

ten years is the importance now being assigned to hygiene. This was very clear in the Darfur camps, when water quality was basically very good from handpumps but water-related disease, including Hepatitis E, was rampant in many camps.

When the *tsunami* occurred, WHO put out a statement in the first days of the crisis saying that, if the water and sanitation side were not addressed, then more people would die from water-related disease than from the *tsunami* waves. In reality this did not happen. The first lesson for such a disaster now seems to be very clear: the provision of clean water and sanitation is of course important, but basic hygiene practices such as hand washing and personal hygiene are equally critical in the prevention of disease.

Under the banner of sanitation also comes solid waste. The *tsunami* spread millions of tons of solid waste all across the southern Asia region that will affect the environment and health of the people of those countries for many years to come. National governments, international agencies, NGOs, local government and civic organizations had little or no experience in dealing with such a wide range of issues to do with solid waste.

The United Nations Environment Programme (UNEP) held a conference in the region specifically to address the many problems created by the waste itself and what people have done with the waste. Many NGOs have for the first time run programmes in waste collection and recycling.

Conclusions

At last it is becoming clear that the world is now engaging a little more in the water and sanitation sector and realizing the importance of this sector to people's survival. But there is no time for complacency, as new solutions, greater preparedness and more widely shared training all need to be put in place if we are going to be effective in saving people's lives in future emergencies.

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WSS relating to refugees and IDPs

- **Technical notes for emergencies**
These short illustrated notes, prepared for the World Health Organization, assist those working immediately or shortly after an emergency to plan appropriate responses to the water and sanitation needs of affected populations and are relevant to a wide range of emergency situations, covering conditions in feeding centres, transit and refugee camps.
http://wedc.lboro.ac.uk/WHO_Technical_Notes_for_Emergencies/index.htm
- **'Emergency water supplies for transient populations' 1997**
This paper discusses the strategy adopted by NGOs and the UNHCR to provide water to Hutu refugees returning to their home in Rwanda in 1996.
<http://wedc.lboro.ac.uk/publications/pdfs/23/larcher.pdf>
- **'Keeping clean water clean in a Malawi refugee camp: a randomized intervention trial', 2001**
A research paper on a study to assess the ability of an improved water container to prevent household contamination of water.
[http://whqlibdoc.who.int/bulletin/2001/issue4/79\(4\)280-287.pdf](http://whqlibdoc.who.int/bulletin/2001/issue4/79(4)280-287.pdf)
- **Oxfam water and sanitation in emergencies**
Based on its work with refugees and IDPs, Oxfam has produced eight water and sanitation guidelines and manuals, covering topics such as water treatment, storage, filtration and distribution and excreta disposal.
http://www.oxfam.org.uk/what_we_do/emergencies/how_we_work/water_sanitation.htm
- **Sphere Handbook 2004 revised edition**
Chapter Two covers hygiene, water supply, excreta disposal, vector control, solid-waste management and drainage. Each contains minimum standards to be attained in the provision of water and sanitation responses, key indicators for the standard, and guidance for applying the standard and indicators in different situations.
<http://www.sphereproject.org/handbook/index.htm>
- **Visit a refugee camp**
This original site by Doctors Without Borders/Médecins Sans Frontières provides a virtual tour of a refugee camp and a range of teachers' resources. It covers the basic needs in a refugee camp including shelter, food, water, sanitation and health care.
<http://www.refugeecamp.org/>
- **Access to water in refugee situations**
A short technical brief by UNHCR presents both a clear rationale for the provision of water and practical guidelines to achieve this.
http://www.un.org/waterforlifedecade/unhcr_water_brochure.pdf
- **Emergency sanitation: assessment and programme design**
Available online, this publication provides a balance between the hardware (technical) and software (socio-cultural, institutional) aspects of sanitation programmes, and links short-term emergency response to long-term sustainability.
<http://wedc.lboro.ac.uk/publications/pdfs/es/ES04CD.pdf>
- **Emergency water sources: guidelines for selection and treatment**
Guidance is given on how to collect relevant information in a systematic way, to use this information to select a source and to determine the appropriate level of treatment required to make the water suitable for drinking.
<http://wedc.lboro.ac.uk/publications/details.php?book=1%2084380%20069%201>

Compiled by Julie Fisher, Water, Engineering and Development Centre, UK for WELL. WELL is a resource centre network providing access to information and support in water, sanitation and environmental health for the Department for International Development (DFID) of the British Government.