UNHCR The UN Refugee Agency | EMERGENCY HANDBOOK

Environmental and Extreme Weather-Related Considerations in Emergencies

30 September 2025

Key points

- Ensure potential environmental and extreme weather-related risks and challenges are taken into consideration during emergency preparedness and response phases. These should also inform funding proposals and advocacy efforts.
- Also in emergencies, consider monitoring natural resource management and environmental impacts, particularly in the areas of water consumption, biomass for energy and construction purposes, and carbon dioxide (CO_2) emissions resulting from fuel usage and supply chain.
- Undertake rapid environmental screening, using the Nexus Environmental Assessment Tool (NEAT+) or similar, to understand environmental sensitivities and identify ways to proactively mitigate risks.
- Use the multi-sectoral site assessment form when selecting locations to accommodate forcibly displaced people.
- Collaborate with agencies with environmental and climate action expertise, including development actors, local authorities and civil society groups, to mitigate both the risk of extreme weather events on forcibly displaced people, and the potential negative impacts on the environment associated with sudden influx of forcibly displaced people.

1. Overview

Meeting the basic needs of forcibly displaced people and their hosts and protecting the environment on which they depend are critical during an emergency. Sudden influxes of forcibly displaced people can impact ecosystem resources, such as clean water and vegetation cover, particularly if these resources are already scarce. This can cause **tensions with hosting communities** that erode protection space, have **health impacts**, and

accelerate existing environmental hazards or damage. **Extreme weather events**, such as floods, droughts and cyclones, can **affect people's safety and health and can damage the environment**.

Precautionary measures are preferred, to avoid or limit environmental damage and adapt to changing weather patterns, as rehabilitation or reconstruction are difficult and expensive.

Appropriate environmental, resource management and adaptation measures can minimize these potential impacts. Addressing concerns such as unregulated or overexploitation of wood/forest/vegetation or water resources, erosion and landslides, pollution of water/air/soil and unsafe waste management in the emergency preparedness and response phases can contribute to preserving the environment and improved natural resource management. **Adaptation measures**, such as flood mitigation, improved water catchment management and the **inclusion of forcibly displaced people in early warning systems** can minimize the impacts of extreme weather events. Embedding these considerations in sectoral interventions is crucial to improving the overall protection environment of forcibly displaced people and ensuring peaceful coexistence between forcibly displaced people and their hosts while also minimizing the costs of retrofitting environmental problems.

2. Relevance for emergency operations

Environmental sustainability should be mainstreamed to protect forcibly displaced people and their hosting communities and the environment.

Environmental and extreme weather-related considerations should be cross-cutting and addressed from the onset of an emergency, and preferably beforehand during the preparedness phase. This preparedness phase is a critical moment, when environmental challenges can be identified and properly addressed, enhancing resilience, safety and self- reliance, and environmental degradation mitigated.

Natural hazards and extreme weather-related risks should also be taken into account when preparing for and responding to emergencies, to avoid further suffering and to enhance climate resilience. Adaptation measures are paramount to ensure that forcibly displaced people do not settle in areas with hostile climatic conditions, which will further negatively impact their lives.

3. Main guidance

Why consider environment and climate hazards in emergencies: improving protection outcomes

- **Proactively integrating environmental and extreme weather-related considerations** from the outset has been shown to significantly enhance protection outcomes. When environmental management is prioritized—such as through cleaner fuel alternatives and better control of dust from construction—vulnerable groups including the elderly, women, and younger community members benefit from improved air quality and reduced incidence of respiratory disease. Moreover, inclusive planning for extreme weather

events, such as floods or cyclones, can greatly strengthen community resilience. For instance, ensuring that early warning messages are accessible to those who stay more at home because of mobility challenges or caregiving responsibilities—such as older adults, disabled individuals, and those engaged in domestic roles due to cultural norms—can help ensure timely and effective responses across all segments of the population.
- **Improving access to cooking fuel/firewood supports environmental protection** with positive outcomes on women and children, as detailed in the entry on Energy needs.
- **Safe waste management practices reduce health risks**: safe locations for waste disposal minimize the need for dangerous solutions such as burning waste, which result in improved air quality with positive impacts on public health and the environment.
- **Management of the environment and preservation of ecosystem resources** (water, biomass etc) can foster **positive relationships and co-existence** within the forcibly displaced population and between forcibly displaced people and host communities, potentially preventing further conflicts and/or onward displacement.
- **Preventing deforestation and protecting soil coverage** can minimize the formation of gullies and ravines and **reduces the risk for landslides and other disasters**, as described in the entry on Safe and Secure Settlements. This helps to **protect communities and livelihoods**.
- **Inclusive planning and mitigation measures against extreme weather-related hazards and extreme weather events** – be they sudden (cyclones, floods) or slow-onset (droughts, sea level rise, temperature increases) **may prevent loss of life, spread of disease** (eg Dengue fever, malaria), **loss of assets, serious damage to livelihood opportunities, and eventually prevent further displacement, or allow for safe return to areas of origin.**

Improving outcomes for the environment

- **Proactive management and prevention of run-off into streams** and rivers **may protect water sources, contributing to the availability of safe water resources** for forcibly displaced people and host communities who use it for drinking, cooking, bathing or agriculture at risk. Preventing toxins that accumulate in the food chain can further minimize health risks.
- **Safe waste disposal prevents accumulation of chemicals in soils and the air**, resulting in safer, cleaner environments for forcibly displaced people and host communities. Well managed solid waste also minimizes breeding places for disease vectors.
- **Healthy soils, waterways and forests contribute to livelihoods (such as agriculture) and development** opportunities of forcibly displaced people and host communities. Conversely, sustainable land use practices may further promote healthy soil, land and vegetation.
- **Sustainable use of natural resources** (water, biomass, land) contributes to **healthy biodiversity and ecosystems**.
- **Minimizing the production of greenhouse gas emissions** helps to mitigating rising temperatures and the resulting risk of extreme weather events.
- **Mitigating extreme weather events and associated excessive temperatures** associated may help to **prevent health consequences** (dehydration, heat stroke, worsening of medical conditions).

Key decision points

Assessments: At the start of an emergency response, consider mainstreaming environmental assessments, where relevant, into multisector or sector assessments as early as possible so that the response can take risk-informed decisions. Where this is not possible, standalone rapid environmental screenings (eg via NEAT+) can be used to identify key risks.

Refer to the multi-sectoral site assessment form for key considerations regarding climate, environmental and natural hazards when selecting new sites for the establishment of formal settlements, and the extension of existing ones. Considerations should include:

- Whether the site is prone to disasters and extreme weather events, including but not limited to: flooding, landslides, droughts, high winds, sandstorms, heatwaves, cyclones, sandstorms etc;
- Maximum and minimum temperatures;
- Dominant and secondary vegetation cover;
- The presence of protected areas and natural ecosystems such as national parks, reserves, forests, riverines, streams or lakes;
- Environmental health hazards such as malaria, dengue, bilharzia, cholera or pollution e.g. air, water.

Procurement: To reduce the environmental impact of emergency operations on host communities, the procurement of goods—such as plastic sheeting, tents, and other core relief items (CRIs)—must be carefully assessed to balance life-saving needs, logistical constraints, and sustainability considerations. With support from the Procurement Section (Supply Management Service) (accessible to UNHCR staff only), appropriate procurement strategies should be identified based on the specific context. New specifications with the highest durability standards and lowest costs are available for a range of CRIs, including blankets, buckets, family tents and more. Where feasible, locally available solutions may be considered to meet both emergency and environmental requirements.

Guidance: The Green Companion offers practical tools, case studies and good practices to reduce the environmental impacts across sectors, including considerations for shelter and household lifecycle, energy, WASH and solid waste management.

Additional operational guidance, tools and best practices including adaptation and mitigation measures are provided through UNHCR's Geneva Technical Hub.

UNHCR's Extreme Heat Action Profile details key initiatives and resources to promote resilience via operational adaptations and integrated heat preparedness and adaptation strategies.

Key management considerations

All sectors should mainstream considerations for environmental and extreme weather events-related from the outset of an emergency to enhance protection and self-reliance. In order to prevent environmental degradation, resources may be required to implement mitigation measures, as well as train staff and partners, and engage in awareness campaigns with affected people. Consideration should be given to ensure the appropriate range of expertise, including

technical and/or protection colleagues, within the existing team or through partners.

Checklist

- Advocate for considerations for environment and extreme weather events to be embedded in sectoral responses.

- As a minimum, consider guidance and findings from existing risk plans, local knowledge, data on hazard risk analysis and mapping of flooding, landslides and water bodies in the selected site, as well as historical assessments, data and evidence. This will prevent implementation in areas historically affected by disasters and prevent onward displacement and will facilitate the integration of previously existing measures. Further, it supports the spirit of inclusion from the start by building on local knowledge. If time and resources allow, consider a rapid environmental assessment using NEAT+.

- The environmental assessment of the proposed site should inform the settlement design. Should time or resources for a complete environmental assessment not be available, settlement planners can use the multi-sectoral site assessment form. Refer to Principles 2 and 3 under UNHCR's Master Plan Approach to Settlement Planning (MPAT) for key environmental considerations and defining the site carrying capacity.

- Develop a response plan in association with government counterparts, selected partners and technical services.

- Consult both the forcibly displaced and host communities on habits and traditions that might increase the burden on the environment. Consider cooking, shelter, commonly used construction materials, use of space, and livelihoods (especially pastoral, livestock and agricultural activities).

- Draw up and implement awareness-raising campaigns on environmental management and early warning systems. These should benefit forcibly displaced as well as host communities.

- Take steps so that, as far as possible, all domestic and institutional energy needs are met in a sustainable manner. Wherever feasible, energy needs should be met from

renewable sources. If biomass is used for energy needs (especially cooking), encourage the use of sustainable ones (eg briquettes from agriculture activities). Refer to the entry on Energy needs.

- Take steps to prevent pollution of soils or surface waters by adopting appropriate wastewater and waste management and erosion controls, avoiding major changes in landscape and integrating “green buffer zones”.

- If need be, partners and community mobilizers should be trained to build their capacity to implement, monitor and evaluate environmentally informed responses.

4. Standards

Sphere Standards on Water Supply, Sanitation and Hygiene Promotion

Water supply standard 2.1 (Access and water quantity): People have equitable and affordable access to a sufficient quantity of safe water to meet their drinking and domestic needs. Guidance note addresses environmental impacts of water source selection, prevention of contamination of water sources and water reuse.

Excreta management 3.1 (Environment free from human excreta): All excreta is safely contained on-site to avoid contamination of the natural, living, learning, working and communal environments.

Excreta management 3.3 (Management and maintenance of excreta collection, transport, disposal and treatment): People live in an environment where vector breeding and feeding sites are targeted to reduce the risks of vector-related problems.

Vector control standard 4.1: (Vector control at settlement level): People live in an environment where vector breeding and feeding sites are targeted to reduce the risks of vector-related problems. Guidance note addresses biological and non-chemical control to avoid chemical contamination of the environment, including guidance on environmental engineering responses.

Solid waste management standard 5.1 (Environment free from solid waste): Solid waste is safely contained to avoid pollution of the natural, living, learning, working and communal environments.

Solid waste management standard 5.3 (Solid waste management systems at community level): Designated public collection points do not overflow with waste, and final treatment or disposal of waste is safe and secure.

Sphere Standards on Food security and nutrition

Food security and nutrition assessments standard 1.1 (Food security assessment): Where people are at risk of food insecurity, assessments are conducted to determine the degree and extent of food insecurity, identify those most affected and define the most appropriate response. Guidance note links environmental degradation and food insecurity.

Food security standard 5 (General food security): People receive food assistance that ensures their survival, upholds their dignity, prevents the erosion of their assets and builds resilience. Guidance note links environmental impact to access to cooking fuel.

Food assistance standard 6.2 (Food quality, appropriateness and acceptability): The food items provided are of appropriate quality, are acceptable and can be used efficiently and effectively. Guidance note addresses responsible food packaging.

Livelihood standards 7.1 (Primary production): Primary production mechanisms receive protection and support. Guidance note addresses energy needs for food production.

Livelihood standards 7.2 (Income and employment): Women and men receive equal access to appropriate income-earning opportunities where income generation and employment are feasible livelihood strategies. Guidance note considers environmental management livelihood opportunities.

Sphere Standard on shelter and settlement (environmental sustainability)

Shelter and settlement assistance should minimize any negative impacts of programmes on the natural environment.

Sphere Standard on Health

Communicable diseases standard 2.1.1 (Prevention): People have access to healthcare and information to prevent communicable diseases. Guidance note links environmental sanitation, vector control and solid waste to intersectoral prevention measures.

Child health standard 2.2.2 (Management of newborn and childhood illness): Children have access to priority healthcare that addresses the major causes of newborn and childhood morbidity and mortality. Guidance note links household air pollution and related respiratory illnesses.

Commitment 9 of the Core Humanitarian Standard

The Core Humanitarian Standard on Quality and Accountability (CHS) recognizes that the environmental impacts of all sectoral activities should be assessed and mitigated. Displaced people and their hosts can expect that organizations assisting them are managing resources effectively, efficiently and ethically.

5. Policies and guidelines

UNHCR, The Green Companion Guide, 2023

UNHCR, Global Strategy for Sustainable Energy 2019-2025

UNHCR Compendium: Protection-sensitive access to lighting, 2022

UNHCR Compendium: Protection-sensitive access to clean cooking, 2021

6. Links

Nexus Environmental Assessment Tool (NEAT+) frequently asked questions Strategic Framework for Climate Action Operational Strategy for Climate Resilience and Environmental Sustainability 20... The Sphere Project, Reducing environmental impact in humanitarian response The Climate and Environment Charter for Humanitarian Organizations UNHCR Policy on Emergency Preparedness and Response Focus Area Strategic Plan for Climate Action

7. Main contacts

Contact the Technical Support Service (TSS), Division of Emergency and Programme Support (DEPS) at: hqsl00@unhcr.org