

Humanitarian Action and the Environment



Disasters and conflicts, as well as relief and recovery operations, impact the environment in ways that threaten human life, health, livelihoods and security. Failure to address these risks can undermine the relief process, causing additional loss of life, displacement, aid dependency and increased vulnerability. Disaster managers and humanitarian workers can take action to avoid this. This document helps to explain how.

OCHA

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United Nations



UNEP

Essential guidance for humanitarian actors

- 1. Hazardous substances:** All sources of acute risk (such as chemical spills from damaged infrastructure) should be identified as early as possible. The Joint UNEP-OCHA Environment Unit provides emergency assistance through rapid assessments and advice. Access should be restricted until clean-up or risk reduction measures can be taken.
- 2. Emergency waste management:** Plan the location of emergency waste disposal sites with local authorities to avoid contamination of water sources and agricultural land, disease vectors and odours. Do not burn waste without a proper risk assessment, especially in the case of plastics. Healthcare and other forms of hazardous waste should be disposed of using appropriate methods, eg. steam sterilization (autoclaves).
- 3. Water use:** To determine sustainable levels of water use, an early assessment of the presence, quality, quantity and recharge rate of groundwater sources should be done. Monitor groundwater extraction to ensure that the natural recharge rate is not exceeded. Raise awareness of the importance of water conservation.
- 4. Sanitation:** Take care to locate latrines downstream of wells, at least 30m from groundwater sources and at least 1.5m above the water table. Fitting pit latrines with concrete slabs eliminates the need for secondary wooden slabs or supporting beams and facilitates easy cleaning. Consider the up- and down-stream impacts of water use and sanitation, as well as its cumulative impact on a watershed.
- 5. Energy consumption:** The use of wood or charcoal for domestic energy by displaced people has a major impact on the environment and livelihoods. Promote energy saving measures, such as fuel-efficient stoves and cooking techniques, fast cooking foods and consider using cleaner energy sources (eg. gas and photovoltaic power).

- 6. Refugee / IDP camps:** If possible, keep camp populations below 20,000 and locate camp sites at least 15km from ecologically sensitive areas and neighbouring camps. Consider controlled harvesting sites or mud brick construction to avoid deforestation. Promote the “three Rs” of waste management in camps: Reduce, Re-use and Recycle. For more information, see UNHCR’s Environmental Guidelines for Refugee Operations.
- 7. Transport:** Well-maintained vehicles and eco-friendly driving techniques reduce air pollution and fuel consumption. Where possible, choose cleaner fuels and fuel efficient, low emissions vehicles to minimize carbon emissions. Waste oil should be stored in plastic drums and properly disposed of or taken back to its source.
- 8. Green procurement:** Smart procurement decisions are a simple way to reduce the environmental impact of humanitarian operations: Choose goods with the minimum possible packaging, especially containers that can be reused or recycled. Source materials from local or national markets to minimize travel miles and carbon emissions and prefer recycled materials. Select suppliers with certified safe and sustainable production practices, in particular for forest products, water supply, metals and plastics.
- 9. Standards, tools and guidelines:** Standards, tools and guidance documents are available to assist humanitarian responders in managing environmental impacts and risks. In the absence of other guidance, the Sphere standards should be applied.
- 10. UN assistance:** Humanitarian operations can be assisted on environmental issues through the Joint UNEP-OCHA Environment Unit (during the emergency phase) and the UNEP Post-Conflict and Disaster Management Branch (during the early recovery phase). Contact details for both can be found at the back of this brochure.

Why do the environmental impacts of emergencies matter?

Environmental issues directly affect core humanitarian areas. However, humanitarian responders can take steps to address these and can draw on available expert knowledge and support. The environmental impacts of disasters and conflicts threaten people in four ways:

To be addressed during emergency response:

1. Life: The release of hazardous chemicals, as well as secondary threats (for example, from large hydroelectric dams and nuclear facilities) can create acute threats to human life. To protect local populations and those providing humanitarian assistance, experts must identify acute environmental risks as soon as possible following an emergency.

2. Health: Conflicts and natural disasters often contaminate the human environment with toxic substances and hazardous waste. Even when short-term exposure may not be life threatening, pollutants can present significant long-term risks to public health. In the hours and days following an emergency, the identification of environmental risks to public health should be a top priority.



To be addressed during early recovery:

1. Livelihoods: Damage to natural resources and ecosystems, such as forests, pastures, soil, wetlands and coral reefs, often have a devastating effect on the ability of residents to support themselves and their families. Often people are forced to switch to less sustainable, more environmentally damaging livelihoods. Identifying environmental impacts on human livelihoods is a priority during the early recovery phase.

2. Security: When critical natural resources or ecosystem services are undermined, communities become more vulnerable to natural hazards and human security is jeopardized. In other cases, damage to scarce resources can exacerbate tension over access and lead to conflict. Identifying environmental impacts to human security is a priority during the early recovery phase.

How is the environment impacted by emergencies?

Emergencies affect the environment in three ways:

Direct impacts: Disasters and conflicts can physically damage the natural environment. Examples include:

- **Afghanistan:** Thousands of hectares of forests and woodland were destroyed during 23 years of conflict.
- **Pakistan:** The 2005 earthquake triggered massive slope instability and landslides, necessitating expensive air deliveries of critical supplies.

Secondary impacts: Disasters and conflicts can also impact the *human* environment (such as buildings, dams, and infrastructure). Both impacts can compound an emergency. Examples include:

- **Kosovo:** The 1999 conflict caused health threatening chemical contamination at four industrial hot spots in Serbia.
- **Maldives:** Over 300,000 m³ of disaster and hazardous waste was spread across the tsunami-affected islands.

Impacts from relief and recovery operations: Natural resources are required to meet immediate relief needs. However, unsustainable use of these resources can create new sources of risk. Examples from the field include:

- **DRC:** 36 million trees from the Virunga National Park were used to meet the cooking and shelter needs of Rwandan refugees between 1994 and 1996.
- **Bosnia-Herzegovina:** Humanitarian aid included 17,000 tons of expired drugs and medical supplies. An incinerator had to be built at considerable cost to dispose of it in an environmentally sound manner.



What are the links between environment and humanitarian action?

The following are key environmental issues in humanitarian response clusters:

Cluster	Environmental impacts that can affect humanitarian activities	Humanitarian activities that can cause new environmental impacts
Health	<ul style="list-style-type: none"> Contamination by chemicals, hazardous waste and weapons Release of asbestos from collapsed buildings Presence of debris and carcasses Unsafe chemicals management 	<ul style="list-style-type: none"> Improper management of healthcare waste and expired medicines Improper management of chemicals required for health protection (eg. water treatment) Improper management of waste, debris and carcasses
Water, Sanitation and Hygiene	<ul style="list-style-type: none"> Contamination of water sources by chemicals, hazardous waste and weapons Damage of water and sanitation infrastructure, leading to cross-contamination Presence of debris and carcasses 	<ul style="list-style-type: none"> Over-pumping of groundwater aquifers Improper rehabilitation and decommissioning of wells Water contamination from sewage disposal Inappropriate / energy-intensive WASH systems (eg. septic tanks, desalination plants)
Shelter	<ul style="list-style-type: none"> Contamination of land by chemicals, hazardous waste and weapons Environmental hazards (eg. floods, landslides, volcanoes) Loss of forests resulting in reduced access to fuel wood and building materials 	<ul style="list-style-type: none"> Unsustainable supply of shelter construction materials Inappropriate design for a specific need, site, community or culture, leading to misuse or non-use Unsustainable use of timber and fuel wood in shelter construction Deforestation and soil erosion Inadequate disposal of construction and packaging waste
Camp Coordination and Management	<ul style="list-style-type: none"> Contamination of land by chemicals, hazardous waste and weapons Environmental hazards (eg. floods, landslides and volcanoes) 	<ul style="list-style-type: none"> Land degradation and biodiversity loss Improper management and decommissioning of pit latrines Unsustainable use of natural resources (eg. timber, fuel wood) Contamination by fuel spills and disposal of chemicals Improper decommissioning of camps Inadequate disposal of construction and packaging waste
Logistics	<ul style="list-style-type: none"> Environmental hazards (eg. floods, landslides and volcanoes) 	<ul style="list-style-type: none"> Improper management and disposal of fuel, waste oil and tires Chemicals and waste from logistics base operations Procurement of goods produced through unsustainable practices
Early Recovery	<ul style="list-style-type: none"> Damage to natural resources that support livelihoods Loss of government capacity for natural resources management 	<ul style="list-style-type: none"> Unsustainable use of natural resources for reconstruction and livelihoods Improper land use and urban planning Failure to conduct strategic environmental assessments and environmental impact assessments Inappropriate building designs or choices of reconstruction materials Unequal access to natural resources and changes in tenure Development of unsustainable livelihoods

Available standards, guidance and tools

Standards:

- **Sphere Humanitarian Charter and Minimum Standards in Disaster Response (2004):** Includes standards to minimize environmental impacts during operations and reduce conflict potential over access to natural resources. <http://www.sphereproject.org>

Guidelines:

- **Environmental Guidelines for Refugee Operations (2005)**
Identify and evaluate the most common environmental impacts in refugee or returnee situations. <http://www.unhcr.org>
- **Humanitarian Timber Guidelines (draft 2007)**
Guidelines to minimize impacts on forest resources through sustainable sourcing. <http://www.humanitarian timber.org>
- **Handbook on the Safe Management of Wastes from Health-Care Activities (WHO, 1999)**
Recommends safe, sustainable, affordable and culturally acceptable methods for the treatment and disposal of health-care waste. <http://www.healthcarewaste.org>
- **Brochure on Initial clearing of debris and solid waste (UNEP/OCHA, 2006)**
Provides guidance on safe disposal of debris and waste in the aftermath of an emergency. <http://ochaonline.un.org>
- **Environmental Guidelines (DFID, 2003)**
Include advice on environmental screening during the design of a DFID development intervention, which could inform early recovery planning. <http://www.dfid.gov.uk/pubs/files/environment-guide-2003.pdf>
- **Ecosystems, Livelihoods and Disasters (IUCN, 2006)**
Outlines linkages among ecosystem management, livelihoods and disasters. <http://www.iucn.org/dbtw-wpd/edocs/CEM-004.pdf>

Tools:

- **Framework for Assessing, Monitoring and Evaluating the Environment in Refugee-Related Operations (UNHCR & CARE International, 2005):** Toolkit for practitioners and managers to help assess, monitor and evaluate environmental circumstances, using mainly participatory approaches. http://www.benfieldhrc.org/disaster_studies/rea/frame/intro_final.pdf
- **Rapid Environmental Impact Assessment in Disaster Response (Benfield Hazard Research Centre and CARE International, 2005):** Simple framework for identifying significant environmental issues while saving lives. http://www.benfieldhrc.org/rea_index.htm
- **Environmental Risk Identification (2007):** Tool to conduct desk research to identify potentially hazardous facilities in the hours after an emergency. <http://ochaonline.un.org/ochaunep/>
- **Flash Environmental Assessment Tool (FEAT) (Release in August 2007):** Tool to identify and prioritize impacts and secondary environmental risks from chemicals in the hours and days after a natural disaster. <http://ochaonline.un.org/ochaunep/>
- **Environmental needs assessment for early recovery (Release in November 2007):** Tool to assess environmental impacts of a disaster and risks posed to health, livelihoods and security during the early recovery phase. <http://postconflict.unep.ch>

Resources

United Nations – Emergency contacts:

- **In case of acute environmental risks to life and health:**

Joint UNEP/OCHA Environment Unit (Joint Unit) - Operates at the request of affected countries in cases of conflict, disaster or industrial accidents, 24 hours per day, 7 days per week, all year round.

Office hours: +41 22 917 1142 or +41 22 917 1815,

After hours: Via OCHA 24/7 Emergency Hotline: +41 22 917 2010,

E-mail: ochaunep@un.org, Fax: +41 22 917 0257, <http://ochaonline.un.org/ochaunep/>

- **Early recovery phase:**

UNEP Post-Conflict and Disaster Management Branch (PCDMB) - Conducts field-based environmental assessments and provides environmental expertise to the UN country team and national counterparts. Integrates environmental needs within the recovery process to support the principles of “build back better” and “do no harm”.

Contact: Henrik Slotte, e-mail: Henrik.Slotte@unep.ch,

tel: +41 22 917 8530, <http://postconflict.unep.ch>

Other resources:

- **CARE International:** Works at community level to deliver immediate relief and longer-term rehabilitation. Assistance includes food and seeds, tools, temporary shelter, clean water, sanitation services, medical care, family planning, reproductive health services and community-based environmental assessments. *tel: +41 22 795 1020, <http://www.care-international.org/>*
- **Benfield Hazard Research Centre:** Transfers natural hazard and risk research from the academic world to the humanitarian response community. Rapid Environmental Impact Assessment in Disaster Response (REA) assistance is available within five to seven days. *Contact: Charles Kelly, e-mail: 72734.2412@compuserve.com, <http://www.benfieldhrc.org/>*
- **Disaster Waste Management (DWM):** Provides solid waste management support, from advice and training to project implementation, to communities affected by emergencies. *Contact: Martin Bjerregaard, e-mail : martin@disasterwaste.org, tel: +44 7971 49 29 57*
- **World Conservation Union (IUCN):** IUCN is not a disaster relief or humanitarian assistance organization, but can address environmental impacts by supporting rehabilitation of affected areas. *<http://www.iucn.org>*
- **Fleet Forum:** Voluntary association of more than 40 UN agencies, international organisations and NGO's that builds humanitarian transport capacity through the professionalisation of vehicle fleet management and provides guidance on reducing environmental impact of transport. *Contact: Rob McConnell, e-mail: rob.mcconnell@fleetforum.org, <http://www.fleetforum.org>, tel: +41 22 917 8738*
- **World Wildlife Fund:** Works directly with humanitarian organizations in disaster affected areas to ensure that recovery and reconstruction efforts include environmental considerations to reduce risk and vulnerability. *tel: +1 202 778 9618, <http://www.worldwildlife.org/humanitarian/>*