low literate groups, each informant can be asked to order (or sequence) cards that have pictures or symbols (or one can use objects to symbolize the concepts); the ordering should be from "most" to "least" (or "best" to "worst") for the attribute of interest.

Partial rank ordering pairs each item with each of the other items (“pair-wise” ranking). These pairs of items are presented to respondents, who are asked to indicate which is "more" or "less" ("best" or "worst", "most preferred" or "least preferred", etc.). A total rank ordering is obtained by summing the number of times each item was chosen.

Example of pair-wise ranking matrix:

Favorite staple foods

Matoke	**Millet**	**Posho**	**Cassava**	**Potato**		**Score**	**Rank**
	Matoke	Matoke	Cassava	Matoke	**Matoke**	3	B
		Millet	Cassava	Millet	**Millet**	2	C
			Cassava	Posho	**Posho**	1	D
				Cassava	**Cassava**	4	A
					Potato	0	E

(Matoke is steamed banana; Posho is white maize meal porridge)

Strengths of rank order methods:
The complete rank ordering technique produces a great deal of information, and is productive for the time spent by the informant; it is ideal for studying individual differences. Paired comparisons are probably the easiest and most reliable method to use with illiterates when there are a small number of items to be ordered.

Weaknesses of rank order methods:
The complete rank ordering technique can be tedious for non-literate respondents. For paired comparisons, pre-testing is crucial for identifying the maximum number of pairs that informants will tolerate. Some researchers have found that even as few as 15 pairs (6 items) can become tedious.

Steps in using the tool

* Make a list of items to be prioritized;
* Recruit appropriate participants to be involved in the exercise;
* Define a simple ranking mechanism. This may be based on a pair-wise comparison of items in the list; by sorting cards representing items in order of preference; or by assigning a score to the different items.
* Prepare a matrix on which preferences identified by participants could be jotted down (e.g., on the ground, with a flip chart, on a chalk board)
* Explain the ranking mechanism to each participants and ask them to carry out the exercise (e.g., give them card pairs sequentially and record their preferences; or give them stones to place on any categories they want in response to a specific guiding question – which crop is the most difficult, which type of health provider is the most effective, etc.);
* Ask participants to explain the criteria on which their choice has been made
* Carry out a quantitative analysis of ranking series and interpret the findings on the base of qualitative statements about the criteria of choice.

Strengths and weaknesses

+ Ranking is a flexible technique which can be used in a variety of situation and setting.
+ Whenever categorical judgements are needed, ranking is a suitable alternative to closed-ended interviewing.
+ Ranking exercises are generally found to be amusing and interesting by participants and are helpful to increase their commitment to action-research.
+ Information is provided on both the choices and reasons for the choices.
- Pre-testing is needed for the ranking mechanism and the tools to be used to facilitate it.
- Choices may be affected by highly subjective factors. In order to generalize results to the whole community, a proper sampling strategy is needed.

There are a number of resource books with detailed descriptions and pictures of how to do these techniques, for example:

De Coninck, J. (1994) Facilitator's Handbook, Volume 1; CAP West Nile and CDRN

Hudelson, P.M. (1994) Qualitative Research for Health Programs; WHO, Division of Mental Health; MNH/PSF/94.3

Pretty, J.N.; Guijt, I.; Thompson, J.; and Scoones, I. (1995) Participatory Learning and Action; IIED Participatory Methodology Series, IIED

Theis, J. and Grady, H.M. (1991) Participatory Rapid Appraisal for Community Development: A training manual based on experiences in the Middle East and North Africa; IIED, SCF

6. Questionnaire-Based Data Collection

FORMAL INTERVIEWS

Purpose: To discover quantitative information about people's opinions, beliefs and practices, and about service need or coverage of project access, so that the information may be analyzed statistically.

Description: Questionnaire-based data collection is the most common form of social evaluation and research used in Uganda. Questionnaire results usually come from a face-to-face interview between an interviewer and a single respondent. Respondents are selected from a representative sample of the population under study. Each respondent is asked the same set of questions in the same order. Most questions are close-ended, that is, the respondent's answer is interpreted by the interviewer as belonging to a certain answer category and is coded as such. Some questions, however, are open-ended, that is, the respondent is allowed to answer freely and the answer is written down more or less verbatim by the interviewer. The answers to each question on each questionnaire are tabulated by hand or by computer, and then analyzed statistically.

Advantages: A good questionnaire can produce easy to interpret, quantitative results. It is relatively easy to train enumerators to administer questionnaires.

Disadvantages: Problems of translation and cross-cultural communication are often under-estimated. Many people do not tell the truth in interviews; socially acceptable attitudes and behaviors are over-reported by respondents and vices are under-reported; many respondents give the answer which they think the interviewer hopes to hear. Close-ended questions can easily distort the range of respondents' answers by reducing responses into a few categories.

Questionnaire-based data collection is difficult, expensive and time consuming; one needs not only to draft a questionnaire, hire and train enumerators, administer the questionnaire and analyze the data, but also pre-test the questionnaire and re-write it (often several times) and check the translation via back-translation. The reliability of a questionnaire depends heavily on the sample used; identifying a representative sample in Uganda can be difficult.

RAPID SURVEYS

Methodology notes:

- 20 questions (or less), fitting on one to three sheets of paper with room for answers
- about 2/3 of questions pre-set, rest to be contributed by or specific to the concerns of the given community
- capable of being administered by local people (e.g., local volunteers) in collaboration with trained supervision (e.g., divisional staff)
- capable of being analyzed rapidly in the field and raw results given to the community during the field phase
- able to generate reasonable prevalence data for the community (e.g., based on visits to every household, or every third household which has been identified and numbered on the social resource map)

Strategies for identifying additional information beyond the minimum set of indicators for the PIE

- Community-generated: what do community leaders want or need to know that would help them to better serve the needs of their community
- Service-related: based on services reportedly available in the area, how often have individual households received or made use of any services and what services from these various providers

Other data considerations

- Data to be gathered should be useful (i.e., not just collected because it is 'nice to know')
- Data should be anticipated to be more accurate (exact) or more accessible through a survey approach than would be possible in group sessions
- Information to gather at the community level might already be available at a larger scale, but not for the micro-environment of the community, e.g., employment patterns, reasons for school drop-out, nature of disability, adolescent health (sexual and reproductive), latrine quality and usage, etc.

Avoiding inappropriate questions

To make sure our questions are appropriate, we must become familiar with respondent groups – their knowledge of certain areas, the terms they use, and their perceptions and sensitivities. What may be an excessive burden for one group may not be for another. And what may be a fair question for some may not be for others. For example, in a survey of the handicapped, those who were not obviously handicapped were very sensitive about answering questions while the converse was true for the obviously handicapped.

Questions are inappropriate if they:

- cannot or will not be answered accurately
- are not geared to the respondents' depth and range of information, knowledge and perceptions
- are not relevant to the evaluation goals
- are not perceived by the respondents as logical and necessary
- require an unreasonable effort to answer
- are threatening or embarrassing
- are vague or ambiguous
- are part of a conscious effort to obtain biased or one-sided results.

The best way to avoid inappropriate questions is to know the respondent group and not rely on stereotypes. A brief story may bring this point home. A researcher was pre-testing a questionnaire on people who used mental health services. During the test, the researchers expressed surprise that this group of respondents could handle certain difficult concepts. Annoyed, one of the respondents rejoined, "I may be crazy, but I'm not stupid."

Adapted from:

Adkisson, S. and Munro, L. (1991) Quantitative Questionnaire-Based Research (Formal Interviews); In: Monitoring, Research and Evaluation in UNICEF-Assisted Projects, UNICEF-Uganda

Barton, T. (1997) How Are We Doing: Guidelines for M&E; CARE Uganda

7. Rating Scales

Purpose
Rating scales are a very popular technique for questionnaire data collection in the social sciences.

Description
Scales can be created for any number of concepts or attributes, and items can be rated on a single conceptual scale or each may be rated on a series of scales representing a variety of concepts or attributes. Scales can be presented numerically or graphically:

> *"Circle the number that corresponds to the level of severity you would associate with the illness saxra"*
>
> 0 1 2 3 4 5 6 7 (from least to most severe)
>
> *(mark an 'x' on the line below indicating where you would rate the illness saxra in terms of severity)*
>
> ◆————————————————◆
>
> mild severe

Another approach, which can be used with non-literate respondents, is to use cards with symbols or some other visual stimuli (actual foods or medicines, for example), and ask informants to place the objects in piles according to some pre-defined rating criteria. For example, if you are interested in rating a number illnesses according to their perceived severity, you might decide to use a 3-level rating system (very serious, moderately serious, not very serious at all), and ask informants:

> *"I'm going to say the name of an illness, and I would like you to tell me whether the illness is very serious, moderately serious, or not very serious at all."*

As the informant rates each illness, the facilitator (or informant) places the corresponding card or object in the appropriate pile. Such visual stimuli allow the respondent to consider the relationships among items and to change their rating if necessary.

Strengths of rating scales:
Rating scales are easy to administer.

Weaknesses of rating scales:
Rating scales can be extremely sensitive to response bias (the tendency of individuals to always use one end of the scale or a narrow range in the middle of the scale). This can make it difficult to compare data between respondents.

From: Hudelson, P.M. (1994) Qualitative Research for Health Programs; WHO, Division of Mental Health; MNH/PSF/94.3

8. Analyzing Questionnaire Results

Purpose
Participatory, low technology analysis of quantitative data for capacity building, interactive approach; with rapid turnaround time for dissemination back to community.

Description
All too commonly, 'participatory' assessments become non-participatory at the analysis stage, yet this is neither a necessary nor a desirable progression. One of the perceived "reasons" for this shift is 'lack' of personnel – many organizations or agencies do not have many people with computer skills or statistical training. In reality, it represents lack of awareness that manual analysis can be done very effectively in participatory groups – even when there are questionnaires from hundreds of respondents. The consequence is a further 'mystification' of the analysis process and failure to communicate all of the evaluation and research skills necessary to communities or organizations so that they can gather and use information for their own problem-solving.

There are other benefits to analysis by hand. An important opportunity for clarification and interpretation of results is missed if analysis is handed over to someone unfamiliar with the conditions in the field. Manual analysis is a way of drawing in not only the fieldworkers, but also other key stakeholders. And if the analysis is going to be done on a computer with a group, doing some of the analysis by hand first helps to ensure that everybody understands the actions being done by the computer – leading to better understanding of the results and what they mean. In fact, with careful layout of the matrix, and careful cross-checking of each other's work, the accuracy of data entry and extraction can be as good by hand as it is with a computer.

Tally sheets – the most rapid way of summarizing results quickly by hand
These are specially-prepared sheets of paper which show all possible responses and are useful for summarizing and analyzing some types of information, such as production figures, attendance figures or medical records. For example, two questions in participatory evaluation might be "how many patients have been seen in the last four months?" and what ages were they and what was wrong with them?"
Using a tally sheet, a single stroke can be used to record each patient visit by age and symptomatic diagnosis (such as diarrhea, cough or fever).

Example – tally sheet for young child visits at a clinic, age group by selected diseases

Age	Diarrhea	Cough	Fever
6-12 months	111111111	1111111111111111111	11111111111111111111111111111111111
13-18 months	11111111111111111	11111111111111111	11111111111111111111
19-24 months	11111	1111111111111	11111111111111111111111111111

One advantage of tally sheets is that they can be set up with symbols in the row and column headings, and then they can be used even by low literates for tallying data and summarizing results. When the tally sheet is prepared at a meeting or by a group, the pattern of the result emerges in a way in which everyone can see. Paper or chalkboard can be used for tally sheets, too. Tally sheets are very fast for the specific extraction they are set at; however, there are some disadvantages. One becomes locked into the set format. In the above example, say that the persons doing the counting informally comment that it looks there was sort of pattern of differences in the diarrhea episodes. They may have seen a difference among boys versus girls, or Muslims versus Christians, or rural versus urban. However, the numbers on the tally sheet cannot confirm or deny this suspicion, and the group would have

to go back and recheck all the questionnaires and start the counting all over again to validate the statement.

Using these methods to summarize your information helps you to see exactly how many (and what percentage of) people responded in a specific way to specific questions. At the end you can say, for example, that on average, half (or 50 per cent) of the respondents agree or disagree with a particular question.

The following table is an example from Ghana showing respondents' well-being ranking of indications of a good life.

What	Women	Men	Formal leaders	Informal HWs	Total
Income (good)	1111111111 11111111	111111	111111	11111 TBA, 11 TH,	37
Food (clean, good)	1111111111 11111	11111	11111 11	111111 TBA, 111 TH,	36
Health (good)	1111111111 11111	111	111111	111 TBA, 11 TH,	29
Water (good, borehole)	1111111111 111111	1111111	1111	11 TBA	29
Clothing (adequate)	1111111111 11	1	1111	1111 TBA, 1 TH,	22

Another disadvantage with the tally sheets is that you lose the individual answers from each different respondent. If you want to see clearly how each respondent answered, you may wish to use a 'master' sheet.

Analyzing by hand – Master sheets

A master sheet is a simple method of recording, on a large sheet of paper or on a chalkboard, some or all of the responses to a questionnaire (depending on how many questionnaires were involved). It has been used successfully to summarize information on a population of 700.

From experience

In the analysis of baseline data for the Kumi District Health Project (Uganda), each questionnaire was numbered. Then information from each questionnaire was filled in vertically, from top to bottom, on flip-charts that had been converted into large-scale graph paper. The frequency information was then analyzed by 'reading' it horizontally, from left to right. Finally, the results were tallied and made into averages and percentages.

This way of summarizing information is sometimes called a "people-item-data" roster because it sets out clearly in lines (or rosters) information (data) as it relates to certain aspects (items) of the individual respondents (people).

Example:

	Questionnaires				
Questions	No. 1	2	3	4	5
1. Age	29	28	21	19	19
2. Primary grades completed	3	2	0	3	2
3. Age at marriage	17	19	19	17	16
4. Number of living children	5	7	2	2	3
5. Etc., etc.					

If handwriting is small, and the spaces are large enough, it is even possible to write in qualitative answers to open-ended questions so that analysis of these question responses can be cross-tabulated with other variables in the matrix. Note: Be careful with the 'don't know' answers or your average results may not be correct in the end.

Adapted from: Feuerstein, M-T. (1986) Partners in Evaluation: Evaluating development and community programs with participants; MacMillan and TALC

Annex H Issues Consolidation Table

Organization Level Issues	Community Level Issues
Context Statement	
Factors With Immediate Impact on the Environment	
Environmental Impacts of Disaster Agents	
Unmet Basic Needs	
Negative Environmental Consequences of Assistance	
Other Critical Issues	
Recovery Issues	

Annex I Issues and Actions Table

Issues	Actions	Priority

Annex J REA Leader: Key Criteria

The person who is tasked to lead a REA in the field or headquarters setting should meet, to the extent possible, the following criteria:

- Be knowledgeable of the geography, environment, social, economic, and political conditions in the area where the assessment is to be conducted.
- Have experience in disaster relief and recovery operations.
- Have field experience in rapid disaster impact assessment.
- Be familiar with concepts and approaches needed to create a team assessment effort and have demonstrated leadership capabilities and expertise.
- Have experience in rapid community-level assessment methods and procedures, and, in particular, participatory methodologies. (A well-developed ability to listen actively, to show compassion and understanding of the disaster survivors, and be able to help assessment team members understand that these same abilities are important.)
- Be able to dedicate a full time effort to the REA assessment, including time needed to develop new project proposals and seek funding for them. (Note that a full stand-alone assessment can require up to three weeks, and an additional dedicated week to proposal writing and review may be required.)