

## Sanitation too often overlooked in developing nations

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For most of us, finding a bathroom or toilet isn't hard. Chances are it's not more than a short walk away — you may even be there now. For 2.5 billion people around the world, however, it isn't that easy. Their bathroom is likely shared, has no running water and is a walk from their house. And you thought port-a-potties were bad.

The lack of access to sanitation is a huge challenge to the 1 billion people living in urban slums in Africa, Asia and Latin America. The dangers of inadequate sanitation infrastructure are well known — contaminated drinking water and disease transmission become difficult to avoid. Even more unfortunate is the fact that these dangers are often lethal to children, the elderly and the sick, the most vulnerable members of communities. And in cities, the lack of bathrooms and latrines can also be dangerous, particularly for women, who are often harassed and assaulted when seeking out a latrine or place to bathe.



Or consider the amount of time that urban residents spend waiting in line for public restrooms. The World Health Organization estimates that the average is 30 minutes per person per day. That's almost 20 days per year, time that could be better spent in economic activities, education or child rearing. In Pune, a city of almost 5 million in western India, 40 percent live in slums. Ratnakar Gaikwad, the municipal commissioner of Pune, describes the situation: "When I took over as municipal commissioner of Pune, the ratio of toilets to people in the slums was one toilet seat for every 800 persons. We did the math to understand the magnitude of the problem. Technically, if everybody queued up to use one of these toilets, the last man's turn would arrive after 15 days."

And although the benefits of improved sanitation deliver huge boosts to public health, gender equality, economic growth and poverty reduction, they often remain low priorities for budget allocations and official development assistance.

While large intergovernmental organizations such as UN Habitat are working to help slum dwellers gain access to sanitation, there is also a role for smaller organizations, including those in the private sector, to address these issues.

A Swedish architect has come up with one solution. Anders Wilhelmson has designed the playfully named Peepoo bag, helping provide a neat, well-thought out answer to a tough question: How do you provide sanitation to the world's poor? The bag can be used without water (although water is necessary for post-Peepoo handwashing), and is lined with urea, which helps destroy pathogens found in feces and urine while turning the waste into fertilizer, or "humanure." In fact, Wilhelmson predicts the rise of an informal economy springing up around the trade of Peepoo bags and the valuable humanure they can contain.

For a city like Nairobi, Kenya, which produces 60 percent of its food within the urban boundary, the possibility of a local, inexpensive source of fertilizer is an exciting prospect.

Small, locally based NGOs are also presenting solutions to the task of improving sanitation in the poorest parts of the world. In Haiti, after the destruction of the already inadequate sanitation infrastructure in January, smart solutions were needed quickly.

Sustainable Organic Integrated Livelihoods, or SOIL, a nonprofit dedicated to improving soil resources and transforming waste into a resource, partnered with Oxfam to build dry toilets. These toilets are used in tandem with a public waste composting site to convert the dry waste into fertilizer.

This company and NGO are trying to come up with solutions that are designed with the developing world in mind and they seek to turn the recipients of aid into customers and participants who decide what is valuable to them. They are low-cost, low-maintenance, multiple-use products that have the potential to introduce sustainable sanitation to parts of the world that need it most.

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