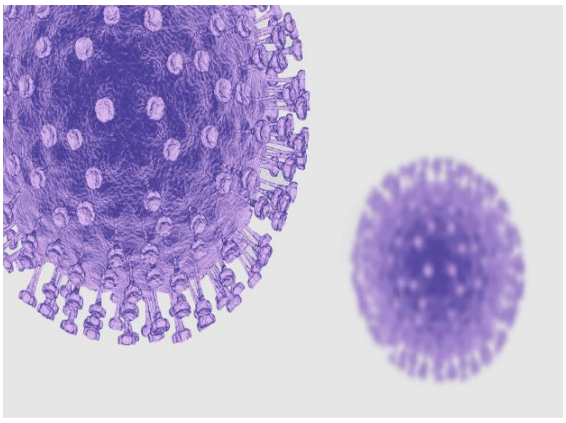
Green Response
Factsheet: COVID-19



This fact sheet is based on:

1) Recommendations captured in the environmental assessment after the Red Cross and Red Crescent Movement response to the 2016 Sierra Leone Ebola Virus Disease Epidemic.

2) Learnings from environmental mainstreaming in humanitarian action. Information has been added relevant to the ongoing COVID-19 pandemic.

Life-saving interventions are at the heart of our mission as the Red Cross and Red Crescent Movement and will always remain our priority. The humanitarian imperative always comes first - it is not about *if* but *how* we address humanitarian needs.

We know that our interventions may have negative impacts on the environment. Incorporating environmentally responsible practices in our work is designed to reduce risk and vulnerability and improve the outcomes of our interventions for the communities we serve. Clean and readily available water in sufficient quantity and quality, and healthy and productive soils to cultivate food are two examples of services provided by nature that support human survival and well-being. A healthy environment can help to absorb, anticipate and adapt to climate shocks and stresses, improving people's resilience and facilitate a safer recovery from disasters. A degraded and unhealthy environment can worsen the impacts of disasters, delay recovery, and increase future risks.

This fact sheet is designed to raise several key issues and is not meant to be final or definitive sector specific guidance.

For more information on the work we are doing on integration of environmental considerations, see the Green Response website: https://media.ifrc.org/ifrc/green-response/.

Integration of environmental considerations in Covid-19 humanitarian response:

Key Issues

Below are a few key issues to consider. The list is not exhaustive and will change over time. Addressing these issues is context specific, these are general guidelines only.

Sphere

Refer to the Sphere thematic sheet "Reducing environmental impact in humanitarian response" with specific information on how to integrate environmental considerations in humanitarian response: https://www.spherestandards.org/resources/thematic-sheet-environmental-impact/.

Swedish Red Cross

PPE – (Personal Protection Equipment)

- Follow existing and updated guidelines for the COVID-19 pandemic on the use of PPE.
- Avoid accumulation of large quantities of potentially contaminated material by setting up a waste management system.
- Properly manage and disposed of PPE to reduce risk of clogging drainage systems and increasing flood risk.

Guidance on disposal of PPE

It is essential to avoid waste accumulation and associated risks to both human and environmental health. Incineration or burying may be options but both alternatives have issues.

Incineration – needs to be done in a controlled way to reach high temperatures. An incomplete combustion of plastic can produce persistent toxic and eco-toxic compounds such as dioxins and furans, potentially harmful to both human and environmental health, and lead to an incomplete elimination of pathogens. *Guidance on incineration can be found at the end of this document.*

Burying – PPE containing plastic will not decompose for a long time, but if properly buried it will not contaminate.

Chlorine Disinfectant

Chlorine dissolves when mixed with water. It can also escape from water and enter air under certain conditions. Most direct releases of chlorine to the environment are to air and to surface water.

Although chlorine itself usually does not cause environmental harm, it combines rapidly to form chemicals such as dioxins that pollute water, contaminate fish and transfer to humans and larger animals that eat fish.
Because of its reactivity chlorine is not likely to move through the ground and enter groundwater.

Plants and animals are not likely to store chlorine. Laboratory studies however show that repeat exposure to chlorine in air can affect the immune system, the blood, the heart, and the respiratory system of animals.
Incidents of symptomatic exposure to workers has been reported in previous response operations (ex. Ebola response, Sierra Leone 2016).

Key factors that reduced the environmental impact of chlorine use in the Ebola response were;

- the early adoption of soap instead of chlorine for regular hand washing of the general public
- careful regulation of mixing and use of chlorine to avoid exposure to high concentrations
- appropriate precautions and management of transport and storage, good education of workers around the proper use and management of chlorine
- careful management of waste water to avoid contamination of waterways and large areas of land

Better education of Red Cross and Red Crescent personnel on chlorine use is essential particularly early in the response phase, to reduce health risks associated with the handling of chlorine

Zoonotic Disease

COVID-19, caused by the coronavirus, is a zoonotic disease, meaning it originated from an animal. The source of the outbreak is believed to have been a "wet market" in Wuhan, China, that sold live and dead wildlife and domestic animals, along with other foods for human consumption. Such markets can be a source of disease, with viruses shed by stressed animals warehoused together mixing with other bodily fluids in unhygienic conditions.

More information on the links between zoonotic disease and the environment will be provided in future guidance.

Solid waste management

Follow existing guidelines on https://ifrcwatsanmissionassistant.wordpress.com/covid-19/ and https://apps.who.int/iris/bitstream/handle/10665/259491/WHO-FWC-WSH-17.05-eng.pdf?sequence=1&isAllowed=y.

Incineration Guidelines

- Open-burning (including burning in barrels) should be avoided as it does not reach high temperatures, resulting in the production and release of Persistent Organic Pollutants (POPs) and incomplete elimination of pathogens.

- Incineration at high temperature (at least 900°C as per Sphere standards) is recommended for medical waste, and incineration of chlorine containing material should be avoided (source of POPs). Incineration of vials should be avoided as well as there is a risk of explosion during the incineration process.

- Different options of small-scale incinerators can be implemented, depending on the context. For field and mobile clinics, portable incinerators can provide an alternative while more permanent solutions are not available and should be integrated in the basic standard equipment of field hospitals and mobile clinics.

- Incineration solutions must be coupled with infrastructure for safe management of ashes (e.g. ash pit).

Key resources - incineration

Managing Health Care Waste Disposal, PATH, 2004:
https://mw-incinerator.info/en/201_guidelines.html
Guidelines focusing on the specification, construction, installation, operation, and maintenance of a self-built De Montfort incinerator. The document addresses common dimensional and construction quality inconsistencies by providing clear technical specifications and engineering drawings for each component of the De Montfort.
Document available in English and French.

The incinerator Guidebook, PATH, 2010:
https://www.path.org/resources/the-incinerator-guidebook-a-practical-guide-for-selecting-purchasing-installing-operating-and-maintaining-small-scale-incinerators-in-low-resource-settings/
Short practical guide for selection, purchasing, installing, operating and maintaining small-scale incinerators in low-income countries for healthcare waste management. The guide includes in Annex a Buyer's Guide with list of small-scale incinerators commercially available.

Prepared in collaboration with **WWF Environment and Disaster Management** *Help Desk*
http://envirodm.org/helpdesk
envirodm@wwfus.org

Swedish Red Cross
International department
Hornsgatan 54 (P.O.Box 17563)
118 91 Stockholm, Sweden

Caroline Gårdestedt, Sr Advisor
Email: caroline.gardestedt@redcross.se
Telephone: +46 76 837 11 67 (direct)
Telephone: +46 8 452 46 00 (office)