UNHCR

ENVIRONMENTAL GUIDELINES

Geneva
June 1996

UNHCR Environmental Guidelines

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LIST OF ABBREVIATIONS USED IN THE TEXT

COP	**Country Operational Plan**
EAP	**Environmental Action Plan**
EIA	**Environmental Impact Assessment**
EMP	**Environmental Master Plan**
EPRS	**Emergency Preparedness and Response section**
FAO	**Food and Agriculture Organization**
FMIS	**Financial Management Information System**
LOI	**Letter of Instruction**
NGO	**Non-government organization**
OSCEA	**Office of the Senior Coordinator on Environmental Affairs**
PTSS	**Programme and Technical Support Section**
QIP	**Quick Impact Project**
SITREP	**Situation Report**
UNEP	**United Nations Environmental Program**
UNHCR	**United Nations High Commissioner for Refugees**
UNICEF	**United Nations Children's Fund**
WFP	**World Food Programme**

UNHCR ENVIRONMENTAL GUIDELINES

1. OVERVIEW

1.1 Context of existing situation

UNHCR defines refugee situations as evolving through three distinct (but interrelated) phases: emergency, care-and-maintenance and durable-solutions.

Apart from the overall protection and humanitarian aspects, each of these phases presents a distinct challenge to UNHCR, and its international partners in identifying activities which will affect refugees' safety, security and general well-being while conforming to sound technical, social and efficiency standards.

As part of its response to these challenges, UNHCR has developed a range of technical information and guidelines dealing with subjects as diverse as water and sanitation, health, social services, logistics, etc.

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

- 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, have placed serious strains on the ecosystems in many regions, including some unique areas set aside by local governments as parks or reserves or even sites recognized by UNESCO as World Heritage Sites. In the worst case, these activities, if continued, could result in irreversible losses of productivity, the extinction of species of plants or animals, the destruction of unique ecosystems, the depletion or long term pollution of ground water supplies, or a variety of other destructive outcomes.

- 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.

Existing UNHCR documentation contains information which, explicitly or implicitly, deals with the environment, but its weakness is that it often treats the environment in an *ad hoc* manner. In addition:

- UNHCR documentation does not take a broad enough view of environmental impacts and embodies an uncoordinated, sector by sector approach to resulting problems.

- Linkages between damage to the environment, loss of productive natural resources (in short or long term) and impacts on refugees' well-being have been made.

1.2 Objectives of the environmental guidelines

These guidelines have two major organizational objectives:

i) To lay the basis for incorporating environmental factors into specific UNHCR guidance/guidelines. 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 46th session of the Executive Committee of UNHCR (EXCOM) [see Diagram 1 on page 4].

ii) To provide more detailed information and the rationale behind the EXCOM policy statement.

In order to address the weaknesses listed in section 1.1, the guidelines have been designed in a format that links sectoral activities, environmental impacts and preventive or remedial actions.

The guidelines seek to provide a framework within which UNHCR staff will be able to:

- identify and evaluate the range of common environmental impacts associated with a specific refugee situation and assign a rough economic cost to these impacts;

- Identify and evaluate opportunities to undertake positive environmental interventions and determine the balance of advantages and disadvantages of these interventions;

- select interventions that best combine the interests of the refugees, those of the receiving country, donors and UNHCR.

1.3 Underlying assumptions

A number of basic assumptions accompany the above-mentioned objectives:

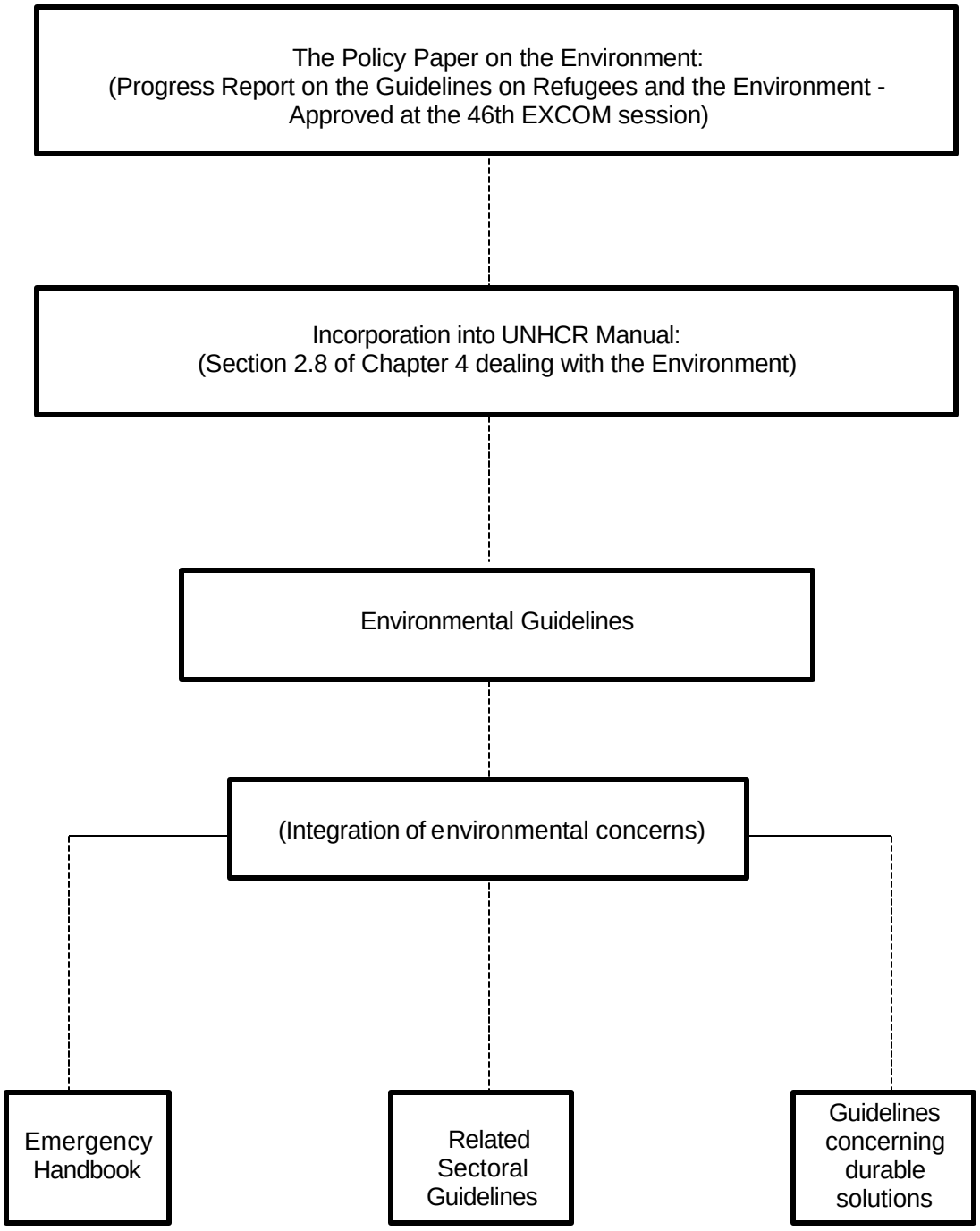
- environmental impacts are an inevitable by-product of human existence and of human beings' interaction with the physical world;

- elimination of all adverse impacts is an impossibility, but their mitigation is a reasonable policy objective;

- most areas hosting or "producing" refugees experience some environmental degradation that is independent of refugee movements. Rather than taking place in a pristine environment, refugee-related impacts add to these underlying problems;

- in many situations, it is possible, albeit approximately, to put an economic value on different kinds of environmental impacts and, therefore, to use economic efficiency criteria to select interventions.

Diagram 1:
Relationship between
The Environmental Guidelines
and other UNHCR Documents



2. ENVIRONMENTAL PROBLEMS ASOCIATED WITH REFUGEE ASSISTANCE

General:

Environmental problems associated with refugees are normally the consequence of high refugee concentrations, occurring rapidly. In the absence of mitigating measures, physical deterioration of the surrounding environment soon takes place, in turn generating other impacts on both the refugees and local populations. Below, the various impacts are grouped into main categories and briefly described.

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

ii) **Irreversible impacts on natural resources:**
Particularly serious are impacts on areas of high environmental value that may be related to the area's high biodiversity, its function as a haven for endangered species or as an important recreation destination. Some of these areas may be of global importance. Damage to these natural assets can be irreversible, and thus deserves special efforts of prevention or mitigation.

iii) **Impacts on health:**
Impoverishment of surrounding natural resources undermines the long-term nutritional base and brings about further adverse impacts on health of an already weakened group. Shortage of fuelwood may result in undercooking of food. A very high percentage of adverse health impacts is related to faecal and chemical contamination of drinking water and ease of disease transmission in the overcrowded refugee camps. Dust and smoke, created by the burning of low-quality fuelwood, heightens the incidence of respiratory disease. Most of these problems tend to affect disproportionately the vulnerable groups, i.e. the very old or the very young.

iv) **Impacts on social conditions:**
The effects of environmental degradation, particularly those related to fuelwood gathering, are felt with a particular force by women and children. Women must spend long hours seeking and carrying wood, activities which put them at increased risk of fatigue and exposure to assault as well as detracting from their child-care and family and social functions.

v) **Social impacts on local populations:**
The host communities suffer similar social impacts as those felt by refugees. Competition between locals and refugees for scarce resources (fuelwood, fodder, water) can result in conflicts and resentment. In some cases, refugee influx has lead to the breakdown of traditional and sustainable local systems of natural resource management.

vi) **Economic impacts:**

The influx of refugees is felt in the local markets. While sections of local population may benefit, the local poor are usually affected adversely as refugee demand forces up the price of fuel. 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 meat 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 and resulting sedimentation can shorten the life of reservoirs and erosion-related floods can destroy local infrastructure.

3. PRINCIPLES OF UNHCR'S ENVIRONMENTAL ACTIVITIES

3.1 General

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

(a) the emergency phase,
(b) the care-and-maintenance phase,
(c) the durable-solutions phase including:

- environmental rehabilitation of the asylum country's territory after refugees' repatriation,
- environmental concerns related to integration of refugees in the host country,
- environmental concerns related to re-integration of returnees in their home country.

Environmental problems confronting UNHCR, the refugees and the local population can vary from place to place according to each area's climate, physical setting and socio-economic conditions. They are often related in a complex way to different sectoral activities as well as to one another. Despite this and the resulting need for flexibility of response, there are several key principles that will apply to virtually all situations alike, with differences only of emphasis. These principles are:

(a) integrated approach,
(b) prevention before cure,
(c) cost effectiveness and net benefit maximization,
(d) local participation.

3.2 Integrated approach

Refugee-related environmental problems have their origin in the sudden imbalance between refugee population requirements and the area's environmental carrying capacity, made more serious by the absence of countervailing environmental action. Sometimes, the problems are a by-product of different assistance activities taken to meet the refugees' immediate needs. One way of addressing these problems is to initiate new environmental projects as funds become available. However this add-on approach has serious drawbacks. It is usually costly compared with available alternatives besides being difficult to implement in proportion to the environmental damage created.

It is widely recognized that it is more effective to incorporate environmental elements into the interventions made right from the beginning, i.e. to modify refugee assistance operations to make them environmentally more benign.

The modifications need to be implemented in a coordinated fashion. There are many different sectoral activities accompanying refugee assistance and decisions concerning them are made at various levels. Without systematic and consistent integration, one action in a particular sector could be nullified by other actions in different sectors.

Environmental planning is a tool of such integration. It needs to be accompanied by institutional steps which help translate environmental plans into action. UNHCR's programming process has to progressively integrate environmental factors into UNHCR routine operations and consistent consideration needs to be given to environmental issues in budget requests, budget allocation, 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-related environmental interventions. In some cases, environmental impacts (such as certain types of health impacts or destruction of biodiversity) are irreversible, and preventive measures therefore represent the only real solution to these problems. In addition, preventive 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, the prevention and mitigation-oriented approach requires that effective planning be carried out as early as practicable in a crisis situation. The quality of the first measures taken during refugee assistance operations will largely determine the overall cost of refugee assistance over its entire duration.

Environmentally sound site selection and layout of refugee camps is an example of this approach.

If sites are selected so that refugees' impacts remain outside areas of high environmental value and their environmental impacts are mitigated in the final location,

irreversible consequences are likely to be eliminated and other adverse environmental impacts significantly reduced. Sound interventions at an early stage avoid more complex and costly steps later. Although it may not be feasible in some cases to adopt certain preventive or mitigation measures due to prevailing political and social conditions, it is important to alert all the parties involved about the economic and environmental implications of a stance that precludes environmentally sound preventive options.

3.4 Cost effectiveness and net benefit maximization

Resources available for UNHCR environmental interventions are scarce. It is therefore a matter of some importance that these 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 maximization).

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 waste") is a necessary but not a sufficient condition of the 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. The decisions about which environmental measures to take will depend on the configuration of benefits and costs that will tend to be specific to each site or group of sites.

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

Valuing environmental impacts is relatively easy in some cases and difficult in others. However, a body of experience in environmental valuation exists, mainly with development agencies, and UNHCR must effectively begin to use it in its work.

3.5 Local participation

Refugee assistance is accompanied by conflicting demands on local resources by the refugees and the local population. The solutions to resulting problems must be tackled with the participation of all the parties concerned and 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 the management of community natural resources. In addition, some local residents and refugees may also have specialized knowledge of natural resource management. This knowledge and experience have to be tapped, to the greatest extent possible, in support of sound environmental management. Apart from other things, 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 the protection of the surrounding environment supported, where necessary, by UNHCR environmental education projects. Refugees must be encouraged to participate in environment related programmes such as organized wood extraction, introduction of fuel-efficient stoves, reforestation or agro-forestry practices.

If it is vital to create a sense of useful endeavour among the refugees, it applies equally to the host population. Their representation 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, 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 on both the refugee and local sides. These groups suffer disproportionately from refugee-related environmental problems yet often their voices are 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 recognized standards. Activities should also respect, as far as possible, the customary rights of local people over use of land and natural resources.

4. OPERATIONAL PRINCIPLES

In order to translate the above-mentioned environmental principles into action in the field, certain administrative adjustments are required. The following are identified.

4.1 Financial integration

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.

- Hiring of an environmental specialist during the early stages of an emergency, when this is considered necessary, should be funded by the relevant Emergency Fund or Special Programmes.

- Large-scale rehabilitation projects should normally be funded from outside UNHCR budgets by development assistance resources. UNHCR would play a catalytic role in the mobilization of these funds.

It is only in this manner that UNHCR can hope to ensure a consistent approach in its efforts to prevent or mitigate environmental impacts in the field, and address the problem of the resulting environmental damage left for asylum countries to deal with in the aftermath of refugee situations.

It is vital to sensitize 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 should be examined. Exploration of possibilities and negotiations concerning environmental funding from the bilateral funding channels of various governments (e.g. Trust Funds), should be pursued by Branch Offices in coordination with Fund Raising Services, taking into account the decision-making practices of each donor. These 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 provide an overview of the range of environmental interventions which might be undertaken, a core list of environment-related activities is attached as Appendix 1.

For budgeting and statistical purposes, these activities[1] have been grouped by sector. In cases where activities cannot be easily assigned to a specific sector, they have been labelled as "common environmental activities". This classification will be revised on a regular basis so that new measures relating to the environment can be monitored. This categorization will provide the basis for statistical and financial reporting on the annual level of environmental expenditure.

4.2 Effective coordination of the roles of actors

Effectiveness of UNHCR 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 will be based on the financial and technical resources available and opportunities open to each actor during different stages of the assistance.

A number of parties are involved, either directly or indirectly, in refugee-related environmental problems. The local actors include the host national and local governments, the refugees themselves, the local communities and local NGOs. The international bodies involved are the UNHCR, international NGOs, other UN agencies and multilateral and bilateral development agencies.

More than many other policy issues, environmental problems and measures bring together a large number of organisations. Refugee related environmental problems are

[1] *Note that the term "activity" used here does not have the same meaning as an "FMIS activity".*

no exception. With many actors involved, close coordination and collaboration among them are vital throughout refugee assistance operations. The leadership of the host government and UNHCR in these circumstances is critical, to avoid a situation in which potential participants adopt a "wait-and-see" approach. Establishment of a local environmental task force is considered instrumental in promoting local coordination.

Generic terms of reference for an environmental task force are attached as Appendix 5.

The roles played by the refugees and the local communities were presented in Section 3.5. Below, the roles of other participants are summarized.

Role of the host government /local governments

- The host government should take a leading role in efforts to minimize adverse environmental impacts arising from refugee situations. 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. The host government's openness to enter into a technical dialogue with the donors on this, and related issues, is thus considered important.

- Governments must take steps to realistically estimate, (with the assistance of donors, 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 in refugee-related matters involving technical bodies (e.g. ministries of environment, forestry, health, etc,) and different levels of government (central, local, etc).

- 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 and provide advice on the implementation of environment-related measures, including the importation of potentially hazardous goods such as pesticides, or the resources of existing tree nurseries to support refugee-implemented reforestation projects. These contributions should be extended to rehabilitation after the repatriation of refugees.

Role of 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 must take a co-leader's role (with the host government), in promoting environmental protection and rehabilitation in the field, by setting objectives, priorities and policies, by overseeing the design and implementation of environmental projects, and by coordinating the efforts of all the parties concerned. UNHCR should promote linkages with other UN agencies and should strive to achieve a consistency of approach across the UN spectrum.

- UNHCR should mobilize 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.

Role of International NGOs

- NGOs involved in refugee-related operations should integrate environmental concerns 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, and many more are able to raise funds for long-term development and relief efforts. In particular, international environmental agencies could play an important role, both in policy development and joint fund-raising campaigns. NGOs, acting on these abilities, should coordinate their efforts with UNHCR and other participants.

- International NGOs could become implementing agencies for rehabilitation projects. At the same time international NGOs should be encouraged to make their own contributions to the rehabilitation needs.

Role of 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 UNEP should be encouraged to involve themselves in refugee assistance operations by providing expertise in their respective fields such as reforestation, land-use planning, soil conservation, and water resource management.

- Current plans and programmes developed by other UN agencies should be extended to refugee-hosting areas. National environmental master plans and action plans, for example, should address refugee-related environmental issues.

Role of Donors

- Given their magnitude and long-term influence on refugee-affected areas when the refugee population is large, refugee-related environmental problems can no longer be considered separately from development activities. International

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 donor and beneficiary governments, cover the rehabilitation of refugee-affected areas. Better still, donors could acknowledge environmental problems related to refugee situations to be an issue which 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 be therefore be sought from those specialized funding agencies set up to address global environmental problems (e.g. the Global Environment Facility).

5. CONDUCT OF ENVIRONMENTAL OPERATIONS

5.1 General measures

Significance

There are a number of environment-related measures that need to be applied to all phases of refugee assistance programmes. These measures are of a general nature and 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 institutional strengthening and further development of environmental know-how.

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

Development of environmental know-how refers to development of human resources, appropriate technologies and an environmental data base in support of field operations.

Institutional measures to be taken

* Modifications of sectoral guidelines: Environmental concerns should be incorporated into sectoral guidelines/manuals, in line with established UNHCR environmental policies. Sectoral guidelines to be modified include those dealing

with food, procurement, domestic energy needs, water, sanitation, health/nutrition, physical planning/shelter, agriculture, livestock/animal husbandry, forestry, and income generation. Environmental considerations in each sector have to adequately link different phases of refugee assistance operations.

* 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.

* Policy level coordination: Coordination with other actors on UNHCR's new environmental policies and initiatives is essential to achieve effective and consistent environmental actions in the field where UNHCR, other UN agencies and its implementing partners work together. Such coordination should involve host governments, other UN Agencies and donor institutions. Close coordination within UNHCR Headquarters should also be maintained because many sections are involved in different aspects of environmental management.

* Promotion of environmentally friendly technologies: UNHCR's basic approach is not to develop new technologies, but to apply 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.

* Upgrading of the environmental data base: The availability of accurate and up-to-date information is essential if environmentally sound decisions are to be made during UNHCR field operations. Investment in creating and upgrading a suitable environmental information system can quickly lead to better decisions. UNHCR's environmental information system should be geared to all phases of refugee assistance operations.

For *emergency phase* operations, the environmental data base should be able to provide the following information, to the extent possible:

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

The above information could be used in:

- contingency planning;
- site location;
- site planning, including camp layout, optimum density, etc.;
- locating infrastructure such as road, airstrips, waste dumps, etc.;
- assessing how refugee camp will affect local communities in the area;
- developing forest management plans.

By inputting information to the database early in a refugee crisis, UNHCR will have the ability to more accurately assess the existing state of environmental conditions in the area concerned. By comparing this information with an environmental "snap-shot" of the same area taken at the end of the crisis it will be possible to evaluate the cumulative refugee-related environmental impacts which have occurred.

During the *care and maintenance phase*, the data base (through use of satellite images, for example) will be indispensable in assessing the evolution of parameters such as deforestation, extension of camps, soil erosion, etc. This information would then form the basis for the preparation of environmental plans and monitoring the effectiveness of environmental measures taken.

During the *durable-solutions phase*, analysis of current and bench-mark data would be used to assess cumulative refugee-related impacts related in the area and to help develop proposals for rehabilitation measures.

Inclusion of environmental data in UNHCR financial reports and the SITREP reporting system should therefore be a major objective in order to ensure that monitoring of environmental impacts and activities can be kept up to date.

Given the limitations of the FMIS format, however, OSCEA would take on the responsibility for gathering this information.

Data would be collected at the Branch Office, or Sub-office level by the individual who has been designated as the "environmental focal point" (see page 15 for an explanation of this position). Based on information available from LOIs, and the list of environmental activities which has been included as Appendix 1, the data would track activities planned and implemented as well as associated costs.

* Environmental training: Training of UNHCR staff in planning, programming, supervision and monitoring of environment-related activities must complement other activities.

a) Training of emergency team staff should include basic environmental principles and issues arising during the emergency phase such as refugee camp site selection and design.

b) A training programme for field and headquarters staff would have the major objective of sensitizing them to the ways in which environmental concerns could be incorporated into their work. These training courses should be extended to UNHCR's implementing partners.

5.2 Emergency Phase

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:

i) unnecessary damage to the environment could be most effectively *prevented, or mitigated* during this phase,

ii) activities undertaken at an earlier stage are *far more cost effective* than those undertaken later on,

iii) the potential for *promoting environmental awareness among the refugee population* will be greater if activities begin at an early stage,

iv) the minimization 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*.

Basic principles

Some environmental damage is unavoidable during the emergency phase. This is particularly true when refugee numbers are very 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 refugee camps in, or near, fragile or internationally protected areas, could result in irreversible impacts on the environment in the areas concerned.

Decisions made during the emergency phase must also take into account the potential for adverse consequences in subsequent phases. For example, refugee camps may be located in areas where deforestation is already a problem. The rate of wood extraction and related environmental damage will be higher than would otherwise have been the case, with the net result being a substantial increase in the cost of remedial measures required in subsequent phases.

The level of participation, in environmental activities, of refugees and locals 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 made better structured and socially more acceptable.

While the primary purpose of this guideline is to minimize environmental impacts caused by refugees, it is relevant to note that, in certain locations, the presence of environmental hazards may pose a risk to the health of refugees as well, e.g. due to the presence of endemic diseases, high levels of air or water pollution, toxic or radioactive chemicals in the soil, etc.

General measures to be taken

* Consideration of the environment in contingency plans: It is useful to identify, in advance, important local environmental factors so that these can be incorporated into contingency planning for possible emergency situations. The objective is to develop plans which help prevent, or at least minimize, irreversible environmental impacts as well as to identify environmental hazards which might have an impact on refugee health. Much of the information needed for this analysis could be provided by the UNHCR environmental data base. An process for incorporating environmental issues in contingency planning is provided in Appendix 4.

* Environmental Specialist/Focal Point: An environmental specialist should be included in the emergency team, in all cases where preliminary information indicates the potential for serious environmental impacts, e.g. where:

  - refugees may be sited near sensitive or valuable ecosystems (such as a wildlife refuge);

  - population density (refugees alone or refugees plus local population) is likely to exceed the local carrying capacity (of water, fuel supply, etc.), or lead to serious depletion of natural resources, in the short or longer term.

In such cases, the specialist will conduct a rapid environmental analysis whose findings will be reflected in the basic set-up of the refugee camp. (Sample TOR for such a specialist are attached as Appendix 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". This person would have the responsibility for ensuring that environmental issues were considered during the development of activities.

* Coordination: 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:

  I) help develop common understanding of the likely environmental consequences of the refugee situation;

  ii) explain UNHCR's proposed environmental initiatives; and

  iii) lay the foundation for subsequent environmental actions by UNHCR, implementing agencies, and the host government.

* Post-emergency assessment: A comprehensive assessment of environmental impacts must 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.

5.3 Care and Maintenance Phase

Significance

The transition from "emergency" to "care and maintenance phase", and the speed of this transition, may vary from place to place. Some refugee-related activities may pass into the care and maintenance mode while others remain fixed in the emergency phase.

In general, UNHCR activities begin to shift to the care and maintenance phase of operation once the refugee population in a given camp becomes relatively stable.

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 **pro-active** as compared to the relatively **re-active** measures used during the emergency phase. The activities will 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, etc.), as well as coordination with other UN agencies, international NGOs, etc.

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 be certain differences in emphasis, however. For example, during the care and maintenance phase most environmental interventions will be comprehensive, long term activities, involving a high degree of refugee participation.

General measures to be taken

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

  The responsibilities of environmental coordinators, and their relationship with UNHCR and implementing partner staff, must be clearly specified. (Sample TOR for such a coordinator are attached as Appendix 3).

  In cases where a coordinator has not been assigned to the team, one of the team members should be designated as the "Environmental Focal Point". This person would have the responsibility 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 preparation of an Environmental Action Plan and, in some cases, an Environmental Master Plan. These planning activities should initiated by Field Offices and undertaken with the help of PTSS, OSCEA, and in consultation with the host government, implementing partners, other UN agencies and donor organizations.

  The former document should be reflected in the regular annual budget, the latter incorporated into the Country Operations Plan. Coordination with the host government, implementing partners, other UN agencies and donor organizations is important in preparing environmental plans. Basic guidance on how to develop environmental plans is given in Appendix 4.

* Establishment of an Environmental Task Force: A local environmental task force should be established to coordinate implementation of environmental measures and to monitor environmental impacts. The task force should include representatives of UNHCR field staff, implementing partners, host government officials, including those from environment-related ministries, and local community and refugee leaders. In certain circumstances, the coordination role may be entrusted to an environmentally active implementing partner. TOR for an Environmental Task Force are attached as Appendix 5.

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

a) A section on environment should be included in the budget submission, to ensure that the country's environmental strategy and action plans are translated into the programming cycle.

This will require input into the budget development process at the Sub-office and Branch Office levels by environmental specialists, coordinators or focal points, as appropriate.

b) A paragraph on environment should be included in Section 1 - 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 Appendix 1).

In cases where negative environmental impacts were foreseen, a description of proposed mitigation measures would also be included.

c) 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 minimize environmental impacts associated with the activities they will provide.

d) Donor organizations 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

Significance

Three different environmental issues are addressed during this phase: (i) environmental rehabilitation of refugee affected areas after repatriation, (ii) environmental aspects of integration of refugees in the host country, and (iii) 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 demands that these areas be rehabilitated to the greatest extent possible.

The absence of appropriate action by UNHCR, at this stage, would devalue the pro-active remedial measures taken during earlier phases of the operations, and 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 be seen as an integral part of environmental activities which have been 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. These issues are regularly addressed by many development assistance agencies and UNHCR can draw on this experience.

Basic principles

Environmental damage caused by refugees, despite the 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. The participation of the local population in rehabilitation activities is essential since the activities being undertaken have to meet their long term needs.

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

Since UNHCR may not be the only agency active in a specific geographical area, 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 harmonize with development projects being planned or carried out by other groups or agencies in the geographical areas concerned. This harmonization would involve an *integration of environment and development concepts*.

General measures to be taken

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

i) Rehabilitation

Rehabilitation of environmental damage following refugees' repatriation can be undertaken on a large scale or limited scale.

Limited-scale rehabilitation measures refer to localised activities such as garbage clean-up/disposal and site rehabilitation, while large-scale rehabilitation measures target a wider range of environmental assets and services placed at risk.

Large-scale rehabilitation measures are required if:

1) Environmental damage threatens the economic base of the areas concerned. Wide spread destruction of forests, for instance, may affect not only those who are **directly dependent** on forests for resources such as fuel, food, herbal medicines, etc., 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).

2) The scale of these impacts undermines efforts made by the local government and development agencies to promote the sustainable development of the areas concerned.

3) 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.

The cost/benefit approach can also be applied to large-scale rehabilitation works which begin during the care-and-maintenance phase. The factors to be considered in a project proposal for a rehabilitation scheme are listed in Appendix 6.

Limited Scale Rehabilitation Scheme

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.

- The host government and UNHCR should provide technical advice to assist the rehabilitation of refugee sites after repatriation.

Large Scale Rehabilitation Scheme

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

- In principle, large scale environmental rehabilitation schemes should go beyond rehabilitation to the status quo ante whenever possible. They should 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.

- 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.

ii) 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.

iii) Environment concerns in relation to repatriation and effective reintegration

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 semiarid regions, UNHCR should consider including, in its programmes, specific community based environmental projects to enhance the local capacity for sustainable natural resource management.

5.5 Technical concerns

Introduction

Due to linkages 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 sectors so that indications of problems can be noted and shared as quickly as possible and coordinated actions can be taken.

EMERGENCY AND CARE AND MAINTENANCE PHASES

a) SUPPLIES AND LOGISTICS

***Issues**:*

During the emergency phase, refugees need almost immediate access to basic goods and services such as 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 result in rapid environmental deterioration.

Environmental impacts related to supplies and logistics:

- inadequate supply of basic supplies, e.g. shelter materials, may force refugees to find what they need 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;

- if excess shipping materials, such as wood or cardboard, cannot be used by refugees in some way, they must be disposed of (at worst), by scattering them around the area or (at best), in garbage dumps.

***Measures to reduce or eliminate environmental impacts*:**

- adequate supplies of appropriate materials must be in place as soon as possible after the arrival of refugees to minimize environmental destruction,

  - the supply of other environmentally friendly items (e.g. foods requiring little cooking and fuel), should be promoted where appropriate;

- reduce excess transport and maximize use of empty vehicles,

  - shipments of supplies and use of transport facilities should be coordinated with other implementing agencies to minimize overall transport requirements;

- reduce the load on the environment,

  - utilize 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
  - reduce unnecessary packaging materials at source;

- promote environmentally friendlier ("Green") procurement

- The central 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 (I) environmental impacts that such items could cause in refugee situations, and (ii) internationally accepted treaties and practices that promote environmentally sound production and consumption.

References:

More complete information on supplies and logistics can be found in the following documents:

- UNHCR Guidelines on Environmentally Friendlier Procurement (UNHCR; OSCEA/STS, 1996, draft)
- Supplies and Food Aid - Field Handbook (UNHCR, 1989)
- UNHCR Emergency Handbook (UNHCR, 1982)

b) PHYSICAL PLANNING

Issues

The location and layout of refugee camps and settlements and the design of refugee shelter, determine to a large extent (i) the effect which environmental conditions may have on refugees' well-being and health and (ii) the type and degree of impacts on the environment in and around refugee sites, caused by the presence of refugees.

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

i. site selection,
ii. site survey,
iii. site planning,
iv. site preparation,
v. shelter construction.

Environmental impacts related to site establishment and shelter construction:

Refugee health may be affected by such environmental factors as 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, earthquakes, volcanic activities etc..

Proximity of refugee sites to forest reserves, natural parks, wildlife reserves, range land, open water courses and other fragile areas may increase the risk of damage caused by overuse or unmanaged exploitation of natural resources. This damage may include deforestation, loss of biodiversity, rangeland degradation, erosion, siltation and pollution of water resources etc. The overuse of and damage to natural resources may cause conflict with the local population.

Location of refugee sites on steep slopes increases the risk of erosion.

Inappropriate location of camp sites may increase the risk of floods and the need for construction of new access roads, or may increase transport distances.

Inappropriate camp layout, shelter design and poor maintenance of camp infrastructures, may lead to an increased risk of erosion, poor sanitary conditions, water pollution, fire hazards, and refugee 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 live and straight trees are the preferred choice, resulting in the loss of high quality forest land.

Measures to reduce or eliminate environmental impacts:

- When **selecting a refugee site**, factors like the carrying capacity in terms of the availability of natural resources and space; the 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 should be taken into account. Utmost care should be taken to avoid the establishment of refugee sites in or near national forest reserves, national parks, wildlife reserves and national historic monuments. All these factors should be determined through systematic **site surveys**.

- The size of a camp 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 also be included.

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

- 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.

References:

More complete information can be found in the following documents:

- Shelter and Infrastructure - Camp planning (UNHCR; PTSS, 1994)
- Water Manual for Refugee Situations (UNHCR; PTSS, 1992)
- UNHCR Emergency Handbook (UNHCR, 1982)

c) WATER

Issues

The supply of potable water is an essential component in the response to a refugee situation. Water is needed for drinking, cooking, personal hygiene, livestock, agriculture and for institutional uses.

There is a strong inter-relationship between environment, water and other sectors including health, sanitation, physical planning, agriculture and livestock, e.g. for water and sanitation sectors interrelations exist between water washed, water borne diseases and environmental health. As regards agriculture, due attention has to be given to soil and water conservation measures for rainfed agriculture and the design and construction of sound irrigation systems in the case of irrigated crop production; the indiscriminate use of agrochemicals may lead to contamination of surface or

groundwater sources. For water and livestock sectors, water availability on and carrying capacities of grazing lands need to balanced in order to avoid overgrazing or desertification.

Environmental conditions may be positively or negatively affected by water supply systems, depending on the appropriateness of the system and its operation. Refugee related activities can have serious environmental impacts on water supplies, both locally and further afield.

Impact of water supply systems on the environment and impact of refugee related activities on water resources:

- over-exploitation/contamination of available water resources (see UNHCR Water Manual for Refugee Situations: Chapters 6 and 11);
- faulty design, operation or maintenance of pipeline networks may reduce efficiency of distribution network and introduce new contaminants into the system which may prove difficult or impossible to eliminate before water reaches users (see UNHCR Water Manual for Refugee Situations: Chapters 2, 3, 10 and 11);
- poor quality of drinking water may affect health condition of refugees, the local population and agency staff;
- some sanitation systems (e.g. sewers, septic tanks) need sufficient water in order to function properly;
- camps and settlements may be subject to flooding if wrongly located (e.g. in river beds, in wadis);
- inappropriate drainage, soil and water conservation measures as well as poor water management in irrigation systems may lead to erosion, floods, ground water contamination and soil salinisation;
- poor watering point hygiene may lead to increased occurrence of vectors;
- human settlements close to open streams or over unconfined aquifers may cause downstream contamination.

Measures to reduce or eliminate environmental impacts:

- carry out adequate surveys to assess quantity and quality of available resources and to obtain sufficient data for the elaboration of optimum systems for their exploitation, in accordance with needs (see Water Manual for Refugee Situations, Chapters 2, 5, 6, 7, 8, 10 and 12);
- maintain water sources and storage facilities and protect them against pollution (e.g. by human waste, garbage, livestock, siltation, etc.);
- ensure proper control of any chemicals, such as chlorine, being used to disinfect water (see Water Manual for Refugee Situations, chapter 8);
- ensure proper management of waste water to avoid development of wet areas which can be breeding grounds for mosquitoes and disease.

References:

More complete information on water can be found in the following documents:

- Water Manual for Refugee Situations (UNHCR; PTSS, 1992)
- Technical Approach to Environmental Sanitation (UNHCR; PTSS, 1994)
- UNHCR Emergency Handbook (UNHCR, 1982)

d) SANITATION

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 and by contamination of the environment (water , soil, etc.). This contamination will almost certainly lead to disease among the refugee population and possibly among the local population as well.

Sanitation includes activities in the following areas:

i. disposal of human excreta,
ii. waste water and drainage,
iii. garbage,
iv. dust,
v. insect and rodent control.

Environmental impacts related to sanitation:

- poor control of excreta can lead to pollution of surface water as well as ground water. This can result in the spread of disease to a much greater population than that which caused the pollution, with resultant human and financial costs;

- poor management of waste water (i.e. if it is allowed to collect in "ponds" or puddles) can provide breeding grounds for disease carrying vectors;

- inadequate provision of: garbage storage near point of use, collection, disposal and stabilization, 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;

- insects and rodents are primary vectors for the spread of disease within the refugee camp and between the refugee and local population. These pests can also contaminate food supplies, either before or after distribution to refugees,

- some of the 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 (regarding biodegradability of chemicals).

Measures to reduce or eliminate environmental impacts:

- design and put into operation a basic system for the disposal of human excreta as soon as possible, taking into account expected needs as well as local conditions,
  - monitor and upgrade the system as necessary
  - alternative technologies for excreta treatment should be utilized, to the extent possible (e.g. use of excreta in bio-gas generation, as fertilizer, etc.);
- control waste water at source and/or put into place drainage facilities or other remedial measures to prevent accumulation of standing water around refugee shelter areas
  - drainage systems for waste water can be used to capture and recycle this resource for use in watering vegetable gardens, trees, etc.;
- 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, used/expired chemicals, etc.
  - implementation of a programme involving the "3-Rs" (reduce, reuse, recycle) should be a major part of a waste management plan;
- camp design and operation should aim to minimize the production of dust. 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.

References:

More complete information on sanitation activities can be found in the following documents:

- Technical Approach to Environmental Sanitation (UNHCR; PTSS, 1994)
- Manuel d'utilisation des desinfectants dans les situations de réfugiés (UNHCR; PTSS, 1994)
- Lutte Antivectorielle dans les Situations de Réfugiés (UNHCR; PTSS, 1996, an English version is to be issued in 1997)
- Water Manual for Refugee Situations (UNHCR; PTSS, 1992)
- UNHCR Emergency Handbook (UNHCR, 1982)

e) HEALTH

Issues

The sudden arrival of large numbers of refugees in an area creates a source of potential health and environmental problems, for both the refugees themselves, as well as the local population.

The rigours of flight, and poor sanitation due to the disruption of normal health services, may lead to the onset of outbreaks such as cholera, dysentery, hepatitis or typhoid among the refugee population.

Environmental conditions which may have impacts on refugees' health and well-being:

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

Environmental impacts related to refugee health:

- introduction of (non-endemic) disease vectors into the local environment, by the refugees themselves or by poor management, of health services (e.g. improper storage or disposal of hazardous medical waste such as used dressings, syringes, expired medicines, etc.).

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, availability of water, etc.
  - supply adequate potable water
  - design and install appropriate sanitation facilities
  - provide appropriate, location-specific shelter materials for protection against heat, cold, rain, snow, etc.
  - introduce effective vector control measures as early as possible in refugee settings
  - minimize dust production in and around the camp
  - put into place appropriate controls over the use of medical supplies and for the safe disposal of medical waste;

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

References:

More complete information can be found in the following documents:

- Water Manual for Refugee Situations (UNHCR; PTSS, 1992)
- Technical Approach to Environmental Sanitation (UNHCR; PTSS, 1994)
- Manuel d'utilisation des desinfectants dans les situations de r fugiés (UNHCR; PTSS, 1994)
- UNHCR Emergency Handbook (UNHCR, 1982)

f) FOOD

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 and also plays an important role in emotional well-being.

Supply of food requires close cooperation with other organizations, 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. (It should be noted that a Memorandum of Understanding exists between UNHCR and WFP which covers the respective responsibilities of these two agencies for the supply of food for refugee situations.)

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

- damage to infrastructure (e.g. roads and bridges) caused by the transportation of large volumes of food;
- degradation of forests, woody areas, etc. by refugees gathering cooking fuel, leading to direct and indirect impacts such as destruction of flora and fauna, loss of topsoil, soil erosion, siltation of surface water sources, etc;
- 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, eye problems, etc.;
- pollution due to discarded food packaging waste (e.g. paper, wood, plastic, and various laminates).

Measures to reduce or eliminate environmental impacts:
(Taking into account the MOU with WFP, political and economic constraints, etc.)

- the cultural acceptability of the food provided will be a major consideration in the success of any programme to promote more efficient preparation techniques, etc.;

- provide ready-to-eat food items on a short-term basis for segments of the refugee population, such as vulnerable groups,

- in order to ensure adequate nutrition while at the same time reducing uncontrolled fuelwood cutting during the earliest stages of an emergency situation, UNHCR could promote the provision of ready-to-eat food items, such as high energy biscuits, pre-cooked foods such as Corn-Soy-Blend (CSB), taking into account the cultural acceptability of the food and the operational constraints posed by such an intervention;

- in conjunction with specialists from other sectors (community services, domestic energy, forestry, site planning, etc.), review technical and social activities related to food transport, storage, preparation, etc., to reduce energy needs and minimize pollution and waste production. The following measures and aspects should be considered:

Technical measures:

- 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 of 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 in a form which requires the least amount of energy for cooking (e.g. fresh food, grains which have been milled before distribution, etc.);
- select those foods/sources whose transport, handling and packaging needs are the lowest and promote the reuse, recycling or proper disposal of the packaging which is used;
- promote recycling of food waste as livestock feed, compost, or as feedstock in a bio-gas plant;
- minimize the use of any pesticides used in food storage areas, while ensuring adequate food quality.

Social considerations:

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.

References:

More complete information on food can be found in the following documents:

- UNHCR guidelines for the use of imported food items in selective feeding programmes (UNHCR; PTSS, 1987)
- Quick nutrition survey among populations in emergency situations (UNHCR/WFP/MSF, 1991)
- Domestic Energy Guidelines for Refugee Situations (UNHCR; OSCEA/PTSS, 1996, draft)
- Refugee Children - Guidelines on Protection and Care (UNHCR, 1994)
- UNHCR Emergency Handbook (UNHCR, 1982)

g) DOMESTIC ENERGY

Issues

In a refugee situation, energy is required to meet the cooking, heating and lighting needs of refugee households and small businesses (such as charcoal making, lime burning, beer brewing, burning bricks or operating restaurants, etc.) as well as the needs of the relief and development agencies involved in the operation.

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.

Environmental impacts related to energy consumption:

The primary energy source in the majority of refugee situations is wood, or wood based products such as charcoal. Other sources, such as coal, kerosene, liquid propane and electricity are used less frequently, and usually in urban areas, where the type and scale of impacts involved are of a generally less severe nature than those produced in rural areas.

- extensive extraction of wood-based products for the production of energy has the potential to result in deforestation, soil erosion, flooding, pollution of surface

water sources, loss of natural habitat (with all that this implies for rare and valuable plant and animal species), etc.

Energy consumption as a source of environmental health problems:

- the use of different fuel sources can result in a variety of health problems, e.g.
- the burning of all fuels, in enclosed areas without proper ventilation, can lead to carbon monoxide poisoning and death. In addition:

    - biomass which is not properly dried is 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 a lot of smoke and a variety of pollutants, including sulphur dioxide and heavy metals;
    - kerosene presents the risk of fire as it is usually stored in containers inside shelters. It is a poison, with special risks for children.

Measures to reduce or eliminate environmental impacts:

- lower fuel consumption by reducing demand (*first choice*)

    - promote energy efficiency by all users (domestic, institutional, business, agency) by among other things, introducing these incentives to high fuelwood consumption (e.g. wood supply away from refugee camps) and identifying energy saving techniques tailored to their specific needs, e.g.

        - fuel efficient stoves along with environmental education and/or training programmes, to be used at the domestic level,
        - bio-gas plants and solar cookers/water heaters, for camp institutions and agency housing,
        - photovoltaic power, wind generators, or micro-hydropower for small businesses, etc.;

- supply alternative fuels (*second choice*)

    - compare the types of cooking/household fuels that refugees are accustomed to with what is available locally and provide those local fuels whose supply is the most sustainable and economically viable, taking into account the local natural resource situation;

- provide fuelwood in a sustainable manner (*third choice*)

    - implement a fuelwood supply programme which provides fuelwood cut in a sustainable manner, and includes controls over unauthorized harvesting of fuelwood as well as economic and educational programmes designed to reduce fuelwood consumption.

References:

More complete information on domestic energy can be found in the following documents:

- Domestic Energy Guidelines for Refugee Situations (UNHCR; OSCEA/PTSS, 1996, draft)
- Forestry Guidelines for Refugee Situations (UNHCR; OSCEA/PTSS, 1996, draft)
- UNHCR Emergency Handbook (UNHCR, 1982)

h) FORESTRY

Issues

One of the major environmental problems associated with refugee situations is the degradation of forest land and deforestation as a result of the overuse of biomass, caused by the disproportionally high demands as compared to the carrying capacities, in refugee camp and settlement areas.

Consequently, forest degradation and deforestation may 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 desertification. The availability of forest products for the local populations may decrease, which may 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, coordination with all partners involved, community participation of refugees and the local population and sufficient financial resources for specific actions to be undertaken.

Environmental impacts on forests

- Site preparation for camps: many refugee camps are located in forest areas. Land clearing for camp-establishment, if not well planned, may lead to severe deforestation, although 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 encroaching refugees may be considerable.

- Harvesting of construction materials: poles, posts, sawn timber and grass 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 increases the risk of erosion.

- Farming: refugees may start clearing forest land for crop production purposes.

- 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 affected if no adequate control systems are in place.

- Grazing: grazing and browsing by refugee livestock may cause severe damage to forest and rangeland.

- Hunting: hunting and poaching may seriously affect the wildlife population and biodiversity.

Measures to reduce and mitigate deforestation

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

- Assessment and planning: rapid assessment of forest resources; assessment of demand for forest products; preparation of a long term forest management programme; take environmental concerns into account, when planning refugee sites and roads

- Preventive and mitigative actions: These may be in the fields of proper site selection, site planning and implementation, resource conservation (forest protection) and forest management (controlled wood extraction). They may also 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: rehabilitation activities include reafforestation 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 reafforestation of deforested areas. Other measures may be agro-forestry, 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, bunding etc.

- Monitoring: monitoring of changes in the vegetation cover is essential for planning purposes. Satellite images and aerial photography interpretation in combination with ground checks, using GPS, are useful techniques in preparing forest and vegetation maps.

References:

More complete information can be found in the following document:

Forestry Guidelines for Refugee Situations (UNHCR; OSCEA/PTSS, 1996, draft)

i) AGRICULTURE

Issues

Refugee agriculture is usually small scale, low input, traditional farming, practised in the following situations:

i. Refugees in camps: small scale vegetable and foodcrop production in and around camps, if land can be made available. The objective is to supplement the food basket and to generate some income.

ii. Spontaneously settled refugees in villages and towns: refugees will mostly make their own arrangements with the locals to obtain the use of agricultural land. The objective is to improve food security and to generate income.

iii. Refugees in organized rural settlements: agricultural land is provided by the Government and local authorities. The objectives are the promotion of food self-sufficiency and the generation of income.

UNHCR's assistance measures to promote refugee crop production may include the following:

- assistance in making land tenure arrangements,
- planning of landuse and agricultural practices,
- provision of agricultural inputs (tools, seeds, agrochemicals),
- support to land development and land clearing,
- provision of extension services and support to agricultural cooperatives and farmers associations.

Environmental impacts

Since refugee farming is usually low input, traditional farming, the kinds of environmental impacts associated with modern, large scale, high input farming are limited.

There are, however, a number of environmental risks, depending on the specific circumstances of a refugee situation. The most important are the following:

- availability of insufficient and unsuitable or marginally suitable land; this 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; this may lead to inappropriate farming techniques, resulting in land degradation;

- 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.

Measures to reduce or eliminate environmental impacts:

- ensure the security of access to sufficient and suitable agricultural land;

- carry out land use planning based on soil and land surveys and systematic land evaluation;

- 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);

- provide appropriate farming inputs (e.g. improved local seed varieties; low toxicity pesticides);

- provide agricultural extension services, disseminating sustainable farming methods and technologies.

References:

More complete information on agriculture can be found in the following documents:

- Environmental Guidelines for Refugee Agriculture (UNHCR; OSCEA/PTSS, 1996, draft).
- International Code of Conduct on the Distrubution and Use of Pesticides (amended version) (FAO, 1990)

j) LIVESTOCK

Issues

Many refugees in dryland areas belong to pastoral or semi-pastoral groups. Their 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 stay behind or might move together with their owners. If staying behind, they may be subject to raiding or slaughtering.

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.
Small animal production can provide food and income opportunities during the care and maintenance and local settlement phase. The main constraint for animal raising in refugee settlements is the lack of feed, water and space. In addition, sanitation problems may arise.

Environmental impacts:

In refugee situations there are a few beneficial livestock related impacts on the environment which can be mentioned. These include: the provision of animal dung, in particular from cattle, which can be used for cooking and heating; the use of animal dung for fertilization of agricultural fields; and the 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.

Amongst the negative impacts caused by refugee livestock, the following are the most important:

- in the absence of adequate rangeland, 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 fauna, increased soil erosion, siltation of surface water sources etc.;
- 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 overuse;
- 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;
- 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, rabies, etc., to humans.

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 are to be carried out to determine the 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 for the obtention of adequate grazing land; relocation of livestock to alternative grazing lands; supplementary feeding and pasture improvement.

- The following animal health measures can be considered: disease prevention and the provision of animal health care, including control of movement of animals; control of individual herds (fencing); monitoring of diseases; vaccination and prophylactic treatment and vector control. A community based animal health care approach involving refugees and the local population is to be promoted.

- The negative impacts on public health caused by refugee livestock can be minimized 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.

References:

More complete information on livestock can be found in the following document:

- Livestock Guidelines for Refugee Situations (UNHCR; OSCEA/PTSS, 1996, draft)

k) COMMUNITY SERVICES

Issues

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

The arrival of refugees in areas where environmental conditions may substantially differ from their home areas, may pose special problems. On the one hand, refugees may face special difficulties in adapting to different environmental conditions (climate, health conditions, water, vegetation) and on the other hand, they may have difficulties, or they may not be motivated, to manage their new environment in a sustainable way. Refugee environmental awareness and responsibility are crucial in the adaptation to their new environment.

Knowledge and understanding of environmental issues, will raise the awareness amongst refugees and the local population and may encourage their commitment to take better care for their environment.

Measures to reduce or eliminate environmental impacts:

Many environmental-mitigating measures are of a technical nature and are described under other sectoral headings. 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 participation of refugees in environmental related activities and to promote self help activities. To this end, close consultation and cooperation with all other concerned sector activities is crucial.

Specific measures:

- 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 of refugee and local host communities, local government officials, local and international NGOs and UNHCR. The task force must be as representative of the full range of refugee and local community interests as possible in order to ensure that it addresses issues affecting the most vulnerable members of the community (women, children, the aged and the handicapped);

- Identify refugees with skills and experience in environmental related activities and facilitate their participation in planning and implementation of related projects.

- 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) the measures refugees can take to adapt to their new environment; and (iv) the 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 refugees to participate in these activities and projects, such as cleaning campaigns, household hygiene, protection of forests, tree planting, production and use of fuel-saving stoves, protection of water points etc. This can best be done through the setting up of special committees.

- Facilitate inter-action between refugees and the local population with the objective of conflict resolution on environmental issues.

- Assist in the mobilization of refugee labour in environmental projects where refugees can be employed. (See under income generation)

References:

More complete information on Community Services can be found in the following documents:

- Refugee Emergencies: A Community-Based Approach (UNHCR; PTSS, 1996)
- Urban Refugees: A Community-Based Approach (UNHCR; PTSS, 1996)
- Working with Unaccompanied Minors: A Community-Based Approach (UNHCR; PTSS, 1996)
- Assisting Disabled Refugees: A Community-Based Approach (UNHCR; PTSS, 1996)
- Refugee Children - Guidelines on Protection and Care (UNHCR, 1994)
- Guidelines on the Protection of Refugee Women (UNHCR, 1991)
- A UNHCR Handbook - People-Oriented Planning at Work (UNHCR, 1994**)**

l) EDUCATION

Issues

A condition for the success of any technical solution to environmental problems is the raising of the awareness of the beneficiaries and participants.

Without the acceptance, cooperation and support of the refugees and local population, it is nearly impossible to modify behaviour which impacts negatively on the environment, for example, high fuelwood consumption. Environmental education is also crucial for refugees.

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

Measures to promote environmental education:

- developing 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. The Office of the Senior Coordinator on Environmental Affairs has launched pilot projects to develop model teaching materials, which can be adapted to different geographical, national and cultural contexts;
- training of 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:

1. Energy conservation,
2. Conservation of trees and other vegetation,
3. Soil conservation,
4. Water conservation,
5. Environmental health,
6. Sustainable shelter,
7. Waste disposal
8. 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;
  - priority to women and children;
  - local populations as well as refugees / internally displaced / returnees should benefit;
  - involvement of host country government authorities.

Reference materials:

More complete information on education and the environment can be found in the following documents:

- Revised Guidelines for Educational Assistance to Refugees (UNHCR; PTSS, 1995)
- Refugee Environmental Education - A Concept Paper (UNHCR; OSCEA, 1995)

m) INCOME GENERATION

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 realize 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 (sale of wood or charcoal, burning bricks, etc.). As more income generation options become available, these wood-based activities become less attractive, from a financial point of view.

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, etc.;

- 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, noise, etc., reducing the “quality of life” for those living nearby.

Measures to reduce or eliminate environmental impacts:

- promote activities which, in the best case scenario, contribute directly to sound environmental management

  - 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 coordination with implementing partners, international development agencies, etc.), e.g.

  - production of fuel efficient stoves
  - manufacturing concrete latrine slabs, water cisterns, cement blocks or sundried/compacted earth blocks for shelter construction, etc.
  - nurseries and reforestation
  - collecting and recycling of waste
  - terracing eroded hillsides
  - composting programmes
  - fish farming
  - setting up bio-gas generators, etc.

  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;

- identify and discourage environmentally harmful income generating activities

  - 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)
    - place excessive demands on available resources or utilities (e.g. water supply, sewage system, electrical supply);

- design and implement sound training programmes

  - 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.

References:

More complete information on small-scale income generating projects can be found in the following documents:

- Guidelines for Refugee Enterprise Credit Assistance for Small Businesses (UNHCR; PTSS, 1988, working draft)
- Refugee Employment and Credit Assistance: Guidelines for Developing a Self-Reliance Strategy (UNHCR; PTSS, 1966, under preparation)
- Community Participation and Self-Reliance in Refugee Local Settlements (UNHCR; PTSS Discussion Paper No. 7)

SPECIFIC TECHNICAL CONSIDERATIONS - DURABLE SOLUTIONS PHASE

While the specific environmental and technical consideration will, of course, vary from situation to situation, there are a number of issues which are often associated with the durable solutions phase and these are listed below in two sections: Rehabilitation of refugee-affected areas and environment concerns in relation to repatriation and

effective reintegration. Integration of refugees in the host country (local integration) is covered briefly.

It should be noted that specific environmental measures elaborated in the previous section by sector can 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.

Rehabilitation of refugee-affected areas:

a) GARBAGE CLEAN UP AND DISPOSAL

Refugee camps generate a lot of garbage and in cases where repatriation has occurred immediately after the emergency phase (such as with the situation of Kurds in Turkey, shortly after the Gulf War), there may never have been an effort made to collect and properly dispose of waste.

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

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.

- Garbage 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), etc.

  - The disposal of **non-hazardous** waste should include a consideration of 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, 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, etc.) can be undertaken immediately.

b) 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 camp site. The digging of latrines and drainage trenches, opening of a garbage dump, construction of various camp facilities, etc., will leave the camp site a far different place than 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 benefitted 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 borders of a nature preserve may have had only negative impacts on what had been a relatively pristine environment. The water table may have been polluted, streams may have become silted and have lost their capacity to support valuable aquatic life, etc.

- 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; e.g:

    Natural drainage patterns on the site may have been altered by construction, digging drainage ditches, etc. The new drainage patterns may result in the drying up, over the long term, of a valued wetland, upon which local people depend as a source of fish, birds, medicinal herbs, etc.;

    - 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 minimized;
    - 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").

c) 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 this guide, 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 under the heading "Approach to investment decisions" found in Appendix 4, Section 4 of this guideline.

d) ENVIRONMENT CONCERNS IN RELATION TO REPATRIATION AND EFFECTIVE REINTEGRATION

The return of refugees to their countries of origin involves many of the same environmental considerations described above, under the sections titled "Site rehabilitation and Ecosystem rehabilitation". 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, e.g.

- refugees 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.

e) LOCAL INTEGRATION

Integration of refugees in the host country (local integration) involves many of the same issues, with respect to impacts and sustainable activities, which are covered elsewhere in these guidelines under the sections titled " Food/Household, Water, Sanitation, Managing trees and biomass, Livestock management, Agriculture and Fisheries". Many of these sectors are covered in greater detail in the UNHCR Sectoral Guidelines

Appendix 1

Core list Of UNHCR Environmental Projects And Components

The purpose of this Appendix 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.

(i) Common environmental activities

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

(ii) Sectoral activities

a) Supplies and logistics

(1) Environmentally friendly (“Green”) procurement

b) Physical planning

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

c) Water

(1) Protection of water supply areas

d) Sanitation

(1) Disposal of human excreta
(2) Waste water and drainage
(3) Proper management of garbage
(4) Dust control
(5) Insect and rodent control

e) Food

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

f) Domestic energy

(1) Promotion of efficient energy use
(2) Supply of alternative fuels
(3) Sustainable provision of fuelwood

g) Forestry

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

h) Agriculture

(1) Minimization of the use of agricultural chemicals and promotion of organic production methods

i) Livestock

(1) Provision of food and income support

j) Community services/Education

(1) Promotion of environmental education, awareness and participation

k) Income generation

(1) Promotion of environment-related income generation activities

Appendix 2

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 analyze 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, NGO's, 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, agro-forestry, rural energy supply, environmental science, or natural resource management.

Appendix 3

Draft Terms Of Reference For An Environmental Coordinator

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 Representative, with technical support from UNHCR Programme and Technical Support Section (PTSS) and the Office of the Senior Coordinator on Environmental Affairs, and in close collaboration with relevant Government Departments, and relevant NGOs, the environmental coordinator 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. Harmonize 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 environmental impact of refugee;

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 tension between refugees and local communities;

10. Identify appropriate local institutions and agencies who 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 Coordinator:

Depending on the situation, relevant qualifications could include:

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

Appendix 4

ENVIRONMENTAL PLANNING: ROLE AND CONTENT

1. Introduction

The present document places emphasis on integration of environmental concerns into UNHCR operations. UNHCR's environmental concerns do not exist independently of the principal objectives of sheltering and sustaining refugees and 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 prioritize the many diverse environmental considerations arising in a typical refugee situation. 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 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 settlement or a larger set of such settlements, must take account of three key factors:

i) Existence of a number of technical and organisational 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 cook stoves), others organisational or institutional (e.g. communal cooking as a way of reducing fuelwood consumption, or use of a price mechanism as a disincentive to resource degradation). In many cases, the responses will be a combination of different measures.

ii) Existence of a number of groups actually or potentially affected by the environmental interventions under consideration and the need to coordinate 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 groups' demand for environmental resources. They have to take account of the distribution of existing human and institutional resources.

iii) 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 of UNHCR environmental interventions at a country-wide level take the form of *environment master plans* while those addressing environmental problems at the level of individual refugee concentrations are referred to as *environmental action plans*.

Contingency plans should normally address environmental concerns during the emergency phase. The nature and function of these plans is described in more detail below. It is important to ensure, however, 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 at UNHCR field offices and headquarters, these environmental concerns are incorporated into contingency planning for the selected countries. The plans, accompanied by maps and simple quantification where relevant, will:

- identify special local resource management systems that could easily be disrupted by a refugee influx and the most important measures needed to avoid irreversible environmental impacts;
- suggest the most appropriate pattern of refugee distribution 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, and their preparation is supported by EPRS and the relevant Bureaux. Environmental expertise could be supplemented by PTSS and OSCEA, as necessary.

3. Environmental master plans

The purpose of an environmental master plan (EMP) is to define environmental strategy for refugee assistance in a selected country based on a long-term view of the problem, and translate it into a broad plan of action. This is done by systematically considering factors such as:

- pattern of refugee distribution and its relationship to the existing resource base;
- importance of different types of environmental stresses in the area covered by the EMP;
- the risk of irreversible impacts;
- refugee energy requirements and the scope that exists for their provision;
- health and nutritional status of the refugees;
- experience with refugee environment management to date in the area concerned;

- institutional basis for different approaches to refugee management;

- relationship of refugee-related activities with environmental and development initiatives in the hosting area

An EMP deals with all refugee concentrations in the country in question and, in general, will deal more extensively with the care-and-maintenance than durable-solutions phases of refugee assistance as the latter will typically have its distinct priorities (see Section 5). Emergency considerations will feature relatively little in an EMP. Nevertheless an EMP may specify general approaches and measures to be taken in the event of emergency, drawing on the assessment contained in contingency plans where these exist.

The end-product of an EMP is the identification and formulation of a broad plan of action containing representative projects that best mitigate the most significant negative environmental impacts resulting from refugee presence, including

- a statement of their economic rationale;

- suggested organisational and administrative measures required to support the projects' implementation, and a plan of their strengthening, if necessary;

- tentative estimates of the total budgetary requirement, its structure and the identification of possible funding sources.

EMPs will be prepared by UNHCR bureaux in collaboration with OSCEA and PTSS, and reflected in the concerned country's operations program. In principle, EMPs will be prepared for all countries where the presence of refugees is likely to result in significant environmental deterioration. The plans will be updated at five-year intervals, or more frequently in the cases of major changes in the pattern of refugee distribution or underlying environmental conditions.

The preparation of an EMP will call for a close cooperation between UNHCR and its partners. The host government needs to ensure that local and national environmental and development priorities are adequately reflected in the plan, and also needs to provide realistic estimates of local resources that could be used to support those mitigation and preventive measures selected for implementation.

It is UNHCR's responsibility to consult with, and seek the views of other UN agencies and donors, including international NGOs, on the structure of the plan and the roles that UNHCR's technical and financial partners are expected to play. The scope for involving local NGOs as intermediaries between the concerns of the local population and those of the refugees also needs to be tapped.

It is also UNHCR's responsibility to ensure congruence between EMP priorities and the environmental and related initiatives of multilateral and bilateral donors. UNHCR's own

EMPs must reinforce, and be reinforced by, such wider development efforts. This will naturally require consultation and coordination.

4. Environmental action plans

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, in line with the priorities set out in a corresponding EMP. EAPs in UNHCR practice therefore combine the aspects of project identification and investment appraisal. For their implementation, the projects identified can be grouped either by type or by location. For example, one set of EAP activities may group only reforestation projects in several different locations whereas another set may group a number of different environment-related activities in a single refugee location. The soundness and efficiency of each EAP will be determined by reference to the expected costs and benefits of the proposal.

The time span of an EAP, i.e. the period of expected implementation, will normally not be longer than three years. Different components of an EAP may have their own, shorter, implementation periods. EAPs may need to be "rolled over" and modified according to the changes in the underlying refugee situation.

The preparation of an EAP will be carried out to a standard that allows the subsequent submission to potential donors of its components, 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. In terms of internal financial procedures, EAPs will feature in UNHCR's annual budget submissions. An EAP will also specify the implementation arrangements envisaged, i.e. the role and responsibilities of the various parties to the plan.

The main features of the two types of plan are summarised in Box 1.

BOX 1 : CLASSIFICATION OF ENVIRONMENTAL PLANS IN UNHCR PRACTICE

	Environmental master plan	**Environmental action plan**
Main objective	Setting of overall strategy, prioritization of interventions during the post-emergency phases of refugee assistance	Preparation of a specific interventions and establishment of their technical and economic viability
Time horizon	A long-term approach dealing with all phases of refugee assistance	Short-term, usually not exceeding three years
Geographical scope	Country hosting refugees or, exceptionally, a region comprising several countries	All or a sub-set of refugee camps in a given country
Relationship with UNHCR programming and financial management	A component of the country's operations plan specifying the long-term funding needs of an environmentally integrated strategy	A component of annual budget submission accompanied by an estimate of the funding level of the interventions selected
Who initiates and implements	Field office, with assistance from PTSS and OSCEA	Field office, with assistance from PTSS and OSCEA
Relationship among participants to refugee assistance	Emphasis on long-term roles and responsibilities of participants and on building up institutional strengths of local governments and NGOs. Relationship of the plan with the government's overall environmental and development priorities to be clarified	Emphasis on the role of different parties in the implementation of the interventions and practical arrangements required to ensure progress in the field
Approach to priority setting	General economic framework used to determine the optimum balance of intervention. Examination of existing policies of the host country(-ies) and their role in reinforcing (or detracting from) the measures envisaged is part of the plan	Inclusion (or not) in the plan based on economic appraisal of the intervention proposed. Cost-benefit framework used accompanied by valuation of environmental impacts where possible

5. 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;

- estimation of budgetary requirements and likely funding sources of the rehabilitation program.

Where durable solutions deal with either integration of refugees into local economy or re-integration of returnee refugees 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 these cases, environmental plans will take the form of a simplified environmental impact assessment (EIA).

6. Approach to investment decisions

Decisions about which environment-related measures or activities to undertake is at the heart of any environmental plan. These decisions are investment decisions, i.e. decisions about how to allocate scarce economic resources among competing environment-oriented (as well as other) goals. 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 or efficiency-minded governments. It involves three interrelated steps, i.e.:

i) identification and quantification of environmental impacts that the measures proposed would eliminate or mitigate;

ii) conversion of these impacts into money terms (valuation or "monetisation"); and

iii) combination 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 one or another kind of environmental impact assessment (EIA) while the second and third steps combined are the domain of 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.

Other than in exceptional circumstances, UNHCR's environmental assessment will utilize the procedures of rapid environmental appraisal (REA) rather than a full-scale EIA-type studies. Evidence available from the work of development agencies documenting the relative importance of different classes of environmental impacts in value terms ("screening") needs to be used to make UNHCR's environmental assessment focused and fast. Examples and case studies of screening procedures are available and can be introduced into regular UNHCR activities.

The application of the cost/benefit method in the refugee context requires that UNHCR obtain estimates of the cost of each intervention that mitigates or eliminates damage and match 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. The analysis can be used to determine both the desirable scale of the intervention, - that is, 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. An extensive body of experience in applying cost/benefit analysis exists and is available to UNHCR staff through OSCEA or PTSS.

Appendix 5

GENERIC TERMS OF REFERENCE FOR A LOCAL ENVIRONMENTAL TASK FORCE

1. Justification

a) 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

b) 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.

c) 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.

d) 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. Organization

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 overall goals and specific objectives of the rehabilitation scheme.

2. Background to the scheme:

Describes how the situation came about (i.e. an 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/NGOs, 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 time frame.

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.