



An improvised washing area

affected population by setting high standards and investing considerable resources per capita. One toilet and bath cubicle per family is well above international standards such as those set out in 'Sphere' (which recommends 1 toilet for 20 people). Yet, in Little Andaman, high standards did not produce satisfactory results. This happened because another important standard, one that is not expressed in numbers, was forgotten: the standard that defines the involvement of the beneficiaries. 'Sphere Hygiene promotion standard 1' states: 'All facilities and resources provided reflect the vulnerabilities, needs and preferences of the affected population. Users are involved in the management and maintenance of hygiene facilities where appropriate.'

Unfortunately, these are notions that are not familiar to many engineers, in particular when they lack the experience of working in emergency situations. Authorities should be aware of this situation and try to ensure that a team with a larger spectrum of competence and experience is consulted when designing water supply and sanitation for refugee camps, since these are issues far too important to be left to engineers alone.

## Notes

1. Sphere (2004) *Humanitarian Charter and Minimum Standards in Disaster Response*, The Sphere project, Geneva. [http://www.sphereproject.org/handbook/hdbkpdf/hdbk\\_full.pdf](http://www.sphereproject.org/handbook/hdbkpdf/hdbk_full.pdf)
2. *Earthquake and Tsunami Relief Operations, Andaman and Nicobar Islands, Port Blair* (2005) <http://www.and.nic.in/tsunami/>

## About the authors

Jean-François Pinera (J.Pinera@lboro.ac.uk) and Bob Reed (R.A.Reed@lboro.ac.uk) work for the Water, Engineering and Development Centre, Loughborough University, UK

# webwatch

## Sustainable rural water supply

### ■ Rural Water Supply Network (RWSN)

The RWSN aims to facilitate the provision of safe water and sanitation to the poor through the promotion of sustainable technologies that are affordable to the needs of users. It functions as a global knowledge network, acting as a depository of knowledge and providing support to sector partners. The website provides access to the RWSN discussion forum and newsletter. <http://www.rwsn.ch/>

### ■ Guidelines for sustainable handpump projects in Africa

This research looks at the improved benefits from communal handpumps in Africa through an increased application of factors affecting sustainability in new projects. The project website includes all outputs from the research. [http://wedc.lboro.ac.uk/projects/new\\_projects3.php?id=47](http://wedc.lboro.ac.uk/projects/new_projects3.php?id=47)

### ■ Towards Sustainable Water-Supply Solutions in Rural Sierra Leone

Oxfam research in 2006 investigates the contention that if communities have insufficient capacity to maintain their water points, then officially prescribed systems will not be sustainable; it then considers potential options for extending access to safe water. This report also uses research by WaterAid to compare the situation in Sierra Leone with that in Mozambique. It is shown that handpumps supply the safest drinking water and are the water-lifting device that most people prefer.

[http://www.oxfam.org.uk/what\\_we\\_do/issues/health/research\\_water\\_sleone.htm](http://www.oxfam.org.uk/what_we_do/issues/health/research_water_sleone.htm)

### ■ Taking Sustainable Rural Water Supply Services to Scale: a Discussion Paper

This paper reviews some of the issues associated with scaling up an effective RWS initiative, identifying four broad categories of constraints: resources, knowledge, resistance and untested implementation conditions. [http://www.wsp.org/publications/scaling\\_up\\_press\\_20\\_03\\_03.pdf](http://www.wsp.org/publications/scaling_up_press_20_03_03.pdf)

### ■ Making rural water supply sustainable: Recommendations from a global study

This WSP study clarifies what is meant by 'demand-responsiveness' in theory and in practice, and measures the impact of this on the sustainability of rural water systems.

[http://www.wsp.org/publications/global\\_ruralstudy.pdf](http://www.wsp.org/publications/global_ruralstudy.pdf)

### ■ A multi-sectoral approach to sustainable rural water supply: the role of the rope handpump in Nicaragua

A description of the success of the low-cost rope handpump for boreholes and hand-dug wells, developed, marketed, and subsequently mass-produced in Nicaragua by local, small, privately owned workshops since the early 1990s. By 1995 the technology became an integral part of rural water programmes implemented by NGOs and government agencies, contributing to an increase in rural water supply coverage.

<http://www.wca-infonet.org/servlet/>

[BinaryDownloaderServlet?filename=1060849787088\\_WDWP81.pdf&refID=98332](http://www.wca-infonet.org/servlet/BinaryDownloaderServlet?filename=1060849787088_WDWP81.pdf&refID=98332)

### ■ Toward Equitable and Sustainable Rural Water Supplies: A Contingent Valuation Study in Brazil

This article describes a study of willingness to pay for water in Brazil, showing that surveys of actual and hypothetical water-use practices can provide policy-relevant information on this, which varies according to household socio-economic characteristics and the characteristics of the existing and new supplies of water.

<http://wber.oxfordjournals.org/cgi/content/abstract/4/2/115>

*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.*