This issue contains some of the most recent studies, guidelines, fact sheets, etc. on planning and managing WASH projects in emergency situations. Included are WHO technical notes; a Pacific Institute review on the use of mobile phones; Water, Engineering, and Development Center (WEDC) presentations on emergency sanitation in urban areas; and country reports from Haiti and Sri Lanka. Also included are links to relevant USAID, World Health Organization (WHO), and other websites.

Please let WASHplus know at any time if you have resources to share for future issues of WASHplus Weekly or if you have suggestions for future topics. An archive of past Weekly issues is available on the WASHplus website.

TECHNICAL NOTES/REPORTS


  Ecological sanitation (Ecosan) is usually only implemented in disaster relief situations in flood-prone areas and locations where excavation is not possible. In addition to meeting the sanitation needs of the affected population, Ecosan can be implemented to allow added benefits such as nutrient recovery, reforestation, and to help begin post-disaster recovery and the transition to peaceful and sustainable development. Several examples of disaster relief situations where Ecosan methods are employed are investigated.


  A portable toilet appropriate for disaster response is presented in this report. The urine is diverted and the feces undergo a lacticfermentation process. Biochar is also added to the feces to eliminate odor and facilitate the reuse of the excreta as a soil additive. The design, costs, logistics, and expected challenges are discussed.
• **Emergency Urban Sanitation: Challenges and Solutions**, 2012. IRC. ([Link](#))
  Bob Reed of WEDC shares insights on the topic of emergency urban sanitation.
  Emergency response has a history of focusing exclusively on rural communities.
  Carrying out emergency urban sanitation work poses difficult challenges as urban regions are often spread out. Included are his presentation and a briefing note.

• **Managing Menstrual Hygiene in Emergency Situations: How Far from Reality?** 2012. D Wickramasinghe, WSSCC. ([Full-text](#))
  This paper explores the issue of menstrual hygiene management in emergency situations. It also discusses common obstacles that are encountered in promoting effective menstrual hygienic practices in disaster relief programs. Learning from the 2004 tsunami relief activities, this article describes strategic actions to build capacity and develop processes to respond to the needs of menstruating women.

• **mWASH—Mobile Phone Applications for the Water, Sanitation and Hygiene Sector**, 2012. M Hutchings, Pacific Institute. ([Full-text](#))
  Mobile phones are increasingly being used as cost-effective tools for collecting data and disseminating information. Collecting, aggregating, and analyzing data from remote regions and making the data available in a transparent way can help identify where investments are most urgently needed and can improve long-term project monitoring. Mobile phones are already being used as tools for data collection and dissemination across multiple sectors, such as health, socio-economic development, agriculture, natural resource management, and disaster relief.

• **Sustainable Sanitation for Emergencies and Reconstruction Situations—Factsheet of Working Group 8**, 2012. A Johannessen, Sustainable Sanitation Alliance. ([Full-text](#))
  This fact sheet addresses current developments, challenges, gaps, and solutions in the planning and implementation of sustainable sanitation for emergencies and reconstruction situations, focusing on low and middle income countries. It is mainly intended for students, researchers, policymakers, and practitioners.

• **Technical Notes on Drinking Water, Sanitation and Hygiene in Emergencies**, 2011. World Health Organization. ([Link to technical notes](#))
  These four-page illustrated notes have been prepared to assist those working immediately or shortly after an emergency to plan appropriate responses to the urgent and medium-term water and sanitation needs of affected populations. The notes are relevant to a wide range of emergency situations, including both natural and conflict-induced disasters. They are suitable for field technicians, engineers, and hygiene promoters, as well as staff from agency headquarters.

• **Urban WASH Lessons Learned from Post-Earthquake Response in Haiti**, 2011.
Large-scale urban WASH programming requires different approaches than those normally employed during Oxfam emergency response activities. This paper examines the lessons learned from the WASH response to the Haiti earthquake in January 2010. The paper also presents practical case studies of some of the successes and failures from the WASH initiatives, which were undertaken in a very high-density urban/peri-urban context.

- **Water, Sanitation and Hygiene in Emergencies**, n.d. Johns Hopkins University. (Full-text)  
  This chapter of the *Public Health Guide for Emergencies* discusses the importance of improving water, sanitation, vector control, and hygiene in emergency settings. It explains the relationship between the environment and WASH-related diseases; presents standards and key indicators related to water supply, sanitation and hygiene in emergencies; and provides basic information about control measures for improving environmental conditions.

### JOURNAL ARTICLES

  The authors reviewed risk factors and potential infectious diseases resulting from prolonged secondary effects of major natural disasters that occurred from 2000 to 2011. Natural disasters including floods, tsunamis, earthquakes, tropical cyclones (e.g., hurricanes and typhoons), and tornadoes have been associated with the following infectious diseases: diarrheal diseases, acute respiratory infections, malaria, leptospirosis, measles, dengue fever, viral hepatitis, typhoid fever, meningitis, as well as tetanus, and cutaneous mucormycosis.

  Over the last 15 years increasing attention has been given to adolescent girls’ and women’s menstrual hygiene management (MHM) needs in humanitarian response contexts. A growing number of donors, NGOs, and governments are calling attention to the importance of addressing girls’ and women’s MHM-related needs in post-disaster and post-conflict settings. However consensus on the most effective and culturally appropriate responses to provide for girls and women remains insufficiently documented for widespread sharing of lessons learned.

- **Reinforcing Cholera Intervention through Prediction-Aided Prevention**, *Bull World Health Organ*, Jan 2012. A Akanda, Tufts University. (Full-text)  
  The established treatment methods—oral rehydration, antibiotics, enhanced water and sanitation infrastructure, and vaccination—have performed well in selected local and regional settings. However, the disease burden could be significantly reduced if these
preventive measures could be deployed ahead of time with an early warning system before a cholera outbreak hits a particular region.


This review summary presents an overview of current knowledge about what works to prevent disease during an emergency WASH response. It is known that providing safe water, safe excreta disposal, and basic hygiene measures such as hand washing with soap are effective interventions both within emergency settings as well as in longer-term development, but innovation and further research are needed to make WASH responses more effective. This article proposes key areas for critical research to support the evidence base for WASH interventions in emergencies and to promote innovation.

**WEBSITES**

- **ReliefWeb** – [Link]

ReliefWeb compiles information on humanitarian crises. It scans the websites of international organizations, NGOs, governments, research institutions, and the media for news, reports, press releases, appeals, policy documents, analysis, and maps related to humanitarian emergencies worldwide.

- **SPHERE Project** – [Link]

The Sphere Handbook, *Humanitarian Charter and Minimum Standards in Humanitarian Response*, is one of the most widely known and internationally recognized sets of common principles and universal minimum standards in life-saving areas of humanitarian response. The handbook features a chapter on WASH.

- **Sustainable Sanitation Alliance (SuSanA): Emergency and Reconstruction Situations** – [Link]

This website of the SuSanA Working Group on Emergency and Reconstruction Situations provides access to case studies, training materials, and conference information.

- **USAID Enhancing Water and Disaster Risk Reduction** – [Link]

To adapt to and mitigate the impact of natural disasters, climate variability, and global climate change, USAID works with developing countries to reduce the risk of droughts and floods through more effective water resources management and assist countries with the installation and management of disaster monitoring and warning systems.

- **USAID Office of U.S. Foreign Disaster Assistance (OFDA)** – [Link]

OFDA’s [Field Operations Guide](#) has been updated and improved to include new information on WASH and other topics. New and updated sections address humanitarian protection, safety and security issues, working with the U.S. military,
and working with USAID/OFDA's Response Management Team.

- **WHO Environmental Health in Disasters and Emergencies** – [Link](#)
  This website features WHO publications and four different series of fact sheets. The first gives information on WASH specifically in emergency situations. The second is useful in a broader context. The third provides information on vector-borne diseases in an emergency situation. Lastly, a series of fact sheets shows how a variety of diseases are affected by water and sanitation.

Each WASHplus Weekly highlights topics such as Urban WASH, Indoor Air Pollution, Innovation, Household Water Treatment and Storage, Hand Washing, Integration, and more. If you would like to feature your organization's materials in upcoming issues, please send them to Dan Campbell, WASHplus knowledge resources specialist, at dacampbell@fhi360.org.

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**About WASHplus** - WASHplus, a five-year project funded through USAID’s Bureau for Global Health, creates supportive environments for healthy households and communities by delivering high-impact interventions in water, sanitation, hygiene (WASH) and indoor air pollution (IAP). WASHplus uses proven, at-scale interventions to reduce diarrheal diseases and acute respiratory infections, the two top killers of children under five years of age globally. For information, visit [www.washplus.org](http://www.washplus.org) or email: contact@washplus.org.