

# Water supply

## Water is essential for life, health and dignity.

Demands for and availability of water in emergencies will vary depending on:

- **nature and scale of the emergency:** flooding or drought limiting supplies
- **affected locations:** climate, seasons, water sources, security, geology, urban/rural
- **affected populations:** density, pre-existing health and hygiene practices, culture

In severe emergencies there may insufficient water to meet basic needs. Priority must be given to addressing survival needs (drinking and cooking) for all, followed by a staged approach to meeting basic needs as the situation improves.

## Providing sufficient water in emergencies

Selection of appropriate **water sources** will be affected by:

- type, availability, yield, quality of sources: boreholes, wells, rivers, rainfall collection
- rehabilitation needed: urban pumped/piped supplies, cleaning wells after flooding
- quantities needed for different groups for survival, basic hygiene, livestock
- proximity to the affected population and potential risks in water collection
- social, political or legal considerations such ownership or usage rights, and costs

Ground water sources such as springs are preferable as they require minimal treatment. Water quantity and quality are important but in emergencies, priority is given to providing sufficient quantity for survival, even if of intermediate quality. Environmental impact, sustainability and seasonal variations should be considered.

## Water quantities to meet basic survival needs (Sphere Handbook)

Quantity required to meet basic needs will be highly dependent on local climate, livestock requirements, cooking and hygiene practices, differing habits of men and women, cultural and religious practices e.g. washing before prayer.

<b>Survival needs</b> (drinking and food preparation)	2.5-3 litres/day	Depends on climate, individual size
<b>Basic hygiene practices</b>	2-6 litres/day	Depends on social and cultural norms
<b>Basic cooking needs</b>	3-6 litres/day	Depends on food type, norms

## Quality and treatment of water in emergencies

- **Assess contamination risks and identify sanitary practices and effective treatment measures** with water and sanitation teams and affected populations.
- **Understand local norms in sourcing water.** Unprotected sources such as rivers, lakes or unprotected wells may be preferred due to taste, convenience or physical safety e.g. collecting water from the same location as washing clothes.
- Safe water can be contaminated during collection, transport or storage. **Provide suitable containers and treat at source.**
- Treat all drinking water supplies where there is **threat of diarrhoea epidemic.**
- **Facilitate household-level treatment** when treatment at source or centrally is not possible. Details on options and methods in Resources below.
- Facilitate effective **promotion, community sensitisation, training and on-going monitoring** as an integral part of effective treatment and hygiene promotion.
- **Adapt water containers and collection points** e.g. taps or hand pumps for use by the elderly, children, the disabled, ill and those affected by HIV and AIDS.
- **Engage the affected population, particularly women** in siting water points and design of facilities for bathing, laundry, washing and drying underwear.



Image credit: Adam Bacher for Mercy Corps, Haiti

## Key questions

### Assessment

Public health risks and local sanitation practices?

How much water for different uses by different groups?

Local skills available?

### Location and protection of water sources

Nearest/most convenient water sources?

How to protect these?

### Water treatment

Contamination risks?

Water treatment needed?

If so, appropriate methods and likely consequences?

### Water distribution

How can sufficient safe water be distributed most effectively?

Easy and safe access by all?

### Transport and storage

How to store and transport for drinking and domestic use?

Image source: WASH Visual Aids Library <http://ceecis.org/washtr/aining/index.html>

### Additional resources on All In Diary website

Water supply in emergencies, © Practical Action, 2012  
Emergency treatment of drinking water at point of use © WHO 2013  
How much water is needed in emergencies © WHO 2013

### Web links for further information

WEDC - WHO technical notes for emergencies;  
[http://wedc.liboro.ac.uk/knowledge/notes\\_emergencies.html](http://wedc.liboro.ac.uk/knowledge/notes_emergencies.html)  
Water aid: <http://www.wateraid.org/uk/>