

Environment

Ensure environment is considered at an early stage

The emergency phase is the critical moment at which environmental degradation may be confined or limited.

There are a number of strong arguments for making environmental interventions as soon as possible during the emergency phase of a response, such as:

- Unnecessary damage to the environment is most effectively prevented or mitigated during this phase.
- Activities undertaken at an earlier stage of an operation are far more cost-effective than those taken later.
- The potential for promoting environmental awareness among the refugee population is greater if activities begin at an early stage.
- 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.

Similarly, issues which are crosscutting in nature should not be neglected. This is often the case with issues concerning age and gender groups, and the environment.

Strengthening institutional capability to deal with environmental matters in the field is essential. The provision of clear guidance to UNHCR and implementing partner field staff on how environmental matters should be treated within UNHCR's operational framework is particularly important (see chapter 4 on Contingency Planning).

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

Environmental considerations in contingency plans

It is useful to identify, in advance, local environmental issues or concerns which might be relevant to the planned or ongoing operation, so that these can be incorporated into a contingency plan. Developing such a site-specific plan can help prevent, or at least minimize, irreversible environmental impacts as well as identify environmental hazards which might have an impact on refugee health.

Environmental considerations

Environmental considerations should be integrated into physical planning and shelter from the very start of an emergency. Location and layout of refugee camps, provisions made for emergency shelter, and the use of local resources for construction and fuel can have a major negative environmental impact. It is in the earlier stages of an emergency where the greatest environmental damage can occur and habits are formed. Environmental damage has health, social and economic consequences for the refugees and local population, and can have political repercussions.

In order to safeguard the welfare of refugees and local population by protecting their environment, the following steps can be taken:

- i. Site selection: avoid sites close to environmentally protected areas. A site should be located at least a day's walk from protected areas or reserves.
- ii. Site preparation: discriminately preserve existing vegetation and top-soil.
- iii. Camp size and density: generally, the smaller the settlements the better; allocate 30-45m² of area per person.
- iv. Camp layout: the layout (particularly roads) should follow contour lines. This will reduce erosion, preserve topsoil, and avoid the creation of dangerous gullies. A site layout that encourages community living arrangements (which can also promote security) safeguards the environment within that community.

v. Shelter design (energy-saving through insulation): in cold climates, with extended winter seasons where continuous heating is needed, passive energy saving measures, e.g. sufficient insulation of roof, walls, and floors can save significant fuel and prove cost-effective over time.

vi. Shelter and fuel: materials for these often come from the immediate surroundings of the camp. It is crucial at the outset to initiate a system to manage and control the use of local natural resources including wood for construction and fuel. Meeting the initial need for shelter materials from the local resources can be particularly destructive, so collection of such materials should be carefully managed, and/or provided from an alternate source.

Natural Resources Management Plan

A simple natural resources management plan should be drawn up as soon as possible. A key feature of a basic plan will be controlled harvesting and collection of fuel-wood and timber. This should be discussed with government bodies, such as forestry departments. Controlled fuel-wood and timber harvesting in the vicinity of the camp can include:

- defining certain areas and trees (by marking) which should not be harvested,
- allowing only dead wood to be collected;
- establishing an environmental awareness programme to define clear rules from the outset regarding
- harvesting wood and to encourage respect for the local resources;
- assigning responsibility for managing and harvesting certain areas to certain groups.

A more comprehensive natural resource management plan for the site and its immediate surroundings should be drawn up as soon as possible (with specialist advice if necessary). Such a plan should be based on a baseline environmental survey.

A comprehensive natural resource management plan would cover (in addition to controlled harvesting of timber for construction and fuel-wood, as mentioned earlier): promotion of fuel-saving stoves and fuel efficient cooking techniques and supply of key energy saving devices (e.g. lids with cooking pots, provision of mills or milled grain). In addition to awareness raising programmes, identify the scope for better use of existing natural resources (e.g. using waste water, common areas, and areas around shelters), kitchen gardens, tree planting, and reforestation where necessary.

Potential Environmental Impacts

The following provides a generic list of potential environmental impacts associated with water and related activities in a camp situation:

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

Quotes from: Handbook for Emergencies, Third Edition, UNHCR, Geneva, February 2007