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How not to sh-- in the woods

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If this is
your idea of a
**bathroom
emergency**
maybe it's time
to look down
from your throne

The UN just declared 2008 the International Year of Sanitation. Funny perhaps until you consider that 2.6 billion people in the world lack access to a basic toilet. As Chris Cobb reports, it's a difficult problem to fix: Number 1, because the worst-off countries won't acknowledge the problem. And Number 2? Because no one likes to talk about poo.

Chris Cobb

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They call it "goo" in Bangladesh, though refined circles use the word "baikhana." Some African countries know it as "kaka," a word familiar to diapered toddlers in North America. The world has hundreds of words for "shit." Or "excrement," should you prefer. (In every language, the colloquial and the polite.) The 6.6 billion humans on Earth have a few things in common, none more obvious than the need to excrete waste daily. No matter if one dines on haute cuisine or crude gruel, each human produces an average 400 grams of waste each day.

And while in this way humans are all the same, what sets us apart is where that waste is deposited. The lucky ones sit on the finest porcelain in comfortable, private surroundings: flush and forget. Others employ "flying toilets," filling plastic bags, then tossing them out the back door onto neighbouring roofs or to the ground below where children play. Some don't stand -- or squat -- on ceremony, going outdoors where fancy takes them: behind a bush, by a stream, in a stream.

No matter the method, when it comes to waste disposal, there's one point on which humans of all cultures agree: No one likes to talk about it.

Enter Zakir Khandker.

"People feel shy to talk about defecation," he says. "But when you make them feel comfortable, they will." Khandker helps to co-ordinate Bangladeshi community sanitation for WaterAid, a British aid agency. It's his job to convince people to practise safe sanitation. Lesson One: "The fecal-oral contamination chain." The approach and language is blunt. Participants are cajoled into repeating aloud the local word for "shit." Only when they can say it with ease -- "goo" or "baikhana" or "kaka" -- does conversation move on.



"We ask men whether they want to expose their women to others," Khandker explains. "With open defecation, that's what happens." When talk turns to handwashing, he points an accusatory finger: "Are you interested in eating the shit of others?" The question may get a laugh, "but eventually they take it seriously." Despite piling evidence, governments in the worst affected countries often refuse to acknowledge the ravages of poor sanitation. Aid workers say such denial is reminiscent of the early days of HIV-AIDS.

If the comparison sounds overblown, consider that the UN estimates 6,000 children die every day from such diseases as chronic diarrhea associated with unsafe drinking water, inadequate sanitation and poor hygiene. Eighty per cent of illnesses in developing countries are linked to the same conditions.

In Ethiopia, one of the worst affected sub-Saharan African countries, only six per cent of the population has access to safe sanitation. The child mortality rate -- children under five years old -- is 169 deaths per 1,000 live births. In Kenya, one of the region's better off countries, the figure is 123. In Canada, it is six.

Canadian Clarissa Brocklehurst heads a UN task force on water and sanitation. The water supply and sanitation engineer calls safe sanitation the "poor cousin" of water supply.

"It's the last taboo," she says. "People get all shy and tipsy when sanitation comes up. We need to work on changing behaviour. We need to sell sanitation like products are sold and convince people of the dangers of open defecation -- shitting in the bush, basically." The key is to get communities and governments to acknowledge the need for proper sanitation. The type of toilets is almost irrelevant as long as they get used and can be maintained.

Canada spends \$4.1 billion on foreign aid each year, filtering about 70 per cent of that through the Canadian International Development Agency. In turn, CIDA spends about \$57 million on water-related aid projects, though little is earmarked for sanitation.

The Bill and Melinda Gates Foundation says of the \$79 billion that developed countries devote each year to overseas development, five per cent -- \$3.4 billion -- is spent on water, sanitation and hygiene.

The foundation says that 85 per cent of the contributions earmarked for these issues in developing countries come from 10 top contributors, a list that includes the United States, Japan, Holland, Germany, Denmark and the U.K., but not Canada.



CREDIT: Photo by George Yap

George Yap took this photograph last summer when he was in one of Kampala's slum neighbourhoods. 'I was walking with the children doing a sanitation survey and here we had to jump over an open ditch/sewer,' he explains. 'It was full of oil, garbage, flies and excrement. A nearby latrine likely empties its contents into this ditch. During the rainy season it overflows, flooding nearby homes.' Many poor neighborhoods are located on low-lying flood-prone area, he says. This coupled with the lack of proper drainage networks means this is a very common problem in Kampala's slums.



CREDIT: Photo by George Yap
Central Ethiopia

"It's puzzling," says George Yap, program director for WaterCan, the Ottawa-based aid group. "I guess it's an indication of the relative importance the government puts on it." Yap argues that water and sanitation should be a priority. "The current government is looking to get more bang for its aid bucks. We would argue that if you're looking for the greatest bang for the buck, water and sanitation will give you a concrete result. That's not to say it will be easy." The UN's Millennium Development Goals include improving sanitation facilities to half of the 2.6 billion people in need by 2015. By its own estimates, they will miss that target by half a billion people.

"It's mind-boggling," says Alan Etherington. The Ottawa sanitation specialist, who has worked worldwide, says the challenge of providing cheap sanitation to the world's poorest people is daunting.

"Can you imagine the anxiety of defecating in a plastic bag and when it's full throwing it over your fence onto a neighbour's roof or a communal pathway? Or imagine defecating into a smelly open pit where there are insects or snakes? Or lining up with your neighbours at a community toilet to use a disgusting, smelly space?" He adds that in many societies, women and girls can only use washrooms before dawn or after dusk. "Women don't defecate outside in daylight," he explains. "So they have to manage their bowels and bladder to control when they defecate. They get constipated and they get urinary tract infections.

"It's a huge daily stress for most poor people in the world and with increased urbanization and growing slums, it is only getting worse." Getting communities in the developing world to buy into the concept of safe sanitation is complex, he adds. "Africans and Asians don't buy toilets for health reasons," he explains. "They buy them for all the other reasons: status, convenience and privacy." Aid programs must understand these motivations, he says. "We have to work with local tradespeople to help them build better, affordable toilets. It might only be a crude \$5 toilet that won't last a year, but at least it gets people into the habit of defecating in a safe, hygienic manner." In densely populated slums, the problem is complicated by the fact there are no sewers. Homes are often one-room shacks constructed from discarded materials. So installing toilets is not an option.

1.1 billion people, about 20 per cent of the world's population, lack access to safe drinking water

2.6 billion people, about 40 per cent of the world's population, have no access to sanitation facilities

2.2 million people, mostly children under five, die every year from problems associated with the lack of water and sanitation

At any one time, **half of the world's hospital beds** are occupied by patients suffering from water-borne diseases

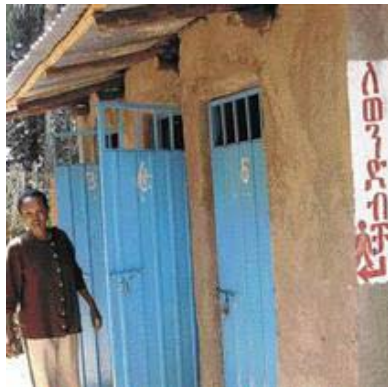
One litre of water weighs one kilogram. In developing countries, it is common for water collectors, usually women and girls, to walk several kilometres every day to fetch water. Filled pots and jerry cans weigh as much as **20 kilograms**

More than 6,000 children die every day from diseases associated with lack of access to safe drinking water, inadequate sanitation and poor hygiene

In developing countries, about **80 per cent** of illnesses are linked to poor water and sanitation conditions

A person in sub-Saharan Africa uses **10 to 20 litres of water a day**; on average, a Canadian uses **326 litres a day**

In some cases, there are communal sanitation areas, perhaps 20 units used by 50 people every day. "That's 1,000 uses," Etherington explains. "That's 400 kilos of fecal matter a day, every day that has to be disposed of." The sanitation block could be linked to a sewer, if one were available, or to a septic tank. "How do you empty the septic tank that gets full so quickly?" asks Etherington, who also has the answer: "In some parts of the world they are emptied by removing the cover when it rains and allowing a portion of the contents to be washed away and flood into the community." Dirty habits are hard to change -- especially when people don't understand that open defecation can spread deadly diseases. Not even Zakir Khandker's "shit chanting" sessions always convince communities of the need for change.



CREDIT: Photo by George Yap
Addis Ababa, Ethiopia

In India, communities compete for cash prizes and countrywide publicity in "Open Defecation Free," a program sponsored by several aid agencies, including Unicef. Some Bangladeshi villages have posted "No Open Defecation" signs. Other communities in India have fine-tuned the campaign with signs that read: "No Daughter From Our Village Will Marry into a Village Where There is Open Defecation." Aid agencies created "The Sanitation Ladder." On the lowest rung? Covering feces with dirt. (Something is better than nothing.) The next step might be a pit. And the next? A simple structure over a pit. On the top rung: a basic flush toilet.

Etherington says the introduction of composting toilets -- "the recycling of fecal matter" -- has been a breakthrough.

A CIDA-backed project has just provided 8,000 Eco-San toilets to Malawi. The toilets separate fecal matter and urine, diluting the urine to become fertilizer and storing the fecal matter to become compost. The process takes about six months. "In a country like Malawi, it is significant that people can treat their toilet as an economic asset," Etherington says.

One of the less obvious ramifications of poor sanitation is the devastating affect it can have on the lives of adolescent girls. Many abandon their education at the onset of their periods rather than deal with the embarrassment of sharing school facilities with boys.

"Leading agencies around the world now realize there has to be separate toilets for boys and girls," says Etherington.

And then there are the many social and cultural quirks that aid groups must acknowledge. For example, one agency in western Kenya was shocked to learn it is taboo for families to share a toilet with their in-laws.

WaterCan, the Canadian group, has worked on projects with the Maasai, herders of cattle, sheep and goats in central Tanzania. Talking about toilets was a disaster, says George Yap.



CREDIT: Photo by George Yap
Kampala, Uganda

"Pooping in the fields is a common and ingrained practice," he explains. "If you tell a Maasai herdsman to poop in the same spot all the time, they respond by saying they have all this land, why would we want to put ourselves into a little outhouse that stinks when we can poop under the stars.

"Maasai sleep with their cattle who pee and defecate right next to them. It's awfully difficult to deal with hygiene promotion in that context. You learn from your mistakes, Sanitation is about behaviour change." In the 1980s, the UN increased efforts to improve water and sanitation in the developing world. Agencies introduced western-style sanitation to Third World communities, which was fine until the system required repair. By that time, agencies had pulled out and there was no one to fix the system. Lessons were learned the hard way. Even areas that had access to clean water had to contend with germ-infested buckets and water conveyances. And, of course, no system could work because of widespread ignorance about hygiene.

From these early errors, a strategy evolved that incorporates clean water, practical toilets and hygiene campaigns.

Last week UN Secretary General Ban Ki-Moon declared 2008 the International Year of Sanitation. Perhaps it is to make up for its shortsightedness in 2000 when the UN announced its millennium goals without a mention of sanitation. (It was included two years later in response to vigorous lobbying led by the British agency WaterAid.) Since then, there has been much talk. "That's the thing with water issues, there are lots of conferences," Yap says. "If the number of conferences were somehow related to impact, we would have solved the problem long ago. ... There is a big gap between rhetoric and reality." The bad news is that across the globe, all countries, especially in sub-Saharan Africa, are lagging way behind the millennium targets.



CREDIT: Photo by George Yap
Rural Western Kenya

"Sanitation often involves several departments (of government) but not to the extent that one department takes charge," Yap explains. "If one department doesn't take charge, nothing gets done." By some calculations, every dollar spent to improve sanitation creates a \$9 economic benefit for communities. A small investment yields great rewards, Yap says.

"You build one toilet and health will improve," he says. It makes sense, but governments are not convinced.

"We've got to talk about it. If you don't talk about it, how can you do anything to solve the problem? Sanitation is the elephant in the room. You can't ignore it."