



The world is not on track to reach Sustainable Development Goal 6 (SDG 6): to ensure availability and sustainable management of sanitation and water for all by 2030.¹

Today, 4.5 billion live without a safe toilet ² and 892 million people still practise open defecation. ³

The impact of exposure to human faeces on this scale

has a devastating impact upon public health, living and working conditions, nutrition, education and economic productivity across the world.

SDG 6 aims to ensure that everyone has a safe toilet and that no-one practises open defecation by 2030. Failure to achieve this goal risks the entire 2030 Agenda for Sustainable Development.

1 United Nations (2018) Sustainable Development Goal 6 Synthesis Report 2018 on Water and Sanitation: <http://www.unwater.org/un-reports-that-world-is-off-track-on-water-and-sanitation-goal/>

2 'Safe toilet' is used here as shorthand for the WHO/UNICEF term 'safely managed sanitation', which means improved sanitation facilities which are not shared with other households, and the excreta produced is either: treated and disposed in situ; or, stored temporarily and then emptied and transported to treatment off-site; or, transported through a sewer with wastewater and then treated off-site.

3 Both figures from: WHO/UNICEF (2017): *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*.



When nature calls, we need a toilet. But, billions of people don't have one.

This means human faeces, on a massive scale, is not being captured or treated.

We are turning our environment into an open sewer.

We must build toilets and sanitation systems that work in harmony with ecosystems. When nature calls, we have to listen and act.

HEADLINE FACTS

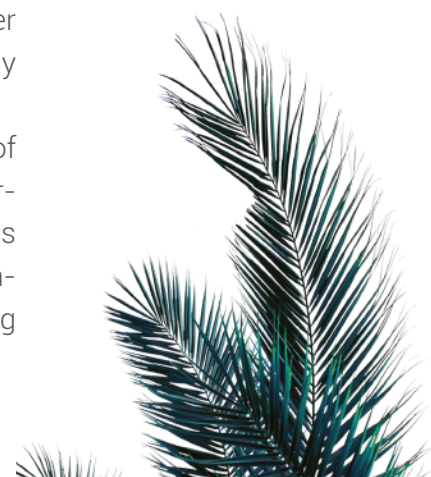
• Today, 4.5 billion people live without a safe toilet and 892 million people still practise open defecation – this means human faeces, on a massive scale, is not being captured or treated. ⁴

• An estimated 1.8 billion people use an unimproved source of drinking water with no protection against contamination from human faeces. ⁵

• One fifth of schools worldwide do not provide any toilet facilities – a particular problem for girls during menstruation. ⁶

• 900 million schoolchildren across the world have no handwashing facilities – a critical barrier in the spread of deadly diseases. ⁷

• Globally, over 80% of the wastewater generated by society flows back into the environment without being treated or reused. ⁸



4 WHO/UNICEF (2017): *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*.

5 WHO/UNICEF (2017): *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*.

6 WHO/UNICEF (2018): *Drinking Water, Sanitation and Hygiene in Schools: 2018 Global Baseline Report*

7 WHO/UNICEF (2018): *Drinking Water, Sanitation and Hygiene in Schools: 2018 Global Baseline Report*

8 On average, high-income countries treat about 70% of the wastewater they generate, while that ratio drops to 38% in upper-middle-income countries and to 28% in lower-middle-income countries. In low-income countries, only 8% of industrial and municipal wastewater undergoes treatment of any kind (Sato et. al, 2013).

EXAMPLES OF SOLUTIONS TO THE SANITATION

CRISIS

Nature-based sanitation solutions (NBS) harness the power of ecosystems to help treat human waste before it returns to the environment. Most NBS essentially involve the protection and management of vegetation, soils and/or wetlands, including rivers and lakes.

For instance:

- Composting latrines capture and treat human waste on site, producing a free supply of fertiliser to help grow crops.
- Human-made wetlands and reed-beds filter contaminants out of wastewater before it is released back into water courses.

CASE STUDIES

India: Toilets for health and safety

Worldwide, around 892 million people practise open defecation: going to the toilet in the streets, fields and bushes near their homes.⁹ More than half of this group – approximately 520,000,000 people – live in India, around 40% of the national population.¹⁰

The problems generated by this practice go beyond the issues of disease and indignity. Girls and women living in areas where open defecation is widespread often wait until the cover of darkness to venture outside to relieve themselves.



A lack of a safe toilet close to home can result in attack, rape and, as covered in recent well-publicised media reports from Uttar Pradesh, murder.

The Government's Clean India Mission aims to construct 90 million household and community toilets in rural India and eliminate open defecation across the country by 2019¹¹ – playing a major role in helping to achieve SDG 6 at both the national and global level, and keeping girls and women safe.

The challenge has inspired many organisations to develop sustainable and affordable sanitation models,

9 WHO/UNICEF (2017): *Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines*.

10 World Bank: (2015): <https://data.worldbank.org/>

11 <http://swachhbharatmission.gov.in/sbmcms/index.htm>



such as 'composting latrines' that biodegrade human waste ready to be used as a fertiliser for crops.¹² Many models are designed to be built and maintained by communities themselves, helping to foster a sense of ownership, which is crucial in changing the often ingrained practice of open defecation.

Nigeria: community-led total sanitation

In Warji, Bauchi state, Nigeria, the local government authority (LGA) is helping communities to learn about the effects of open defecation on their health and to be therefore inspired to build latrines and eradicate open defecation.

In a 'community-led total sanitation' approach, people are sensitised to issues such as the transmission of pathogens from exposed human and animal faeces back into the food chain. Citizens become aware of the link between deadly disease outbreaks and open defecation due to the lack of latrines.

Once a community has improved its sanitation situation and demonstrated sustained, universal usage of the facilities, the LGA awards the village 'open defecation-free' (ODF) status. This then has a 'ripple effect' with neighbouring settlements, who see the health benefits and associated prestige and are encouraged to emulate the effort to become an ODF community.

Warji LGA is one of 12 LGAs supported by UNICEF to implement a UK Aid-funded sanitation, hygiene and water project and overall has reached over 2 million people in four states.

(Read more: https://www.unicef.org/nigeria/media_6791.html)



¹² https://www.unicef.org/ghana/Latrine_technology_option_manual_final_a4_size.pdf

*The multifunctionality of human-made wetlands*¹³

Domestic wastewater is made up of three basic components: water (e.g. urine and greywater), carbon and nutrients (e.g. bodily and food waste). Safely treated and/or extracted, these are useful components for various purposes such as growing food or producing bio-energy (WWAP, 2017).

Human-made wetlands are intended to reduce organic matter and pathogens in wastewater to a minimum, helping to make discharge safer. The effluent leaving constructed wetlands can still have relatively high levels of nitrogen and phosphorus, making it a highly suitable source of water for irrigation.

Constructed wetlands are also among the world's most productive ecosystems, capable of producing relatively large quantities of biomass. This biomass can be harvested at regular intervals to be used as biofuel. It is estimated that about 12% of the cooking fuel needs of a 60-person village in sub-Saharan Africa can be supplied from the biomass of a constructed wetland (Avellán et al., 2017), thereby reducing reliance on wood fuels.

Examples of human-made wetlands:

In Egypt, a constructed wetlands pilot project in Bilbeis, 55 km north of Cairo, resulted in a secondary-level treated wastewater effluent, which was used to irrigate Eucalyptus trees for the manufacture of packaging boxes. Hence, the project has contributed to water conservation and the preservation of groundwater resources.

The Litani River in Lebanon is highly polluted due to the discharge of untreated agricultural, industrial and domestic wastewater. Wastewater treatment plants in



the region are either non-functional or only partially in operation. This has resulted in soaring concentrations of nutrients and pathogens in the river. A constructed wetland system has been designed to treat water flows in the Litani River and has removed between 30% and 90% of the pollutant mass, resulting in wetland effluent quality that falls within the range permitted by international environmental standards. The treated water effluents are directed through a discharge channel back to the Litani River. (Difaf – Environmental Consultant, supported by USAID)

¹³ WWAP (United Nations World Water Assessment Programme)/UN-Water. 2018. *The United Nations World Water Development Report 2018 Nature-Based Solutions for Water*. Paris, UNESCO.