

## WASH Technical Operations: Sanitation

### Scope and Application

*Objective of the intervention: To ensure that appropriate and equitable sanitation facilities are available to all, in a way that maintains dignity for safe excreta disposal, clean bathing and laundry spaces to realize the human right to sanitation for all. Physical and affordable access to sanitation in all spheres of life minimizes the risk of WASH-related disease and environmental degradation, and maintains dignity, safety, hygiene and security.*

### Excreta containment and bathing and laundry facilities

Safe disposal of human excreta is essential to decreasing diarrheal disease by reducing transmission routes, and will likely form part of any WASH emergency response. IOM WASH ensures the environment is free from faeces by aiming for immediate responses (e.g. emergency pit latrines) whilst aiming to avoid open defecation areas where possible, acknowledging that all responses should adapt and evolve with the crisis over time. All sanitation facilities should include hand-washing facilities with soap, soapy water or chlorine solutions as context-appropriate, promoting hand hygiene and safe menstrual hygiene management (MHM) practices (refer to WASH Technical Operations: Hygiene Promotion page).

Bathing and laundry facilities should also be constructed to ensure dignity and to promote safe hygiene practices (such as cleaning and drying of menstrual cloths), enclosed for privacy and with adequate spacing (especially for mothers and babies), and with water points at the facilities or close by for ease of use.

### Wastewater management

Wastewater is released from WASH facilities such as water coming from laundry, bathing and kitchen areas, as well as black water and/or faecal sludge coming from excreta containment areas. Wastewater management is often overlooked in emergencies given that it can rapidly infiltrate through soil, run into surface water or be buried. However, wastewater, if not managed appropriately can cause environmental pollution, attract vectors and spread disease. Alternatively, if capitalized upon, wastewater can be used for alternative benefits such as for fertilization for crops or treatment and re-use to increase water supply.

Wastewater management needs to achieve quality parameters for safe disposal to its various end points. There are a wide variety of methods and technologies to treat wastewater which can include, but are not limited to, tiger worm toilets, up flow filters, geotubes, constructed wetlands, decentralized wastewater treatment, anaerobic baffled reactors, lime stabilization, anaerobic lagoons, aerobic treatment and desludging and disposal. The technology used will depend on the characterization of the wastewater (e.g. number and type of pathogens, nutrients, water content, pH, oil, grease, grit, biochemical oxygen demand and chemical oxygen demand) as well as other contextual factors (refer to Context analysis section of WASH Programming page and Placement and design of WASH facilities section of WASH Technical Operations: Key Considerations page).

Being able to treat large volumes of faecal waste on-site rather than having to transport it elsewhere is critical for sustainability, environmental protection and public health. As with all WASH interventions, wastewater management can be **scalable** throughout the emergency, using simple measures and parameters for **immediate** response, with the long-term aim for decentralized and on-site treatment methods that achieve water quality parameters for safe disposal to an approved location.

### Solid waste management

Solid waste management is the systematic practice of daily collection, segregation and adequate disposal/re-use/recycling of garbage. Poor solid waste management practices can cause serious health risks by creating potential vector breeding grounds, contaminating water sources and creating feeding risks to livestock and air pollution if the waste is burnt. The accumulation of solid waste can also result in blocked drainage channels and fire risk. Effective waste management can increase the lifespan of products, reduce environmental degradation and in some cases can be capitalized on to provide alternative positive outcomes such as through composting of organics for agriculture or re-use of valuable materials such as lead or mercury from e-waste products.

Depending on local context, a mix of garbage bins (at household level or communal), intermediary disposal sites (garbage pits inside the camps) and final disposal sites is the common approach. Waste segregation in camps, with reference to plastic and organic products, should be promoted especially in cases where the local market can play an active role in the process (e.g. presence of plastic recycling companies or possibility to sell the compost to local farmers). According to the circumstances and environmental

regulations of the host government, IOM may need to construct landfills, given suitable permissions are obtained including management of fleet trucks and operators to support waste management after a crisis. Solid waste management activities can also include more simple interventions such as community clean-up activities to ensure solid waste doesn't build up and cause issues in terms of vector control or drainage blockages. Hazardous wastes also need to be managed where used, such as aluminium residual from water treatment operations, mercury from e-waste or solar lanterns, lead from batteries, or expired or leftover chemicals such as chlorine or vector insecticide.

## Links

- [SPHERE Standards, Excreta Disposal](#)
- [FSM Toolbox](#)
- [SPHERE, Solid Waste Management](#)
- [Global WASH Cluster: Sanitation Zip Drive](#)
- [Compendium of Sanitation Technologies in Emergencies](#)

## Media



[Approaches to deliver IOM WASH in emergencies](#)

## References and Tools

- [Compendium of Sanitation Technologies in Emergencies](#)
- [Compendium des technologies d'assainissement dans les situations d'urgence](#)
- [WEDC Technical Note on Excreta Disposal in Emergencies \(2007\)](#)
- [IOM WASH Technical Guidance - Waste Management During Disease Outbreaks \(July 2022\)](#)
- [OCHA Disaster Waste Management Guidelines \(2011\)](#)
- [Sampling for Faecal Sludge and Other Liquid Wastes in Emergency Settings \(2021\)](#)
- [Menstrual Disposal, Waste Management & Laundering in Emergencies - A Compendium \(2020\)](#)

## Other Entries in this Topic

- [Water, Sanitation and Hygiene \(WASH\)](#)
- [WASH Approaches](#)
- [Cross-Cutting Themes within WASH](#)
- [WASH Programming](#)
- [WASH Technical Operations: Key Considerations](#)
- [WASH Technical Operations: Hygiene Promotion](#)

## Contacts

IOM's Global WASH Support Team is available to support country missions in a variety of ways as outlined in the IOM Global WASH Support Team mechanisms, including surge support, remote support and/or monitoring, evaluation and learning.

The Global WASH Support Team can be contacted for additional information or specific guidance at [washsupport@iom.int](mailto:washsupport@iom.int).

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