



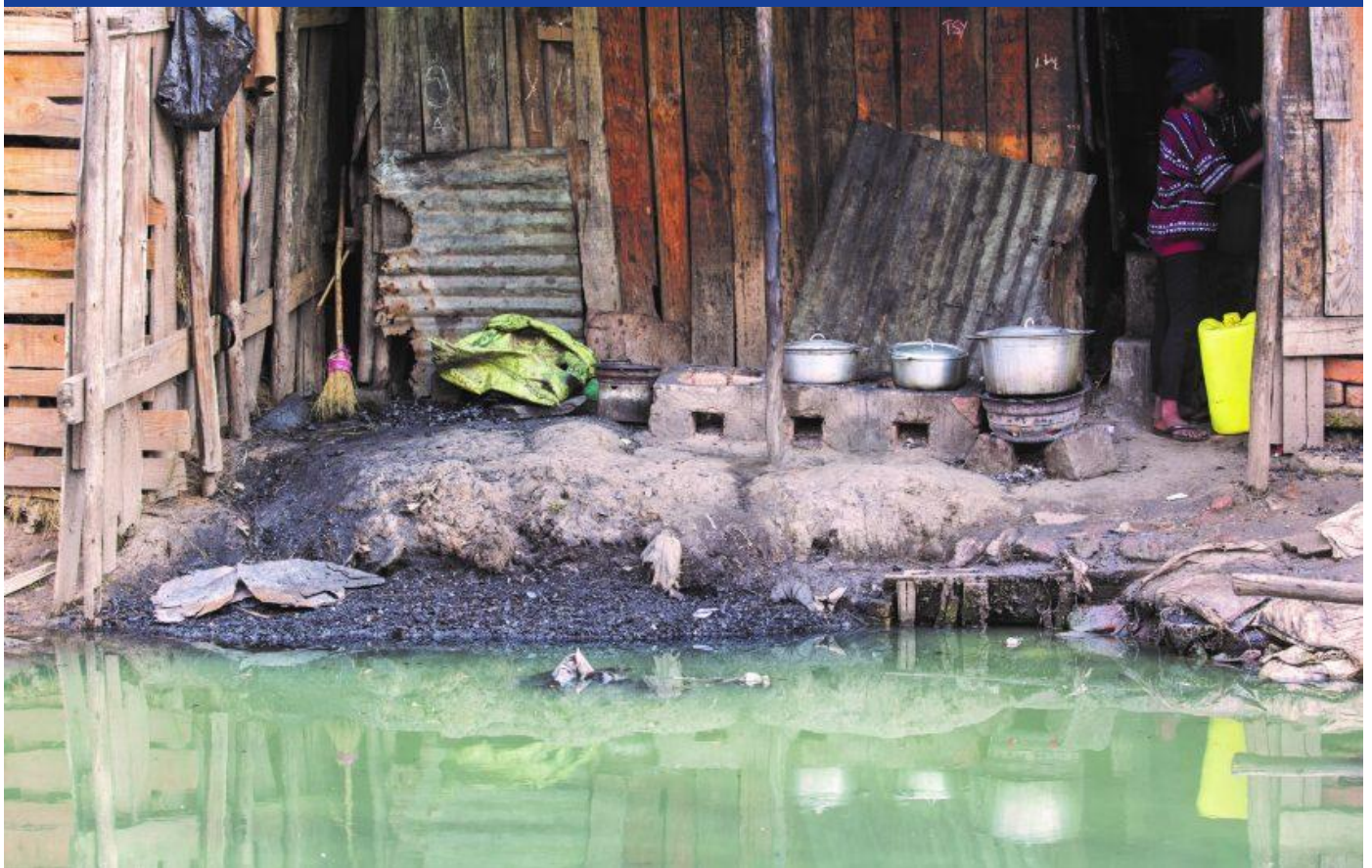
# The devastating impact of poor wastewater management



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News



## Ahead of World Toilet Day, our CEO looks into the impact of poor wastewater treatment and highlights ways in which cities can improve sanitation management.



**By Neil Jeffery, Chief Executive**

When people in the most developed cities flush the toilet, they have the luxury of not having to wonder where the wastewater goes to next.

They know, if they stop to think for a second, that it gets flushed into a sewer, probably running under the main road, joining larger and larger sewers until it ends up in a treatment plant. At this point, water gets treated and ends back – somehow – in the water system.

Maybe, years later, that water will come back to the same house, perhaps to be used in a sink, or shower.

But we don't need to worry about all this. It just happens, and our sanitation systems works – by and large – in harmony with the wider ecosystem.

It is not so simple, though, in many other countries. The lack of a sewer system outside of central urban areas means that vast quantities of wastewater is simply not treated.

And this, in turn, results in sanitation waste being abundant in urban communities – with a devastating impact on health, dignity, education and economic development.

The United Nations says, in its communications for next week's World Toilet Day, that “we are turning our environment into an open sewer”.



For example:

- 80% of sanitation waste in the Indian city of Kochi goes into the environment untreated
- In Dakar, Senegal, 69% of the waste is not treated
- In Dar-es-Salaam, Tanzania, the figure is 57% (all data from <https://sfd.susana.org/>)

In some cities the challenge is that many residents' septic tanks are connected directly to open drains – so that all their waste flows directly into the environment, often without residents even knowing.



Wastewater flows into an open drain in Bangladesh. Credit: Skoll Foundation

In other cities, residents pay for their waste to be collected by a vacuum tank operator which then simply dumps the waste into a river a few miles away. The problem is shifted from the house, but very much remains in the environment.



A tanker dumps raw sewage near communities in Freetown, Sierra Leone

In Lusaka, groundwater is vulnerable to contamination due to thousands of openings in the rock layer. Poorly-built facilities leach their contents into surrounding soil, and informal pit emptiers dump sanitation waste into open drains and water bodies: both heavy factors behind recent outbreaks of cholera, which killed 88 people in 2017 and 2018.





A shallow well in Lusaka – a breeding ground for cholera yet too often a source of drinking water

Sadly, many of these issues are hidden below ground, out of sight and out of mind.

The world is significantly off track for all of Sustainable Development Goal 6, and poor management of sanitation waste has a particular impact on SDG 6.3:

### **Improve water quality, wastewater treatment and safe reuse**

By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

SDG 6.3 is vitally important, because poor sanitation waste management in urban areas has a catastrophic impact on health of urban dwellers. It affects the whole city – even richer residents are not immune, for example when they eat vegetables irrigated by water mixed with sewage.

But, for the poorer residents, the risks are far higher.



They will live in communities where harmful bacteria is rife. They might have to wash their clothes in dirty, polluted water. They will almost certainly be reliant on water from damaged pipes, increasing the risk of contamination as they drink (especially where depressurisation from water rationing has weakened the system).



Water pipes mingle with rubbish and raw sewage in a slum in Nairobi. Credit: Brian Otieno

Solving this challenge of poor sanitation management is a complex task. In order to do this, here are four ways in which cities need to act:

1. **Risk management:** Better understand, and act to mitigate, risks to environmental damage across the entire water cycle: from the catchment area right through to water bodies in urban areas, and wastewater management.
2. **Monitoring:** Improve monitoring of water quality across the ecosystem – in boreholes, rivers, coastal areas and discharge points, using technology to better predict and solve hidden risks before they cause irreparable damage to the ecosystem.
3. **Treatment:** Improve the treatment of human waste *before* it goes back into the environment, particularly from un-sewered toilets but also from



treatment plants.

4. **Services:** Support the development of services which can collect and transport sanitation waste for safe treatment, and raise awareness of the issue among residents, to stimulate customer demand.



Operators in Lusaka, Zambia, collecting waste from a pit latrine to ensure it can be safely treated.

We need to build systems which work in harmony with the natural environment, not against them.

Leading urban authorities are recognising this, and we have seen progress in cities such as Lusaka, Freetown, and Visakhapatnam.

They understand that tackling this issue head-on can pay dividends – not just for the well-being of poorer residents, but for the health of the whole city and all its inhabitants.

We need more cities to join them in prioritising improved wastewater management.

**Learn more about this issue**

- [New report: promoting water security in Lusaka](#)
- [How to improve sanitation across an entire city: the case of Visakhapatnam](#)
- [SWEEP – an affordable sanitation service in Bangladesh](#)
- [Protecting the water source from trees to tap in Nairobi](#)

*Top image: Polluted river, Madagascar. Credit: Tsilavo Rapiera*



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