UNCOMMON GROUND
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GREENING THE TOILET

It is supposedly the 100th anniversary of the modern lavatory, though there is some dispute about when the modern flush toilet as we now know it was invented and by whom. Nevertheless, for the billions around the world who take their daily convenience for granted and for the remaining billions who have no access to modern sanitation, it is a good opportunity to sit and think about the future of human waste, of which millions of tonnes is generated every day.

Is the flush toilet a good thing for us all, knowing that it uses a lot of water to carry very little waste, to a place mercifully out of sight and out of mind? Depending on where you are reading this, your answer might well be different.

The truth is that while it provides unparalleled convenience, the past century of sanitation has been an environmental and financial nightmare for the world. The vast centralized water-based infrastructure systems, where they exist, that carry waste out to treatment plants are not only exorbitantly expensive to build, but also to maintain. It is estimated that billions of dollars will be urgently required to upgrade the ageing sewage pipes in the US and Europe. No one knows where the money will come from. Worse, the underground drainage systems, the storm water drains and the sewage treatment plants can be quite ineffective in times of sudden overload, such as during floods, when even the most developed countries are known to let untreated sewage go out into water bodies and oceans. And the less said about the systems in India, the better.

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What happens when untreated sewage goes off into the surface and underground water? Not only does it contaminate the water in our wells, streams and rivers with nitrates and pathogens of all kinds, its journey into our oceans is disturbing marine life and bleaching delicate coral reefs. We now know that the once sacred Yamuna river, at least near Delhi, is little more than a national drain.

Ironically, though, the so-called waste which we send away into the distant waters is actually scientifically proven to be a resource that is critical for soil health and food security. Human waste, both liquid and solid, makes excellent fertilizer, and human urine—politely referred to as anthropogenic liquid waste (ALW)—is known across cultures for its antibacterial properties. Instead of rerouting this by-product of our eating into the soil to create more food for us, we have set up a multibillion-dollar industry to manufacture artificial fertilizers which mimic what nature has already created.

Clearly, we need to look more closely at, if not into, the chamber pot. Can we do something about this problem without giving up our convenience? It would be almost impossible for financial planners, policymakers and even the most ardent of environmentalists to convince people, especially urban populations, to go back to unmentionable alternatives.

So, as nations push to meet the Millennium Development Goals on sanitation, and come to grips with the public health crises caused by the lack of hygienic waste disposal, we have to imagine a new possibility that is financially sound and environmentally sustainable.

Let's face it. There is a huge question mark over how the 2.6 billion people estimated to live without proper sanitation can aspire to the water-guzzling, high capital cost infrastructure that many of us can enjoy now. We, too, need to understand that we should not take it for granted much longer.

The alternative exists, though it needs much more work. Ecological sanitation is the new paradigm that allows the conversion of waste into a resource. Without going into too many details, let me just say that eco-san is about separating solid and liquid waste at source, without using water (except for personal cleaning in some designs), and then allowing the waste to turn into usable compost.

In our work at Arghyam, we are supporting many small endeavours across the country to popularize the use of eco-san in rural areas. We are also working with an agricultural university to conduct further research and training.

The converts are usually small farmers with no access to conventional latrines and less to expensive fertilizers. You have to see to believe the impact of the judicious application of ALW on crops such as bananas. And one conversation will help understand a farmer who sees for himself that eco-san saves thousands of rupees on fertilizer while maintaining soil fertility.

If this is such a simple and sound solution, why is this not scaling rapidly across the country, if not the world? There are many challenging issues to do with awareness, with good design, with policy, with financial and other incentives, and also, especially in India, with culture and, importantly, with caste. Eco-san seems more suited to small rural solutions in an urbanizing world.

Yet, none of these is insurmountable. We need the champions of the new green economy, those who are continuously and vocally optimistic that current market systems will thrive on ecological challenges, to grapple with the less understood question of sustainable sanitation.

There is surely a pot of gold at the end for rainbow chasers here.

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