

## Key messages

### Access and Quantity

- All people have adequate and equitable access to sufficient water to meet their basic needs.
- Insufficient or contaminated water is the cause of the most significant risks to health.
- Groundwater sources are likely to require less chemical treatment and provide a more consistent supply of water.
- Vulnerable groups receive particular attention with regards to access and protection.
- Provisions for watering livestock are in place.

### Water Quality

- Water should be palatable, sufficiently potable without causing significant risks to health.
- Water contamination at source or post delivery can pose a significant risk to health.
- Ensure the regular monitoring of potability indicators: residual disinfectant (usually chlorine), faecal *coliforms* and turbidity (pre and post-delivery).
- The camp population should preferentially select protected water sources over unprotected sources.

### Water Use Facilities and Goods

- Each household has at least 2 clean jerry cans (between 10-20 litres) and sufficient storage provisions to store at least 4 litres per person (assuming a constant water supply is available).
- Collection containers (jerry cans) have narrow necks and / or lids.
- Communal laundry areas have at least 1 basin per 100 people.
- Bathing facilities are sited in consultation with vulnerable sections of the community and provisions for washing (soap, ash, clean sand) exist.

## WATER SUPPLY, ACCESS AND QUALITY

### INTRODUCTION

The adequate provision of potable water to a camp population is obviously essential for life. Providing water goes beyond engineering interventions. It also involves participatory planning, ensuring equity in access, awareness-raising on water use and post-delivery storage. Water providing agencies are required to work with a range of agencies working in other camp sectors in order to support the effective and safe use of protected water sources, in addition to ensuring that water sources are not threatened by contamination.

### KEY ENVIRONMENTAL CONSIDERATIONS

The main aim of providing water to a camp population is to do so in a manner that does not deplete the sources of water exploited. This infers that the status (and re-charge rates) of water supplies (particularly groundwater sources) must be known before a water supply programme commences. Regular monitoring of the water table must be undertaken in order to assess the impact of exploiting a water source.

Since there are a number of activities that can result in the contamination of water sources, it is essential that an agency responsible for providing water works closely with agencies involved in other sectors including:

- sanitation – location and design of latrines, location and design of burial sites, solid waste management, excreta disposal, bathing / washing facilities, vector control and awareness-raising;
- agriculture – pesticide use or livestock management;
- health – disposal of medical waste;
- education – hygiene awareness; and
- income generation – use of water and disposal of waste.

Wherever feasible, solar pumps should be used for the pumping of water to collection points.

In order to conserve water, it is suggested that awareness-raising activities focus on the use of grey water at the family level, whilst assisting in the establishment of gardens at drainage points of water sources and washing / bathing areas is beneficial in terms of reducing contamination of water sources, using grey water and providing additional food sources.

In areas of moderate to high rainfall, rainwater-harvesting systems should be constructed (at both family shelters and institutions in the camp).

## CHECKLIST

### Water access and quantity

- √ Conduct a water use survey to ascertain water quantity needs (including institutions and income generating activities).
- √ The average requirement for drinking, cooking, hygiene – 15 litres per person per day.
- √ A water point should be no more than 500m from the user.
- √ Queuing time should be no longer than 15 minutes.
- √ It should take no more than 3 minutes to fill a 20 litres container.
- √ Vulnerable members of the community should be provided with smaller jerry cans if carrying weight may be an issue.
- √ Community consultation in the design of a water supply system is important.
- √ Ensure that neighbouring host communities have similar water access provisions.
- √ All water sources should be maintained and be in working order.

### Water quality

- √ Conduct a sanitary survey to assess water contamination risks (pre and post delivery).
- √ Ensure that latrines and burial grounds are at least 30 metres away and downstream from water sources.
- √ Ensure the protection of water sources from contamination (surface run-off, effective drainage).
- √ Provisions should be made to the camp population for the cleaning of jerry cans and storage vessels.
- √ Ensure that water quality and related health risks are included in sanitation awareness programmes.
- √ Monitor the use of chemicals in the camp environment (vector control, pesticides).
- √ Monitor solid waste management and excreta disposal practices.

### Water use facilities and goods

- √ Each family has suitable water storage vessels.
- √ Bathing areas are constructed in consultation with camp residents.

### Environmental activities

- √ Promote rainwater harvesting.
- √ Promote grey water use.
- √ Establish community gardens at water points.

## Further reading and resources

**Humanitarian charter and Minimum Standards in Disaster Response** (Sphere project, 2004).

[www.sphereproject.org/component/option,com\\_docman/task,cat\\_view/gid,17/Itemid,203/lang,English/](http://www.sphereproject.org/component/option,com_docman/task,cat_view/gid,17/Itemid,203/lang,English/)

**Minimum Water Needed for Domestic Uses** (WHO, 2005).

<http://www.who.or.id/eng/contents/aceh/wsh/water-quantity.pdf>

**Guidelines for Drinking-Water Quality** (WHO).

[http://www.who.int/water\\_sanitation\\_health/dwq/guidelines/en/](http://www.who.int/water_sanitation_health/dwq/guidelines/en/)

**Guidelines for Water Treatment in Emergencies** (Oxfam, 2003).

<http://www.reliefweb.int/library/documents/2003/oxf-gen-15sep.pdf>

**Disease Control Priorities in Developing Countries, "Water Supply, Sanitation and Hygiene Promotion"** (DCPP, 2006).

<http://files.dcp2.org/pdf/DCP/DCP41.pdf>

**Water and Sanitation in Emergencies. Good practice review1** (ODI, 1994).

<http://helid.desastres.net/en/d/Jwho93e/>

**Water Manual for Refugee Situations** (UNHCR, 1992). <http://www.unhcr.org/3ae6bd100.html>

*ProAct Network is a Swiss-based non-governmental environmental organisation. Our work aims to help vulnerable communities improve their resilience to disasters, climate change and humanitarian crises, through sustainable environmental management. This briefing note was compiled under the project "Strengthening Environmental Awareness and Management Capacity in Norwegian Church Aid (NCA) in Darfur", funded by Christian Aid.*

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