MOVING TOWARD A STRATEGIC APPROACH TO SANITATION AT USAID

Background Paper for
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Cover Photo: Members of a family of 16 in rural Madagascar who will use this new SanPlat latrine when it is completed. *(photo: C.Thompson/AED)*

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ACRONYMS

CLTS	Community-Led Total Sanitation
FFP	USAID Office of Food for Peace
GH	USAID Global Health Bureau
HIF	Hygiene Improvement Framework
HIP	USAID Hygiene Improvement Project
MCH	Maternal and Child Health
MDG	Millennium Development Goals
SM	Sanitation Marketing
USAID	U.S. Agency for International Development
USG	U.S. Government
WASH	Water, Sanitation, and Hygiene
WSSCC	Water Supply and Sanitation Collaborative Council
WSP	World Bank Water and Sanitation Program

INTRODUCTION

A GLOBAL CALL TO ACTION

Diarrhea remains a leading cause of child mortality and morbidity worldwide, with 90 percent of all deaths caused by diarrheal diseases occurring among children under age five.[1] Most of the morbidity and mortality among children can be prevented through the use of straightforward hygiene improvement actions. These actions are well defined and include the proper disposal of human feces, which has been estimated to reduce diarrhea prevalence by 30 percent or more.[2]

As more information emerges on the negative impact of poor sanitation on human health, on girls' school attendance and education, and ultimately on the economies of households, communities, and nations, public health professionals are revisiting the issue of sanitation and the role of sanitation programming in improving public health. *The Lancet,* in an editorial in the November 10, 2007, issue,[3] declared that "Adequate sanitation is the most effective public-health intervention the international community has at its disposal....It is time for toilets and sewage disposal systems to be taken more seriously, not just by governments and civil society, but also by funding bodies and the global health community." *The Lancet* followed up with a March 2008 editorial urging the public health community to "keep sanitation in the international spotlight."[4]

> ***The Lancet*, March 2008 editorial:**
>
> **Keeping Sanitation in the International Spotlight**
>
> **"Sanitation has languished at the bottom of the international agenda for far too long and the global health community has been complicit in letting it stay there. This unacceptable situation must change now."**

The international community in the form of the UN General Assembly has noted the lagging progress on the Millennium Development Goal (MDG) target for sanitation[5]and has declared 2008 to be the International Year of Sanitation. In response, numerous donors and development organizations are focusing resources and efforts to address the deplorable state of sanitation in developing countries where over 2.6 billion people are without access to adequate sanitation.

ORGANIZING A USAID RESPONSE

Building on a growing base of programmatic experience, USAID seeks to develop best practices in community and household sanitation in urban and rural settings. These practices address behavioral, technological, political, and financial dimensions, and would be promoted in health-focused sanitation activities across the Agency. To this end, USAID is organizing a Sanitation Consultation to bring together international public health practitioners, water and sanitation specialists, donor representatives, and USAID decision makers. With this Consultation, USAID hopes to forge a common internal vision on community and household approaches to sanitation and ensure that investments are strategic and effectively complement other water and sanitation

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[1] WHO. 2004. *Water, Sanitation and Hygiene Links to Health*

[2] Fewtrell, L., Kaufmann R.B., Enanoria, W., Haller, L., Colford, J.M. Jr. 2005. Water, sanitation, and hygiene interventions to reduce diarrhea in less developed countries: A systematic review and meta-analysis. *The Lancet Infectious Diseases* 5(1):42-52.

[3] Editorial: Access to toilets for all. *The Lancet,* Vol. 370: 1590, Nov. 10, 2007.

[4] Editorial: Keeping sanitation in international spotlight. *The Lancet.* Vol. 317:1045, March 29, 2008.

[5] The eight MDGs were adopted by the UN General Assembly in 2000 and the sanitation target of halving the proportion of people without access to basic sanitation by 2015 was defined at the 2002 World Summit on Sustainable Development in South Africa. At current rate of progress, 600 million will be without sanitation in 2015.

efforts by USAID and others. This background paper was written to set the stage for the Sanitation Consultation by:

- Making the case for a focused USAID response to the global sanitation crisis.
- Presenting a snapshot of what USAID is doing to support global sanitation efforts.
- Laying out a menu of options that can be considered in putting together a USAID strategic approach.

OBJECTIVES OF THE USAID SANITATION CONSULTATION

1. Identify USAID's comparative advantages and opportunities in community and household sanitation programming for improved health.

2. Describe specific program approaches that USAID should take to increase access to and use of basic sanitation over the next three to five years.

3. Agree on next steps that will help USAID incorporate best sanitation practices into ongoing or new programs.

WHY AN INCREASED FOCUS ON SANITATION AT USAID AND WHY NOW?

THE EXTERNAL ENVIRONMENT IS SUPPORTIVE

Perhaps never before has international public attention been as focused on the issue of access to adequate sanitation as it is now. Sanitation has a discrete MDG target, and the International Year of Sanitation is galvanizing international focus on sanitation by donors, the UN, and the press. The Water Supply and Sanitation Collaborative Council (WSSCC) has just launched a Global Sanitation Fund to help meet the MDG sanitation target, helped by over $50 million worth of contributions from the government of The Netherlands, Sweden, Switzerland, and the United Kingdom. Thirty-two African ministers recently signed the eThekwini Declaration, which commits them to aim to spend at least 0.5 percent of GDP on sanitation and hygiene. The foreign minister of Japan stated that his government would put water and sanitation on the G8 agenda at the Hokkaido Toyako Summit in July 2008.

Although sanitation is primarily recognized for its impact on reducing diarrheal disease, it can also reduce vulnerability to other diseases such as trachoma and parasitic infections. Sanitation is recognized by many organizations and institutions as an effective intervention to improve human health, educational achievement, economic productivity, and human dignity and is fundamental to achieving all MDGs – poverty reduction, health, education, economic development, and environment.

THE INTERNAL ENVIRONMENT AT USAID IS SUPPORTIVE

The U.S. Government's Paul Simon Water for the Poor Act of 2005 called for increasing U.S. investments in water and sanitation and is linked to a recent $300 million congressional earmark for water and sanitation interventions in FY 2008. In addition to the mandate for funding detailed in the Water for the Poor Act 2008 Report to Congress, this report contains clearly defined criteria for sanitation programming. The Water for the Poor Act earmark has already increased demand from USAID Missions for guidance and technical support on sanitation. In addition, USAID's Bureau for Global Health is considering increasing investments in sanitation

programming with health-related outcomes over the next three years. This investment will help to catalyze and drive follow-up to the Sanitation Consultation.

For information on sanitation conditions and potential impacts from increased funding of sanitation in USAID Maternal and Child Health (MCH) priority countries, see Annex 5, Impact of Sanitation Coverage on Health in USAID MCH Priority Countries.

USAID'S COMPARATIVE ADVANTAGE FOR SANITATION PROGRAMMING

USAID has many areas of strength to support expanded activity in sanitation, including:

- The Bureau for Global Health's 25-year trajectory in funding health-focused water and sanitation programs (e.g., the WASH Project, the Environmental Health Project, and the Hygiene Improvement Project).
- Sanitation programming that cuts across multiple service delivery sectors, e.g., health, education, governance, water, environment, and emergency response, offering multiple entry points for expanded action.
- A diverse and interdisciplinary development portfolio that brings wide ranging expertise in areas relevant to sanitation programming, such as public-private partnerships, private sector development, innovative access to credit, and dynamic approaches to behavior change at the community and household levels.
- An extensive geographic platform including 99 missions and eight regional offices, reaching over 100 countries, through which it can support programming opportunities in sanitation.
- An opportunity to take initial steps to provide not only unified internal guidance for programming on sanitation but to also provide leadership in sanitation programming within the context of other U.S. Government (USG) investments in international health and development (e.g., maternal and child health and HIV/AIDS).

Making pourflush bowls as part of a sanitation marketing initiative supported by WSP, USAID, and others in Peru. *(photo: WSP)*

CHALLENGES FOR USAID SANITATION PROGRAMMING

Like many large bureaucracies, USAID faces political, structural, and operational issues that affect efforts to strengthen and expand sanitation programming. Key challenges may include:

- USAID implements sanitation programs through a decentralized structure that challenges the Agency to establish and maintain guidelines and best practices.
- Agency resources for sanitation are quite limited considering the number of USAID Missions and compared to the scale of sanitation funding from other donors.
- USAID budget decisions are centralized, which can impact Mission programs by inhibiting field flexibility and opportunistic programming.

- Agency technical expertise in sanitation is limited, especially in the field.
- Demand by USAID Missions for sanitation programming assistance is low and the reason for this is not entirely clear. It may indicate a lack of understanding of the value of new approaches and innovations in sanitation programming.

WHAT IS USAID DOING IN SANITATION?

USAID-supported sanitation activities can be found in projects across the USAID programming spectrum and contribute to program outcomes that go well beyond human health. For example, sanitation components can be found in governance projects as vehicles for improving citizen participation and organizational management, environmental projects to improve water quality and biodiversity, and in transition initiatives to meet local needs in repairing and replacing infrastructure.

Because sanitation is often used as a programming vehicle (rather than a programming focus) for projects that do not have sanitation or health-related outcomes, it is difficult to gather comprehensive information on USAID sanitation activities from USAID's current reporting systems. Nevertheless, a number of current USAID sanitation activities illustrate the Agency's approaches and thinking on sanitation.

ILLUSTRATIVE USAID SANITATION ACTIVITIES (see Annex 1 for more detail)

- **Global Child Survival and Health grants fund sanitation activities in 27 countries.**
- **The Hygiene Improvement Project supports sanitation marketing work in Uganda and Peru and at-scale approaches for sanitation in Madagascar and Ethiopia.**
- **The USAID Environmental Services Project in Indonesia supports improved management capacity in Indonesia's major sewer and wastewater treatment systems, community sanitation, and handling and treatment of sewage sludge.**
- **The EcoAsia Project partners with cities, utilities, and local communities to demonstrate sustainable, decentralized, and low-cost sanitation solutions.**
- **Democracy and governance projects support social infrastructure activities worldwide, which are typically coordinated through municipal governments.**
- **The Office of Foreign Disaster Assistance funds water, sanitation, and hygiene interventions such as the construction of wells and latrines and the promotion of hand washing, safe water usage, and healthy sanitation in emergency response scenarios.**
- **Many Food for Peace projects incorporate a component on food utilization, including actions to reduce diarrheal disease.**
- **USAID's infrastructure rehabilitation work in Iraq refurbishes sewage treatment plants and provides plant-level operations and maintenance training.**

Also of significance are existing Agency programming guidelines that address sanitation, which range from those that deal with environmental impact to sanitation-specific guidelines for organizations that are applying for grants. These are noted in Annex 2.

BUILDING AN AGENCY APPROACH TO SANITATION

In planning toward an expanded role in sanitation, USAID will use the Sanitation Consultation to review highlights of current programming and seek inputs on strategic approaches for the future, in the context of available resources.

A child at a WASH-friendly school in Madagascar walks to a hand washing station near the latrine.
(photo: C. Thompson/AED)

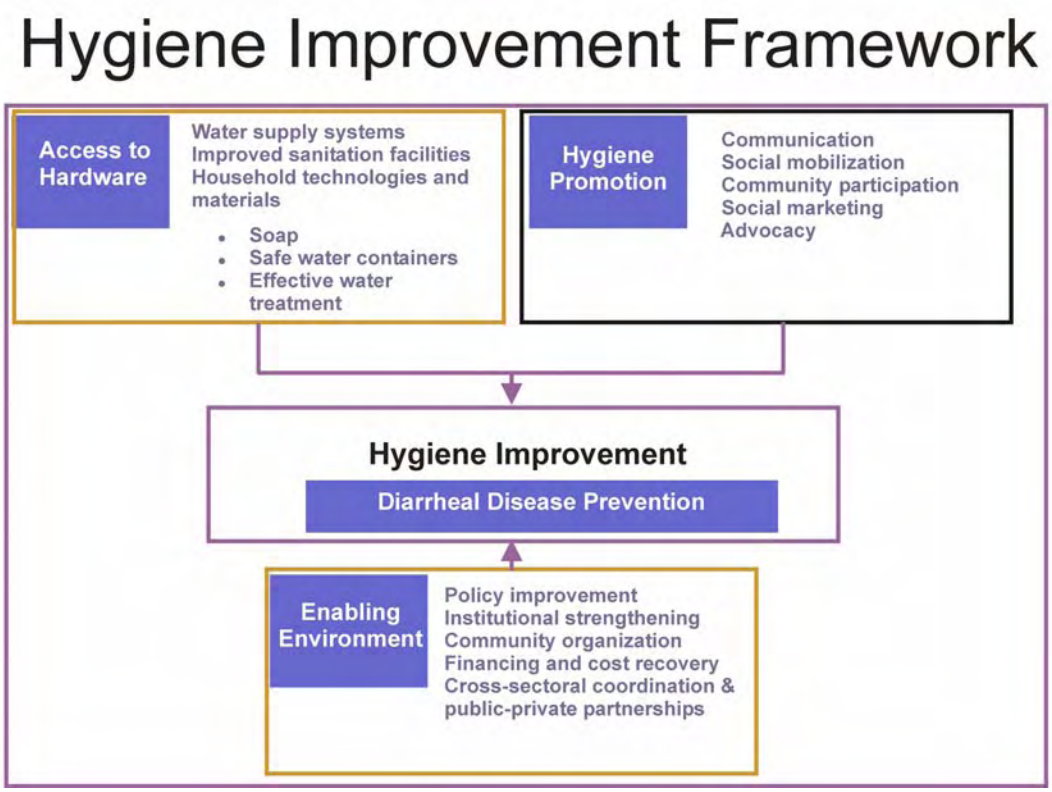
FINANCING FOR INCREASED PROGRAMMING IN SANITATION

As noted earlier, funding for sanitation programming at USAID will increase in the coming years. The Global Health Bureau is considering increasing funding for sanitation through its Maternal and Child Health Division. The Water for the Poor Act has clearly defined criteria for sanitation programming that will satisfy the congressional water earmark. There are other innovative resources and approaches at USAID that may be used to fund sanitation programs, including:

- Using core funds to promote and leverage USAID Mission financing for sanitation programming to satisfy the water earmark.
- Engaging the USAID Development Credit Authority to support innovative credit schemes for utilities and/or household sanitation improvements.
- Leveraging private sector funding through regional public-private partnerships (e.g., with manufacturers of sanitation products).

FOUNDATIONS FOR A PROGRAMMATIC APPROACH TO SANITATION

This paper begins to outline potential elements of a more coherent Agency approach to sanitation. Participants in the Sanitation Consultation are invited to consider these options in developing their own recommendations to USAID. The list is not meant to be all-inclusive, and some of the most creative options may emerge from the consultation. Program elements have been organized according to the Hygiene Improvement Framework (HIF), USAID's behavior-centered approach to hygiene and sanitation (see figure below), which has also been adopted and further adapted by UNICEF, the World Bank, and other development partners. The key underlying principle for the HIF is that successful diarrhea prevention activities require intervention in three areas: access to hardware (water supply systems, improved sanitation facilities, household technologies, and materials); sanitation/hygiene promotion activities (communication, social mobilization, community participation, social marketing, and advocacy); and the enabling environment in which sanitation improvement programs take place (policy improvement, institutional strengthening, community organization, financing, and partnerships). Simply providing access to improved sanitation facilities does not automatically ensure that they will be used, or used properly, or that the expected health benefits are guaranteed.



Examples of programming options include the following:

Access to Hardware

- Create basic technical norms for all sanitation hardware promoted by USAID, ensuring at a minimum that criteria for meeting the MDG are maintained.
- Pilot hardware and technologies leading to readily replicable and scalable approaches for adopting them at a large scale.
- Promote innovative low-cost technologies for urban sewerage and waste water treatment.
- Identify and fill gaps in low-cost sanitation technology design – e.g., for inundated areas, collapsing soils, high water tables.
- Address gaps in handling bio-solids (sludge) ensuring proper “cradle-to-grave” handling and disposal of feces.
- Support governments to create and institutionalize technical norms for sanitation that would apply to all NGO and private sector providers of sanitation products and services in those countries.
- Address a key hygiene issue by integrating hand-washing hardware into latrine/toilet hardware packages.

Hygiene Promotion

- Build capacity to develop effective strategies for sanitation marketing and demand creation among implementing partners in targeted countries by stimulating the private commercial sector, nongovernmental organizations, and artisans to produce and market sanitation products.

- Use school sanitation interventions as programming platforms and technology demonstration showcases to reach households and plant seeds of socio-cultural behavioral norms.
- Continue to develop adaptations of the community-led total sanitation approach to sanitation promotion that incorporate household interpersonal communication.
- Develop integrated communication/marketing approaches that effectively motivate sanitation consumers.
- Promote sanitation-related behavior change at the household level – e.g., using the sanitation ladder to identify "small doable actions" that move households toward ideal practices.
- Disseminate and integrate programming guidance on sanitation options for people living with HIV/AIDs.

A community participates in a transect walk to identify areas of open defecation—one of the tools leading to the ignition of community commitment to end open defecation.
(photo: Plan International/Ethiopia)

Enabling Environment

- In priority countries, identify those without up-to-date national sanitation policies and/or strategies and support them in producing field implementation guidelines (as USAID/HIP and WSP are doing in Ethiopia), which address subsidies, minimum standards, and country-specific issues.
- Promote public-private partnerships that leverage support from entrepreneurs who would benefit from increased demand for sanitation products and services. These partnerships can expand access to capital as well as access to and use of sanitation products and services.
- Draw upon USAID experiences in loan guarantees, credit, and micro-credit to create mechanisms by which households can access credit for sanitation improvements.
- Draw upon operational research data on sanitation subsidies to provide internal guidance for USAID on strategic targeting and application of sanitation subsidies.

NEXT STEPS IN CREATING AND IMPLEMENTING AN AGENCY APPROACH TO SANITATION

Several steps need to be taken to establish an enabling environment within USAID for improved sanitation programming, while building on collaborative relationships with external partners:

PROGRAMMATIC COLLABORATION/COORDINATION WITHIN USAID

USAID's collective contributions to improved sanitation will be enhanced through more effective collaboration within and across USAID bureaus and offices and country missions and with other USG activities. Specific actions might include:

- **Formation of a USAID Sanitation Working Group**
  - Establish an interdisciplinary sanitation working group with cross-bureau membership to formalize a short and long-term strategic approach to sanitation.

- **Development of Sanitation Guidelines and Tools**
  - Create general Agency guidelines for sanitation programs to satisfy the MDGs, the Water for Poor Act, and to maximize health outcomes, not dissimilar to guidance that is in place for other programs – e.g., bed nets, family planning products, and vaccinations.

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- **Internal Advocacy and Education**
  - Develop sanitation advocacy messages to promote health-based sanitation programming as a core Agency investment.
  - Raise awareness of and demand for sanitation technical assistance from USAID Missions and other USG sanitation donors.

- **Capacity Building**
  - Develop and conduct training for USAID staff on the sanitation programming implications of current budget earmarks.
  - Create and market a USAID e-learning course that orients Agency staff to "cutting edge" sanitation approaches and incorporate an innovative sanitation component into the new training program on water and sanitation for USAID staff.

PROGRAMMATIC COORDINATION/COLLABORATION WITH EXTERNAL PARTNERS

USAID has global and country-specific opportunities to collaborate with other donors and international organizations active in sanitation to help meet the sanitation MDG. Actions might include:

- Establish working agreements with key international players and sponsorship arrangements for important high-profile sanitation activities (e.g., WSP, UNICEF, WSSCC, etc.).
- Develop relationships with multilateral or other USG donors that allow USAID to provide niche technical services in support of major sanitation investments.

MANAGING KNOWLEDGE

Currently, information on the number, type, and location of sanitation programs at USAID, as well as their outputs and results, are not systematically collected. USAID is challenged to create mechanisms to both compile data on sanitation programming and promote Agency-wide

knowledge sharing on sanitation experiences, resources, and best practices – across bureaus, offices, and regions. Some initial steps to manage and share knowledge might include:

- Promote mechanisms, such as online information repositories and communities of practice, that promote the sharing of information and experience in sanitation programming.
- Provide USAID personnel online access to the necessary USAID guidelines, tools, and program support documents for sanitation.
- Provide access to the latest information and resources on sanitation programming worldwide. In existence already, the "Sanitation Updates" blog supported by USAID and the IRC International Water and Sanitation Centre offers up-to-date news and resources on sanitation promotion efforts worldwide http://sanitationupdates.wordpress.com/.
- Adapt the current USAID reporting system to permit compilation of data on the number and type of USAID programs integrating sanitation programming into their ongoing activities (e.g., maternal and child health, education, HIV/AIDS) and their outcomes relative to the MDG for sanitation.
- Work in partnership with key organizations involved in international sanitation such as the Joint Monitoring Programme to continue to refine indicators to measure increased access and effective use of sanitation.

ANNEXES

1. Illustrative Examples of Current USAID Sanitation Activities

2. Current USAID Programming Policies and Guidelines Addressing Sanitation

3. Glossary of Sanitation Terms

4. International Year of Sanitation Advocacy Messages and Facts

5. Impact of Sanitation Coverage on Health in USAID MCH Priority Countries: Number of children under 5 whose lives could be saved if sanitation coverage reaches MDG/full levels in 2015

6. Annotated Bibliography of Sanitation Documents

7. Annotated Listing of Sanitation Websites

ANNEX 1 – ILLUSTRATIVE EXAMPLES OF CURRENT USAID SANITATION ACTIVITIES

GLOBAL HEALTH CHILD SURVIVAL AND HEALTH GRANTS

USAID's Global Health Bureau currently oversees 39 (22 in Africa, seven in South Asia), Child Survival and Health grants with "Control of Diarrheal Disease" components in 27 countries. The total value of these projects is over $107 million and 21 percent of this total is focused on diarrheal disease control activities—over $22 million. Indicators used in these projects indicate that a small proportion of this $22 million is spent on sanitation promotion. USAID's Child Survival Technical Support has the most detailed set of programmatic guidelines for sanitation and hygiene.

ENVIRONMENTAL SERVICES PROJECT INDONESIA

USAID/Indonesia's Environmental Services Project works in four sanitation-related activities:

1. Sanitation mapping to identify pollution sources and help decision makers set priorities.
2. Management and administrative capacity building at Indonesia's major sewer and wastewater treatment systems to improve management, fee collection systems, and attention to repair and maintenance.
3. Community-based sanitation systems involving less than 100 households that are operated by a community or local NGO (on behalf of the community), which include a collection network from houses to a space-saving underground treatment facility.
4. Improved handling and treatment of sludge (partially treated solids from wastewater treatment plants) to prevent illegal dumping of sludge on land and into water bodies.

ENVIRONMENTAL COOPERATION-ASIA (ECO-Asia) PROJECT

USAID's Bangkok-based ECO-Asia Project partners with cities, utilities and local communities in the region to demonstrate sustainable decentralized and low-cost sanitation solutions. ECO-Asia employs a participatory approach that mobilizes local decision-makers and other stakeholders to identify priority sanitation challenges and sustainable solutions, ensuring full-cost recovery for construction, debt servicing and operations. On the demand side, ECO-Asia assists partners to implement promotion campaigns that focus on increasing demand for sanitation services and increasing citizen willingness to pay. ECO-Asia catalyzes change by facilitating counterpart linkages, or "twinning" arrangements between utilities, cities, governmental agencies and financial institutions.

LOCAL GOVERNANCE AND MUNICIPAL SERVICE PROJECTS

USAID democracy and governance projects worldwide support Social Investment Funds, grant programs administered through projects and focused on local governance and municipal services, including the development of social infrastructure. Activities typically are coordinated through municipal governments, creating a "learning by doing" opportunity along with local buy-in to the project. Project activities are generally selected through a participatory process and sometimes include support for sanitation infrastructure. The latter often focus on sanitation facilities in markets, public buildings, and schools although community and municipal sewerage and wastewater treatment are supported as well. Technical guidance for the infrastructure comes from local country guidelines and USAID environmental guidelines. Building recurring cost recovery systems and strengthening the capacity to operate, maintain and manage the infrastructure are normally part of these projects.

OFFICE OF FOREIGN DISASTER ASSISTANCE (OFDA) – EMERGENCY RESPONSE SANITATION

In disaster response situations, OFDA funds water, sanitation, and hygiene (WASH) interventions such as the construction of wells and latrines and the promotion of hand washing, safe water usage, and healthy sanitation. To ensure sustainable programs, OFDA encourages household, family latrines where individual ownership decreases risk factors associated with poor maintenance of sanitation infrastructure. OFDA only funds communal infrastructure (e.g. block latrines) during the immediate onset phase of disasters when populations are on the move or in the medium to long term phases of a disaster, when space is prohibitive (e.g. overcrowded camps) or when institutions (schools and clinics) ensure maintenance. Because the risk of water borne disease outbreaks (e.g. cholera) associated with poor sanitation during disasters is high, sanitation is a component in over 80 percent of WASH programs funded by OFDA. OFDA uses its own set of guidelines for organizations implementing its sanitation programming.

OFFICE OF FOOD FOR PEACE (FFP)

Recognizing that a key component of food security and nutrition is proper food utilization, Food for Peace projects often contain diarrheal disease reduction components that include the provision of water, sanitation, and hygiene infrastructure and/or education and training. These are components of food and non-food assistance programs as well as emergency and development assistance. Recent countries receiving sanitation programming through FFP (often via communication and education activities) include Sudan, Mozambique, Ethiopia, Uganda, and Liberia.

ANNEX 2 – CURRENT USAID PROGRAMMING POLICIES AND GUIDELINES ADDRESSING SANITATION

Child Survival and Health Grants Program (CSHGP) Technical Reference Materials. Control of Diarrheal Diseases. USAID Bureau Global Health, Office of Health, Disease and Nutrition. 2007. http://www.childsurvival.com/documents/trms/update_trms.cfm

Environmental Guidelines for Development Activities in Asia Near East. Part II, Sector Specific Guidelines, Chapter 16—Water Supply & Sanitation. USAID Asia and Near East Bureau.
http://www.usaid.gov/our_work/environment/compliance/ane/ane_guidelines/water_ane.pdf

Environmental Guidelines for Small-Scale Activities in Africa. Part II, Sector Specific Guidelines, Chapter 16—Water Supply & Sanitation 2nd Edition. USAID Africa Bureau. March 2007.
http://www.encapafrica.org/EGSSAA/watsan.pdf

Environmental Guidelines for the USAID Latin America and Caribbean Bureau. Chapter 2. Environmental Issues and Best Practices for Small-Scale Infrastructure. USAID Latin America and Caribbean Bureau.
http://www.usaid.gov/locations/latin_america_caribbean/environment/docs/epiq/chap2/lac-guidelines-2-small-scale-infrastructure.pdf

Guidelines for the Development of Small-Scale Rural Water Supply and Sanitation Projects in East Africa. A Policy and Planning Framework for Activities Funded by USAID under the Title II (Food for Peace) Program and by Other Donors. Catholic Relief Services. August 2005.
http://crs.org/publications/pdf/Wat0509_e.pdf

Paul Simon Water for the Poor Act Report to Congress. June 2008.
http://www.state.gov/g/oes/rls/rpts/105543.htm

USAID/OFDA Guidelines of Unsolicited Proposal and Reporting. USAID Office of Foreign Disaster Assistance. December 2006.
http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/resources/pdf/OFDA_Guidelines_Unsolicited_Proposals_Reporting.pdf

ANNEX 3 – GLOSSARY OF SANITATION TERMS

At scale approaches to sanitation – At scale projects build on network theory, focusing on strengthening bonds among sectors, and "bridging" across sectors to synergize and coordinate around a shared action agenda. At scale approaches contrast to "scaling up," which starts at a pilot level and then works up to reaching broader targets.

Child-friendly designs – Technical designs for latrines and bathrooms that take into account skills, preferences and abilities to use (and sometimes maintain) them.

Community-led total sanitation (CLTS) – The CLTS approach builds upon decades of experience with Participatory Rural Appraisal (PRA) approaches. CLTS requires a facilitator to guide a community through a series of participatory exercises like mapping, feces calculation, and a community walk to ignite a sense of disgust and shame about open defecation among the community. People collectively realize that through open defecation they quite literally ingest one another's excreta. This disgust is harnessed to commitment and action at the household to end open defecation. The use of household capital incentives (subsidies) to pay for sanitation hardware is absent or minimized. Incentives are applied at the community level through community-level rewards for ending open defecation. First pioneered in Bangladesh and India, CLTS is now being applied with various modifications and hybrids in Africa, Latin America and other parts of Asia.

Composting latrine/composting toilet – Also known as biological toilets, dry toilets, or waterless toilets, these latrines contain and compost excreta, toilet paper, carbon additive, and depending on the approach, food wastes. Some composting toilets aim to separate urine (urine diversions toilets) to control the moisture and nitrogen content of the compost. The composting takes place in a batch process that typically requires one year, at which time feces and other materials have degraded into innocuous compost that can be used as a soil amendment. Separated urine is ultimately used as plant fertilizer.

Cost recovery – The degree to which the costs of sanitation services are paid for by the users. Cost recovery includes two categories of costs: the initial investment costs and the continuous or recurrent costs of operation and maintenance. The basic cost recovery principle requires that 100 percent of operation and maintenance costs be covered by the users. As for the initial investment costs, users are usually required to pay a part of them, possibly through in-kind contributions made by households, while governments or donors pay the balance of initial set-up and marketing costs.

Demand responsive approach (DRA) – A project development and management approach in which community members make informed choices about participation, desired levels of service, management of funds, and operation and maintenance. Government plays a facilitative role, sets clear national policies and strategies, encourages broad stakeholder consultation, and facilitates capacity building and learning. An adequate flow of information is provided to the community, and procedures are adopted for facilitating collective action and decision making within the community.

Desludging – Removing accumulated sludge (composted feces, ash, cleansing paper and other contents) from latrine pits, septic tanks, etc.

Disability adjusted life years (DALYs) – A Population metric (measure). The sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability.

Ecological sanitation (Ecosan) – A sanitation design that builds on the concept of protecting ecosystems, and which treats excreta as a valuable resource to be recycled. The term is widely understood to reflect this general approach to excreta management. Ecosan technology often implements the approach through the separation of urine and feces at the level of the individual toilet, using urine as a plant fertilizer, and composting feces into a soil amendment. (See composting latrine), Ecosan approaches can be promoted in dry climes, which lack water for flushing, and wet climes which preclude the use of a pit that can lead to groundwater contamination.

Enabling environment – One of the three components of the Hygiene Improvement Framework, this term describes the role of policies, financial instruments, technical norms, organizational capacities, and partnerships in supporting changes in sanitation hygiene practices and access to technology.

Environmental sanitation – A wide range of interventions designed to create and maintain an environment conducive to human health. This includes sanitation (defined as the infrastructure and services required for the safe management of human excreta) but also includes solid waste management, drainage of surface water and sullage, vector control, air pollution control, etc.

Fecal-oral transmission – The route or vector enabling fecal material to reach the mouth.

Fecal sludge – Fecal sludge is different to the “usual” sewage sludge from municipal wastewater treatment plants. Characteristics of fecal sludge can differ widely from household to household, from city to city, and obviously from country to country. The qualities of fecal sludge are influenced by the duration of storage, temperature, intrusion of groundwater or surface water in septic tanks or pits, performance of septic tanks, and tank emptying technology and pattern.

Graywater – Waste water (used) from the kitchen, bath, laundry, and other domestic activities that normally should not contain urine or excreta.

Hygiene – As associated with sanitation, these are behaviors related to the safe management of human excreta, such as using, cleaning, and maintaining a latrine, hand washing with soap, or the safe disposal of children’s feces. Hygiene thus determines how much impact sanitation infrastructure can have upon health because it reflects not the construction, but the use, of such facilities.

Hygiene education – teaches audiences about how diseases can be prevented through improved practices. In the case of diarrheal diseases, this includes messages and training on oral-fecal contamination (feces ingestion) through the unsafe disposal of excreta or by not washing hands with soap after defecation.

Hygiene promotion – A planned approach to preventing diarrheal and other diseases through the widespread adoption of safe hygiene practices. It begins with and is built on what local people know, do, and want. Promotion typically refers to the processes by which demand for sanitation hardware and hygiene behavior change are generated.

Integrated CLTS and sanitation marketing – CLTS (see entry in glossary) focuses on creating and consolidating demand while sanitation marketing focuses more on the supply side of the developing sanitation market, making a range of products more accessible and affordable as demand grows.

Off-site sanitation – System of sanitation where excreta are removed from a house and its immediate surroundings.

On-site sanitation – System of sanitation where the means of collection, storage, and treatment (where this exists) are contained within the plot occupied by the dwelling and its immediate surroundings.

Pit latrine – Latrine with a pit for collection and decomposition of excreta and from which liquid infiltrates into the surrounding soil. Pit latrines can be wet or dry, with "wet" signifying that water is used to dispose of the excreta as in a pour-flush latrine. In a dry-pit latrine the excreta passes directly into the pit without the use of water.

Pour-flush latrine – Latrine that depends on small quantities of water, poured from a container by hand, to flush away feces from the point of defecation.

Primary wastewater treatment – The first step in wastewater treatment that consists of screening out larger particles and then providing a quiescent environment for the wastewater (tank or pond) in which those non-dissolved materials of a density higher and lower than that of water are removed from the water by settling and skimming respectively. Some anaerobic bacterial digestion of fecal materials also takes place. Primary treatment typically removes up to 70 percent of the "pollution capacity" from wastewater, but does not render the treated wastewater biologically safe.

Privately-operated public sanitation facilities – Includes facilities at markets, transport hubs, religious shrines, etc. for which users pay a fee for use. These facilities provide sustainable sanitation and model appropriate sanitation to users. Funds are used to pay for cleaning, operation, maintenance, and administration of the facilities, which are operated by local entrepreneurs for profit. There may be controversy about whether these facilities contribute to meeting MDGs.

Sanitation marketing – An approach to attain sanitation coverage by creating a market for sanitation goods and services. Sanitation marketing considers the target population as customers. It borrows private sector experience to develop, place, and promote an appropriate product and/or service for hygienic feces collection and disposal. The market depends upon an articulated demand, a supply of affordable products and services, and a legal and policy environment that supports both suppliers and customers. Affordability of desired products and services is often dependent upon household access to credit.

Sanitation subsidy – Referring to capital provided to a population unit to aid them in providing sanitation coverage is a key consideration in sanitation programming. Past approaches that provided highly subsidized household sanitation hardware have shown low impact on sustainable coverage. Current thinking on subsidies addresses approaches to strategically target vulnerable groups, moving subsidies into community-based incentives, providing subsidies through credit mechanisms, etc.

School sanitation – Proper sanitation infrastructure and behaviors at schools can improve attendance and improve educational outcomes, leading to societal impacts on human productivity and dignity. School sanitation is particularly advantageous for girls when appropriate numbers of girls' only latrines are constructed and maintained. Activities at schools also model sanitation technologies and behaviors that are transferred from schools and schoolchildren to households and community.

Secondary wastewater treatment – Wastewater treatment step following primary treatment to remove biodegradable dissolved and colloidal organic matter by using biological processes, such as activated sludge, trickling filters, or various kinds of ponds and lagoon systems. With primary and secondary treatment, up to 95 percent of the "pollution capacity" is removed, but the water is not yet rendered biologically safe.

Septage – Sludge removed from septic tanks. This material is not biologically safe, and the handling of septage remains a critical shortcoming in sanitation systems in developing countries.

Septic tank – An underground tank that treats wastewater by a combination of solids settling and anaerobic digestion. The effluents may be discharged into soak pits or small-bore sewers, and the solids have to be pumped out periodically. Emptying septic tank sludge and final disposal of this septage is a challenge to many countries, developed and developing alike.

Sewage – Human excreta and wastewater, flushed in carrying water into a pipe that can lead to on-site or off-site treatment and disposal.

Sewer – A pipe or conduit that carries wastewater or drainage water.

Sewerage – A system of sewer pipes, manholes, pumps, etc. for the transport of sewage.

Sludge – A mixture of solids and water deposited on the bottom of soak pits, septic tanks, ponds, etc. or is produced as a by-product of wastewater treatment. The term sewage sludge is generally used to describe residuals from centralized wastewater treatment, while the term septage is used to describe the residuals from septic tanks.

Soak pit – Similar to a pit dug for a pit latrine, except that feces are carried into the pit by water though a pour flush or flush toilet. Also referred to as a cess-pool in the United States, soak pits, when properly located in soils with appropriate infiltration capacity, take longer to fill than dry pits. A soak pit can also refer to a pit in which the effluent from a septic tank flows or where gray water is disposed. Soak pits are problematic when soils do not provide sufficient infiltration or where the groundwater table is high.

Sullage – Domestic dirty water not containing excreta. Sullage is also called gray water.

Toilet – All types of technical sanitation solutions, including flush toilets, pour flush toilets, ventilated improved pit (VIP) latrines, pit latrines, etc.

Utility approaches to sanitation coverage – Often integrated with water utilities to ensure payment for services, utilities can be publicly and /or privately run. Utilities can be integrated with CLTS and sanitation marketing efforts to engage households to pay for sewer hookup and to install appropriate toilets in households.

VIP latrine – Ventilated improved pit latrines have a pit, either lined or unlined depending on soil conditions, covered with a slab over the whole of the pit, which removes the need for providing supporting beams. A ventilation pipe is positioned on the slab to take the foul smells away from the pit and to vent it to the external air above the superstructure roof line. The interior of the latrine is kept dark to provoke flies that enter the pit to exit through the ventilation pipe, which is screened at the top to prevent flies from returning to the local environment.

Wastewater – Liquid waste discharged from homes, commercial premises, public buildings, and similar sources that contains mainly human excreta and used water. When produced mainly by household and commercial activities it is called domestic or municipal wastewater or domestic sewage. In this context, domestic sewage does not contain industrial effluents at levels that could pose threats to the function of a wastewater treatment plant, public health, or the environment.

Water table – The level in the ground at which water is found when a hole is dug or drilled (same as groundwater table).

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ANNEX 4 – INTERNATIONAL YEAR OF SANITATION (IYS) ADVOCACY MESSAGES AND FACTS

International Year of Sanitation Website
http://esa.un.org/iys/index.shtml

International Year Sanitation Facts
http://www.unicef.org/wes/files/IYSFact.pdf

Key Messages for the International Year of Sanitation
http://esa.un.org/iys/docs/IYS%20Advocacy%20kit%20ENGLISH/Key%20messages%20booklet.pdf

IYS Fact Sheet 1: Sanitation is Vital for Health
http://esa.un.org/iys/docs/IYS%20Advocacy%20kit%20ENGLISH/Fact%20sheet%201.pdf

IYS Fact Sheet 2: Sanitation Generates Economic Benefits
http://esa.un.org/iys/docs/IYS%20Advocacy%20kit%20ENGLISH/Fact%20sheet%202.pdf

IYS Fact Sheet 3: Sanitation Contributes to Dignity and Social Development
http://esa.un.org/iys/docs/IYS%20Advocacy%20kit%20ENGLISH/Fact%20sheet%203.pdf

IYS Fact Sheet 4: Sanitation Protects the Environment
http://esa.un.org/iys/docs/IYS%20Advocacy%20kit%20ENGLISH/Fact%20sheet%204.pdf

IYS Fact Sheet 5: Improving Sanitation is Achievable
http://esa.un.org/iys/docs/IYS%20Advocacy%20kit%20ENGLISH/Fact%20sheet%205.pdf

ANNEX 5 – IMPACT OF SANITATION COVERAGE ON HEALTH IN USAID MCH PRIORITY COUNTRIES

MCH Priority Countries	Sanitation coverage 1990	Sanitation coverage 2006	# of people without access 1990 ('000)	# of people without access 2006 ('000)	Current Under-5 mortality rate	Current # of Under-5 deaths (000)	% of Under-5 deaths due to diarrheal diseases	Diarrhea prevalence	% of Total WSH deaths	Lives saved in 2015 if sanitation coverage is at MDG level	Lives saved in 2015 if sanitation coverage is at full coverage	Reduction in U5MR in 2015 if full coverage
Afghanistan	3	30	14,168	18,262	267	221	18.9	30.0	16.2	4,047	8,095	262
Azerbaijan	na	80	na	1,681	88	11	15.3	11.0	2.6	124	248	87
Bangladesh	20	36	83,238	99,834	65	287	20.0	9.0	9.9	11,473	22,945	49
Benin	12	30	4,557	6,132	125	38	17.1	9.8	19.0	868	1,736	94
Bolivia	33	43	4,468	5,332	75	16	14.3	22.4	7.5	473	946	42
Cambodia	na	28	na	10,222	83	28	16.6	19.5	13.1	1,177	2,353	31
DR Congo	16	31	31,722	41,844	148	409	18.1	16.0	3.5	8,616	17,232	92
Ethiopia	3	11	49,509	72,109	123	347	17.3	18.0	15.0	10,149	20,299	61
Ghana	15	10	13,157	20,707	111	76	12.2	15.2	12.2	2,464	4,927	72
Guatemala	58	84	3,735	2,085	53	19	13.1	13.3	9.9	250	501	25
Haiti	24	19	5,219	7,651	86	26	16.5	23.7	9.5	1,124	2,248	56
India	14	28	730,497	829,261	74	1920	20.3	9.0	7.5	75,962	151,925	57
Indonesia	46	52	97,964	109,855	46	218	18.3	11.0	3.5	8,836	17,673	19
Kenya	40	42	14,058	21,201	115	153	16.5	16.0	9.9	3,078	6,156	142
Liberia	39	32	1,303	2,434	111	16	17.3	19.4	17.8	372	744	74
Madagascar	14	12	10,359	16,860	94	66	16.9	9.8	19.7	3,033	6,066	48
Malawi	47	60	5,013	5,428	133	73	18.1	22.3	14.4	960	1,920	85
Mali	36	45	5,692	6,582	191	111	18.3	13.3	20.9	1,390	2,780	177
Mozambique	20	31	10,743	14,470	153	121	16.5	14.1	16.2	2,287	4,574	83
Nepal	11	27	17,011	20,178	61	53	20.5	11.9	10.6	2,629	5,258	28
Nigeria	39	30	55,240	101,304	201	1014	15.7	18.8	16.7	15,911	31,822	160
Pakistan	37	58	70,370	67,596	94	427	14.0	21.6	13.6	7,505	15,009	31
Philippines	57	78	26,275	18,978	40	89	12.0	10.6	5.2	2,074	4,147	20
Rwanda	37	23	4,470	7,287	152	58	18.5	14.1	16.1	1,322	2,644	174
Senegal	33	28	5,345	8,692	121	56	17.1	22.3	16.5	1,379	2,758	87
Sudan	33	35	17,464	24,510	89	105	12.9	45.0	11.3	3,685	7,369	84
Tajikistan	na	92	na	531	79	22	16.4	na	4.0	66	133	40
Tanzania	47	33	13,902	20,032	112	159	16.8	12.6	13.1	3,660	7,321	93
Uganda	42	33	10,300	26,438	137	192	17.2	25.8	15.8	4,633	9,267	114
Zambia	44	52	4,691	5,614	168	76	17.5	21.2	13.2	878	1,756	136
									TOTAL LIVES SAVED	**180,426**	**360,851**	

Sources:
*WSH = water, sanitation, and hygiene. Estimates of WSH are from *Safer Water, Better Health* (forthcoming from the World Health Organization. Pruss, A. Bos, R., Gore F. and Bartram, J. 2008).
Diarrhea Prevalence data are from the latest DHS in the country; data for Afghanistan and Sudan are from MICS. Pakistan, Liberia are calculations from the preliminary DHS reports. DR Congo and Bangladesh are also from preliminary DHS reports.
Population estimates are from U.S. Census Bureau 2008.
Incidence of diarrhea and case fatality rate are based on *Koesk M., Bern, C. and Guerrant, R. The Global Burden of diarrheal disease, as estimated from studies published between 1992 and 2000. Bulletin of the World Health Organization, 2003; 81:197-204.*
Improved sanitation reduces diarrhea morbidity by 36%: *Fewtrell, et al. Water and Sanitation and hygiene interventions to reduce diarrhea in less developed countries: a systematic review of the evidence. Lancet Infectious Disease 2005; 5:42-52.*
Population without access to sanitation is from WHOSIS online database; the JMP database was not updated with the 2006 data at the time of these calculations. http://www.who.int/whosis/indicators/compendium/2008/2wst
Definitions:
MDG level coverage refers to the goal of a 50% reduction in those without sanitation coverage.
Sanitation Coverage: Population with sustainable access to improved sanitation (%) total
Diarrhea Prevalence: Percentage of children under five years who had diarrhea in the two weeks preceding the survey.
The number of lives saved (not shown here) are estimated from total diarrhea incidence in each country and case fatality rate. Diarrhea morbidity is assessed as an average of 3.2 episodes per child per year. A sanitation intervention is assumed to reduc
In order to calculate the reduction in under-five mortality rate, the number lives saved is first subtracted from total number of under-five deaths. This is then divided by the number births in thousands (deaths/thousand births).

Source: USAID Analysis, Information Management & Communications Activity (AIM)

ANNEX 6 – ANNOTATED BIBLIOGRAPHY OF SANITATION DOCUMENTS

This bibliography contains brief annotations and links to the full text of 21 documents that are organized by **Sanitation Advocacy, Sanitation Approaches, Sanitation Impacts, Sanitation Situation,** and **Sanitation Strategy.**

SANITATION ADVOCACY

Durrheim, D. 2007. **A Clarion Call for Greater Investment in Global Sanitation**. *Lancet,* Vol. 370: 1592-1593, Nov. 10, 2007.
Link: http://www.ehproject.org/PDF/ehkm/lancet-durrheim2007.pdf

The hindrance on global development resulting from inadequate sanitation is recognized in the Millennium Development Goals (MDGs), and an aspirational target to halve the proportion of people without access to basic sanitation by 2015 has been established. Accomplishment of this target would profoundly reduce the risk of cholera and other epidemic-prone diarrheal diseases.

Lancet. 2008. **Editorial: Keeping Sanitation in the International Spotlight.** *Lancet,* Vol. 371:1045, Mar 29.
Link: http://www.ehproject.org/PDF/ehkm/lancet-sanitation_spotlight2008.pdf

The shamefully weak presence of the health sector in advocating for improved access to water and sanitation is incomprehensible and completely short-sighted. Children who benefit from the huge international effort and financial and human resources spent on immunization and bed net distribution still have a strong chance of dying from diarrheal illnesses—the second biggest killer of children under 5 years.

Lancet. 2007. **Editorial: Access to Toilets for All**. *Lancet*, Vol. 370, p. 1590, Nov. 10, 2007.
Link: http://www.ehproject.org/PDF/ehkm/lancet-access_toilets2007.pdf

Adequate sanitation is the most effective public health intervention the international community has at its disposal. Yet 40% of the world's population still lacks access to a toilet. It is time for toilets and sewage disposal systems to be taken more seriously, not just by governments and civil society, but also by funding bodies and the global health community.

WaterAid. 2008. **Time to Wake up to the Sewage Crisis.** *The Telegraph,* 21 January.
Link: http://www.ehproject.org/PDF/ehkm/wateraid-sewage_crisis.pdf

It's not a glamorous issue, far from it. In fact it's a bit of a taboo subject. But it's an issue we need to start talking about because it's causing extensive environmental damage and leading to the deaths of 5,000 infants every day. It's a problem of disposal of human waste and toilets.

SANITATION APPROACHES

Caplan K., Gomme J., et al. 2007. **Assessing Partnership Performance: Understanding the Drivers for Success.** London: Building Partnerships for Development (BPD).

Link:
http://www.bpdwaterandsanitation.org/bpd/web/d/doc_191.pdf?statsHandlerDone=1

BPD's mission is to promote effective delivery of safe water and sanitation services to poor communities in developing countries through multi-stakeholder partnership approaches. The purpose of this report is to provide partnership practitioners with guidance about collaboration and to determine if collaboration is, or was, the best way to achieve their aims.

Frias J. & Mukherjee N. 2005. **Harnessing Market Power for Rural Sanitation**. Washington, DC: Water and Sanitation Program.
Link: http://www.wsp.org/filez/pubs/eap_harnessing.pdf

In two Vietnam provinces, an international NGO developed a range of low-cost sanitation options and stimulated a network of local masons to market and deliver them to the rural population. As a result, the sanitation access rate increased markedly in the area, even among the poor. This Field Note outlines lessons learned in the process of creating the demand for sanitation and meeting this demand locally.

IRC International Water and Sanitation Centre. 2006. **Children's Health Clubs in Schools: Opportunities and Risks**. Delft: IRC.
Link: http://www.ehproject.org/PDF/ehkm/irc-health_clubs.pdf

Many school programs for water, sanitation, and hygiene have organized special children's groups or special hygiene sub-groups in children's parliaments and school councils. There are many names for these such as school health clubs, health scouts, or hygiene rangers. This paper discusses some of the benefits and risks of these school groups.

Jani R. 2007. **Water, Sanitation, and Hygiene for People Living with HIV and AIDS.** Washington, DC: Water and Sanitation Program.
Link: http://www.wsp.org/filez/pubs/72200723130_SAHIVAIDSFN.pdf

This Field Note is based upon a study conducted among people living with HIV and AIDS in selected areas of the Indian states of Tamil Nadu and Andhra Pradesh. It stresses the importance of incorporating improved, consistent, and comprehensive water, sanitation, and hygiene-related information into HIV and AIDS care interventions.

Kamal K. & Chambers R. 2008. **Handbook on Community-Led Total Sanitation**. London: PLAN-UK. Link: http://www.plan-uk.org/pdfs/cltshandbook.pdf

This handbook on Community-Led Total Sanitation enables communities to analyze their sanitation conditions and collectively understand the impact of open defecation on public health and their environment.

Mehta M. & Knapp A. 2004. **The Challenge of Financing Sanitation for Meeting the Millennium Development Goals**. Washington DC: Water and Sanitation Program.
Link: http://www.wsp.org/filez/pubs/af_finsan_mdg.pdf

This paper was commissioned as a think piece for the 12th session of the United Nations Commission on Sustainable Development (CSD-12), 2004. It provides a discussion of why sanitation promotion is so important, what methods and implementation models have been

used for sanitation promotion, and why it is necessary to leverage additional resources for sanitation.

Morgan P. 2007. **Toilets That Make Compost: Low-Cost, Sanitary Toilets That Produce Valuable Compost for Crops in an African Context**. Stockholm: Stockholm Environment Institute.
Link: http://www.ecosanres.org/pdf_files/ToiletsThatMakeCompost_lowres_greyscale.pdf

This manual provides practical information on recycling nutrients from excreta in order to fertilize gardens. The work is primarily intended for use in East and southern Africa, where backyard gardening is practiced and where the climate is warm and wet seasons are interspersed with dry. Included inside the manual are detailed descriptions of how to make a range of low-cost, sanitary toilets that also make compost.

UNESCO. 2005. **Selecting an Appropriate Technology for Human Excreta Disposal.** Paris: UNESCO.
Link: http://www.ehproject.org/PDF/ehkm/unesco-selecting_appropriate_tech.pdf

This tool provides information that could help schools seeking to build or upgrade sanitation facilities to choose suitable and sustainable technologies. A number of excreta disposal technologies are described, with particular emphasis on the operations and maintenance requirements of each, as experience has shown this to be a key factor in determining long-term project success.

Visscher J. & Silva Wells C. 2006. **Landscaping and Review of Approaches to Support Service Provision for Water, Sanitation and Hygiene**. Seattle: Bill and Melinda Gates Foundation.
Link: http://www.aguaconsult.co.uk/test/pdf/Approaches_Landscape_Apr_2007.pdf

This document presents the landscaping of approaches and enabling factors applied in the water, sanitation and hygiene sector. It provides a background to past and present approaches and follows a framework based on three categories for improving service provision: (1) Self-initiated approaches (building of own or communal wells and latrines; (2) Entrepreneurs providing different services etc.; and (3) Externally initiated or supported approaches (governments/donors providing services, etc.).

SANITATION IMPACTS

Hutton G, Rodriguez UE, et al. 2007. **Economic Impacts of Sanitation in Southeast Asia: Summary Report**. Washington DC: Water and Sanitation Program.
Link: http://www.wsp.org/filez/pubs/124200733057_ESI_Synthesis_Report.pdf

This study examines the major health, water, environmental, tourism, and other welfare impacts associated with poor sanitation in Cambodia, Indonesia, the Philippines, and Vietnam. By examining the economic impacts of poor sanitation, and the potential gains from improved sanitation, this study provides important evidence to support further investments in sanitation. The goal of this report is to show decision makers how the negative impacts of poor sanitation can be mitigated by investing in improved sanitation.

Kemeny T. 2007. **Sanitation and Economic Development: Making an Economic Case for the MDG Orphan**. London: WaterAid.
Link: http://www.wateraid.org/documents/sanitation_and_economic_development.pdf

This report describes advances in knowledge of sanitation costs and benefits and discusses the economic costs of inadequate sanitation and the broad benefits associated with averting mortality and morbidity from poor sanitation. It also points to other sanitation topics that need to be explored.

UNICEF/WES. 2007. **Literature Review/Working Document on Sanitation and Hygiene Interventions.** New York: UNICEF.
Link: http://www.ehproject.org/PDF/ehkm/unicef-lit_review2007.pdf

This document provides a compilation of the recent evidence-based literature for utilizing water, sanitation, and hygiene interventions. It focuses on hygiene and sanitation, but also discusses water quality interventions. Section 2 discusses the effectiveness of interventions to reduce diarrhea; section 3 presents the results of recent benefit-costs analysis. Other sections focus on social marketing for hand washing and sanitation, and there is a brief introduction to the merits of Community-Led Total Sanitation.

SANITATION SITUATION

African Minister's Council on Water (AMCOW). 2006. **Getting Africa on Track to Meet the MDGs in Water and Sanitation: A Status Overview of Sixteen African Countries.**
Link: http://esa.un.org/iys/docs/san_lib_docs/319200725615_312007101903_MDGs_All_final3_high.pdf

This AMCOW survey was supported by the Water and Sanitation Program-Africa (WSP-Africa), in collaboration with the African Development Bank, the European Union Water Initiative, the United Nations Development Program (UNDP), and The World Bank. The Country Status Overview consists of individual country reports produced through consultation, data gathering using local sector experts, detailed discussion with country sector stakeholders, and endorsement by lead government sector agencies.

WHO & UNICEF. 2006. **Meeting the MDG Drinking Water and Sanitation Target: The Urban and Rural Challenge of the Decade.** Geneva: WHO.
Link: http://www.who.int/water_sanitation_health/monitoring/jmpfinal.pdf

This report by the WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation (JMP) is concerned with the MDG target to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. The indicators of progress towards this target are: 1 - proportion of population with sustainable access to an improved drinking water source, urban and rural; and 2 - proportion of population with access to improved sanitation, urban and rural.

SANITATION STRATEGY

Sanitation Reference Group. 2007. **Sanitation Policy Background Paper: Water Is Life, Sanitation Is Dignity**. London: DFID.
Link: http://www.dfid.gov.uk/consultations/past-consultations/water-sanitation-background.pdf

This paper maps out what DFID can do in sanitation and hygiene over the coming five years and how it can be done. The primary internal audiences for the paper are country program managers and advisers from sectors other than water and sanitation.

United Nations. 2005. **UNICEF Water, Sanitation and Hygiene Strategies for 2006-2015.** New York: United Nations.
Link: http://www.ehproject.org/PDF/ehkm/unicef-watsanstrategy.pdf

This paper describes strategies that will be applied by UNICEF country offices in assisting governments, communities, and families to achieve specific targets related to the Millennium Development Goals. The strategies are grouped into three distinct packages of support: one, for countries where water, sanitation, and hygiene are priority interventions; two, for countries affected by emergencies; and three, for all other countries supported by UNICEF.

Water and Sanitation Program. **Medium-Term Strategic Framework on Sanitation (Draft)**. Washington DC: Water and Sanitation Program.
Link: http://www.ehproject.org/PDF/ehkm/wsp-san_strategy.pdf

This document provides a medium-term strategy for WSP's sanitation program. It discusses trends and challenges such as rising income inequalities, urbanization, poor attention given to sanitation, and others. WSP's strategy for sanitation includes focusing on advocacy efforts to draw the necessary attention and action for sanitation, monitoring progress, and increasing understanding on how to do it right.

ANNEX 7 – ANNOTATED LISTING OF SANITATION WEBSITES

Includes USAID website and other sanitation-related websites of interest.

USAID SANITATION-RELATED WEBSITES

Environmental Health at USAID
http://www.ehproject.org/

In its environmental health programs, USAID aims to provide global leadership in the development of new and improved interventions to prevent illness and death associated with environmental factors, and to use innovative approaches to take these interventions to scale within the context of USAID's field activities. The site includes links to six USAID-sponsored environmental health activities, as well as the rich archive of EHP and WASH reports and publications.
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Environmental Services Program (ESP) in Indonesia
http://www.esp.or.id/

ESP promotes better health through improved water resources management and expanded access to clean water and sanitation services in Indonesia.
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Environmental Cooperation – Asia (ECO-Asia)
http://usaid.eco-asia.org/programs/wat_san/index.html

In Asia, USAID implements regional water and sanitation activities through the Environmental Cooperation-Asia (ECO-Asia) Water and Sanitation Program. ECO-Asia develops and implements pilot projects that demonstrate innovative strategies for expanding, improving, and financing water services delivery in Asia. Through pilot projects and regional activities, ECO-Asia demonstrates and disseminates innovative policies and practices for expanding or improving water and sanitation services. Strategic focus areas for the ECO-Asia water and sanitation program include:

- Enabling water services delivery to the urban poor
- Demonstrating sustainable sanitation solutions
- Enabling access to finance for water services
- Improving performance of water services utilities

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USAID Hygiene Improvement Project (HIP)
http://www.hip.watsan.net/

The Hygiene Improvement Project (HIP) is a USAID-funded program that works at scale to improve and sustain hygiene practices. HIP is the latest generation of USAID health investments in water and sanitation intended to reduce diarrheal disease and improve child health. HIP brings a strong focus on sustainable improvements at scale in three key hygiene practices: safe feces disposal, hand washing with soap, and safe storage and treatment of water at the point of use.The HIP website provides access to a signficant number of current reports and information on activities in the sanitation sector.

OTHER SANITATION WEBSITES OF INTEREST

African Development Bank – Sanitation
http://www.afdb.org/portal/page?_pageid=473,30722200&_dad=portal&_schema=PORTAL

The four main initiatives underpinning the bank strategy in the water sector are the Rural Water Supply and Sanitation Initiative (RWSSI), the African Water Facility (AWF), the NEPAD Water and Sanitation Program, and the Multi-Donor Water Partnership Program (MDWPP). These initiatives are complemented by the Bank's Urban Water Supply and Sanitation (UWSS) activities. The African Water Facility is managed by the bank on behalf of the African Ministers' Council on Water (AMCOW).
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Asian Development Bank Sanitation Agenda
http://www.adb.org/water/operations/sanitation/agenda.asp

Between 2006-2010, ADB aims to provide 200 million people with sustainable access to safe water supply and improved sanitation and double its pipelined $2.2 billion worth of sanitation and wastewater projects. To reach these targets, ADB anticipates an increase in its lending and technical support activity, particularly once governments prioritize sanitation on their development agenda.
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Building Partnerships for Development in Water and Sanitation
http://www.bpd-waterandsanitation.org/

BPD Water and Sanitation is an international cross-sector learning network focused on improving access to safe water and effective sanitation in poor communities. BPD's primary aims are to explore through action research the contribution partnerships make to meeting the water and sanitation needs of poor communities; through direct project-level support, to assist in developing partnerships for the provision of water and sanitation; and by bringing together organizations, to promote constructive dialogue around water and sanitation issues affecting poor communities.

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Duncan Mara's Sanitation Blog from University of Leeds School of Civil Engineering
http://www.duncanmarasanitation.blogspot.com/

This blog written by Duncan Mara, a professor of civil engineering at the University of Leeds School of Civil Engineering, includes numerous papers and reports on international sanitation technologies.
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EcoSan (hosted at WASTE)
http://www.ecosan.nl/page/353

The www.ecosan.nl site is hosted by -WASTE and focuses on ecological sanitation. The site provides information on the technical, financial, environmental, health, socio-cultural,

institutional, political, and legal aspects important for the success of (ecological) sanitation, with an emphasis on urban solutions. The site also offers practical examples of sanitation systems from around the world, interesting sanitation related links, useful publications, and profiles of available sanitation experts.

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EcoSanRes
http://www.ecosanres.org/index.htm

EcoSanRes (ecological sanitation research) is an international environment and development program on ecological sanitation. It has its roots in the pioneering SanRes program, which ran from 1993 to 2002. Sponsored by Sida and managed by Stockholm Environment Institute with a world network of 20 organizations.

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GARNET Global Applied Research Network
http://www.lboro.ac.uk/departments/cv/wedc/garnet/index.html

The GARNET site is no longer updated, but still provides useful links to information, resources, and organizations.
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Gender and Water Alliance Sanitation Documents
http://www.genderandwater.org/content/search/?SearchText=sanitation&SearchButton=Search

The Gender and Water Alliance (GWA) was established at the Second World Water Forum (WWF) in March 2000. The mission of GWA is to promote women's and men's equitable access to and management of safe and adequate water, for domestic supply, sanitation, food security and environmental sustainability. The provision of sustainable water and sanitation services that incorporate an integrated water resources management approach requires a special emphasis and focus on gender, social justice, and human rights. GWA believes that equitable access to and control over water is a basic right for all, as well as a critical factor in promoting poverty eradication and sustainability.

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German Toilet Organization
http://www.germantoilet.org/

The German Toilet Organization (GTO) is a nonprofit NGO, which was founded in Berlin in October of 2005. Its mission is to protect the environment and improve public health by raising awareness for and providing people with clean and sustainable toilet and wastewater treatment systems, with special focus on the MDGs.

GTO believes in positive and progressive communication of the taboo subject “toilet and wastewater,” awareness raising events and awareness training to establish the subject in the public debate, promotion of alternative solutions, dissemination of alternative technical approaches that can present considerable advantages to users and system operators,

innovative operational concepts to guarantee higher standards, and collection and analysis of experience gained through existing projects.
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Inter-American Development Bank – Sanitation
http://www.iadb.org/topics/Home.cfm?language=English&topicID=OS&parid=2

The IADB works in urban and rural sanitation that is linked to water supply projects.
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International Year of Sanitation 2008
http://esa.un.org/iys/index.shtml

Despite significant efforts by governments, progress on sanitation targets has been slow and uneven. Recognizing the impact of sanitation on public health, poverty reduction, economic and social development, and the environment, the General Assembly decided to declare 2008 the International Year of Sanitation. The General Assembly encouraged member states as well as the United Nations system to take advantage of the International Year to increase awareness of the importance of sanitation to promote action at all levels, taking into account the recommendations of CSD-13. This excellent website is the logical starting point for a person seeking to obtain up-to-date information on international sanitation—the organizations involved, the approaches used, the countries targeted.
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IRC International Water and Sanitation Centre – Sanitation Resources
http://www.irc.nl/page/116

IRC's website for bridging the knowledge gap and joint learning with partners for improved, low-cost water supply, sanitation and hygiene in developing countries.

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The Mvula Trust
http://www.mvula.co.za/

The Mvula trust is the largest water and sanitation NGO in South Africa. The Mvula trust works to alleviate poverty through testing and advocating sustainable models of cost-effective water services delivery and management, supporting local government in the delivery of sustainable, reliable, affordable water services, and enabling local communities to manage their own water services thereby retaining economic resources within the community.
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The SanPlat Homepage
http://www.sanplat.com/index.htm

A SanPlat is an improved latrine slab with the following features: a smooth and sloping surfaces that encourage regular cleaning.; elevated footrests to help the user find the right position, even at night, and a drop hole that is both comfortable to use and safe for the smallest children.
A SanPlat can also be made with a tight fitting lid that effectively stops smells and flies.
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SULABH International
http://www.sulabhinternational.org/

SULABH International (SI) is the largest nationally and internationally recognized pan-India social service outfit with 60,000 volunteers who work to promote human rights, environmental sanitation, health and hygiene, non-conventional sources of energy, waste management, and social reforms through education, training and awareness campaign.

SI has developed a scavenging-free two-pit pour-flush toilet (Sulabh Shauchalaya); safe and hygienic on-site human waste disposal technology; a new concept of maintenance and construction of pay and use public toilets, popularly known as Sulabh Complexes with bath; laundry and urinal facilities being used by about ten million people every day; biogas and bio-fertilizer produced from excreta-based plants; and low maintenance waste water treatment plants of medium capacity for institutions and industries.

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Sustainable Sanitation Alliance (SuSanA)
http://www.sustainable-sanitation-alliance.org/

The Sustainable Sanitation Alliance (SuSanA) strives to promote sanitation systems that take into consideration all aspects of sustainability; raise awareness of what sustainable sanitation solutions are and promote them on a large scale; highlight the key role of sanitation for achieving a whole series of MDGs; show how sustainable sanitation systems should be planned with the participation of all stakeholders and go hand in hand with hygiene promotion; and aim at a paradigm shift in sanitation by the promotion of reuse-oriented sanitation approaches without compromising health.

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Toolkit for Hygiene, Sanitation, and Water in Schools
http://www.schoolsanitation.org/

Hygiene, Sanitation, and Water in Schools projects can create an enabling learning environment that contributes to children's improved health, welfare, and learning performance. This toolkit makes available information, resources, and tools that support the preparation and implementation of Hygiene, Sanitation, and Water in Schools policies and projects.

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UNICEF Water, Environment and Sanitation
http://www.unicef.org/wes/index.html

UNICEF works in more than 90 countries around the world to improve water supplies and sanitation facilities in schools and communities, and to promote safe hygiene practices. We sponsor a wide range of activities and work with many partners, including families, communities, governments, and like-minded organizations. In emergencies we provide urgent relief to communities and nations threatened by disrupted water supplies and disease. All UNICEF WASH programs are designed to contribute to the Millennium Development Goal for water and sanitation: to halve, by 2015, the proportion of people without sustainable access to safe water and basic sanitation.

UNICEF WASH in Schools site:
http://www.schools.watsan.net/
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WaterAid
http://www.wateraid.org/

WaterAid is an international charity. Our mission is to overcome poverty by enabling the world's poorest people to gain access to safe water, sanitation and hygiene education. WaterAid and its partners use practical solutions to provide safe water, effective sanitation, and hygiene education to the world's poorest people.

WaterAid Sanitation:
http://www.wateraid.org/international/what_we_do/how_we_work/integrated_projects/sanitation/default.asp

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Water and Sanitation for the Urban Poor (WSUP)
http://www.wsup.com/

WSUP supports local service providers around the world to deliver affordable and sustainable water and sanitation services to poor people in urban communities. There are great benefits in this partnership approach for all stakeholders: consumers, local service providers, local NGOs, donors, and the private sector. The most important stakeholders—the urban poor—gain access to lasting water and sanitation services and actively participate throughout the project.

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Water and Sanitation Program of the World Bank – Sanitation Page
http://www.wsp.org/themes/index.asp?id=5

The Water and Sanitation Program (WSP) works to develop and promote sustainable solutions to the problems of inadequate sanitation. The program recognizes the diverse needs and capacities of communities in urban and rural Africa, Asia, and Latin America, and thus is not developing a single "model" for sanitation and hygiene promotion.

WSP's comparative advantage in sanitation lies in its longer-term field presence to establish experience and trust with local partners and its ability to share ideas across regions.

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Water, Engineering and Development Centre (WEDC), Loughborough University – Sanitation Resources
http://wedc.lboro.ac.uk/news_IYOS.php

WEDC is one of the world's leading education and research institutes for improving access to infrastructure and services for the poor in low- and middle-income countries. We are based in the Department of Civil and Building Engineering at Loughborough University in the UK, but we work all over the world.

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Water Supply and Sanitation Collaborative Council
http://www.wsscc.org/interwater/

The Collaborative Council exists under a mandate from the United Nations. It is governed by a multi-stakeholder steering committee elected by the Collaborative Council's members, combining the authority of the UN with the flexibility of an NGO and the legitimacy of a membership organization.

WSSCC focuses exclusively on those people around the world who currently lack water and sanitation, with all its policies and work aimed only to serve those people. The Collaborative Council has a special interest in sanitation and hygiene and emphasizes the need to view water, sanitation, and hygiene as an inseparable trinity for development.

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WELL
http://www.lboro.ac.uk/well/index.htm

The WELL resource center for water, sanitation, and environmental health was first established in 1996 and was managed by LSHTM and WEDC, subsequently by WEDC, LSHTM, and IRC, and currently by WEDC yet again.

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World Bank Water Supply and Sanitation
http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTWSS/0,,menuPK:337308~pagePK:149018~piPK:149093~theSitePK:337302,00.html

The World Bank is committed to reaching the poor in water supply and sanitation and helps countries develop, share, and apply global and local knowledge to meet challenges in this sector. It operates across the spectrum of public and private provision to help ensure efficient, affordable, and sustainable delivery of WSS services. World Bank projects that closed between 2000 and 2004 improved access to WSS services for about 10 million people a year. The active World Bank WSS portfolio is $10.7 billion (60 percent for water supply and 40 percent for sanitation). Among the regions, East Asia & Pacific, followed by Sub-Saharan Africa, are the largest recipients of World Bank financing for WSS. About half the WSS lending flows through multi-sector operations.

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WHO/UNICEF Joint Monitoring Programme for Water and Sanitation
http://www.wssinfo.org

This website hosts information related to water supply and sanitation, two issues that concern every one of us on a daily basis and play a crucial role in our health and well-being.

The website information is both general and specific in nature and provides a picture of the state of water supply and sanitation at different scales (global, regional, and country), which enables

you to “zoom” in and out. Information is presented in the form of short texts linked to tables, graphs, and maps.
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World Health Organization – Water Sanitation and Health (WSH)
http://www.who.int/water_sanitation_health/hygiene/envsan/en/

WHO has been at the forefront of environmental sanitation and hygiene action over the years and has developed some key materials intended for policy-makers and technical people dealing with these issues. These materials include guidelines, best practice documents, and promotion materials.

WHO World Health Statistics 2008:
http://www.who.int/whosis/whostat/2008/en/index.html

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World Toilet Organization
http://www.worldtoilet.org/

World Toilet Organization (WTO) is a global nonprofit organization committed to improving toilet and sanitation conditions worldwide. WTO was recently appointed to the World Economic Forum's Global Agenda Council on Water Security.
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World Water Day 2008
http://www.worldwaterday.org/

World Water Day (WWD) is held March 22 every year. The international observance of World Water Day is an initiative that grew out of the 1992 United Nations Conference on Environment and Development in Rio de Janeiro. On the World Water Day website, several resources are available, including advocacy guides, information booklets about water, and WWD events.
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