UNEP

ENVIRONMENTAL NEEDS ASSESSMENT IN POST-DISASTER SITUATIONS

A PRACTICAL GUIDE FOR IMPLEMENTATION

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United Nations Environment Programme

NOTE

This draft guide is intended as a first step towards elaborating a systematic approach to addressing and assessing environmental impacts and concerns following natural disasters – especially those issues which might have a negative impact on the safety and welfare of people. The guide has been primarily designed to inform and influence the early recovery process. It is intended as a pilot tool and will be revised further as field tests are carried out. Drafting of the manual has included input from many international agencies and individuals and thanks are expressed to them. The manual also draws on a number of published resources listed in the Bibliography.

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ABBREVIATIONS

ENA	Environmental Needs Assessment
ENAT	Environmental Needs Assessment Team
ER	Early Recovery (as part of the IASC Cluster System)
FAO	Food and Agriculture Organisation (of the United Nations)
GIS	Geographical Information System
GPS	Global Positioning System
HIC	Humanitarian Information Centre
IASC	Inter-Agency Standing Committee
NGO	non-governmental organisation
PDNA	Post Disaster Needs Assessment
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees

GLOSSARY

Biodiversity – Biodiversity, or biological diversity, is the variability among living organisms From all sources including *inter alia* terrestrial, marine and aquatic ecosystems and the ecological complexes of which they are part.

Carrying capacity – The maximum number of a given organism, or population, that a particular environment can sustain.

Consultation – A two-way exchange of information, comments, ideas and suggestions. Consultation outputs are considered as inputs for decision-making; they must be taken into account, but need not determine decisions.

Disaster – A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources.

Displaced persons – persons who, for different reasons or circumstances, have been compelled to leave their homes. They may or may not reside in their country of origin, but are not necessarily regarded legally as refugees.

Early recovery – Recovery that begins early in a humanitarian setting. Early recovery is not intended as a separate phase within the relief-development continuum, but rather as an effort to

strengthen the effectiveness of the linkage. Early recovery encompasses livelihoods, shelter, governance, environment and social dimensions (such as HIV/Aids and gender equality as cross-cutting issues), including the re-integration of displaced populations…

Ecologically sensitive area – Habitats such as wetlands, aquifer recharge zones, important wildlife habitats and so forth which are, or might be, sensitive to degradation or destruction by human activities.

Ecosystem – A functional unit consisting of all the living organisms (plants, animals and microbes) in a given area, as well as the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow. An ecosystem can be of any size – a log, pond, field, forest, or the Earth's biosphere – but it always functions as a whole unit. Ecosystems are commonly described according to the main type of vegetation (e.g. forest ecosystem, old-growth ecosystem or range ecosystem).

Ecosystem integrity – The degree to which the fundamental ecological processes (e.g. water and nutrient cycling, the flow of energy and biodiversity) are maintained.

Ecosystem services – The benefits which an ecosystem provides, which include storing water, preventing soil erosion, nutrient recycling and serving as a source of genetic diversity.

Participation – A process by which stakeholders are active and equal partners in decision-making, and may have shared ownership and control over project/programme design and implementation (and also eventual evaluation).

Protected area – Portions of land protected by special restrictions and laws for the conservation of the natural environment. They include large tracts of land set aside for the protection of wildlife and its habitat; areas of great natural beauty or unique interest; areas containing rare forms of plant and animal life; areas representing unusual geologic formations; places of historic and prehistoric interest; areas containing ecosystems of special importance for scientific investigation and study; and areas that safeguard the needs of the biosphere.

Rehabilitation – The full, or at least partial, restoration of degraded landscapes and/or impaired ecosystem services to their state prior, for example, to the site being occupied as a site for transitional shelter for displaced people.

Transitional settlement – settlement and shelter resulting from conflict and natural disasters, ranging from emergency response to durable solutions.

Vulnerability – The extent to which a community, structure, service or geographic area is likely to be damaged or disrupted by the impact of a particular hazard.

Water catchment – An area, often a combination of mountain ranges and basins, that 'catches' rainfall or snow. Water from rain or snowmelt is absorbed into the soil and stored in underground reservoirs, or is fed into a river, aquifer, or lake.

World Heritage Site – A designated and protected site of great cultural significance or a geographic area of outstanding universal value.

# 1.	INTRODUCTION

## 1.1	BACKGROUND

During and after any crisis, decision-makers at the national and international levels rely on rapidly acquired information to analyse impacts, set priorities, identify gaps, plan early recovery responses, mobilise resources and engage in advocacy. Timely and well-founded information on post-disaster environmental impacts and possible risks to health, livelihoods and the environment and ecosystem services is an invaluable contribution to these efforts.

Despite a growing recognition of the important links between the environment and other life-supporting sectors and systems, environmental information to inform decision making is often unavailable or inaccessible in a post-crisis situation. National databases may have ceased to function or census data may be outdated. The capacity of relevant state institutions may also be weakened, poorly resourced and in serious need of support. Insecurity or poor communication with affected areas may also constrain access to primary data, while competing interests or priorities can also hamper the gathering of vital information. Often, therefore, despite good intentions, environmental considerations are often overlooked.

Despite these challenges, the objectives and priorities for early recovery must be based on a timely and well-grounded assessment of identifiable needs, including those relating to the environment. Although a number of tools and mechanisms exist for assessing and analysing humanitarian relief and broader recovery needs, none has yet been developed or adapted to provide a sound or timely methodological guidance for early recovery needs with regards the environment[1]. Furthermore, no instruments are available for ensuring that early recovery support is linked with considerations for safeguarding the environment and the services it provides.

The development of a Post-Disaster Needs Assessment (PDNA) methodology by the Inter-Agency Standing Committee (IASC) Early Recovery Cluster provides an opportunity to address this gap. Within this framework, the United Nations Environment Programme (UNEP) has been requested to take the lead in developing a post-emergency environmental needs assessment method in order to fully integrate environmental needs within early recovery programming.

## 1.2	ENVIRONMENT IN A POST-DISASTER CONTEXT

The cause-effect relationship between environmental degradation, poverty and disasters is complex and has been the subject of many analyses. All signs, however, show that the number of environment-related disasters is currently on the increase, with flooding expected to be among the highest of future predictions. As the many ramifications of a

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[1] Recognition is given to the excellent ECLAC Handbook for Estimating the Socio-economic and Environmental Impacts of Disasters (ECLAC 2003), but many practitioners have found that this tool is more appropriate for economic-related assessments, with less attention being given to community needs.

changing global climate also become more apparent, it must be expected that certain zones which to date may not have experienced serious impacts of natural disasters may in future become more vulnerable to such events.

Predicting natural disasters is a growing area of research. The scale of human suffering however in post disaster situations is rarely considered ahead of a disaster occurring. In some cases, this places an immediate extra burden on perhaps already damaged or degraded environmental services for the provision of emergency shelter, water or waste provisioning. In almost every disaster situation, however, there are some forms of environmental impact, some of which in turn may have additional secondary negative implications for the already affected communities.

Understanding the dynamics between a disaster, its environmental (as well as social and economic) impacts, the needs of the community and implications for the early recovery process is therefore a vital need. Table 1 shows some of the recurrent environment-related consequences associated with recent disasters.

Table 1. Common and Recurrent Natural Disasters and some Environment-related Consequences

Type of Disaster	Associated Environmental Impact
Hurricane/Cyclone/ Typhoon	• Loss of vegetation cover and wildlife habitat • Short-term heavy rains and flooding inland • Mud slides and soil erosion • Saltwater intrusion to underground fresh water reservoirs • Soil contamination from saline water • Damage to offshore coral reefs and natural coastal defence mechanisms • Waste (some of which may be hazardous) and debris accumulation • Secondary impacts by temporarily displaced people • Impacts associated with reconstruction and repair to damaged infrastructure (e.g. deforestation, quarrying, waste pollution)
Tsunami	• Ground water pollution through sewage overflow • Saline incursion and sewage contamination of groundwater reservoirs • Loss of productive fisheries and coastal forest/plantations • Destruction of coral reefs • Coastal erosion and/or beneficial deposition of sediment on beaches/small islands • Marine pollution from back flow of wave surge • Soil contamination • Loss of crops and seed banks • Waste accumulation – additional waste disposal sites

	required
	• Secondary impacts by temporarily displaced people
	• Impacts associated with reconstruction and repair to damaged infrastructure (e.g. deforestation, quarrying, waste pollution)
Earthquake	• Loss of productive systems, e.g. agriculture
	• Damage to natural landscapes and vegetation
	• Possible mass flooding if dam infrastructure weakened or destroyed
	• Waste accumulation – additional waste disposal sites required
	• Secondary impacts by temporarily displaced people
	• Impacts associated with reconstruction and repair to damaged infrastructure (e.g. deforestation, quarrying, waste pollution)
	• Damaged infrastructure as a possible secondary environmental threat, e.g. leakage from fuel storage facilities
Flood	• Ground water pollution through sewage overflow
	• Loss of crops, livestock and livelihood security
	• Excessive siltation may affect certain fish stocks
	• River bank damage from erosion
	• Water and soil contamination fertilizers used
	• Secondary impacts by temporarily displaced people
	• Beneficial sedimentation in floodplains or close to river banks
Volcanic Eruption	• Loss of productive landscape and crops being buried by ash and pumice
	• Forest fires as a result of molten lava
	• Secondary impacts by temporarily displaced people
	• Loss of wildlife following gas release
	• Secondary flooding should rivers or valleys be blocked by lava flow
	• Damaged infrastructure as a possible secondary environmental threat, e.g. leakage from fuel storage facilities Impacts associated with reconstruction and repair to damaged infrastructure (e.g. deforestation, quarrying, waste pollution)
Landslide	• Damaged infrastructure as a possible secondary environmental threat, e.g. leakage from fuel storage facilities Secondary impacts by temporarily displaced people
	• Impacts associated with reconstruction and repair to damaged infrastructure (e.g. deforestation, quarrying, waste pollution)

Drought	• Loss of surface vegetation. • Loss of biodiversity • Forced human displacement. • Loss of livestock and other productive systems.
Epidemic	• Loss of biodiversity • Forced human displacement • Loss of productive economic systems • Introduction of new species
Forest Fires	• Loss of forest and wildlife habitat • Loss of biodiversity • Loss of ecosystem services • Loss of productive crops • Soil erosion • Secondary encroachment for settlement or agriculture
Sand Storms	• Loss of productive agricultural land • Loss of productive crops • Soil erosion

At the same time, however, there are a number of humanitarian- and relief-related activities that are commonly undertaken during the early recovery phase which may themselves have an impact on the state of the environment. Specific attention needs to be given to these – many of which are cross-cutting activities from other related clusters – among which are:
• over-extraction of ground water aquifers;
• water contamination from improper sewage disposal;
• selection of inappropriate or energy-intensive systems such as desalination plants;
• unsustainable supply of shelter materials;
• unsustainable use of timber for construction and fuelwood;
• deforestation;
• land degradation and soil erosion;
• waste disposal; and
• selection of inappropriate sites for temporary shelter and site planning.

1.3 ENVIRONMENTAL NEEDS ASSESSMENT

Until very recently, post-disaster needs assessments were being carried out primarily to identify immediate and life-saving needs. As part of the ongoing humanitarian reform, renewed attention has been given to the needs of people and their communities following the end of the emergency phase and before full scale development starts to fill the void. This period – simply defined as "(Early) Recovery" – is clearly one where needs and opportunities are changing.

Early recovery efforts by governments and UN and non-UN actors often suffer from a combination of isolated initiatives and sporadic strategic leadership. This leads to an

absence of a comprehensive strategy, a duplication of efforts in some areas, a waste of resources and lives in others, and a failure to factor in risk reduction considerations and put in place the conditions for sustainable long-term recovery.

In recognition of this, renewed effort is now being given to supporting this early recovery phase of post-disaster situations, by addressing needs and opportunities across the board, taking all sectors into account, taking institutional and community needs into account and consolidating data into a format where it can be immediately inserted into the available mechanisms for funding support.

Addressing environmental consideration features as part of this process and, in a bid to highlight the many ways in which environmental issues need to be considered during early recovery, this guide has been commissioned. Development of this guide – in support of early recovery and as part of the broader post-disaster needs assessment (PDNA) is intended to help:

- identify environmental impacts and risks caused by the crisis and relief operations as well as potential environmental pressures from recovery;

- identify the negative response-related activities or coping mechanisms resulting from an emergency that can impact the environment or create new environmental risks;

- assess institutional capacities at the national and local levels to mitigate environmental risks and manage environmental recovery;

- provide a forward looking plan that aims to "Build Back Better", by integrating environmental needs within early recovery programming and across the relevant relief and recovery clusters; and

- provide a standard reference point for future environmental assessments in the post-crisis setting, in spite of the fact that this tool is expected to be modified to suite the needs of different situations.

In addition to the above, a number of secondary objects might be highlighted, these being the opportunity to:

- generate strategic baseline data that could eventually feed into a monitoring and evaluation system to track implementation of environmental recovery interventions;

- identify initiatives that can be strengthened to provide or help rebuild livelihoods and sustain human security – especially those that depend on the environment and natural resources;

- identify how environmental degradation may have contributed to the underlying causes of the emergency and how environmental vulnerabilities can be addressed during recovery;

- identify opportunities to re-orient livelihoods along sustainable pathways, using environmentally sound construction practices and/or alternative energy options, by

identifying ecosystem restoration requirements; and by mainstreaming disaster risk reduction; and

- provide an understanding of the specific vulnerabilities that women and other groups in the communities face, and identify their capacities and needs to engage in the environmental recovery process.

The actual timing and time require for an ENA to be carried out is difficult to generalize, but this should always be considered as part of the early recovery and other cluster interventions in a post-disaster situation. Table 2 shows an indicative timeframe for conducting an ENA, assuming that a Team Leader has already been identified.

Table 2. Indicative Stages of an ENA

Main Activities	Duration
Pre-disaster baseline data gathering	1 week
Training of ENA Team	2 days
Situation analysis	2-3 weeks (depending on the scale and severity of the disaster this may take much longer)
Consultations and stakeholder engagement (if separate to above)	2 weeks
Draft ENA produced and circulated to government and UN agencies	1-2 weeks
Revision of ENA report and completion of proposed environment strategy	1-2 weeks
Sharing of strategy with government, donors, UN agencies, community representatives. Follow-up with data transfer to central repository	1 week

Note: If needs be, an early rapid assessment of the situation may already allow a broad outline of a costed proposal to be compiled and circulated to donors. During the ENA process, however, more reliable information will be constantly becoming available which will likely influence earlier recommendations.

2.   THIS GUIDE

2.1   OVERVIEW

This guide is intended for use by anyone concerned with environmental, and related, impacts occurring in a post-disaster situation. It should be of particular relevance to those interested in ensuring that environmental issues are taken into account from the earliest possible moment of planning for early recovery.

This guide is not intended to present a blueprint of how to conduct an environmental needs assessment given that practically every situation will have its own particular concerns. It should, however, help provide some proven basic guidance on:
a) how an ENA team – or Team Leader at least – might organise themselves prior to conducting the ENA, as well as during subsequent stages of the assessment;
b) some key issues which the ENA team and decision-makers might need to consider;
c) approaches that should be respected during specific stakeholder consultations;
d) how non-cluster specific cross-cutting issues and concerns such as gender and governance might be integrated into the various lines of questioning and assessments; and
e) how the collected information might be presented in a format suitable for quick and easy reading and referral.

The guide has been designed with a view to helping people take each of the modules and adapt these, as necessary, to particular situations.

2.2   INTENDED AUDIENCE

The ENA guide has been written with the expectation of it being used primarily by a core group of people who might constitute an Environmental Needs Assessment Team (ENAT), though in particular the ENA Team Leader.

For this reason, the guide assumes that at least one member of an ENAT will either have some level of prior environmental or assessment experience and organizing and managing stakeholder consultations. As one of the main concerns of carrying out an ENA in the first instance is to influence decisions being taken for the early recovery process, some working knowledge of the development scene would also be advantageous

The ENA tool is designed to be as flexible as possible so as to encourage and allow its use in a range of different situations, such as those highlighted in Table 1, by different users.

It is assumed that at least some users of this tool will be arriving at a site and situation with which they have no or little previous experience. Some contact with agencies active on the ground may have been established ahead of time but this will need to be re-inforced – by the ENAT Team Leader in particular – as quickly as possible.

At the same time, however, it must be expected in many situations that key agencies and individuals may have a number of competing interests and needs: the environment may not be among his/her priorities, in which case the ENAT, or similar, must be prepared to operate – initially at least – on their own. It is imperative however that links be established with the humanitarian response movement as soon as possible both in terms of accessing vital information, ensuring that efforts are not being duplicated and in order to allow information from the ENA to in turn become part of the information gathering and decision-making processes.

Section 3 of this guide provides some additional information on the background of the ENA (3.1) and goes into a little more detail on the role and possible structure and operating modality of the ENAT. A simple outline of the ENA process is given in Section 3.3.

Section 4 houses the main content of the ENA which is designed around four separate but interlinked phases: Pre-disaster Baseline (4.1), Situation Analysis (4.2) and Stakeholder Engagement and Consultation (4.3).

Field practitioners and potential members of the ENAT and other assessment teams are thus likely to focus mainly on sections 3 and 4, in addition to relevant annexes. At the same time however, the guide has also been structured to inform decision-makers such as senior staff of relevant ministries and agencies on the importance of ensuring that environmental considerations are duly considered in the early recovery process. For this reason, information contained in Section 5, as well as the ENA Executive Summary Report are likely to be the most relevant.

3. THE PROCESS

3.1 BACKGROUND

The ENA is designed to give quick initial results since some of the problems may pose an immediate threat to human welfare. In addition, however, it can also enable more concrete recommendations to be developed with the active participation of institutions and individuals selected from amongst the affected community. The ENA should also examine possible secondary environmental risks as part of the early recovery process since these have the potential to unduly affect the recovery process at some point in the future. Possible secondary risks could include pollution through gradual leakage of damaged chemical storage facilities, or an earthquake aftershock that might trigger off additional damage.

The time required to complete the ENA will vary from one situation to another depending mainly on the availability and quality of information, the scale of the enquiry as well as the experience of the users (see Table 2 for a broad estimate of time required for this process).

A number of different sources of information are needed to be consulted at various stages of the ENA, ranging from online research to direct consultations with key stakeholders. Table 3 identifies some likely or possible lines of enquiry which the ENA Team might find helpful to consider.

Table 3. Information that the ENA Team might Receive from Different Sources and Interlocutors

Level	Type of Information
Online services	• Maps • History of site and previous disasters • Sector specific databases • Disaster response • Information regarding risk mapping and analysis
Survey reports	• Environmental impact assessments • Other PDNA-linked reports • Other cluster-related reports (demography, livelihoods, shelter, etc) • Disaster preparedness and recovery strategies/ plans
Line ministries	• Pre-disaster status reports on the environment • Presence of sites of ecological importance • Regulations governing access to natural resources • Information concerning possible sourcing of

	shelter and construction materials
	• Information on waste management systems, policies and practices
Secondary data	• Pre-disaster environment baseline data collection
	• Initial severity and impact information
	• Humanitarian relief information, disaggregated by age and sex
	• Initial environmental impact extrapolation
Communities	• Former use of natural resources by community members, disaggregated by age and sex
	• Community level links with livelihood security before the disaster
	• Governance issues regarding land tenure
	• Customary regulations governing access to natural resources
	• Main immediate and longer term needs
Individual stakeholders and stakeholder groups (fishermen, farmers, pastoralists, women groups…)	• Former use of natural resources by men and women, old and young people
	• Links with livelihood security before the disaster
	• Pre-disaster and current livelihood coping strategies of men and women, old and young people
	• Trends in rural and urban activities in relation to natural resource use and management
	• Main immediate and longer term needs of men and women, old and young people
	• Gendered division of labour (water collection, etc.); gendered pattern of land-use and -ownership

Source: Modified from FAO/ILO 2007

3.2 THE ENVRONMENTAL NEEDS ASSESSMENT TEAM

This ENA has been designed with the use by non-specialists in mind. Someone with prior experience of conducting an environmental impact assessment or rapid environmental assessment, or an experienced environmentalist with practical social skills in the line of community consultations should have no difficulty in completing the assessment.

The ENA, however, also offers the possibility of establishing a small multidisciplinary team or people, under the co-ordination of an appointed or elected Team Leader. Draft Terms of Reference for such a Team Leader are outlined in Annex I.

Member of such a team might typically be drawn from specialist UN agencies, government line ministries (Environment, Water, Marine and Coastal Resources, Waste and Sanitation…) as well as national and international environment-related NGOs, local authorities and, wherever possible, some representation from the affected communities. Community involvement, including that of women, is strongly advised in this process, but recognition is given to the fact that this may require more time than might be available in many situations.

In addition to specific environment-related knowledge or skills, it is essential that other potential cross-cutting concerns are catered for within this team, for example in relation to gender or with specific concern for governance issues and/or the vulnerable members of a community. The purpose of such integration is not to gather a complete new set of information on say gender, but to make sure that gender issues are taken into account in meetings and interviews and in the overall formulation of action plans and recommendations, and that such issues are clearly and consistently considered by all members of the team.

A team of 4-5 people is probably optimal size for this ENA: Additional specialist assistance and input can be obtained on a needs basis, thus keeping the core team to a small and manageable size. The ENA Team should be made up of men and women.

It is important that the Team Leader, at least, is experienced with the content of the ENA before s/he takes up their role in the field. The Team Leader should, in turn, ensure that all members of the team are provided with copies of the ENA (both in paper and electronic modes) and that they are then guided through the various steps. This process will allow a subsequent division of labour to be developed between the team members, so that each is clearly aware of their own, and others, roles in this assessment process.

During the assessment itself, at least daily meetings should be held by all team members to share information, identify any problems or gaps, and to plan for the next day's activities. Such opportunities should be taken also to identify where additional resource persons might be needed. Team members should also be kept appraised of security and assessment-related logistical arrangements and constraints.

3.3   OUTLINE STEPS OF THE ENA PROCESS

The ENA is structured around three separate but inter-related steps, designed in such a way as to help focus attention on different levels and needs, and to streamline information gathering from the many envisaged different sources. This will also allow for some of the data to be verified by different sources as any assessment team is likely to be provided with many contrasting and sometimes conflicting points of view.

Phase I – Pre-disaster Baseline

Gathering as much reliable information on the actual situation immediately before the disaster – as well as and lead up events to the disaster – is an essential point of departure for the ENA. Many different sources of information will need to be consulted. Even then, however, it must be expected that many gaps will become evident in the information available, which may need to be addressed in subsequent steps through specific, directed lines of enquiry.

Phase II – Situation Analysis and Site Assessment

Additional information will continue to be collected during this phase of the assessment to initially allow a risk mapping exercise to be carried out before then proceeding to actual on-the-ground data collection, observation and verification. A series of outline questionnaires are provided to help guide the ENA team during this comprehensive stage of the process.

Phase III – Stakeholder Engagement and Consultation

Engaging with a broad range of people – from decision-makers in line ministries to actual practitioners who have a direct dependency on certain natural resources – is a fundamental part of the ENA process. Some consultation will naturally occur during the site assessment work, but given the importance of making sure that peoples' own voices and experiences are recorded, and their immediate (at least) needs identified, special attention is given to this phase of work. Consultations are also an essential opportunity to ensure that all members of the affected society have an opportunity to contribute to the early recovery process, while at the same time ensuring that cross-cutting issues such as gender are properly addressed.

Section 5 of this guide looks at how the data emerging specifically from the ENA can be used to guide and influence relevant aspects of the early recovery process. Specific attention needs to be given to addressing identified needs at the community and institutional levels, as well as to looking at future opportunities and synergies, while ensuring that the environment is not unduly impacted by these processes.

4.   ENA PRACTICALITIES – GETTING STARTED

4.1   PHASE I   PRE-DISASTER BASELINE

Who: *Phase I would ideally be conducted by a core team of 4-5 people, co-ordinated by a Team Leader.*
When: *Information gathering should begin even before the team is deployed, particularly since many reports and databases may be available online. The Team Leader may need to assume this responsibility alone initially.*
Resources needed: *Internet access.*
Time required: *As a rough guide, 3-4 days could usefully be spent sourcing and reading background materials.*

4.1.1   Overview

The point of departure for the ENA is acquiring some degree of baseline – pre-disaster information – of the area and population that have been impacted. Baseline information is not only essential in order to understand what the environmental situation and dynamics were before the disaster occurred, but it is a vital requirement to help guide the early recovery process in terms of both rebuilding livelihoods and security as well as re-establishing and strengthening environmental integrity.

When it is then possible, for example if more time and resources are available or if the security situation improves, this initial series of data gathering should be followed by a far more detailed overview of the situation, as outlined in Phase II and subsequent steps of this process.

Key sources of pre-disaster baseline information are likely to include, but not be restricted to:
- Environmental profiles for the country/region.
- Satellite images and maps.
- Project reports from national and international environmental agencies.
- Local knowledge on natural resources' management.
- Previous environment-related assessments.
- Specific databases, for example, if a national park or marine reserve in within the affected area, specific reports will likely be available.
- Wildlife and fisheries management plans.
- Housing and related development plans.
- Land tenure records.

In certain situations and depending on the severity of the disaster, gathering pre-existing information may be difficult or even impossible as records may have been lost or destroyed. Some of the people formerly responsible for environment-related management tasks may have been killed or displaced. Concerns for the environment are also often not at the forefront of peoples' thinking immediately after a disaster has occurred, despite there being some very credible reasons why this should happen.

To guide the initial data gathering process, questions to consider include, but again are not restricted to:

- Who were the main actors (government, non-governmental and communities) responsible for managing natural resources before the disaster?
- What is the current situation regarding the status of these organizations and structures?
- Who might be the most useful people to contact for further information regarding the pre-disaster situation?
- What were some of the key environmental features in that region before the disaster? Examples might include productive coastal fisheries, ecotourism, endemic species, a source of drinking water and so forth.
- What was the land ownership system? Who had access to natural resources?
- Were there obvious links with or dependencies upon natural resources or critical ecosystem services, such as fisheries or freshwater provisioning which might have been impacted by the disaster?
- Are there sites of ecological interest or value in the immediate region? If so, what was their pre-disaster status?

Sites of Environmental Interest and Importance

Particular attentions needs to be given to identifying the presence and pre-disaster status of protected areas and the presence of ecosystems that may provide particular services, such as water provisioning, spawning grounds for offshore fisheries or sites of exception biological diversity. Such sites include:

- National Parks
- Nature Reserves and Hunting Reserves
- UNESCO World Heritage Sites
- Marine reserves
- Ramsar sites (wetlands of international importance)
- Wildlife corridors
- Watersheds and other ecosystems providing vital services

4.1.2 Recording Information

Analysis of such information will also help plan for subsequent steps, e.g. by identifying who needs to be consulted, how the ENAT might allocate individual responsibilities for certain tasks, how the field work will be conducted, and so forth.

Additional information coming from the emergency phase may also prove helpful in piecing together an overview of the pre-disaster situation.

4.2   PHASE II   SITUATION ANALYSIS AND SITE ASSESSMENT

Who: Phase II would ideally be conducted by a core team of 4-5 people, of whom at least one would have some degree of environmental experience, and another a good understanding of the actual situation on the ground.
When: Immediately after baseline data has been acquired and analysed.
Resources needed: transport and communication logistics; translators; recording materials; meeting room; possible additional technical expertise; GPS; access to information hubs...

Time required*: This phase of work may take at least 5-10 days, depending on the scale and depth of the analysis.*

4.2.1   Overview

In order to now assess the scale and severity of the situation three broad approaches are recommended:
- further data gathering which may take the form of background research and desk studies, combined with some interviews of key government and non-governmental actors in country;
- preliminary risk analysis supplemented by on-site assessments, which would include direct observations (Section 4.2); and
- stakeholders' consultations with representatives of the affected community including women (Section 4.3).

Possible sources of additional information to guide this phase include:
- Government ministries such as those for the environment or natural resources (if different), forestry, water, livestock, agriculture and so forth.
- National or regional disaster preparedness plans.
- Geographical, geomorphological and climatic maps of the country/region.
- National or international bodies gathering geographic information systems data, e.g. UNOSAT. This is essential in order to a) quickly identify registered sites of special interest, e.g. National Parks or specific vulnerable ecosystems such as watersheds, forests or coastal ecosystems and b) to begin a process of data collection and registry.
- Relevant specialist UN agencies such as UNDP, UNEP, UNHCR, UNFPA, FAO or WMO.
- On-the-ground conservation organisations, national and international.
- Community structures which may have a role in managing natural resources, including women groups.
- Relief website http://www.reliefweb.org and other internet search facilities.
- Previous reports of similar types of disaster within the country or region.
- Specialist databases such as those of the Food and Agriculture Organisation (www.fao.org) or Livestock Emergency Guidelines and Standards: www.livestock-emergency.net/
- The Humanitarian Information Service (HIC) if present.
- Legal documentation on issues such as land tenure, gazettement of protected areas and so forth.

It would be useful to identify and agree upon a focal point for all such contacts since additional information may be required or need to be fed back to these sources at some point in the future.

As a structured way of analysing this information and determining possible next steps, consider treating this exercise as part of a mini desk study, where members of the ENAT might be assigned different roles in terms of information gathering and analysis. Regular

meeting should be helped within the ENAT to share information, verify data, identify gaps and see what sort of a picture is emerging.

While helping ensure the quality of data being gathered, regular meetings should also help ensure that too much data is not being gathered as this is a common tendency in many post-disaster situations.

It is important that the ENA Team agrees upon a defined physical area for the site assessment. It would be useful for the Team Leader at least to have made an initial reconnaissance trip of the site ahead of this phase of work so that s/he might be able to advise members of the team of the overall situation. Visual aids such as photographs should be taken to orient people: these are also an excellent additional reference source and should, if possible be taken with referenced metadata. Maps should be consulted and annotated as required.

Defining the scope of the assessment will depend on a number of factors, some of the main and possibly recurring of which are security, access, scale of the disaster, density and location of the affected population, identification of where other data are being gathered and might be available, and in response to specific expressed needs of the affected community. This will, however, clearly vary from one situation to another and it may be helpful for the ENAT if a checklist of key considerations is developed at this phase of work in order to help structure and guide decisions regarding the physical scope of the assessment.

Specific questions which might help guide this part of the process are:
- Relating directly to the type of disaster, what are some of the generic and specific information sources likely to be required? What sort of data is ideally needed?
- Are disaster recovery and management plans available? If so, when were these last updated and where can they be obtained?
- Has there already been an environmental assessment of this situation and, if so, how can this information be obtained? Can the people who conducted this be contacted?
- What information is available thus far on a planned humanitarian response? Who are the key contacts?
- What is the status of the early recovery process in the country and how can the results of this ENA be integrated into this process to inform and guide early recovery?
- What gaps are immediately obvious in the type of information now being gathered? How might these be addressed, and by whom?

4.2.2   Recording Information

Form I in annex provides an outline for recording some essential background information with regards the disaster, where it has taken place and what its broad and most immediately recognised impacts have been. Much of the information required to complete this form should already be available at the time when an ENA is able to be conducted, once the emergency phase has passed.

Possible sources of information include earlier situation analysis from other field missions as well as background information obtained online or though other specialist reports. Some degree of consultation is expected to be likely although would probably focus at the agency and institutional levels at this stage.

Building on information obtained from the pre-disaster analysis, and with some knowledge already of the scale and extent of the disaster, an attempt should be made to map the situation to identify areas at risk (such as specific communities or vulnerable ecosystems) and begin to identify possible hazards in each. Possible steps to follow include:

a) obtain or create a base map of the area using available information, satellite images, local knowledge etc;
b) identify where the impacts of the disaster have been most severe, noting also relevant changes to infrastructure, housing and so forth;
c) pinpoint areas that may be at further risk (from secondary disaster-related impacts or those which might be affected by unsustainable exploitation of natural resources);
d) identify which measure might be needed – and whom to consult with – in order to help mitigate further impact on the environment.

Form II in annex looks at certain key environment-related issues, as well as cross cutting concerns like gender, age, vulnerability and governance. Specific sectors are investigated through a series of suggested questions, the purpose being to ultimately have a well grounded assessment of key environment-related concerns and to begin to prioritise a response to these.

A separate assessment, perhaps by one designated member of the ENAT, should be conducted of the current capacity of institutions and other governance-related structures to function, from an environmental management and recovery perspective. This may involve some degree of a damage and loss assessment in terms of infrastructure and resources, which would then lead into a broader and more rigorous investigation of the economic costs associated with recovery in the environment-related domain.

This phase of the ENA would also likely begin to examine some of the links between peoples' livelihoods and their coping mechanisms in relation to use and dependencies on diverse natural resources and/or ecosystem services. More in-depth questions on these issues, however, is likely to take place in Phase III of the ENA, where attention is more specifically focused on community interventions.

4.3 PHASE III STAKEHOLDER ENGAGEMENT AND CONSULTATION

Who: The ENA team working in consultation with a range of identified stakeholders and stakeholder groups.
When: During (if possible) and after the site assessment.

Resources needed: *transport and communication logistics; translators; recording materials; suitable meeting rooms/venues; …*
Time required: *It is difficult to quantify time required in this instance (see below): at least 5 days should be set aside for initial consultation.*

4.3.1 Overview

Engaging stakeholders through a consultation process has become a widely accepted practice in post-disaster needs assessments. A wide range of tools are available to guide this, but a certain degree of training is required in order to ensure that the principles and possible approaches of participatory-based appraisals are respected and used correctly.

Initial consultations should be held by the core team with leaders from amongst the affected communities, as well as and local authorities to explain the purpose of the ENA, to record their views and opinions on the issues being discussed and to seek their approval and advice on how to proceed. Special attention should be give to ensure that women leaders/groups are also contacted at this stage.

Additional meetings would be arranged with a broad representation of local stakeholders from within communities, NGOs active in the region, and others, at times and venues suitable to them. For this, the core team is likely to be split into smaller groups in order to be more time-efficient. Further meetings will also need to be arranged with local authorities and line ministries, as necessary and appropriate. The latter, for example, will be necessary in relation to considerations regarding future needs and options for early recovery, as it might relate with the environment and ecosystem services.

There is an abundance of information on preparing for and conducting consultations, which will not be repeated here. Checklist 1 summarises some key issues which should receive particular attention in the current context of conducting an ENA.

Checklist 1. Some Issues to Consider when Engaging in Stakeholder Consultations

Requirement	✓
Clarify the purpose of each specific consultation within the ENA team and agree upon who will conduct respective sessions	
Seek prior permission from community leaders or heads of households before engaging in any consultation process	
Arrange all group meetings at a time and venue suitable to the community representatives	
Prepare well in advance for each consultation	
Consult with a range of people from within the community – men and women, youth and elderly, different professions etc.	
Identify experts on local environmental conditions before the disaster	
Consider using a semi-structured interviewing process, but have a mental or written checklist as a back-up	

Encourage openness in all discussions and respect peoples' opinions	
Offer people a range of PRA-type tools and help guide them through their application	
Encourage people to tell stories about the environmental situation before the disaster. This, for example, could help identify some important pointers to assist with the early recovery planning	
Review and verify during discussions whether there are gender differences in experiences/views and impact of disasters and access, control and use of natural resources	
Verify secondary data by first hand observations	
Encourage role plays only if this seems appropriate given the situation	
Be prepared to answer questions from the community	
Review the line of questions and discussions before concluding the meeting. Have any new gaps been identified? Have cross-cutting issues been addressed through the discussions?	

Addressing these issues should help ensure that basic rights and needs are respected and that cross-cutting issues are also taken into account.

In addition, to gain specific information as to how people might have used natural resources in the past, a number of tools and approaches can be introduced to the consultation process which can provide high quality insight and understanding of the former situation. These tools and approaches include:
- Community mapping of natural resources.
- Seasonal calendars.
- Transect walks.
- Livelihood analysis.
- Gender analysis
- Key issues and stakeholder matrix.
- Ranking issues and priorities.
- Root cause analysis.
- Clarifying community and institutional relationships.
- Project impact flow diagram.

Each of the above has got a very different role to play in the process of consultation and information gathering. Users should be well versed in their potential as well as associated pitfalls of each before engaging these exercises with community groups.

4.3.2   Recording Information

Use of the above tools and approaches should provide a great deal of information, which will need to be carefully analysed and cross-checked in order to begin to determine priority needs and opportunities. Checklist 2 outlines some of the main issues which need to be considered to ensure that the main environmental issues relating to a particular situation have been examined, that basic rights and needs are respected and that cross-cutting issues have been taken into account.

Checklist 2. Summary of Key Issues to Address in Consultations

Question/Issue	Yes/No
Have members of the affected communities been consulted by the ENA Team?	
Were people briefed on the nature of the ENA being undertaken, and which they might expect to come from this?	
Have specific stakeholder groups that depended to some degree on natural resources been identified and consulted?	
Was attention given to ensuring that both men and women have been consulted?	
Have representatives been consulted from different age groups?	
Has information been gathered on former, traditional means of natural resources management?	
Has information been gathered on local structures of governance and is there an indication as to whether these will continue in the same manner as before?	
Have people been able to express their immediate and longer term needs regarding their current personal situation?	
Has some indication been given to consulted communities as to what the next steps of follow-up action might be?	

5. USING ENA DATA FOR PLANNING EARLY RECOVERY

Information obtained through the process outlined above is expected to include both quantitative and qualitative data. What is essential in this next phase of work is to ensure that in whatever format the analysed data is compiled, the information is eventually presented in a language, style and format which will ensure that the intended audience will be able to absorb its messages.

To do this, a simple ENA Summary Report is suggested – a draft outline is given in Annex II.

Use of Checklist 3 may also help guide this presentation in terms of some key issues that may need to be highlighted through the above findings.

Checklist 3. Early Recovery Checklist based on an ENA

- Is there evidence that environmental degradation may have contributed to the underlying cause(s) of the disaster?

- What are the main environmental impacts and risks caused by the crisis?

- What is the scale of the impact, e.g. the physical area, number of displaced people, economic losses, etc?

- Can any secondary risks be identified at this time, e.g. aftershock, additional land slippage, etc?

- Are there additional or potential environment-related impacts associated with current or planned relief operations?

- Is the region's environment more vulnerable as a result of this disaster?

- Are there potential environmental pressures once a shift towards recovery begins?

- Identify any negative response-related activities or coping mechanisms resulting from the emergency that can impact the environment or create new environmental risks.

- Identify possible gender differences in impacts and risks, including negative coping mechanisms.

- Have institutional capacities been assessed at the national and local levels to mitigate environmental risks and manage environmental recovery?

- Generate strategic, disaggregated baseline data that could eventually feed into a monitoring and valuation system to track implementation of environmental recovery interventions.

- Identify the spontaneous initiatives that can be strengthened to provide or help rebuild livelihoods and sustain human security (especially those that depend on the environment and natural resources).

- Identify opportunities to re-orient livelihoods along sustainable pathways, using environmentally sound construction practices, introducing alternative energy options, identifying ecosystem restoration requirements; and mainstreaming disaster risk reduction.

- Provide an understanding of the specific vulnerabilities of women and other groups, and identify their capacities and needs to engage in the environmental recovery process.

- Provide a forward looking plan that aims to "Build Back Better" by integrating environmental needs within early recovery programming and across the relevant relief and recovery clusters.

Answers to the above questions and issues will provide specific guidance to input to the overall early recovery process. The following matrix may also assist as an additional reference point for some of the main, commonly recurring, issues which need to be considered in the ENA process.

FEATURE	ENA REFERENCE SECTION
Nature of the disaster	
Scale and geographical extent	• Phase I and II
Environmental impacts of the disaster	• Phase I, II and III
Human environment	• Phase II and III
Number of people affected, disaggregated by age and sex	• Phase I and II
Recurring natural hazards	• Phase I, II and III
Human hazards (major industrial sites, facilities or installations that may be vulnerable to the effects of natural disasters, or which pose on-going threats to populations)	• Phase I and II
Risk mapping/secondary risks	• Phase I and II
Environmental Situation	
Environmental vulnerability	• Phase I and II
Priority environmental impacts to address	• Phase I, II and III
Priority environmental issues (e.g. safe waste removal)	• Phase II and III
Critical resource identification (e.g. coral reefs, national parks…)	• Phase I, II and III
Livelihood links with environment	• Phase II and III
Institutional Assessment	
Functional capacity of line ministries	• Phase II
Capacity of local governance structures	• Phase II and III
Capacity of key stakeholder groups	• Phase II and III
Needs assessment	• Phase II and III
Emerging Pressures and Vulnerabilities	
Unsustainable pressure on selected natural resources	• Phase II
Impaired ecosystem services	• Phase II

Unfair advantage taking	• Phase II
Recovery Opportunities and Needs	
Natural resource use on a sustainable basis	• Phase II and III
Added protection for key environmental resources and ecosystem services	• Phase II and III
Appreciation of value of natural resources in terms of risk reduction	• Phase II and III
Improved disaster risk reduction plans	• Phase II and III
Improved livelihood options	• Phase II and III

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FEEDBACK

We are interested in any feedback on the use of this tool, on aspects such as relevance and ease of use as well as practicalities and content. Your comments would therefore me most welcome.

BACKGROUND INFORMATION

STRUCTURE OF THE ENA PROCESS

CHECKLISTS

FORMS PROVIDED

DRAFT TERMS OF REFERENCE

OTHER GENERAL COMMENTS

THANK YOU

Please return any comments to Mike Cowing (Mike.Cowing@unep.ch)

ANNEX I   DRAFT FORMAT FOR ENA REPORT

The ENA Report should be kept as brief and factual as possible, and less than 10 pages for ease of inclusion into the Flash Appeal.

1. Executive Summary (1 page)

A brief summary of the full report describing the nature and scale of the crisis, priority humanitarian and environmental issues, needs and concerns, potential flash points which might need to be monitored and the main recommendations. The summary should also indicate the initial amount of funding required and main potential implementing bodies.

2. The Context of the Crisis (2 pages)

- When the event has taken place and prior history
- Nature of the crisis
- Scale of the crisis
- Estimates of damage and loss – social implications, environmental issues, economic concerns
- What actions have been taken thus far; have environment-related issues being flagged
- Who if anyone is responsible for environmental issues at the national level; what has been done so far

3. The ENA and Other Responses (3 pages)

- Background to the ENA
- Situation Analysis
- Needs analysis and main findings
- Links with other initiatives, especially cross-cutting issues
- Recommendations

4. Roles and Responsibilities

Which agencies/clusters are already involved – from co-ordination to implementation to information gathering, analysis and sharing – and where are there gaps.

5. Project Summary (for inclusion in Flash Appeal)

AGENCY	PROJECT SUMMARY	AMOUNT REQUESTED (US$)
	Project Title: Objective: Beneficiaries:	

FORM I   SITUATION OVERVIEW

It is important that the ENA team gets a quick impression of the actual situation on the ground as soon as possible. This is best done through a combination of a series of rapid site visits for personal observations, combined with selective consultations. It is also important to determine whether any other environmental assessments are being carried out or planned so that duplication of efforts is avoided.

Completing (and modifying accordingly) this form will help ENA team members gain a consolidated view of the situation and should highlight key issues which will then be investigated in further details in subsequent steps of the ENA.

1. WHERE IS THIS ASSESSMENT BEING CONDUCTED?

         Country: ………………………………………………………..

         Province/County: …………………………...………………………..

         Township: …………………………………………………………

2. WHO HAS REQUESTED THIS ASSESSMENT?

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3. HAS THE IASC CLUSTER SYSTEM BEEN ACTIVATED? IF SO, WHICH CLUSTERS ARE ALREADY OPERATIONAL (e.g. for information gathering and co-ordination)?

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4. NATURE OF THE DISASTER (Volcano, flood…):

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5. TIME OF YEAR/SEASON (Wet, dry, cyclone…):

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6. HAS THIS COUNTRY/REGION EXPERIENCED PREVIOUS NATURAL DISASTERS? IF SO, WHAT TYPE AND WHEN? IS INFOMRATION AVAILABLE ON ENVIRONMENTAL IMPACTS OR RESPONSES TAKEN TO SUCH DISASTERS?

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7. DEFINE THE AREA /SCALE OF THE DISASTER AND THIS ASSESSMENT IF DIFFERENT (e.g. record GPS co-ordinates or describe and map the physical boundary of the area and the population likely to be consulted):

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8. AFFECTED POPULATION:

Estimated overall number of affected people: …………………………..

Origin of the displaced people (rural or urban; local or distant):…………………..

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………………………………………………………………………………… …

Ethnic groups represented: ……………………………………………………………
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Livelihood groups represented (as relating to natural resource use, e.g.
pastoralists): ………………
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**9. HOW HAVE PEOPLE BEEN AFFECTED (e.g. number of houses destroyed, area of
land submerged, extent of pollution, loss of crops, etc.)**

Housing:
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Land Affected:
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Livestock killed:
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**10. HOW ARE PEOPLE COPING WITH THE SITUATION (in terms of use or additional
pressure on natural resources or services such as groundwater)?**

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11. DESCRIBE THE OVERALL ENVIRONMENTAL SITUATION (e.g. pay attention to damaged features such as river banks, coastal defences, main types of waste, salt water intrusion, disrupted sanitation systems, shelter etc):

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12. OVERALL DAMAGE ASSESSMENT WITH REGARD TO ENVIRONMENTAL IMPACTS (Direct and Indirect):

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13. KEY ENVIRONMENT-RELATED ISSUES BROUGHT TO THE ATTENTION OF THE ENA TEAM BY OTHER STAKEHOLDERS/FIELD MISSIONS:

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…

14. WHICH ORGANIZATION(S) IS/ARE RESPONSIBLE FOR OVERALL MANAGEMENT OF THE DISPLACED POPULATION? ARE THEY AWARE OF ANY CRITICAL ENVIRONMENT-RELATED ISSUES (waste accumulation, pollution, etc)?

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15. WHICH NATIONAL AGENCY/AGENCIES ARE RESPONSIBLE FOR ENVIRONMENTAL PROTECTION OR MANAGEMENT? HAVE THEY BEEN CONTACTED TO CONTRIBUTE TO THIS ASSESSMENT?

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16. HAVE FORMER LIVELIHOOD STRATEGIES – LINKED TO NATURAL RESOURCES – OF THE AFFECTED POPULATION BEEN AFFECTED BY THE DISASTER (e.g. coastal fisheries)?

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17. WHAT ARE THE THREE MOST IMPORTANT ISSUES/CONCERNS LEARNED FROM THIS ANALYSIS THUS FAR?

1.

2.

3.

18. WHO IS CONDUCTING THIS ASSESSMENT (NAME, ORGANIZATION, EXPERIENCE)?

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PERSONS CONSULTED/INFORMATION SOURCES:

19. NOTES AND RECOMMENDATIONS

FORM II   KEY ENVIRONMENTAL ISSUES

This form comprises a series of checklists based on a question and response format. Not all of the questions below will be relevant to every situation: they need to be modified and possibly expanded to address the different conditions and needs related to specific disasters and local situations. They will also change in relation to the time at which the ENA is being carried out after a disaster.

The questions and answers are also intended to help the ENA team and others to begin to identify possible actions and to prioritise among them.

KEY ENVIRONMENT-RELATED ISSUES/CONCERNS

SHELTER AND HOUSING	☐
WATER	☐
SANITATION	☐
WASTE DISPOSAL	☐
ENERGY	☐
BIODIVERSITY	☐
AGRICULTURE, LIVESTOCK & FISHERIES	☐
(Other) ……………………	☐
(Other) ……………………	☐

Specific attention needs to given to other cross-cutting issues at this stage of analysis, particular gender-related issues, vulnerable members of the affected community and so forth.

As there is a risk of gathering too much information at this phase of the assessment, without necessarily being able it analyse it at the same time, it is recommended that a short "needs summary" be completed at the end of each section below. Discussions centring around the physical sectors may best be held in small groups where specialist advice can be sought.

(Internal note: questions are numbered as these will likely be picked up automatically by new data gathering and comparative tool being developed by UNDP as part of the PDNA process.)

I   SHELTER AND HOUSING

Number	Question	Response
1.1	Is further evacuation or relocation expected? If so, have proposed relocation sites been screened for environmental criteria?	
1.2	What is the topographical suitability of the site(s) chosen for temporary dwellings?	
1.3	What is the environmental suitability of the site?	
1.4	Are any immediate risks evident, e.g. prone to flash flooding or drought?	
1.5	Have camp planning standards been applied in the design and construction of the settlement?	
1.6	What percentage of households (including vulnerable members of the community) affected by the disaster have adequate shelter?	
1.7	What materials are being used for shelter (cover and supporting materials)?	
1.8	Where are these materials sourced – i.e. are they being provided or do people have to source them?	
1.9	Are the materials used the same as those traditionally favoured by local communities?	
1.10	Are these materials scarce or is there already competition over accessing them?	
1.11	How are construction materials typically obtained and by whom?	
1.12	If wooden poles are being used for supports, are these obtained from designated sites and under controlled management?	
1.13	Are there obvious environmental impacts from use for any of these materials?	
1.14	Are former construction materials being used as temporary shelter?	
1.15	What alternatives, if any, exist for alternative shelter materials?	
1.16	What environmental impacts might these have (e.g. clay brick making)?	
1.17	What are possible environmental implications for reconstruction during early recovery?	
Other		
Other		

Needs Summary:

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List the three main concerns linked to shelter at the time of this assessment

1.

2.

3.

II   WATER

Number	Question	Response
2.1	Has the supply of drinking water been affected by the disaster? If so, what is the current situation regarding access to water?	
2.2	From where do people displaced by the disaster get water? • Tap stand • Water tanker/carrier • Spring/stream • Well • Other (please specify)	
2.3	How much water is provided per person per day? (Note: Sphere standard is at least 15 litres per person per day)	
2.4	Have periods of water shortage or unavailability been previously recorded in the affected area? Are these seasonal or related to supply/logistics problems that may affect future supplies?	
2.5	Has an assessment of water needs and availability been carried out? If so, does this identify any problems such as exploitation?	
2.6	Has the water quality ever been tested? If so, what were the results? (International standard is that there should be no faecal coliforms per 100ml of water at the delivery point.)	
2.7	Is water quality being routinely monitored? If so, by whom?	
2.8	Is there any evidence or risk of water pollution? If so, what is the point source(s) and extent of pollution?	

2.9	What are the actual or possible consequences (social, environmental, economic) of water provision?	
2.10	Are there any security issues related to people accessing water?	
2.11	Has the location of the camp had any environmental impacts, especially with regards water availability, extraction, storage and use?	
2.12	Are sites of temporary shelter subject to occasional inundation? Is drainage adequate?	
2.13	Have measures been taken to ensure that drainage waters do not pollute surface or groundwater reservoirs?	
2.14	Do other sectors/activities contribute to water quantity/quality problems, e.g. agriculture or vector control?	
2.15	Identify possible impacts of water provisioning in the post-disaster and early recovery process.	
Other		
Other		

Needs Summary:

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List the three main concerns linked to water at the time of this assessment

1.

2.

3.

III SANITATION

Number	Question	Response
3.1	Have displaced communities been provided with adequate sanitation facilities?	
3.2	Do people avail of these facilities or is defecation taking place in open areas?	
3.3	Are current sanitation services adequate for the population? (Sphere standard is a maximum of 20 people per toilet.)	
3.4	Has the vulnerable component of the population been taken into consideration in the design and location of sanitation facilities?	
3.5	If household latrines exist have these been properly sited and constructed?	
3.6	If communal toilets are being used have effective measures been put in place to ensure personal security?	
3.7	Have people been consulted with regards the location and construction of latrines?	
3.8	Are there existing or threatened water and/or sanitation related diseases? If so, how are these being addressed?	
3.9	Have provisions been made to ensure proper water management (e.g. drainage) at water points to avoid standing water bodies?	
3.10	Is proper use being made with regards the storage, handling and disposal of any chemicals used for sanitation purposes?	
3.11	Is ground water analysis being routinely carried out to ensure that there is no seepage from latrines into groundwater reservoirs?	
3.12	If additional latrines need to be constructed are there environmental implications?	
3.13	Are approved standards being used to deal with any human or livestock corpses?	
3.14	Have additional sites for burial been identified and screed from an environmental and health perspective?	
3.15	What are possible environmental implications for sanitation services and facilities during early recovery?	
Other		
Other		

Needs Summary:

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List the three main concerns linked to sanitation at the time of this assessment

     1.

     2.

     3.

IV   WASTE MANAGEMENT

Number	Question	Response
4.1	What is/are the main source(s) of solid waste resulting from the disaster?	
4.2	Does any of this waste pose an immediate threat to people or the environment?	
4.3	Is there an estimate of the volume of the main types of waste (e.g. building rubble)?	
4.4	Has former waste management systems been impacted by the disaster? What needs to happen for them to be(come) effective?	
4.5	Are there identified waste disposal sites near the disaster affected area?	
4.6	Are medical wastes being separated and disposed of correctly?	
4.7	Are people who collect/handle waste provided with adequate and appropriate protective equipment?	
4.8	Do organisations providing relief generate an excessive amount of solid waste, e.g. packaging materials? If so, what is the main content	
4.9	Have measures been taken to address, e.g. reduce, these? If so, are they adequate?	
4.10	Have plans been developed and put in place to encourage recycling?	
4.11	Is refuse being removed from temporary settlements before it becomes a health risk or nuisance?	
4.12	Is disposed waste being treated to prevent insects and rodents being attracted to it, e.g. by proper burying?	

4.13	Have the environmental consequences of additional waste disposal sites been considered?	
4.14	Have livelihood and income-generating options been considered for waste collection and removal?	
4.15	What are possible environmental implications for waste management facilities and services during early recovery?	
Other		
Other		

Needs Summary:

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List the three main concerns linked to waste at the time of this assessment

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V   ENERGY

Number	Question	Response
5.1	Has the disaster had any obvious impact on the source(s) of energy commonly used by households or industry in the effected area(s)?	
5.2	What is/are the main type(s) of domestic energy being used by the affected communities? For what purpose (cooking, lighting…)	
5.3	What are the main sources of energy used by industry or small businesses, if different?	
5.4	Where are these materials sourced?	
5.5	Which, if any, of these is having a visible environmental impact?	
5.6	Has a plan been formulated to deal with the environmental consequences of this?	
5.7	If food relief is being provided, what are the main food items that require cooking? What	

	form are these in (whole meal, milled, powdered…)?	
5.8	Are communities already familiar with fuel-efficient stoves?	
5.9	Are energy-efficient stoves being used? If so, by what percentage of the population?	
5.10	If fuel wood is the main source of domestic energy, has an assessment been conducted on the availability and needs for fuel wood? If so, what were the main observations and have particular concerns been identified?	
5.11	What is the average amount of fuel wood/ charcoal/kerosene being used per household per day?	
5.12	Are alternative fuel(s) available locally? If so, what would be required to introduce these to the camp?	
5.13	Is there a security issue related to accessing energy sources such as fuel wood?	
5.14	If fuel is being provided are appropriate systems in place to discourage resale and use of natural resources?	
5.15	Has communal cooking been considered as an option to reduce the amount of energy required?	
5.16	What are some of the possible environmental implications for energy during early recovery?	
Other		
Other		

Needs Summary:

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List the three main concerns linked to energy at the time of this assessment

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VI   BIODIVERSITY

Number	Question	Response
6.1	Are there known sites of ecological importance in or near the area impacted by the disaster?	
6.2	Have management plans for such sites included disaster preparedness?	
6.3	Are there known species or habitats at risk in this area, e.g. endemic species or vital ecosystem services?	
6.4	Are national agencies responsible for managing natural resources and biodiversity conservation still functional after the disaster?	
6.5	Has a damage assessment been carried out on any site of ecological value which may have been impacted by the disaster?	
6.6	Were disaster risk reduction and management plans in place prior to the disaster?	
6.7	Is there a possibility that the environment and key sites or biodiversity might be negatively impacted by temporary resettlement of disaster surviving communities?	
6.8	Is there any link with pre-disaster environmental degradation and the current scale or impact of the disaster?	
6.9	Is there evidence that some ecosystems might have had a positive	
6.10	What might some of the implications be on the region's biodiversity during early recovery?	

Needs Summary:

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List the three main concerns linked to biological diversity at the time of this assessment

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VII   AGRICULTURE, LIVESTOCK AND FISHERIES

Number	Question	Response
7.1	Were there formerly any environmental impacts related to agriculture, fisheries or livestock keeping in the affected area?	
7.2	Have the immediate impacts of the disaster on agricultural lands and livestock been assessed?	
7.3	Is the disaster known to have had an impact on coastal or inland fisheries?	
7.4	Was there formerly a strong dependence by communities on agriculture, livestock keeping or fisheries?	
7.5	What percentage of the population was engaged in these productive sectors?	
7.6	Which members of the community were formerly engaged in these sectors?	
7.7	Has the livestock carrying capacity of rangeland within the impacted area been affected?	
7.8	If livestock have been severely affected by the disaster, are veterinary facilities now available?	
7.9	Have any outbreaks of animal disease been detected, relating to the disaster? If so, what measures have been taken to control and deal with this?	
7.10	Have institutional extension services normally available to people engaged in farming/fishing been disrupted on account of the disaster	
7.11	Has a needs assessment been conducted among farmers, livestock owners or fishermen (e.g. in terms of possible restocking)?	
7.12	What might some of the environmental impacts be of future development of the agricultural, farming and fisheries sectors during early recovery?	
Other		
Other		

Needs Summary:

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List the three main concerns linked to agriculture, livestock keeping and fisheries at the time of this assessment

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