

# UNHCR Environmental Guidelines



**UNHCR**

United Nations High Commissioner for Refugees



# UNHCR ENVIRONMENTAL GUIDELINES



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United Nations High Commissioner for Refugees  
Haut Commissariat des Nations Unies pour les Réfugiés

# ACKNOWLEDGEMENTS

Our genuine appreciation to The World Conservation Union (IUCN) in Gland, Geneva for their technical expertise and invaluable revision of the Environmental Guidelines.

We extend our thanks to the UNHCR Field Environmental Coordinators and Focal Points and other colleagues for their very useful comments and additional inputs.

Illustrations prepared by Dorothy Migadee, Nairobi, Kenya

Background image: ©L'IV Com Sàrl

Cover images: UNHCR1000

Design and layout by L'IV Com Sàrl, Morges, Switzerland

Printed by: SroKundig, Geneva, Switzerland

Produced by the Environment, Technical Support Section, UNHCR Geneva and IUCN, August 2005

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## ACRONYMS

<b>COP</b>	Country Operational Plan
<b>EAP</b>	Environmental Action Plan
<b>EIA</b>	Environmental Impact Assessment
<b>EXCOM</b>	Executive Committee (of UNHCR)
<b>FAO</b>	Food and Agriculture Organization (of the United Nations)
<b>GIS</b>	Geographical Information Systems
<b>GPS</b>	Global Positioning System
<b>LOI</b>	Letter of Instruction
<b>NGO</b>	Non-Governmental Organization
<b>QIP</b>	Quick Impact Project
<b>SITREP</b>	Situation Report
<b>TOR</b>	Terms of Reference
<b>TSS</b>	Technical Support Section (of UNHCR)
<b>UNEP</b>	United Nations Environmental Programme
<b>UNHCR</b>	United Nations High Commissioner for Refugees
<b>UNESCO PEER</b>	UNESCO Regional Programme for Education for Emergencies, Reconstruction and the Culture of Peace
<b>WFP</b>	World Food Programme



## 1 INTRODUCTION

### 1.1 ENVIRONMENTAL CONSIDERATIONS IN UNHCR'S OPERATIONS

Environmental considerations need to be taken into account in almost all aspects of UNHCR's work with refugees and returnees. Basic considerations such as the provision of safe, clean drinking water; the physical location of refugee camps or settlements, or the provision of food assistance by UNHCR's partners, all have a direct bearing on the environment. The state of the environment, in turn, will have a direct bearing on the welfare and well-being of people living in that vicinity, whether refugees, returnees or local communities.

Since UNHCR's **Environmental Guidelines** were first elaborated in 1996, much has happened in terms of translating this essential policy into practice. UNHCR, as well as its many partners who engage in environmental management worldwide, have learned valuable lessons which are increasingly being shared with other agencies and communities. Appreciation of the physical environment has also grown, such that today the benefits of considering possible environmental impacts are increasingly being recognised and addressed from the earliest stages of operations.

It is clear, however, that while considerable progress has been made in integrating environmental concerns into its programmes since UNHCR's **Environmental Guidelines** were first issued, much remains to be done. It is still apparent that natural resource management is not a straightforward process in many situations. As a result, the full range of environmental concerns or possibilities is not always addressed, while environmental concerns are still not always dealt with in a consistent manner in refugee and returnee situations.

Reflecting on its experience over the past years and taking into account new thinking on many aspects of environmental management – especially with regards promoting responsibility for community management of natural resources – UNHCR decided it was time to revise its basic environmental guidance. This updated version of the **Guidelines** has therefore been compiled to further assist governments, partners and field staff in

better understanding and appreciating the need for careful and consistent approaches to environmental management.

### 1.2 THE ENVIRONMENT IN CONTEXT

While traditional UNHCR activities have succeeded in their general objective of sustaining refugee populations, there has been an increasing realisation that the negative environmental impacts associated with refugee situations must be better understood and dealt with. A number of points justify this, for example:

- it has become clear that refugee-related environmental impacts can have serious negative implications for the health and well-being of the local population, as well as that of the refugees;
- refugee activities such as uncontrolled fuelwood collection, poaching, and over-use of limited water supplies, add pressure to ecosystems in many regions, including some unique areas set aside by local governments as parks, reserves or even World Heritage Sites. In the worst case, these activities, if allowed to continue, could result in irreversible losses of productivity, the extinction of plant or animal species, the destruction of unique ecosystems, the depletion or long-term pollution of ground water supplies, or a variety of other destructive outcomes; and
- host countries have become more sensitive to the potential economic loss they may suffer, due to environmental damage caused by large concentrations of refugees, as well as the lack of a consistent policy covering the rehabilitation of damaged areas once refugees are repatriated.

### 1.3 PURPOSE OF THESE GUIDELINES

There are three main objectives to these guidelines, specifically to:

- describe the basis for incorporating environmental factors into specific UNHCR guidance/guidelines

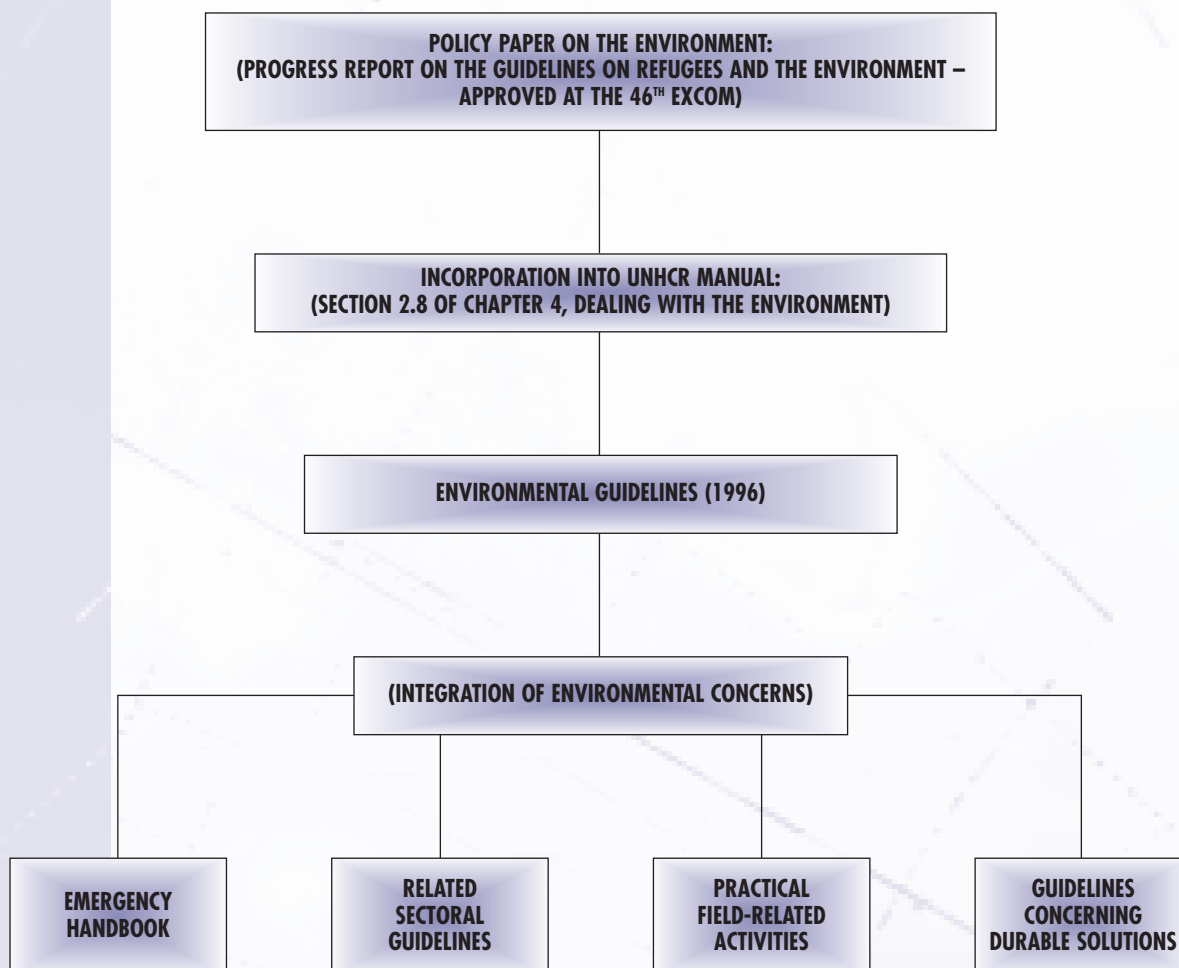
and programmes. Environmental issues are cross-sectoral by nature, and environmental considerations have to be introduced in a consistent and coordinated manner into all relevant sectoral activities, as stipulated by the reformulated environmental policy approved by the 46<sup>th</sup> session of the Executive Committee of UNHCR (EXCOM 1995).

- provide more detailed information and the rationale behind the EXCOM policy statement.
- serve as an awareness raising tool for UNHCR and other agencies involved with refugee and returnee operations.

The guidelines also seek to provide a framework within which UNHCR and implementing partner staff, in particular, will be able to:

- identify and evaluate the range of some of the most common environmental impacts associated with a specific refugee or returnee situation;
- identify and evaluate opportunities to undertake positive environmental interventions and determine the balance of advantages and disadvantages of these interventions; and
- select interventions that best combine the interests of the refugees, those of the receiving country, donors and UNHCR.

**Figure 1. Evolution of UNHCR's Environmental Guidelines (1996) and other key Environment-related UNHCR Documents**







## 2 SOME ENVIRONMENTAL CONCERNS ASSOCIATED WITH THE PRESENCE OF REFUGEES AND RETURNEES, INCLUDING RELIEF OPERATIONS

### 2.1 OVERVIEW

Environmental issues associated with refugees and returnees are normally the consequence of high concentrations of people which often build up at a distinct location over a short period of time. In the absence of appropriate mitigating measures, the surrounding environment can quickly become degraded, which can leave a lasting impact. This, in turn, has the potential for other impacts on refugees as well as local populations. Some of the main impacts experienced in recent years are described below.

### 2.2 SPECIFIC CONCERNS

#### 2.2.1 Natural Resources Deterioration

Degradation of renewable natural resources such as forests, soils and water resources dominates the environmental problems associated with refugees and, to a lesser degree, returnees. Depletion of these resources is often accompanied by their biological impoverishment. Contamination of surface and ground water can occur when sanitary measures are inadequate, or through improper application of agro-chemicals, leakage of vehicle fuel, and the like. In the case of settlement schemes, poor land-use practices may further exacerbate land degradation.

#### 2.2.2 Irreversible Impacts on Natural Resources

Particularly serious are impacts on areas of high environmental value that may be related to the area's biological diversity, its function as a haven for endangered species or for the ecosystem services these provide. Some of these areas may be of national or even global importance. Damage to these natural assets – such as watersheds – can be irreversible, and thus deserve special efforts to ensure their integrity is maintained.

#### 2.2.3 Impacts on Health

Impoverishment of natural resources can directly undermine the health of an already weakened group of people. Shortage of fuelwood, for example, may result in food not being properly cooked. In overcrowded refugee camps, disease transmission is also accelerated,

while inadequate sanitation facilities can result in pollution of ground water reserves. Dust aroused by the movement of – often significant – herds of livestock as well as vehicles, and smoke created from burning low-quality fuelwood heighten the incidence of respiratory diseases. Most of these problems tend to affect disproportionately the most vulnerable groups, i.e. the elderly or the younger members of a community.

#### 2.2.4 Impacts on Social Conditions

The effects of environmental degradation, particularly those related to fuelwood gathering, are particularly felt by women and children. Women must spend long hours seeking and carrying wood, activities which put them at increased risk of fatigue and exposure them to assault. Time spent on such activities also detracts from child-care and family and social functions, while children engaged in similar activities may have less time available for attending school.

#### 2.2.5 Social Impacts on Local Populations

Host communities may suffer similar social impacts as those felt by refugees. Competition between locals and refugees for scarce resources (fuelwood, animal fodder, water) can easily result in conflict and resentment. In some cases, a refugee influx has even led to the breakdown of traditional and sustainable local systems of natural resource management – structures that are often difficult to repair.

#### 2.2.6 Economic Impacts

An influx of refugees is often felt in the local markets. While some sections of local population may benefit, the local poor are usually affected adversely as the demand for certain products and services drive prices higher and higher. Deforestation, land degradation and water resource depletion all carry with them an economic cost for the local population. So does the reduced availability of fuel, housing materials, medicines, and wild game derived from nearby forests. The consequences of environmental degradation in the vicinity of refugee camps may be felt at considerable distances from the camps: soil erosion, for example, can result in local gulleys, a radical decline in soil fertility and sedimentation of local and distant rivers, ponds and reservoirs.

Relief assistance programmes, while well-intentioned, can also have a negative impact on the environment, through issues such as poor planning and location of infrastructure, or inappropriate design of roads which can result in erosion. The use of large quantities of packaging materials, for example, can be reduced significantly, relieving the need for costly collection and safe disposal. Timely, appropriate and sensitive planning are key to improving situations such as these.

Mention should also be made of some positive impacts which can and do result from the presence of refugees. Increased development and well-being are two relatively common features noted in many situations, once the care and maintenance phase has been

established. The influx of additional funds to, and presence of international donor and development agencies in, refugee-hosting regions can encourage and enable additional development. Local host populations commonly benefit from enhanced access routes, which in turn can boost market trading, as well as improvements to schooling and medical services.



## 3

### BASIC PRINCIPLES OF UNHCR'S ENVIRONMENTAL ACTIVITIES

#### 3.1 OVERVIEW

UNHCR's environmental policy deals with refugee- and returnee-related environmental problems during all phases of refugee assistance, i.e. during the:

- emergency phase;
- care-and-maintenance phase; and
- durable solutions phase, which can include such activities as environmental rehabilitation of the asylum country's territory after repatriation and/or address, environmental concerns related to the integration of refugees in the host country, or the re-integration of returnees in their home country.

Environmental problems confronting UNHCR, refugees/ returnees and local populations can vary from one place to another according to the area's climate, its physical setting and the prevailing socio-economic conditions. Environmental issues cross many sectors and should therefore be addressed wherever possible in the entire planning and management process. To assist with this, a small number of key principles have been identified which, as experience shows if applied, will help reduce the impact of refugees and returnees on the environment overall. These principles are:

- an integrated approach;
- prevention before cure;
- cost-effectiveness and net benefit maximisation; and
- local participation.

#### 3.2 INTEGRATED APPROACH

Refugee- and returnee-related environmental problems have their origin in the sudden imbalance of requirements by the displaced population and the area's environmental carrying capacity. Sometimes, the problems are a by-product of different assistance

activities taken to meet the refugees' or returnees' immediate needs. One way to address these problems is to initiate new environmental projects if funds are available. This add-on approach, however, has some serious drawbacks. It is, for example, often costly when compared with possible alternatives, besides being difficult to implement.

It is now recognised that it is often more effective to incorporate environmental elements into interventions being planned from the beginning of an operation, i.e. to modify refugee assistance operations from the outset to make them environmentally more benign. Such modifications, however, need to be implemented in a co-ordinated fashion: without systematic and consistent integration, one action in a particular sector could be nullified by other actions in different, or even the same, sectors.

Proper and timely planning are basic tools to assist with such integration. This, however, needs to be accompanied by institutional actions that help translate environmental plans into action. While much progress has been achieved in this respect, UNHCR's programming processes must continue to progressively integrate environmental factors into the organisation's routine operations, while consistent consideration needs to be given to environmental issues in budget requests, budget allocation, Letters of Instruction (LOIs) and Sub-agreements.

#### 3.3 PREVENTION BEFORE CURE

Preventive and mitigation measures should be the norm rather than the exception. This widely accepted rule of prudent conduct applies particularly to decisions relating to the environment, including refugee- and returnee-related environmental interventions. In some cases, environmental impacts (such as certain types of health impacts or the destruction of biological diversity) are irreversible, and preventive measures therefore represent the only real solution to these problems. In addition, prevention and mitigation measures are usually less expensive than curative ones.

While it is reasonable to acknowledge the high element of unpredictability characterising the emergency phase of refugee movements, a prevention- and mitigation-oriented approach requires that effective planning be carried out as early as practicable in a crisis situation. The timing and quality of early measures taken during refugee assistance operations will largely determine the overall cost of refugee assistance – as well as the operation’s impact – over its entire duration. Environmentally sound site selection and an appropriately planned layout of refugee camps/settlements and returnee housing arrangements is an example of this approach.

If sites are selected so that the impacts of refugees and returnees remain outside areas of high environmental value, and that environmental impacts are mitigated in the final location, costly and often irreversible consequences are likely to be eliminated, and other adverse environmental impacts significantly reduced. Although it may not be feasible in some cases to adopt certain preventive or mitigation measures – due to prevailing political and social conditions, for example – it is important that all parties involved are aware of the economic and environmental implications of a stance that precludes environmentally sound preventive options.

### **3.4**

#### **COST-EFFECTIVENESS AND NET BENEFIT MAXIMISATION**

Resources available for UNHCR environmental interventions are scarce, and will likely continue to be so. It is therefore a matter of some importance that chosen interventions be selected according to whether they make the best use of such resources. The approach to be used will favour those interventions that yield the greatest surplus of benefits over their cost, i.e. net benefit maximisation.

The benefits of environmental interventions are the cost of environmental damage these interventions help avoid. Cost-effectiveness in the selection of interventions – cutting down on unnecessary activities – is a necessary but not sufficient condition of overall efficiency. Where environmental damage is not severe, even a low-cost mitigation measure may be wasteful of resources. On the other hand, high-cost interventions may represent an efficient use of resources where the environmental benefits are significant. Decisions about which environmental measures to take will ultimately depend on the configuration of benefits and costs, which tend to be specific to each site or situation.

Selection of appropriate environmental interventions and environmental planning therefore requires that values (monetary or otherwise) be placed on environmental assets and services at risk during refugee and returnee assistance operations. In this way, environmental factors are brought within the sphere of economic decision making. Without such internalisation of environmental costs and benefits, environmental concerns are either neglected or, at best, based on subjective or arbitrary decisions regarding their relative importance.

Valuing environmental impacts is relatively easy in some cases and difficult in others. While UNHCR itself may not have the necessary expertise in this field, development and other agencies should have this capacity: links should therefore be made with relevant agencies during the early planning process if possible.

### **3.5**

#### **LOCAL PARTICIPATION**

Refugee assistance is accompanied by conflicting demands on local resources by refugees and the local population. Solutions to problems must be tackled with the full participation of all parties concerned, as well as an understanding of the interdependence of refugee assistance operations and local resource management practices.

The local population, as a group, may possess valuable experience in how to manage natural resources. In addition, some local residents and refugees may also have specialised knowledge of natural resource management. This knowledge and experience has to be tapped, in support of sound environmental management. At a minimum, this may provide those involved with certain pride and a sense of using their dormant professional skills for a common cause.

Refugee community leaders must be encouraged to create awareness and a sense of responsibility for protecting the surrounding environment, supported by UNHCR through, for example, environmental education or awareness raising projects. Refugees must be encouraged to participate in environment-related programmes such as a systematic introduction of fuel efficient stoves, and reforestation or agroforestry practices, especially in cases where a new technology or environmentally friendly practice is being introduced.

It is important to try and create a sense of useful endeavour among refugees and, if possible, to extend

this also to the host population. Representation of these communities in environmental decision-making can help smooth the friction that sometimes develops between the two groups. The involvement and participation of local people can create a sense of responsibility, which is essential for sustaining environmental activities after refugee repatriation.

Particular attention in the process of local consultation has to be given to poor and vulnerable groups, both among the refugee and host populations. These groups suffer disproportionately from refugee-related environmental problems yet their voices are often not heard or taken into account.

UNHCR activities should comply with local laws and regulations concerning the environment. If local laws are weak, or non-existent, e.g. in relation to the use of toxic pesticides, UNHCR activities should, in principle, comply with the relevant internationally recognised standards. Activities should also respect, as far as possible, the customary rights of local people over the use of, or access to, land and natural resources.



## 4 OPERATIONAL PRINCIPLES

In order to translate the above-mentioned environmental principles into practical actions at the field level, certain administrative considerations are required. The following are identified.

### 4.1 FINANCIAL INTEGRATION OF ENVIRONMENTAL MATTERS

All environment-related action required during the emergency and care and maintenance phases should be an integral part of UNHCR's response, and budgeted under Special or General Programmes as applicable. Other environmental requirements, such as rehabilitation and returnee operations, would receive limited UNHCR funding, under Special Programmes and be covered by the relevant UNHCR appeal, a United Nations Consolidated Appeal, or by other bilateral or multilateral funding sources. UNHCR should play a catalytic role in the mobilisation of these funds. Through such an approach, UNHCR can ensure a more consistent approach in its efforts to prevent or mitigate environmental impacts in the field, and address any resulting environmental damage left for asylum countries to deal with in the aftermath of refugee situations.

It is vital to sensitise donors to the existence of refugee-related environmental problems early in each refugee situation. Bilateral development assistance funds for environmental purposes should be identified and their possible use in UNHCR or national programmes examined. The possibility of obtaining funds through the bilateral channels of various governments should be pursued by Branch Offices in co-ordination with UNHCR's Fund Raising Section, taking into account the preferences of each donor. Proposals should be presented in a convincing manner in relevant Special Appeals (i.e. objectives and implementation periods should be well defined).

In order to appreciate the range of environmental interventions which might be undertaken, a core list of environment-related activities is outlined in Annex 1. For budgeting and statistical purposes, these activities<sup>1</sup>

<sup>1</sup> Note that the term "activity" used here does not have the same meaning as an "FMIS activity".

are grouped by sector. In cases where activities cannot be easily assigned to a specific sector, they have been labelled as "common environmental activities".

### 4.2 EFFECTIVE CO-ORDINATION OF THE ROLES OF AGENCIES AND ACTORS

The effectiveness of UNHCR's environmental measures will depend, among other things, on the degree to which all participants in assistance operations are assigned suitable roles and understand their purpose. The assignment of roles is normally based on the financial and technical resources available and the opportunities open to each actor during different stages of the programme.

A variable number of parties are always involved – either directly or indirectly – in refugee-related environmental management. Local actors include the host national and local governments, refugees, local communities and local NGOs. International bodies, apart from UNHCR, include donor agencies, international NGOs, other UN agencies and multilateral and bilateral development agencies.

Environmental management in refugee and returnee operations relies on a large number of organisations, sometimes more than might be required for other sectors. With many actors involved, close co-ordination and collaboration become essential. Clear and timely leadership of the host government and UNHCR in these circumstances is critical. The establishment of a local environmental task force is considered instrumental in promoting and monitoring local co-ordination. Generic terms of reference for such a group are provided in Annex 5.

The roles played by the refugees and the local communities have already been highlighted in Section 3.5. Below, the roles of other participants are summarised.

#### **4.2.1 Host and Local Government**

The host government should take a lead role in efforts to minimise adverse environmental impacts arising from refugee situations.<sup>c</sup> For example, the technical evaluation of options which underlies the host government's decisions on the location and scale of refugee camps, during the emergency phase, is crucial. Government's openness to enter into a technical dialogue with the donors on this, and related issues, is thus important.

Governments must take steps to realistically estimate, (with the assistance of donors and technical specialists/agencies, where necessary) the quantity and accessibility of natural resources to be made available for refugee assistance operations, and their environmental consequences. The host government should clearly specify the structure of local decision-making systems in refugee-related matters involving technical bodies (e.g. Ministry of Environment or Ministry of Health, for example) and different levels of government – central or local.

Use should be made of whatever technical and extension services, as well as related infrastructure facilities and equipment, which can be mobilised in support of refugee-related environmental activities. This may include technical staff to supervise or provide advice on the implementation of environment-related measures. Such contributions should also be extended to rehabilitation efforts following repatriation.

#### **4.2.2 UNHCR**

UNHCR has a primary responsibility for integrating environmental considerations into all of its decisions and activities affecting the protection and well-being of refugees. UNHCR, together with government, must jointly promote environmental protection and rehabilitation in the field, by setting objectives, priorities and policies, by overseeing the design and implementation of environmental projects, through monitoring, and by co-ordinating the efforts of all the parties concerned. UNHCR should also promote links with other UN agencies and strive to achieve a consistent approach in the responses taken.

UNHCR should also mobilise donors to contribute to activities which eliminate or mitigate adverse environmental impacts of ongoing operations, as well as activities that help offset the legacy of past refugee-related damage.

#### **4.2.3 International NGOs**

NGOs involved in refugee-related operations should integrate environmental concerns and management issues into their policies, programmes and projects, and ensure that these are compatible with UNHCR's policies in this domain.

NGOs should provide technical expertise and share it with the other parties involved in assistance operations. NGOs should facilitate links with specialists, make available insights gained from case studies, and share relevant technical materials.

A small percentage of NGOs has the ability of self-funding emergency-type projects, while others may be able to raise funds for long-term development and relief efforts. A particular strength of international environmental agencies could be in policy development and joint fund-raising.

International NGOs are sometimes also implementing agencies for rehabilitation projects, in co-ordination with donors and interested development agencies. This occasion offers much scope and potential for joint fund raising for longer term needs.

#### **4.2.4 Other UN Agencies**

Other UN agencies should integrate refugee-related environmental concerns into their policies, programmes and projects.

Technical agencies such as UNICEF, FAO and UNDP should be encouraged to become involved in refugee assistance operations by providing expertise in their respective fields such as reforestation, land-use planning, range management, soil conservation, and water resource management.

Existing support and development plans and programmes developed by other UN agencies should be extended to refugee-hosting areas, where practical and appropriate. National environmental action plans, for example, should address refugee-related environmental issues.

#### **4.2.5 Donors**

International donors and development agencies must be encouraged to adopt an integrated approach to refugee affected area rehabilitation and development.

Funds could be reallocated within the framework of bilateral development funding, and could, with the agreement of the donor and beneficiary governments,

cover the rehabilitation costs of refugee affected areas. Better still, donors could acknowledge environmental problems related to refugee situations as an issue that transcends existing development commitments, and make available additional funds.

Some refugee-related environmental problems – e.g. threats to biodiversity and endangered species, or emissions of global-warming gasses linked to refugees' fuelwood use – have global implications. Support for refugee-related environmental operations should therefore be sought from specialised funding agencies or facilities set up to address global environmental problems, e.g. the Global Environment Facility, although this is often a time consuming process.

## **4.3 INSTITUTIONAL MEASURES TO BE TAKEN**

### **4.3.1 Modifications of Sectoral Guidelines**

Environmental concerns should be incorporated into all sectoral guidelines/manuals, in line with established UNHCR environmental policies. Environmental considerations in each sector must be well co-ordinated and adequately link the different phases of refugee assistance operations.

### **4.3.2 Promotion of Environmentally Friendly Procurement**

Procurement is a vital component of refugee assistance operations and its rules and practices must be in line with environmental provisions incorporated into other UNHCR activities. Environmentally responsible procurement practices will include, for instance, avoiding the use of internationally prohibited chemicals or ensuring that safe disposal, recycling, or re-use of packaging materials takes place. Support should be provided for similar programmes at the national level.

### **4.3.3 Policy Level Co-ordination**

Co-ordination with other actors on UNHCR's environmental policy and initiatives is essential to achieve effective and consistent environmental actions in the field. Initiated often by UNHCR, such co-ordination should involve host governments, other UN agencies, donor institutions and implementing partners. Close co-ordination within UNHCR (between field operations and its Headquarters) must be ensured as many sections of the organisation may be involved in different aspects of camp/settlement management.

Environmental Co-ordinators or Environmental Focal Points have a key role to play in this co-ordination role – their timely interventions and continued presence can help prevent and mitigate deleterious impacts from taking place.

### **4.3.4 Promotion of Environmentally Friendly Technologies**

UNHCR's basic approach is not to develop new technologies, but to apply – and modify where necessary – existing technologies to actual refugee situations. It is important for UNHCR to have a facility to consistently encourage introduction and testing of new technologies in the field. Any such technology should, however, have been well tested and proven in similar situations to those to which it is being introduced. Neither refugee nor returnee situations should be used to experiment with new technologies.

### **4.3.5 Maintaining a Valid Environmental Data Base**

The availability of accurate and up-to-date information is essential if environmentally sound decisions are to be made during UNHCR's field operations. UNHCR's environmental information system should be geared to all phases of refugee assistance operations. For emergency phase operations, for example, such a facility should be able to provide detailed information on the following:

- topography;
- geology;
- hydrology;
- vegetation/forest cover;
- soils;
- local climatic conditions;
- proximity of protected or fragile areas to selected sites/areas; and
- socio-economic conditions and infrastructure.

Such information could be used as a basis for contingency planning, site location, site planning, infrastructure placement such as road, airstrips and waste dumps, and in developing forest management plans.



#### **4.3.6 Environmental Training**

Training of UNHCR staff in planning, programming, supervising and monitoring environment-related activities must complement other activities. Training of emergency team staff should include coverage of basic environmental principles and issues arising during the emergency phase, such as refugee camp site selection and design.

A broader training programme for field and headquarters staff would help increase awareness of how environmental concerns could be incorporated into their respective work programmes. Such training courses should also be extended to UNHCR's implementing partners, including government agencies as well as donors, where possible.

## 5

## CONDUCT OF ENVIRONMENTAL OPERATIONS DURING DIFFERENT PHASES OF REFUGEE SITUATIONS

**5.1  
OVERVIEW**

Certain environment-related measures need to be applied to all phases of refugee and returnee assistance programmes. These measures are of a general nature – their function is to provide a common technical and institutional basis for more detailed environmental interventions, as well as to achieve consistency among sectoral activities. These general measures include local capacity building institutional strengthening and further development of environmental expertise.

Strengthening institutional capability to deal with environmental matters in the field is essential. The provision of clear guidance, to UNHCR and implementing partner field staff, on how environmental matters should be treated within UNHCR's operational framework is particularly important. This document, supplemented by a number of thematic sectoral guidelines, serve that purpose, the objective being to facilitate UNHCR Field Offices' task of dealing with environmental problems effectively and in a consistent manner, thus saving time and money.

Other issues, however, may be of a more specific nature, appearing or becoming relevant only at a specific time during an operation. Some of these issues are examined in more detail below.

**5.2  
EMERGENCY PHASE****5.2.1 Significance**

With respect to the environment, the emergency phase is the most critical period for UNHCR operations. Decisions made at this time will have a major bearing on both the type and scale of refugee-related environmental impacts in subsequent operational phases.

There are a number of strong arguments making environmental interventions as soon as possible during the emergency phase of a response, some of which are outlined below:

- unnecessary damage to the environment is most effectively prevented, or mitigated during this phase;
- activities undertaken at an earlier stage of an operation are far more cost-effective than those taken later;
- the potential for promoting environmental awareness among the refugee population is greater if activities begin at an early stage; and
- minimisation of refugee-related environmental impacts will reduce the burden placed on the local population and may have the added benefit of decreasing friction between the local population and refugees.

**5.2.2 Basic Principles**

Some environmental damage is unavoidable during the emergency phase, particularly when refugee numbers are large. The basic principle during the emergency phase should therefore be to concentrate on essential concerns. It is particularly important to consider the risk of irreversible impacts. For example, uninformed decisions concerning the siting of a refugee camp in, or near, a fragile or internationally protected area could result in irreversible – local and distant – impacts on the environment. Likewise, it is not advisable to establish a camp or settlement close to a village forest reserve or similarly important natural resources.

Decisions taken during the emergency phase must also take into account the potential for adverse consequences in subsequent phases. For example, if refugee camps are located in areas where deforestation is already a problem, the rate of wood extraction and related environmental damage will almost certainly be higher than would otherwise have been the case. The result of such action will require immediate protection through patrols, or the like, as well as a substantial increase in the cost of remedial measures required in subsequent phases.

The level of participation of refugees and local communities in environmental activities is often limited during the emergency phase. Nevertheless, efforts should be

made to encourage their participation to the extent possible, e.g. through the provision of environmental information to help ensure that environmental measures taken during this phase can be better structured and socially more acceptable.

While the primary purpose of this guideline is to minimise environmental impacts caused by refugees, it is relevant to note that, in certain locations, the presence of environmental hazards may also occasionally pose a risk to the health of refugees. This may arise from features such as the presence of endemic diseases, high levels of air or water pollution, and toxic or radioactive chemicals in the soil.

### 5.2.3 General Measures to be Taken

**Consideration of the environment in contingency plans:** It is useful to identify, in advance, local environmental issues or concerns which might be relevant to the planned or ongoing operation, so that these can be incorporated into a contingency plan. Developing such a site-specific plan can help prevent, or at least minimise, irreversible environmental impacts as well as to identify environmental hazards which might have an impact on refugee health. A process for incorporating environmental issues in contingency planning is provided in Annex 4.

**Environmental Specialist/Focal Point:** In all cases where preliminary information indicates the potential for serious environmental impacts, an environmental specialist should be included in the emergency team. In such cases, the specialist will conduct a rapid environmental assessment (see the Toolkit produced by UNHCR in 2005 on environmental assessment, monitoring and evaluation for further guidance), the findings of which should then be reflected in the basic set-up of the refugee camp. Sample TOR for such a specialist are provided in Annex 2.

In cases where a specialist has not been assigned to the team, one of the team members should be designated as the “Environmental Focal Point”. S/he would then be responsible for ensuring that environmental issues are considered during the development of activities.

**Co-ordination:** Even in the emergency phase, it is important to develop a working relationship with the environmental authorities in the host government to facilitate consultation and joint action. This would:

- help develop a common and informed understanding of the likely environmental consequences of the refugee situation;

- explain UNHCR’s proposed environmental initiatives; and
- lay the foundation for subsequent environmental actions by UNHCR, implementing agencies, and the host government.

**Post-emergency assessment:** A comprehensive assessment of environmental impacts should be undertaken at the end of the emergency phase, so that problems can be identified and the necessary remedial activities can be planned and implemented during the following phases. Findings from such an assessment can also help with future planning.

## 5.3

### CARE AND MAINTENANCE PHASE

#### 5.3.1 Significance

The transition from an emergency to the care and maintenance phase, and the speed of this transition, will vary from one situation to another. Some refugee-related activities may pass quickly into the care and maintenance mode while others might remain fixed in the emergency phase for quite some time.

In general, UNHCR activities begin to shift to the care and maintenance phase once the refugee population in a given camp becomes relatively stable, i.e. when there is an end to refugees arriving or a clear reduction in the number of new arrivals.

The care and maintenance phase is the stage during which the cumulative effects of various environmental impacts will begin to be seriously felt by refugees and the local population. Environmental activities developed during this phase should be proactive compared with the more reactive measures one is obliged to have to deal with during the emergency phase. Activities will now tend to have a longer term outlook, and will be formulated in a systematic manner that takes into account the costs and expected benefits of alternative technical approaches.

To be successful, formulation and implementation of environmental measures must include inputs from refugees, local sources (i.e. communities, government, NGOs, and other stakeholders), as well as co-ordination with other UN agencies, international NGOs, and local authorities.

### 5.3.2 Basic Principles

The general principles upon which activities were based during the emergency phase will continue to apply during the care and maintenance phase. There will, however, be certain differences in emphasis. For example, during the care and maintenance phase, most environmental interventions will be comprehensive, long-term activities that involve a high degree of refugee and local community participation.

### 5.3.3 General Measures to be Taken

**Environmental Co-ordinator/ Focal Point:** As in the emergency phase, an Environmental Co-ordinator should be assigned in cases where field assessments have indicated the presence of existing or potential serious impacts on the environment. Funds for such co-ordinators need to be included in each country's annual programme budget.

The responsibilities of Environmental Co-ordinators, and their relationship with UNHCR and implementing partner staff, must be clearly specified. Sample TORs for such a co-ordinator are provided in Annex 3.

In cases where a co-ordinator has not been assigned, one of UNHCR's own staff should be designated as the "Environmental Focal Point". This person would have the responsibility to be thoroughly briefed and familiar with UNHCR's past experiences in dealing with environmental management, and would be responsible for ensuring that environmental issues were considered and budgeted for during the development of activities.

**Environmental planning:** The care and maintenance phase will normally call for the preparation of an Environmental Action Plan. This planning activity should be initiated by Field Offices and undertaken with the help of TSS, in consultation with the host government, implementing partners, other UN agencies and donor organisations.

The Environmental Action Plan should be reflected in the regular annual budget and incorporated into the Country Operations Plan. Basic guidance on how to develop an Environmental Action Plan is given in Annex 4.

**Establishment of an Environmental Task Force:** A local Environmental Task Force should be established to co-ordinate implementation of environmental measures and to monitor environmental impacts. The Task

Force should include representatives from UNHCR field staff, implementing partners, host government officials – including those from environment related ministries – and local community and refugee leaders. In certain circumstances, the co-ordination role may be entrusted to an environmentally active implementing partner. Suggested TORs for an Environmental Task Force are provided in Annex 5.

**Environmental programming:** The importance of environmental measures needs to be stressed in the UNHCR budget approval process. This can be achieved as follows:

- A section on environment should be included in the budget submission, to ensure that the country's environmental strategy and action plans are incorporated into the programming cycle. This will require input into the budget development process at the Sub-office and Branch Office levels by environmental specialists, Environmental Co-ordinators or Environmental Focal Points, as appropriate.
- A paragraph on the environment should be included in Section I – Project Objective/ Overview of the Project Description (Annex A) in all Letters of Instruction, except in cases where no obvious environmental impacts are likely to result from the planned activities. This paragraph would include a brief description of the environmental implications (positive or negative) of the activities covered by the LOI and would highlight those expenditures specifically targeted for environmental measures (based on the list of activities in Annex 1). In cases where negative environmental impacts were foreseen, a description of proposed mitigation measures would also be included.
- An environmental clause should be included in project agreements with host governments and implementing partners. The clause would reflect the type and complexity of the project being undertaken and would require implementing partners to prevent or minimise environmental impacts associated with the activities they will provide.
- Donor organisations should be kept informed of events during the early stages of refugee operations since they may be requested to fund some of the proposed environmental activities at a later date.

## 5.4 DURABLE SOLUTIONS PHASE

### 5.4.1 Significance

Three different environmental issues are addressed during this phase:

- environmental rehabilitation of refugee-affected areas, after repatriation;
- environmental aspects of integration of refugees in the host country; and
- environmental aspects of re-integration of returnees in their home country.

It is not normally possible to eliminate all refugee-related environmental impacts before the refugees' departure from the refugee-hosting areas. Given that a host country has been generous enough to allow portions of its territory to be used by refugees, basic courtesy from the international community demands that these areas be rehabilitated to the greatest extent possible.

Lack of appropriate action by UNHCR at this stage would seriously devalue proactive remedial measures taken during earlier phases of operations. Equally, it would send a negative message to potential host countries, thus potentially undermining refugee assistance operations in the long-term.

Rehabilitation of refugee sites, after repatriation, must therefore be seen as an integral part of environmental activities initiated during the care and maintenance phase.

Environmental concerns associated with local integration and re-integration of returnees are a complex set of issues relating to sustainable development of the areas involved. Such issues, however, are regularly addressed by many development assistance agencies and UNHCR can and should draw on this experience.

### 5.4.2 Basic Principles

Environmental damage caused by refugees, despite preventive and mitigation measures taken, must be addressed to the greatest extent possible. According to the circumstances of each case, this can be achieved by physical restoration of resources such as forests and/or the provision of alternative development benefits to the area affected. Cost-effectiveness is an important factor in the implementation of rehabilitation projects. Participation of the local population in rehabilitation activities is essential since the actual activities being

undertaken have to meet their long-term needs. This is especially important at this juncture as once operations are scaled back or removed, attention may also be diverted to other needs and regions. Thus, it is important that communities are enabled to the maximum extent possible to be self-reliant – often through indirect assistance provided by other agencies more experienced with development-oriented projects.

For rehabilitation projects to be effective, their planning must involve all major actors concerned, including the host government, UNHCR, development agencies, donors, implementing partners and – most important – the communities concerned. A mechanism should be set up to sustain these rehabilitation activities until completion.

Since UNHCR may not be the only agency active in the area in question, it should be noted that all UNHCR-sponsored projects considered during the durable solutions phase (i.e., rehabilitation in refugee hosting areas, local integration of refugees or re-integration of returnees) should be in keeping with and support development projects being planned or carried out by other groups or agencies in the geographical area concerned. This harmonisation would involve an integration of environment and development concepts into overall planning and implementation procedures and practices.

### 5.4.3 General Measures to be Taken

A brief outline of the manner in which environmental activities might be systematically integrated into the durable solutions phase is provided in Annex 4.

#### 5.4.3.1 Rehabilitation

Rehabilitation of environmental damage following repatriation can be undertaken on a large or limited scale. Limited-scale rehabilitation measures refer to localised activities such as solid waste clean-up and disposal, and site rehabilitation, while large-scale rehabilitation measures target a wider range of environmental assets and services which may be at risk.

Certain factors are relevant mostly to limited scale rehabilitation schemes. These include the following:

- contributions are expected from UNHCR and the host government. Where possible, voluntary contributions by refugees to the rehabilitation works should also be considered;

- assistance would be made to support local communities' environmental rehabilitation efforts. Since UNHCR may no longer be present in the field, rehabilitation works would be implemented by national NGOs, with support from international NGOs and/or technical UN agencies; and
- the host government and UNHCR should provide technical advice to assist the rehabilitation of refugee sites after repatriation.

Large-scale rehabilitation measures are required if:

- environmental damage threatens the economic base of the areas concerned. Widespread destruction of forests, for instance, may affect not only those who are directly dependent on forests for resources such as fuel, food or herbal medicines, but also those who benefit indirectly (e.g. farmers downstream will be affected if the removal of ground cover in the forest leads to flooding and damage to agricultural land and infrastructure);
- the scale of these impacts undermines efforts made by the local government and development agencies to promote the sustainable development of the areas concerned; and/or
- environmental damage threatens future development efforts in the areas concerned. While an area might have relatively little current economic activity, it might have a good potential for the future, provided that the refugee-related environmental damage can be repaired. The value of this economic potential may far exceed the cost of rehabilitating the area to its (approximate) original state or providing compensating investment.

Potential large-scale rehabilitation activities should be assessed using a cost/benefit analysis. This approach can also be applied to large-scale rehabilitation works which begin during the care-and-maintenance phase.

Factors to be considered in a project proposal for a rehabilitation scheme are listed in Annex 6. Note should also be taken of the following:

- large-scale environmental rehabilitation schemes should, in principle, go beyond meeting immediate needs and address the real development needs of the areas concerned;
- where extensive rehabilitation is needed, an environmental rehabilitation scheme may need to be developed in collaboration with the host government, other UN agencies and donors; and
- while UNHCR should take the lead in preparing environmental rehabilitation schemes, its financial contribution to these activities and projects should remain modest, involving funds raised through repatriation/re-integration programme funding appeals.

#### 5.4.3.2 Local settlement

Environmental guidelines developed by international development assistance institutions for rural development should be used in identifying environmental considerations in local settlement. Refugees' participation in the planning, project implementation and monitoring phases is essential.

#### 5.4.3.3 Environment concerns in relation to repatriation and effective re-integration

UNHCR assistance projects implemented through reintegration projects, including Quick Impact Projects (QIPS), should also be environmentally sound and sustainable. Environmental considerations should, therefore, be included in the project design.

In environmentally sensitive areas, such as arid or semi-arid regions, UNHCR should consider including, in its programmes, specific community based environmental projects to enhance the local capacity for sustainable natural resource management.



## 6 TECHNICAL ISSUES RELATING TO ENVIRONMENTAL MANAGEMENT AND OTHER PROGRAMME SECTORS

### 6.1 INTRODUCTION

Due to many inherent links with other sectors, environmental issues cannot be dealt with on their own. Environmental guidelines dealing with specific sectors must be used in conjunction with those developed for other sectors.

As a general rule, clear lines of communication should be maintained between all programme sectors so that indications of problems can be noted, examined and addressed as quickly as possible, and co-ordinated actions can be taken.

### 6.2 EMERGENCY AND CARE AND MAINTENANCE PHASES

#### 6.2.1 Supplies and Logistics

##### 6.2.1.1 Issues

During the emergency phase, refugees need immediate access to basic goods and services such as drinking water, food and shelter. If these essential elements are not provided in time, refugees, in order to survive, must look to the surrounding environment for their needs. This can quickly result in environmental deterioration.

##### 6.2.1.2 Environmental impacts related to supplies and logistics

The following points can be noted:

- inadequate supply of basic supplies, e.g. shelter materials, may force refugees to find what they need (wooden poles, branches and grasses for example) at the expense of the local environment;
- the volume of transport traffic to a refugee camp could damage local infrastructure such as roads and bridges; and
- if excess shipping materials, such as wood or cardboard, cannot be used by refugees in some way, they must be disposed of by removing them from the site (which has cost implications and is rarely

considered), by burning or by burying them in waste dumps.

##### 6.2.1.3 Measures to reduce or eliminate environmental impacts

The following should be considered:

- adequate supplies of appropriate materials must be in place as soon as possible after the arrival of refugees to minimise environmental destruction: the supply of other, more environmentally friendly, items (e.g. foods requiring little cooking and fuel), should be promoted where appropriate;
- reduce excess transport and maximise use of empty vehicles: shipments of supplies and use of transport facilities should be co-ordinated with other implementing agencies to minimise overall transport requirements;
- reduce the load on the environment: reduce unnecessary packaging materials at source and/or use empty trucks to remove waste to a location where it can be recycled and/or disposed of in a more permanent dump or landfill site; and
- promote environmentally friendlier ("green") procurement. The aim of environmentally friendly procurement is to promote purchase of environmentally sound products and to avoid purchasing products that may damage the environment, by adding environmental aspects to the general criteria considered during procurement. Priority items to which this policy applies will be identified by taking into consideration environmental impacts that such items could cause in refugee situations, and internationally accepted treaties and practices that promote environmentally sound production and consumption.

#### 6.2.2 Physical Planning

##### 6.2.2.1 Issues

The location and layout of refugee camps and settlements and the design of refugee shelter determine to a large extent the effect which environmental conditions may have on refugees' well being. These aspects

are also influential in determining the type and degree of impacts on the environment in and around refugee sites, caused both by the presence of refugees as well as the delivery of humanitarian aid services.

Environmental considerations must be integrated as main planning parameters in the following sequence of physical planning activities:

- site selection – review of recommended sites by the host government;
- site surveys – detail review of the selected site before a final selection is made;
- site planning – proper site planning with protection and environmental considerations taken into account;
- site preparation – preventing the removal of ground vegetation cover to the extent possible, and conscious landscaping, including the design of internal roads and location of services; and
- shelter construction – the type(s) of material used in the design of shelter.

### 6.2.2.2 Environmental impacts related to site establishment and shelter construction

Refugee's health and protection concerns will be affected by such environmental factors as a prevalence of endemic diseases, weather conditions, dust, drainage and soil conditions, water quantity and quality, and exposure to man made or natural hazards such as polluted soils, hurricanes, radiation sources, earthquakes and volcanic activities.

The possible proximity of refugee sites to national parks, forest reserves, wildlife reserves, areas of cultural importance, open water courses and fragile ecological areas increases the risk of potential damage by overuse or unmanaged exploitation of natural resources. This damage includes deforestation, loss of biodiversity, rangeland degradation, erosion, siltation and the pollution of water resources. Overuse of, and/or damage to, natural resources may cause conflict with the local population.

The location of refugee sites on steep slopes can increase the risk of erosion, as will inappropriate design of camps or settlements. Likewise, inappropriate location of a camp site may increase the risk of floods, the need to construct new access roads, or may result in increase distances to be covered by transportation.

Inappropriate camp layout, shelter design and poor maintenance of camp infrastructures may lead to an increased risk of soil erosion, poor sanitary conditions, water pollution, fire hazards, and exposure to wind, dust and extreme temperatures.

In urban areas, refugees are often accommodated in communal buildings or abandoned residential buildings. Excessive damage may be caused because of overcrowding and lack of care.

If insufficient shelter material is supplied, refugees will extract needed materials from areas surrounding the camps. Poles cut from young trees are often the preferred choice of support – which can quickly degrade forests and woodlands – while branches, grasses and leaves are often gathered as roofing materials.

### 6.2.2.3 Measures to reduce or eliminate environmental impacts

When selecting a site for a camp or settlement, factors which need to be considered include the physical carrying capacity of the site/region; the availability of natural resources and space; proximity to environmentally sensitive areas; topographical, drainage and soil conditions; vegetation cover; weather conditions; the existence of endemic diseases; the risk of man made or natural hazards; and the potential risk of conflict with the local population. Utmost care should be taken to avoid the establishment of refugee sites in or near forest reserves, other protected or locally important areas, and national historic monuments. All of these factors should be determined through systematic site surveys.

The size of a camp/settlement should in principle be determined by the carrying capacity of a proposed site. In exceptional cases, as an environmental mitigating strategy, the number of refugees may exceed the carrying capacity as far as available forest products are concerned, in order to confine environmental damage to areas of lower environmental value. In these cases special measures will have to be taken to provide sufficient wood resources or alternative materials.

The site plan should determine where and how to build or site different camp elements and where to take special environmental measures such as establishment of greenbelts, construction of drainage canals and terracing. A plan of action for community-based maintenance of camp infrastructure should be included in this plan.



Site preparation implies the careful implementation of the site plan. If heavy equipment is used, indiscriminate bulldozing or radical clearing of ground cover has to be avoided at all costs. While constructing infrastructure and roads, existing trees and bush cover has to be protected to the extent possible. Topographical factors have to be taken into account, following contour lines. The siting of shelter areas should be done in such a way, that existing vegetation is respected to the extent possible.

For shelter construction, it is important to ensure the complete availability of appropriate materials, which are either environmentally benign or which have been gathered in a sustainable manner. If this is not possible, alternative building methods have to be explored and promoted or shelter materials have to be brought in from outside the region or country. Construction waste should be recycled or properly disposed of.

In urban and/or cold climates, priority should be given to distribute materials which will compensate for damage to dwellings, provide additional protection against cold weather conditions and/or establish proactive community-based maintenance systems.

### **6.2.3 Water**

#### **6.2.3.1 Issues**

The supply of adequate amounts of safe drinking water is an essential component in any refugee operation. Water is needed for drinking, cooking, personal hygiene, livestock, agriculture, institutional uses and cultural/religious activities.

There is a strong inter-relationship between the environment, water and other programme sectors such as health, sanitation, physical planning, agriculture and livestock-keeping. Availability of water, for example, is one of the basic criteria for the selection of a camp or settlement site. Designing health services, sanitation facilities or shelter structures are all largely guided by the availability of water. With regards agriculture, attention has to be given to soil and water conservation measures for rain-fed agriculture and the design and construction of appropriate irrigation systems in the case of irrigated crop production. Indiscriminate use of agrochemicals as well as waste disposal may also lead to contamination of surface or groundwater sources.

Refugee-related activities can therefore have serious impacts on aquatic ecosystems (rivers, ponds, groundwater reservoirs), both locally and further afield.

Environmental conditions may be positively or negatively affected by water supply systems and activities linked to it, depending on the appropriateness of the system and its operation management.

#### **6.2.3.2 Environmental impacts related to water extraction**

The following points should be noted:

- depletion of the source as a result of unsustainable extraction or collection of water;
- contamination of the local water (surface and sub-surface) regime due to improper disposal of waste water and human-waste; faulty design and operation/maintenance of piped water network; excessive extraction of groundwater (leading to salt water intrusion in case of coastal zones and other harmful constituents in the local geological formation); and other related activities in the camp;
- impacts to local environment due to construction and operation of water supply system (physical structures and chemicals, if used) the intensity and magnitude of which would largely depend on the nature and size of the project and the sensitivity of the local ecosystem;
- impact on social environment caused by potential conflicts with the host communities when sharing the same water sources;
- camps and settlements may be subject to flooding if wrongly located (e.g. in river beds, in wadis, low-lying floodplains);
- inappropriate drainage, soil and water conservation measures as well as poor water management in irrigation systems may lead to erosion, floods, groundwater contamination and soil salinisation; and
- camps or settlements close to open streams or over unconfined aquifers may cause downstream contamination.

#### **6.2.3.3 Measures to reduce or eliminate environmental impacts**

Attention should be given to the following:

- designate competent technical experts for assessment and development planning of water supply systems, and give special attention to assessment of safe yield and quality of available water (throughout

the year), and likely environmental impacts resulting from construction and implementation of water supply structures;

- maintain water sources and storage facilities and protect them against pollution (e.g. from human waste, garbage, livestock and siltation);
- ensure proper control of any chemicals, such as chlorine, being used to disinfect water;
- ensure proper management of waste water to avoid development of wet areas which can develop as breeding grounds for mosquitoes and aid the spread of disease;
- develop environmentally friendly plans and operations for water supply and disposal systems;
- employ locally appropriate soil and water conservation practices such as bio-engineering, especially in when camps are located in vulnerable areas;
- ensure consultations with stakeholders (including authorities/ line agencies and representatives from host communities) throughout all the stages of developing water supply systems; and
- sensitise and educate the beneficiaries/refugees on the need to conserve water and promote best practices in the use of water.

## 6.2.4 Sanitation

### 6.2.4.1 Issues

Failure to maintain adequate standards of sanitation can result in health risks caused by pests and vectors such as mosquitoes, flies, cockroaches or rodents, as well as environmental contamination. Any such contamination will almost certainly lead to disease among the refugee/returnee population and possibly among the local population as well.

Sanitation includes activities in the following areas:

- disposal of human excreta;
- waste water and drainage;
- solid waste;
- dust and smoke; and
- insect and rodent control.

### 6.2.4.2 Environmental Impacts Related to Sanitation

Note should be taken of the following:

- poor control of excreta can lead to pollution of surface water as well as groundwater. This can result in the spread of disease to a much larger proportion of the population than that which caused the pollution, with resultant human and financial costs;
- poor management of water distribution points and waste water (i.e. if it is allowed to collect and stand in puddles) can provide breeding grounds for disease carrying vectors;
- inadequate provision of solid waste storage near point of use, collection, disposal and stabilisation, or reuse and recycling, could lead to contamination of the environment and the potential spread of disease by humans, animals, insects or vermin;
- dust carried in the air can be irritating or harmful to the eyes, respiratory system or skin, can contaminate food and damage sensitive camp equipment. Under some conditions, dust can be heavily contaminated with faecal matter and may be a direct cause of disease;
- smoke generated as a result of poor cooking practices and the wrong design of shelter can be a concern, as it is hazardous to human health;
- insects and rodents are primary vectors for the spread of disease within a refugee camp and between refugee and local populations. These pests can also contaminate food supplies, either before or after distribution to refugees; and
- some measures used to control pests (i.e. chemical applications) can be toxic to humans (both beneficiaries and workers), to non-target organisms and to the environment.

### 6.2.4.3 Measures to reduce or eliminate environmental impacts

The following measures should be considered:

- design and put into operation a basic system for disposing of human excreta as soon as possible, taking into account expected needs as well as local conditions and customs. This system should be monitored and upgraded as necessary. Alternative technologies for excreta treatment should be used, to the extent

possible, e.g. using excreta in biogas generation, as fertilizer, or other possibilities;

- control waste water at source and/or put into place drainage facilities or other remedial measures to prevent accumulation of standing water around water distribution points and refugee shelter areas. Drainage systems for waste water can be used to capture and recycle this resource, which can then be applied for watering vegetable gardens or trees;
- a waste management system, appropriate to the demands and local site conditions, should be put into place, monitored, and improved as necessary. Special precautions need to be taken with all hazardous waste such as medical waste, empty pesticide containers, and used or expired chemicals. Implementation of a programme involving the “3-Rs” (reduce, reuse, and recycle) should be a major part of a waste management plan;
- camp design (including shelter for refugees) and operation should aim to minimise the production of dust and smoke. Ground cover should be maintained or replaced, to the extent possible;
- insect and rodent control measures should be implemented, taking into account the toxicity of many pesticides and insecticides. Over the longer term, non-chemical pest-control methods should be instituted, to the extent possible.

## 6.2.5 Health

### 6.2.5.1 Issues

The sudden arrival of large numbers of refugees in an area creates a source of potential environmental health problems, for refugees as well as members of the local population. The rigours of flight, overcrowding, malnutrition, poor sanitation, and disruption of health services may, for example, lead to the onset of outbreaks such as cholera, dysentery, hepatitis or typhoid among the refugee population.

Conditions which may have an impact on refugees' health and well-being include:

- overcrowding;
- poor quality shelter;
- poor drainage in the camp/settlement area;
- polluted water;
- inadequate sanitation;
- presence of vector-borne diseases such as schistosomiasis, malaria, or river-blindness; and
- extremes of climate and weather.

### 6.2.5.2 Environmental impacts related to refugee health

Impacts to avoid include:

- the introduction of new disease vectors into the local environment by refugees (or an erroneous perception that refugees might bring in new diseases, which can lead to stigmatisation of refugees);
- improper storage or disposal of hazardous medical waste such as used dressings, syringes, or expired medicines;
- increased vector population due to poor sanitation and hygiene, e.g. mosquitoes or rats; and
- infection of existing vectors with new species, e.g. mosquitoes with falciparum malaria.

### 6.2.5.3 Measures to reduce or eliminate environmental impacts

Identify potential environmental impacts on refugee health and well-being and take appropriate preventive measures, e.g.:

- identify the most appropriate camp location, taking into account issues such as: climate, local disease patterns, drainage, and/or the availability of water;
- supply adequate safe drinking water;
- design and install appropriate sanitation facilities, including waste management;
- provide appropriate, location-specific shelter materials for protection against heat, cold, rain, or snow;
- introduce effective vector control measures as early as possible in refugee settings – including insecticide treated shelter and latrine materials as appropriate;
- minimise dust production in and around the camp/settlement;
- put into place appropriate controls over the use of medical supplies and for the safe disposal of medical waste; and

- institute appropriate training programmes for staff and the refugee community.

In returnee situations, the possible introduction of vector borne diseases by large population movements should be taken into account. For example, in an outbreak situation, consider active case finding, effective treatment and possible quarantining of infected people before relocation to an area where the vector is present but where there is no actual outbreak. Expert advice should be sought and the national authorities should be involved.

Advantage should be taken of a return situation to engage in community education about vector borne diseases in countries of return. Suitable materials such as insecticide treated mosquito nets and education materials for malaria control will need to be provided. Measures to prevent disease vectors being transported with returning refugees – such as preventing livestock transfer or disinfecting transportation vehicles or luggage are not recommended as they are of limited efficacy.

In vacated camps and settlements, it is important to:

- ensure that no infectious waste or dangerous materials remain unsupervised on the site; and
- ensure that hazards such as empty shelters, pit latrines, waste disposal areas and the like are either removed (and disposed of in a safe manner) or dealt with appropriately to accepted standards.

## 6.2.6 Food

### 6.2.6.1 Issues

The supply and preparation of food are two of the most important areas of concern in refugee situations. A sufficient quantity of palatable food is necessary for physical health but it also plays an important role in emotional well-being.

Supply of food requires close co-operation with other organisations, such as the World Food Programme (WFP), host government and other agencies, as well as the involvement of the logistics, transport, domestic energy, and forestry sectors. A new memorandum of understanding was established in 2002 between UNHCR and WFP which covers the respective responsibilities of these two agencies for refugee situations.

### 6.2.6.2 Environmental impacts related to the supply and preparation of food in refugee situations

possible impacts include:

- damage to infrastructure such as roads and bridges by the transportation of large volumes of food;
- degradation of forests and other wooded areas by refugees gathering cooking fuel, leading to direct and indirect impacts such as loss of fauna, degradation of vegetation, loss of topsoil, soil erosion, and siltation of surface water sources;
- air pollution, both inside refugee shelters and around camp sites, due to the burning of fuel for cooking, leading to an increase in health problems such as asthma, bronchitis, and eye problems;
- pollution due to discarded food packaging waste such as paper, wood, plastic, and various laminates.

### 6.2.6.3 Measures to reduce or eliminate environmental impacts

Possible measures to take into account – bearing the substance of the MOU mentioned above, as well as political and economic constraints are:

- cultural acceptability of the food provided, which will be a major consideration in the success of any programme to promote more efficient preparation techniques, etc.;
- in conjunction with specialists from other sectors (community services, domestic energy, forestry, site planning), review technical and social activities related to food transport, storage, preparation, etc., to reduce energy needs and minimise pollution and waste production. The following measures and aspects should be considered.
  - when on site feeding for selective feeding programme is decided, it is important that appropriate cooking energy is provided. Fortified, blended food such as corn soya blend and fresh vegetables are not supposed to be cooked for a long time to preserve their nutrition status (refer to joint UNHCR/WFP guidelines on selective feeding programme). Raising awareness on healthy and environmental friendly cooking techniques could be provided;
  - food preparation related support – such as the provision of cooking sets and suitable stoves

(including traditional models) – should be provided to mothers with young children who require frequent feeding and bearing in mind the lack of refrigeration facilities in camps (refer to WHO's nutritional management guidelines in major emergencies)

Note: High energy biscuits and cooked meals for the entire population should only be provided for a short period of time, such as during repatriation or early influx of emergency where security is bad. Otherwise this should be avoided due to associated health risks.

Technical measures to adopt could be to:

- promote the use of energy saving (and low smoke) stoves;
- promote community-based grinding of grains, or the use of grinding mills in camps and settlements;
- promote energy-saving cooking methods, e.g. pre-soaking beans or whole grain maize;
- promote the use of energy-saving utensils (e.g. pots with tight fitting lids which are the appropriate size for the stoves being used);
- supply food items in the general food ration in a form which requires the least amount of energy for cooking, e.g. flour instead of grain;
- select those foods/sources whose transport, handling and packaging needs are the lowest and promote the re-use, recycling or proper disposal of the packaging used;
- promote recycling of food waste as livestock feed, compost, or as feedstock in a biogas plant;
- minimise the use of any pesticides used in food storage areas, while ensuring adequate food quality;
- promote best use of empty food bags and tins, e.g. for income-generating activities in support of people/groups with special needs; and
- promote ways of healthy food preparation, combined with health and nutrition education.

Possible social considerations to examine could be to:

- Facilitate multi-household or multi-family cooking, or some variation of this concept, e.g. cooking by small groups of families several days a week. Adoption of this measure could yield the largest reduction of fuel use of any of the measures noted above.
- There is an increase in the potential for disease transmission associated with the adoption of a multi-family cooking approach due to the generally unhygienic conditions prevailing in refugee situations. Any such approach should therefore not be extended beyond a manageable number of families from a public health point of view, and should include a public education component stressing the dangers and means to avoid them.
- Institutional cooking, in which UNHCR or other agencies control the supply of food and manage food preparation, should not be promoted and only be considered as a last resort under exceptional conditions such as an extreme shortage of food, fuel or water.
- When large numbers of refugees are involved, this option presents potential problems in the areas of management, hygiene, water supply, etc. In general, therefore, this approach should be reserved for controlled settings, such as transit centres, hospitals, and feeding centres for malnourished refugees.

## 6.2.7 Domestic Energy

### 6.2.7.1 Issues

Energy is required to meet the cooking, heating and lighting needs of refugee and returnee households. It is also frequently a requirement of small businesses (such as charcoal making, lime burning, beer brewing, brick burning and small-scale restaurants), and is necessary for the operation of most if not all relief and development agencies.

While agency requirements may be relatively large, they have the financial ability to purchase fuel (in the case of wood) in a manner which may be less harmful to the environment. In the case of refugees, however, the extraction of wood is often a major cause of environmental impacts.

Many energy sources also pose considerable health risks to the user, especially when used in cooking, and recognition needs to be given to this potential.

### 6.2.7.2 Environmental impacts related to energy consumption

The primary energy source in the majority of refugee situations is wood, or wood-derived products such as charcoal.

The collection of wood – dead or live – is often a major cause of environmental impacts in refugee operations. Extensive extraction of wood and wood-based products has the potential to result in deforestation, soil erosion, localised flash-flooding, pollution of surface water and loss of natural habitat, all of which have potentially negative implications for biological diversity and the sustainable use of natural resources.

Other energy sources, such as coal, kerosene, liquid propane gas and electricity are used less frequently, and usually in urban areas, where the type and scale of impacts are generally less severe nature.

As well as having a visible and often lasting impact on the physical environment, the use of some energy sources can pose health risks to users, especially in cooking, for example:

- the burning of all fuels, in enclosed areas without proper ventilation, can lead to carbon monoxide poisoning and death;
- biomass, which if not properly dried, has been implicated in causing acute respiratory infections, lung disease, heart disease, destruction of red blood cells, eye disorders and a variety of infant ailments;
- coal produces smoke and a variety of pollutants, including sulphur dioxide and heavy metals; and
- kerosene presents the risk of fire as it is usually stored in containers inside shelters. It is also a poisonous substance, with special risks for children.

### 6.2.7.3 Measures to reduce or eliminate environmental impacts

The first priority should be to lower fuel consumption through promoting energy efficiency by all users (domestic, institutional, business, agency) by, among other things, introducing disincentives to high fuelwood consumption and identifying energy-saving techniques tailored to users' specific needs. Such techniques might include:

- fuel-efficient stoves, along with environmental education or training programmes;

- biogas plants and solar cookers/water heaters, for camp institutions and agency housing; and
- photovoltaic power; wind generators or micro-hydropower for small businesses.

A second option is to ensure that fuelwood is harvested in a more sustainable manner. This may be done by introducing controls over the way in which refugees harvest fuel (e.g. areas, times, species) or through an organised fuelwood supply programme based on wood whose origin is properly checked.

Another option is to consider the supply of alternative fuels. For this, the types of fuels that refugees are accustomed to need to be compared with what is available locally. Fuels whose supply is the most sustainable and economically viable may then be provided, taking into account the local natural resource situation and the funding available.

## 6.2.8 Forestry

### 6.2.8.1 Issues

The physical impacts of refugees or returnees on the environment can be immediate, visible and long lasting. Nowhere is this more critical than in relation to forested or heavily vegetated lands. During a humanitarian operation, land can be partly or fully cleared of vegetation to make way for the physical infrastructure of a new camp or settlement. Urgently required building materials may be sourced from local forests or plantations, while wood is commonly cut or gathered for cooking, heating and – often later in the operation – conversion to charcoal. Livestock herders may have no option but to graze their animals in open forests or gather necessary forage from these regions. All of these activities, and more, have the potential of causing significant and lasting environmental, social and economic impacts on a community and/or region.

Forest degradation and deforestation can, in turn, result in additional, related environmental damages such as accelerated erosion, landslides, siltation of surface water courses, siltation of agricultural fields, the loss of biodiversity, dust storms and eventual desertification. The availability of forest products for the local populations may decrease, which can lead to frictions between refugees and the local population in refugee hosting areas.

The limitation of damage to the local ecosystems will depend, to a very large extent, on the ability to rationally and systematically manage the natural resource

base, in particular forests and rangeland in refugee hosting areas. This implies the need for timely and systematic planning, good co-ordination with all partners involved, community participation by refugees and the local communities, and sufficient financial resources for specific, timely actions to be undertaken.

#### 6.2.8.2 Environmental impacts on forests

- Site preparation: many refugee camps are located in forest areas. Land clearing for camp establishment – if not well planned – may lead to severe deforestation, although this may be concentrated over a relatively small area. If refugee camps are located in the vicinity of national parks and forest reserves, the risk of damage by encroachment may be considerable.
- Harvesting of construction materials: poles, posts, sawn timber, grasses and branches are essential components of basic shelter, buildings, fences and other structures. In particular, straight and well developed trees are cut for construction purposes.
- Collection of wood for fuel: in many refugee camps and settlements, wood is the only readily available energy source for cooking. Initially refugees will collect dead wood. If this is no longer available within walking distance, they may start cutting live trees indiscriminately. This may lead to substantial forest degradation and deforestation.
- Construction of access roads can, if poorly aligned with regards the physical landscape, increase the risk of erosion.
- Farming: if no clear guidance or instructions are forthcoming, refugees may quickly start to clear forest land for small-scale agriculture.
- Charcoal manufacturing and cutting wood for sale: this is often one of the most profitable income generating activities in refugee camps. Large areas of forest may be quickly affected if adequate control systems are not established from the outset, and people informed accordingly.
- Grazing and browsing by refugee-owned livestock may cause severe damage to forest and rangeland, and lead to conflict over access to possibly pasture.
- Hunting and poaching may seriously affect local wildlife populations and biodiversity.

#### 6.2.8.3 Measures to reduce and mitigate deforestation

Key, basic elements to successful forest management in refugee and related operations are:

- knowing the needs and demands from refugees as well as local communities, if common resources are to be exploited;
- assessing what can be supplied, and from where;
- carefully controlling the level of resources extracted, while at the same time renewing or replanting others; and, in particular;
- ensuring that forest-related activities are not carried out in isolation from activities which are planned or already underway in other related sectors.

Mitigative actions have to be taken from the very beginning of an emergency, throughout the whole period of a refugee situation. The following actions could be taken:

- assessment and planning: this includes organising and undertaking a rapid assessment of forest resources, an assessment of the demands for forest products, integrating environmental issues into the complete site planning and development cycle, and preparation of a long-term forest management programme (see below);
- preventive and mitigative actions, possibly in the fields of site selection, site planning and implementation, resource conservation (forest protection) and forest management (controlled wood extraction). Others might include the establishment of fuelwood plantations. Additional mitigative actions are related to sound planning of agricultural activities and livestock keeping, enforcing rules and regulations regarding illegal charcoal making, wood trading and illegal hunting.
- rehabilitation activities such as reforestation of affected areas. This may be done by facilitating natural regrowth of trees through protection, by forest enrichment through direct seeding or tree planting and by reforestation of deforested areas. Other measures include agroforestry, permaculture, community forestry in camps and local villages, road side plantations, and plantations along irrigation canals. Often these activities are undertaken in combination with soil and water conservation measures such

as the installation of water catchments, check dams, terracing, or bunding.

- monitoring change in the extent and composition of vegetation cover: Satellite images and aerial photography interpretation in combination with ground checks, using GPS, are useful techniques in preparing forest and vegetation maps.

To assist with this co-ordination, it is strongly recommended that a Forest Management Plan is drawn up for each situation, addressing these and other needs. Such a plan, which would include a broad range of stakeholders, would also include a strong element of monitoring to ensure that the activities being undertaken respond in an appropriate manner to the perceived needs of the affected people.

## 6.2.9 Agriculture

### 6.2.9.1 Issues

Some form of agriculture is possible and practised in many refugee and returnee situations, but is often dictated by local rules governing access to land, availability of water and traditional practices by the people. Where it does occur, refugee agriculture is usually small-scale, of low input and traditional by nature. The conditions under which many such activities are carried out often means that agriculture as practised is often environmentally damaging and not sustainable. Many opportunities, however, exist for introducing simple new practices and techniques which can boost yields and benefit the environment as well as the community.

Agriculture is most often practised in the following situations:

- refugees in camps, where small-scale vegetable and food crop production is practised in and around camps, if land can be made available. The objective here is to supplement the food basket and, if possible, to generate some level of income;
- spontaneously settled refugees in villages and towns, where refugees will mostly make their own arrangements with local people to obtain the use of agricultural land. Improving food security and generating income are two of the reasons why this form of agriculture are practised;
- refugees in organised rural settlements, where agricultural land is provided by the government or local authorities. The objective here is to promote food self sufficiency and generate income; and

- returnee situations, where agriculture may even form, or be expected to form, the basis for future subsistence of returnees.

UNHCR's assistance measures to promote crop production by refugees and returnees may include the following:

- assistance in making land tenure arrangements;
- planning of land-use and agricultural practices;
- provision of agricultural inputs (tools, improved seed varieties, agrochemicals – although use of the latter should be discouraged wherever possible);
- enrichment of soil land promotion of water harvesting and conservation practices;
- avoidance of harmful practices; and
- provision of extension services and support to agricultural co-operatives and farmers associations.

### 6.2.9.2 Environmental impacts

Although refugee farming is usually of low input – but some can be carried out on the same plot over many years thus weakening the soils unless appropriate recovery actions are taken – there are still a number of issues which need to be considered. Among these are the:

- clear guidance to refugees on what they can and should not do with regards agriculture: some refugees make arrangements with local community members allowing them access to land in return for some form of repayment. Such practices are, however, illegally in some countries;
- lack of suitable land which may lead to overexploitation or inappropriate use of land, resulting in land degradation, erosion and infestation of weeds;
- unclear land tenure arrangements and limited time perspectives of refugees; this may result in a lack of care and concern for the sustainable use of land;
- unfamiliarity with land and ecological conditions, which can lead to inappropriate farming techniques, resulting in land degradation; and
- unfamiliarity with newly introduced farming techniques such as irrigation or the use of agrochemicals;



this may also lead to land degradation, pollution of land and water resources and health hazards.

### 6.2.9.3 Measures to reduce or eliminate environmental impacts

Possible measures include:

- Ensure security of access to suitable agricultural land;
- Carry out land-use planning based on soil and land surveys and systematic land evaluation;
- Introduce and support sustainable farming methods and technologies, (e.g. legume-based rotations, use of organic inputs such as compost and manure, soil and water conservation methods, integrated pest management, agroforestry, and/or permaculture);
- Provide appropriate farming inputs, including improved seed varieties and low toxicity pesticides;
- Provide agricultural extension services, disseminating sustainable farming methods and technologies;
- Work side by side with local communities to promote sustainable agricultural practices, even if only initially through small-scale demonstration projects; and
- Assist with improving crop storage facilities for communities.

## 6.2.10 Livestock

### 6.2.10.1 Issues

Although there are a number of obvious constraints against keeping livestock – space, potential for disease outbreaks, sanitation and demands for forage and water – livestock are commonly kept in many refugee situations. They are also a fundamental requirement in many returnee situations – given the broad range of products which they can provide – where they again form an important part of community activities.

Many refugees in dryland areas belong to pastoral or semi pastoral groups, whose livelihood is largely based on livestock production. If these people are forced to leave their home region and become refugees, their livestock herds may also be heavily affected. Animals might be left behind or may be moved to other areas, if time permits to organise such movement.

If animals move together with their owners to other countries or regions, various problems may arise. These problems are related to natural resources management, human health conditions, animal health conditions and social conflicts between refugees and the local population.

At a different scale, small animal production can provide food and income opportunities for refugees during the care and maintenance and local settlement phase. Livestock rearing is also an important first activity for many returnee communities.

### 6.2.10.2 Environmental impacts

Some of the most commonly encountered negative impacts caused by refugee livestock are the following:

- in the absence of adequate pasture, livestock can strip existing vegetation (grass, shrubs, trees and crops) in the areas where they are kept, thus contributing to the destruction of flora and causing increased pressure with grazing wild animals, but also causing soil compaction and erosion, as well as siltation of surface water sources;
- livestock may cause damage to, or simply occupy, land owned or claimed by the local population, leading to loss of income for them and increased friction with refugees;
- movement of livestock may lead to increased dust levels in and around refugee camps;
- water resources may be depleted by increased demands;
- water sources may be contaminated, leading to health risks for refugees and local populations;
- when animals from different areas are brought into contact, they may be exposed to endemic or epidemic diseases to which they have little resistance. This may lead to high mortality rates; and
- the conditions in refugee camps often result in animals and humans living in very close proximity. This may result in transmission of animal borne diseases such as tuberculosis, brucellosis, anthrax, or rabies to humans.

These, however, should be countered by the following beneficial environmental impacts which are in addition

to a range of social and economic benefits that accrue for keeping livestock:

- provision of animal dung, in particular from cattle, which can be used for cooking and heating;
- use of animal dung as a fertilizer for vegetable gardens and fields; and
- use of cattle, buffaloes, camels and donkeys as draught animals in agriculture, for transport and for other work purposes, thus saving non-renewable energy resources.

### 6.2.10.3 Measures to reduce or eliminate Environmental Impacts

- The number of animals allowed in camps or settlements has to be restricted according to feed and space availability. Resource assessments should be carried out at the start of an operation and periodically thereafter to determine the local carrying capacity.
- If the number of animals exceeds the carrying capacity, the following measures can be considered: sale of livestock; slaughtering; negotiations with local population and authorities to obtain adequate grazing land; relocation of livestock to alternative grazing lands; or supplementary feeding and pasture improvement.
- Improved animal health, including disease prevention and the provision of animal health care; controlled movement of animals; zero grazing and improved guardianship of free ranging animals; monitoring of diseases; and vaccination and prophylactic treatment and vector control. A community-based animal health care approach involving refugees and the local population should be promoted.
- The negative impacts on public health caused by refugee livestock can be minimised or avoided by the following measures: careful use of veterinary drugs; prevention of zoonotic diseases; slaughtering only in confined slaughtering places (abattoirs) and careful disposal of slaughterhouse wastes; separation of water points for human and livestock use.
- Livestock keeping programmes should be developed hand-in-hand with sound environmental management and environmental awareness raising programmes, for refugee/returnee communities as well as local people (if the latter are also engaged in livestock keeping).

## 6.2.11 Community Services

### 6.2.11.1 Issues

The inevitable impact of large refugee influxes on the environment, and the resulting competition for limited natural resources, may cause friction and conflict with the local population.

The arrival of refugees in areas where environmental conditions may differ substantially from their home areas pose special problems. On the one hand, refugees may face difficulties in adapting to different environmental conditions (climate, health conditions, water, vegetation), while others may have difficulty, or may not be motivated, to manage natural resources in a sustainable way. Individual responsibility, as well as heightened awareness of the situation, are crucial factors in helping refugees adapt to their new environment and the social setting in which they find themselves. It is important to acknowledge that men and women are affected differently by environmental concerns – their different needs and roles should be recognised and addressed.

Improving knowledge and understanding of environmental issues, will help raise awareness amongst refugees and the local population, and may encourage their commitment to take better care of specific natural resources as well as the broader environment.

### 6.2.11.2 Measures to reduce or eliminate environmental impacts

Many of the environmental-mitigating measures described in these guidelines are of a technical nature. Most of these measures require the active participation of refugees or should be undertaken on a self help basis. The main objective of Community Services, in relation to the environment, is to promote the participation of refugee men, women, boys and girls in environment-related activities and to promote self-help activities. To this end, close consultation and co-operation with all other concerned sector activities is crucial.

Specific measures to take include the following.

- Support formal participatory mechanisms: environmental issues must be placed high on the agendas of whatever participatory mechanisms begin to emerge during the first days of the influx. If a committee structure develops, it may be possible to encourage the establishment of a local Environmental Task Force, including representatives from the refugee and local host communities, local government officials, and representatives from local

and international NGOs and UNHCR. The task force must be gender balanced and representative of as a full range of refugee and local community interests as possible in order to ensure that it addresses issues affecting those with specific needs – single female headed households, children, the aged and the handicapped. A specific focus on enabling equal and active participation of women and men is necessary;

- Identify refugee men and women with skills and experience in environment-related activities and facilitate their participation in planning and implementing related projects. Specific efforts must be made to include women, especially in cultures where it may not be the custom for women to take public responsibility.
- Provide systematic information to refugees on:
  - (i) prevailing environmental conditions in and around their living areas;
  - (ii) the implications these conditions may have on their well being;
  - (iii) measures refugees can take to adapt to their new environment; and
  - (iv) measures they can take to maintain and sustain their environment.

Information should be disseminated through refugee leaders, youth and women's groups, schools, civic clubs, refugee committees and associations and group meetings.

- Facilitate training activities in specific environmental related activities and encourage refugee men, boys, girls and women to participate in these activities and projects, such as clean-up campaigns, household hygiene, forest protection, tree planting, production and use of fuel saving stoves, protection of water points and the like. This can best be done by setting up special committees and ensuring that women and men have equally opportunity to participate in decision making.
- Facilitate interaction between refugees and the local population to help prevent and solve any conflicts relating to the use of natural resources.
- Help mobilise refugee labour in environmental projects where both male and female refugees can be employed (see also Income Generation).

## 6.2.12 Education

### 6.2.12.1 Issues

A condition for the success of any technical solution to environmental problems is raising awareness of key issues and concerns among stakeholders.

Without the acceptance, co-operation and support of the refugee and local population – men, women, boys and girls – it is practically impossible to modify behaviour which impacts negatively on the environment, for example, high levels of fuelwood consumption. Environmental education is also crucial for refugees and other displaced persons.

Considering the benefits which it produces, environmental education is relatively inexpensive and, if combined with other activities and measures, environmental awareness raising can prevent a great deal of environmental damage.

### 6.2.12.2 Measures to promote environmental education

Among the measures which might be considered are the following:

- Develop environmental teaching materials. Environmental teaching and learning materials for school children and adult learners (in literacy or farming classes, for example), should be developed and made available. UNHCR, in collaboration with UNESCO PEER has developed a range of model teaching materials, which can be adapted to different geographical, national and cultural contexts;
- Training of both male and female teachers in environmental principles and techniques should accompany the introduction of any package of teaching materials. The eight broad topics outlined below are the subject matter of most refugee environmental education programmes:
  - energy conservation;
  - conservation of trees and other vegetation;
  - soil conservation;
  - water conservation;
  - environmental health;
  - sustainable shelter;
  - waste disposal; and
  - local laws and traditions on natural resource use.
- In implementing environmental education programmes with refugees, internally displaced persons or returnees, the following principles should be followed:

- integration of environmental education within existing refugee, UNHCR and implementing partner initiatives;
- cultural sensitivity;
- refugee motivation;
- refugee community initiative, participation and empowerment;
- respect for traditional knowledge as well as for modern science;
- active involvement in all activities by women and girls including in decision making;
- active involvement in all activities by men and boys even in their none traditional roles;
- local populations as well as refugees / internally displaced / returnees should benefit; and
- involvement of host country government authorities.

### 6.2.13 Income Generation

#### 6.2.13.1 Issues

The support of micro- and small-scale enterprises, and other employment opportunities, by UNHCR, is an important tool in assisting refugees, in rural or urban settings, to become more self-sufficient during the care and maintenance and durable solutions phases. To obtain maximum benefits, these activities should be actively promoted from the earliest stage.

While some income generation activities, such as reforestation, could directly contribute to sound environmental management, it is more important to realise that increased opportunities for income generation, in general, have the potential to reduce refugee-related environmental impacts. This is the case since, in the absence of alternatives, refugees' primary sources of income tend to be based on wood-based activities (the sale of wood or charcoal, or burning bricks, for example). As more income generation options become available, these wood-based activities become less attractive, from a financial point of view.

#### 6.2.13.2 Environmental impacts related to income generation activities in refugee situations

- Wood or wood-fuel intensive activities, e.g. brewing, businesses that produce charcoal, burnt bricks or lime (for whitewash) can lead to extensive deforestation, with the potential for causing soil erosion, flooding, pollution of surface water.
- Enterprises may use toxic chemicals as part of their operations (e.g. paint thinners, solvents, pesticides, herbicides, etc.) and risk exposing their employees

to unsafe levels of these chemicals, or contaminating the environment by leakage during use, or after improper disposal of waste.

- Income-generating activities may be a source of excessive smoke, soot, or noise, reducing the "quality of life" for those living nearby.

#### 6.2.13.3 Measures to reduce or eliminate environmental impacts

Promote activities which, in the best case scenario, contribute directly to sound environmental management. This might include increasing the opportunities for refugees' involvement in the formal and informal labour force, and through environmentally sound income generating activities, should be a high priority. Such initiatives should include the promotion of development-related projects in refugee-affected areas (in co-ordination with implementing partners, international development agencies, etc.), e.g.

- production of fuel-efficient stoves;
- manufacturing concrete latrine slabs, water cisterns, cement blocks or sun dried/compacted earth blocks for shelter construction;
- nurseries and reforestation;
- collecting and recycling of waste;
- terracing eroded hillsides;
- composting programmes;
- fish farming; and
- setting up biogas facilities.

In order to successfully promote activities with a positive impact on the environment, these activities need to be seen by the refugees as being more profitable and/or less physically demanding than the alternatives (i.e. "environmentally harmful" activities). Failing this, it will be very difficult to prevent more harmful, informal activities from taking place.

Environmentally harmful income generating activities should be identified and discouraged. UNHCR should not support income generation activities which pose serious environmental risks to the refugee and local communities. Each type of small enterprise proposal should be evaluated to assess its potential for serious

environmental impacts. The priority should be to promote activities which (at least) do not:

- use or produce harmful materials (e.g. toxic chemicals);
- involve unsafe production processes;
- produce large quantities of dust or smoke;
- create excessive noise;
- require extensive quantities of wood (unless the wood can be obtained in a sustainable manner); and/or
- place excessive demands on available resources or utilities (e.g. water supply, sewage system, electrical supply).

Sound training programmes should be designed and implemented. The design of vocational training curricula should include both an overview of the kinds of environmental impacts likely to occur as a result of the operation of small-scale enterprises, as well as describing the kinds of measures which could be taken to either prevent or mitigate these impacts.

## 6.3 SPECIFIC TECHNICAL CONSIDERATIONS – DURABLE SOLUTIONS PHASE

While the specific environmental and technical consideration will, of course, vary from situation to situation, a number of issues commonly associated with the durable solutions phase can be identified. Two such issues are addressed below:

- the rehabilitation of refugee-affected areas and environmental concerns in relation to repatriation; and
- re-integration of refugees in the host country (local integration).

It should be noted that specific sector-related environmental measures elaborated in the previous section can also be generally applied to any form of durable solutions. The major difference is that the durable solutions phase requires more consideration to achieve long-term sustainability of the area concerned.

### 6.3.1 Rehabilitation of Refugee-Affected Areas

Three issues of particular concern should be highlighted:

- a) waste clean-up and disposal;
- b) site rehabilitation; and
- c) ecosystem rehabilitation.

**Waste clean-up and disposal:** Refugee camps generate a lot of solid waste, in particular. In protracted refugee situations this can be a problem, but also in cases where repatriation may occur immediately after the emergency phase, little or no consideration might be given to collecting and properly disposing of waste.

Even in the best case scenario, closing down a camp will produce an enormous amount of waste associated with shelter materials, discarded belongings, damaged and unusable supplies of all kinds, and similar items. Waste may also include materials of a hazardous nature such as expired drugs, partially full pesticide containers, or used motor oil.

Apart from being a blight on the landscape, many of these materials will be hazardous, in the short-term, or have the potential to be sources of pollution over the long-term as they deteriorate.

Waste clean up must therefore be carried out so that all hazardous waste is identified and either completely removed, or safely disposed of on-site by incineration or secure burial (taking into account the possibility of contamination of water sources). The disposal of non-hazardous waste should consider the possibility that it could be used or recycled by the local community. This should always be the first choice for environmental reasons. Materials which can not be re-used in some manner should be collected and either incinerated or buried. The ultimate objective of the clean up is to leave the site in good enough condition that all subsequent activities (such as tree planting) can be undertaken immediately.

**Site rehabilitation:** Many of the activities carried out during the running of a refugee camp will result in changes to the topography and ecosystems of the site. The digging of latrines and drainage trenches, opening of a dumping ground, or the construction of various camp facilities, will transform the site from what it was before the arrival of the refugees. Depending on its previous state, and on the uses to which it might be put

after the departure of the refugees, these changes may either be beneficial or detrimental (from an environmental point of view) to the camp site.

For example, a site located next to an existing community might prove to have benefited from the provision of services to refugees, and might, in fact, be a more desirable place to live for the local population than their own community.

On the other hand, a refugee camp site located in an unpopulated area, on the border of a nature reserve for example, may have had only negative impacts on what had been a relatively pristine environment. Possible impacts include pollution of ground water reserves, siltation, deforestation and loss of biological diversity.

Site rehabilitation therefore involves the following activities:

- identification of the actual changes to landscape and ecosystems, made as a result of the setting up, and operation of the refugee camp, and an assessment as to whether these changes have been of a positive or negative nature, bearing in mind the potential uses to which the site will be put after the refugees leave;
- assessment of the seriousness of the negative impacts in terms of their long-term effects on the environment (and local population) and the approximate economic value associated with these impacts;
- identification of measures which could be taken to rehabilitate the camp site so as to ensure that those changes which produced negative impacts are reversed, or minimised;
- calculation of approximate costs for the rehabilitation measures identified and the selection of those measures whose implementation costs are less than the environmental costs identified earlier (i.e., if the cost to reverse an impact is far greater than the cost associated with the impact itself, it may not be justifiable to implement the “cure”).

**Ecosystem rehabilitation:** Ecosystem rehabilitation involves the same kinds of activities identified above, in site rehabilitation, with the difference being that ecosystem rehabilitation encompasses the environmental

impacts associated with refugee activities over a much wider area.

The cutting of trees for fuel and construction materials, the movement of livestock searching for pasturage, the construction of temporary access roads, etc. may have caused environmental impacts over an area of hundreds of square kilometres around the camp.

As discussed elsewhere in these Guidelines, these environmental impacts can take many forms, affecting flora, fauna and humans, and assigning an economic value to these impacts is a complex problem. In order to be able to make a decision about the kinds of rehabilitation measures which will be undertaken, and their scope, there has to be some value put on the environmental impacts which are to be addressed.

Once the impacts themselves have been identified and assessed, an approximate economic value can be assigned to them by using an approach similar to that discussed in Annex 4.

### **6.3.2 Environmental Concerns in Relation to Repatriation and Effective Re-integration**

The return of refugees to their countries of origin involves many of the same environmental considerations described immediately above. The objective of any development-oriented activity involving UNHCR's support for a life-sustaining reintegration of displaced persons, should conform to, and to the extent possible, promote basic criteria for sustainable use and management of natural resources. Project documents should reflect these considerations.

In the case of returnees, however, the causes of the environmental impacts they may encounter, and some of the impacts themselves, are likely to be different from those dealt with in the preceding sections. Refugees, for example, are often returning to areas which have been affected by combat, in which infrastructure has been damaged and destroyed, and where unexploded bombs and shells may be found in homes and businesses, as well as land mines in farmers' fields.

These impacts would impose significant constraints on the ability of returnees' to regain self-sufficiency and the criteria for determining the economic costs associated with these impacts would have to incorporate this reality.

Integration of refugees in the host country (local integration) involves many of the same issues, with respect to impacts and sustainable activities – see sectoral guidance above. Further information on all of these sectors can be found in the Bibliography.

## CORE LIST OF UNHCR ENVIRONMENTAL PROJECTS AND COMPONENTS

The purpose of this Annex is to identify UNHCR projects and project components, specifically related to sound environmental management of refugee assistance operations, so that UNHCR expenditures on the environment can be effectively monitored.

These environmental projects and components are grouped into two broad groups: those having environmental objectives common to all sectors and those which can be associated with particular sectors.

Financial data on a number of the activities listed below may be available through FMIS and such activities can therefore be excluded from this monitoring exercise.

In order to provide as complete a picture as possible of environmental activities and their costs, projects and activities undertaken by partner agencies, to address refugee-related environmental problems, should also be monitored.

### COMMON ENVIRONMENTAL ACTIVITIES

- Inclusion of an environmental specialist in the emergency team
- Fielding and staffing of environmental coordinators during the care-and-maintenance phase.
- Preparation of environmental master plans/action plans and implementation of other field-oriented environmental studies and analysis
- Establishment and maintenance of an environmental data base including geographical information systems
- Environmental monitoring, including development of appropriate indicators, gathering relevant statistics and collection of related environmental documents
- Training in sound environmental management practices
- Research on environmental policies, programmes and technologies
- Promotion of environmentally friendly technologies including field testing and demonstration
- Meetings/symposia/workshops on environment-related subjects
- Public information activities on the environment

### SECTORAL ACTIVITIES

#### **A Supplies and logistics**

Environmentally friendly ("Green") procurement

#### **B Physical planning**

Promotion of shelter materials which are either environmentally benign or which have been gathered in a sustainable manner

#### **C Water**

Protection of water supply areas



**D Sanitation**

Disposal of human excreta  
Waste water and drainage  
Proper management of garbage  
Dust control  
Insect and rodent control

**E Food**

Provision of appropriate foods which require less fuel for their preparation  
Promotion of energy efficient food preparation methods

**F Domestic energy**

Promotion of efficient energy use  
Supply of alternative fuels  
Sustainable provision of fuelwood

**G Forestry**

Establishment of protection zones and other means of the forest access control around refugee sites  
Controlled harvesting  
Natural forest management to promote regeneration  
Reforestation and afforestation projects

**H Agriculture**

Minimisation of the use of agricultural chemicals and promotion of organic production methods

**I Livestock**

Provision of food and income support

**J Community services/Education**

Promotion of environmental education, awareness and participation

**K Income generation**

Promotion of environment-related income generation activities

## DRAFT TERMS OF REFERENCE FOR AN ENVIRONMENTAL SPECIALIST

The main task of the environmental specialist is to assist the UNHCR emergency team and the host government in integrating environmental factors into the refugee-hosting arrangements to be made during the emergency phase. The specialist is responsible to the UNHCR emergency team leader, but will be expected to collaborate with relevant government departments and NGOs.

**THE SPECIFIC TERMS OF REFERENCE OF THE ENVIRONMENTAL SPECIALIST INCLUDES A DUTY TO:**

1. Collect and analyse existing data and information concerning the status of the environment in the refugee hosting areas;
2. Visit the refugee hosting areas, establish the environmental situation prevailing in the areas concerned, and identify major possible constraints to action;
3. Contact relevant government agencies, both central and local, NGOs, and local scientific institutions, to obtain refugee-related information and these institutions' recommendations for preventive and mitigation measures;
4. Interview representatives of refugee and local populations, from all segments of these populations, to examine their relationship with the surrounding natural environment;
5. Propose fuel supply strategies, both short- and long-term, taking into account long-term environmental impacts, costs and logistical constraints;
6. Consult with the sectoral specialists concerned on basic needs such as shelter, sanitation, water, with a view to minimizing environmental impacts associated with projects and activities in the emergency phase. Where necessary, propose environmental projects to rehabilitate initial environmental damage and generate a sense of responsibility among refugee populations;
7. Have joint consultations with the host government as a member of the UNHCR emergency team, and assist the team leader in establishing environmentally-sound refugee assistance arrangements;
8. Prepare a report dealing with the above-mentioned issues, and make recommendations which need to be followed up in the care-and-maintenance phase.

**GENERAL QUALIFICATIONS FOR AN ENVIRONMENTAL SPECIALIST:**

Depending on the situation, relevant qualifications could include:

Post graduate degrees (or equivalent work-related experience) in forestry, agroforestry, rural energy supply, environmental science, or natural resource management.

### DRAFT TERMS OF REFERENCE FOR AN ENVIRONMENTAL CO-ORDINATOR

The main duty of the environmental coordinator is to identify and formulate projects for environmental protection and rehabilitation in refugee-hosting areas. Under the overall supervision of the UNHCR Country Representative, with technical support from UNHCR's Technical Support Section (TSS), and in close collaboration with relevant government departments, and relevant NGOs, the Environmental Co-ordinator will perform the following duties and functions:

1. Coordinate and consolidate UNHCR environment-related activities in accordance with UNHCR policies and priorities;
2. Act as focal point and liaison officer for all matters related to environmental activities amongst different sectors within UNHCR, and between UNHCR, the government, implementing partners, bilateral and multilateral agencies and NGOs. Harmonise and coordinate the work of those agencies dealing with environmental projects;
3. Assess environmental conditions in refugee-hosting areas, and assess how and to what extent those conditions are affected by the presence of refugees. Define main areas of environmental concern (e.g. deforestation, rangeland degradation, soil erosion, water conservation, etc.);
4. Identify ways and means of reducing or arresting the impact of refugees on the environment;
5. Identify and formulate specific projects in the fields of reforestation, forest management, erosion control, soil and water conservation;
6. Devise a strategy for ongoing monitoring of the environmental impact of refugees and refugee operations;
7. Supervise and monitor the implementation of environmental projects administered by UNHCR;
8. Study environmental, as well as socio-economic, impacts upon local communities, and assess the possibility of conflicts between refugees and local communities over natural resources;
9. Propose measures to alleviate any tensions which may occur between refugees and local communities;
10. Identify appropriate local institutions and agencies which have the capacity to implement proposed projects, and advise on implementing arrangements;
11. Assess the need for strengthening government departments related to the proposed projects;
12. Establish a local Environmental Task Force consisting of UNHCR, the central and local governments, NGOs, and local community and refugee representatives, and prepare TORs for the Task Force;
13. Prepare a draft environmental action plan covering the above-mentioned issues and ensure implementation of the plan. Consult UNHCR programme officers concerned to ensure the recommendations are duly incorporated into the programming exercise;
14. Prepare consolidated reports on environmental related activities of the sites, to be submitted to the UNHCR Representative and UNHCR Headquarters.

## **GENERAL QUALIFICATIONS FOR AN ENVIRONMENTAL CO-ORDINATOR:**

Depending on the situation, relevant qualifications could include:

Post graduate degrees (or equivalent work-related experience) in forestry, agroforestry, rural energy supply, environmental science, or natural resource management.

## I. INTRODUCTION

This guideline emphasises the consistent need to integrate environmental concerns into UNHCR operations, at all phases of work, from emergency planning to camp closure and environmental rehabilitation. Recognition is, however, always given to the fact that environmental concerns do not exist independently of the principal objectives of sheltering and sustaining refugees, and to seeking lasting solutions to their plight.

Environmental planning is described here not in order to suggest that UNHCR's environmental interventions should have a life and structure separate from broader operational or strategic plans, but to make it easier to consider and prioritise the many diverse environmental considerations arising in a refugee and, commonly, returnee situations. It is clear that environmental interventions at all levels have to fit in with UNHCR's overall plan of operations for the country or refugee location concerned, and must therefore be integrated into Country Operational Plans (COPs).

To be effective, measures taken by UNHCR and its partners to mitigate or eliminate adverse environmental impacts – whether at the level of an individual refugee camp or often larger settlements – must take account of three key factors:

1. The existence of a number of options normally available to address the environmental problems in question, and the need to make an informed choice among them. Some options may be technological (e.g. introduction of improved cooking stoves), others organisational or institutional (e.g. communal cooking as a way of reducing fuelwood consumption, or the use of a price mechanism as a disincentive to resource degradation). In many cases, the responses will be a combination of different measures.
2. The existence of a number of groups actually or potentially affected by the environmental interventions under consideration, and the need to co-ordinate their roles and consider the impact of these measures on each group: UNHCR's environmental interventions have to strike a balance between competing requirements of different refugee camps and between refugees' and local communities' demands for environmental resources. Interventions have to take account of the distribution of existing human and institutional resources.
3. A limit on financial and other resources available for environmental interventions, and the resulting need to agree on what constitutes the best use of these resources. Allocation of available resources has to bear a systematic relationship to the differences in the seriousness of environmental impacts, as well as to the cost of implementing remedial measures in different locations (noting that secondary impacts may occur in areas away from the refugee camps). Budget constraints can affect the scale of environmental interventions as well as their timing.

Planning decisions relating to the structure and nature of UNHCR's environmental interventions are best incorporated into strategic plans, of which two types are promoted by UNHCR: Contingency Plans for use in emergency-like situations, and broader and more long-term Environmental Action Plans. That said, however, it is important to ensure that UNHCR environmental planning is conducted in a flexible manner; sufficiently sensitive to local conditions.

## 2. ENVIRONMENTAL CONSIDERATIONS IN CONTINGENCY PLANS

Environmental considerations in contingency plans should examine the main types of risks to potential host countries' environments in the event of a refugee emergency. Based on environmental data available – initially at UNHCR field offices and headquarters – environmental concerns are incorporated into contingency planning for the selected countries. The plans, accompanied by maps and additional data, will:

- identify key resources and locations (from ecosystems to specific types of resources, as appropriate) potentially at risk;
- identify any local resource management systems that could be disrupted by a refugee influx;
- identify the most important measures needed to avoid irreversible environmental impacts;
- suggest the most appropriate pattern of refugee distribution and settlement in the event of an influx; and
- identify key, local institutional and NGO environmental contacts, and assess their readiness to provide liaison and practical assistance in the event of an emergency.

Contingency plans should originate in the field, but their preparation could be supported by UNHCR's Emergency Section and the relevant bureaux. Environmental expertise could be supplemented by TSS, as necessary.

## 3. ENVIRONMENTAL ACTION PLAN

The main objective of an environmental action plan (EAP) is to identify and appraise – technically, institutionally and economically – a set of refugee-related environmental interventions in a given country, and to formulate a cohesive and well-co-ordinated response to the identified needs. The EAP is therefore an essential planning and management tool, for use by UNHCR and its implementing partners, primarily.

While UNHCR operates on a 12-month financial programme cycle, the life cycle of an EAP, i.e. the period of expected implementation, should in most cases be for at least three years. The EAP will comprise of any number of components or set of activities or programmes, not all of which will have the same implementation periods. EAPs may need to be “rolled over” and modified according to changes in the refugee or returnee situation.

Preparation of an EAP – which should be initiated and managed by an Environmental Co-ordinator and Field/Branch Office in consultation with TSS, but involving all implicated implementing partners as well as representatives from both the local and refugee communities, as well as local and central government – should be carried out to a standard that allows for subsequent submission to potential donors, in those cases where the activities in question are not funded by the UNHCR itself. An estimate of the funding requirements will be an important component of the preparation of an EAP. An EAP will also specify the implementation arrangements envisaged, i.e. the role and responsibilities of the various parties to the plan.

## 4. ENVIRONMENTAL PLANNING FOR DURABLE SOLUTIONS

In the case of refugee repatriation, identification of the most desirable type of response to residual environmental damage and a decision whether to physically rehabilitate or undertake compensatory projects in related sectors are important. This will normally require:

- clarification of the links that the proposed activities would have with existing or planned development activities in the area, undertaken by the local government, either with its own funding or with outside assistance;
- description of the type of rehabilitation projects to be undertaken, arrangements for their implementation, and the role to be played by different actors in the process;
- identification of possible compensatory project(s), based on the degree of willingness and interest of local community; and
- estimation of budgetary requirements and likely funding sources of the rehabilitation programme.

Where durable solutions deal with either integration of refugees into the local economy or re-integration of returnees into the area of origin, environmental plans will normally not be a separate UNHCR document but a component of a land settlement or area-development plan of the kind routinely prepared by development agencies. In such instances, however, an environmental impact assessment (EIA) or rapid environmental assessment (REA) – tools for which are available from TSS – should always be undertaken at an early stage of the planning process.

## 5. APPROPRIATE RESOURCE ALLOCATION

Decisions about which environment-related measures or activities to undertake lie at the core of any environmental plan. These decisions are often of a financial nature, i.e. deciding how to allocate scarce economic resources to competing environmental (and other) needs. Despite differences of context and emphasis, the approach adopted by UNHCR to making these decisions is the same as that used by most development agencies governments, and involves three inter-related steps:

- identification and quantification of environmental impacts that the proposed measures should eliminate or help mitigate;
- conversion of these impacts into money terms – valuation or “monetisation”; and
- a combining of these value estimates with those of the interventions’ costs to derive the expected costs and benefits of the intervention in question.

The first step mentioned is normally the subject of an EIA (see above), while the second and third steps, combined, are addressed through cost/benefit analysis. The cost/benefit approach requires that options giving the greatest benefit in excess of costs – over a specific period, suitably measured – be selected ahead of other options. For the investment decisions and resulting structure of environmental plans to be sound, it is necessary to pay attention to each of the two principal components of the analysis, i.e. the quality of the assessment of existing and likely environmental impacts on the one hand, and subsequent valuation of these impacts and cost/benefit calculations, on the other. Poor assessment of environment impacts cannot be compensated for by highly competent valuation, and vice versa.

The application of the cost/benefit method in the refugee context requires that UNHCR obtains estimates of the cost of each intervention that mitigates or eliminates damage, and matches these costs against the pattern of environmental benefits that would result. Where environmental damage is limited, even a low-cost mitigation measure may be wasteful of resources. In a similar manner, high cost interventions may represent an efficient use of resources where the environmental benefits (and damage) are large. This analysis can be used to determine both the desirable scale of the intervention – i.e. how far to go before intervention becomes “poor value for money” – and the composition of the best package of intervention measures. It is essential in these analyses to measure both costs and benefits in the same numeraire: money happens to be a convenient yardstick for this purpose.

## GENERIC TERMS OF REFERENCE FOR A LOCAL ENVIRONMENTAL TASK FORCE

### 1. JUSTIFICATION

Environmental problems associated with refugee situations call for concerted efforts by all parties concerned. It is essential to create a framework within which all actors concerned can collaborate, and coordinate environment related activities at the field level. Without it, interventions will be disjointed and possibly ineffective

Sound management of natural resources also requires regular contacts among groups involved in its use and protection. The resources are under changing degrees and types of pressure from the humans and physiological factors. Natural resource management has to be flexible enough to accommodate these changes and the requirements of flexibility are typically accompanied by a greater need for consultation.

Regular contacts involving groups that have potentially conflicting interests in, and claims to, surrounding natural resources could alleviate possible conflicts. Regular consultation could create a sense of partnership vital for effective interventions.

Use of local knowledge about surrounding environment is an important ingredient of sound natural resource management of the area in question. A consultative forum makes it more likely that this type of know-how will become available to the broader group.

### 2. FUNCTIONS

The functions of the Task Force are, among other things, to:

- a) discuss and contribute to the formulation of an environmental action plan, which sets out environmental programmes and projects to be undertaken in the area and the role to be played by various groups in their implementations.
- b) monitor the state of the surrounding environment on a regular basis, identify potentially serious environmental problems, and where necessary, discuss possible measures to deal with such problems.
- c) monitor the implementation of various environment related activities by the actors concerned and provide advice on the ways and means of realigning or improving such environmental activities.
- d) monitor potential sources of conflict in particular between refugees and local communities, and discuss, wherever necessary, measures to lessen the tensions among the parties concerned.
- e) exchange information on work plans and budget requests for the subsequent years and coordinate as much as possible these future activities related to the environment.

### 3. ORGANISATION

#### a) Participants

- UNHCR field staff in charge of environmental matters
- Central as well as local government officials including those from technical departments
- Refugee representatives
- Representatives of local communities
- Field staff of the related international/local NGOs
- Local staff of related international organizations



**b) Leadership**

UNHCR staff should take the leadership role of the Task Force, wherever possible. The credibility of the Task Force could suffer if a party considered by others to represent a narrow interest or to have only a limited contact with the problems encountered were to lead the Task Force.

**c) Factors to be considered**

Since environmental problems in question have differentiated effects on the poor and vulnerable segments of the local and refugee population, the Task Force should be run in such a way as to reflect the views and opinions of these groups.

## DEVELOPING A REHABILITATION SCHEME

No matter what kind of rehabilitation scheme is intended (i.e. large or limited scale), the following factors should be considered in the project proposal.

**1. Objectives**

Lists the overall goals and specific objectives of the rehabilitation scheme.

**2. Background to the scheme**

Describes how the situation came about, i.e. provide a historical overview.

**3. Detailed analysis**

Describes and analyses those refugee-related environmental impacts, which are to be dealt with by the proposed scheme, and quantifies the cost of these impacts on the local economy.

**4. Proposed activities**

Examines proposed project activities in detail, from the perspective of costs and benefits.

**5. Implementation plan**

Describes proposed implementation plan, providing time frames and identifying roles of the partners from central government, local government, local communities, national and international NGOs and UNHCR.

**6. Monitoring and evaluation**

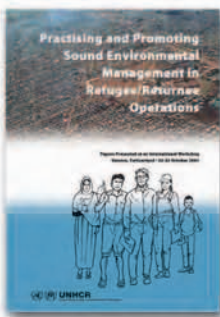
Describes who will be responsible for monitoring and evaluation, how these activities will be integrated into the implementation plan and when they will be carried out.

**7. Budget**

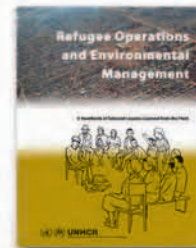
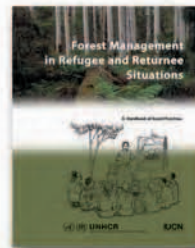
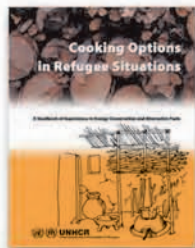
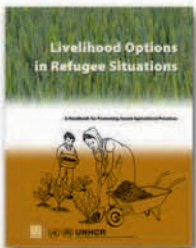
Presents detailed inputs and costs for the project, matching costs, activities and timeframe.

**8. Funding plan**

Identifies potential sources of funding to support the proposed activities and identifies, if possible, donors who would be interested in specific project components.



**UNHCR's environmental activities are designed to prevent, mitigate and, when necessary, rehabilitate the negative effects of the refugee camps/settlements on the environment so as to secure the welfare of the refugees and local populations, and foster good relations with host governments who provide asylum to refugees.**



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