130 million – households don't have access to a toilet

2.5 million – people without access to sanitation

Basic sanitation

Poor sanitation continues to impact public health and restrict social progress, particularly for women. Governments and donor organisations prioritise measurement, education and innovation in a bid to drive change.

Although investments in sanitation can reduce disease, increase family incomes, keep girls in school, help preserve the environment, and enhance human dignity, the world has missed the UN Millennium Development Goal target by almost 700 million people. Goal 6 of the newly adopted Sustainable Development Goals (SDG) is to ensure availability and sustainable management of water and sanitation for all by 2030. It's a tough challenge as, according to the World Health Organization, lack of access affects approximately 2.5 billion people, or more than 30% of the global population, the majority of whom are living in extreme poverty across parts of rural Asia and Africa.

Some 130m households don't have access to a toilet. This means that more than a billion people defecate in the open, behind bushes, in fields or by roadsides. One gram of faeces carries up to 1 million bacteria and 10 million viruses, so diseases can easily spread and it's hard for health workers to control outbreaks caused by contaminated water and unhygienic food preparation.

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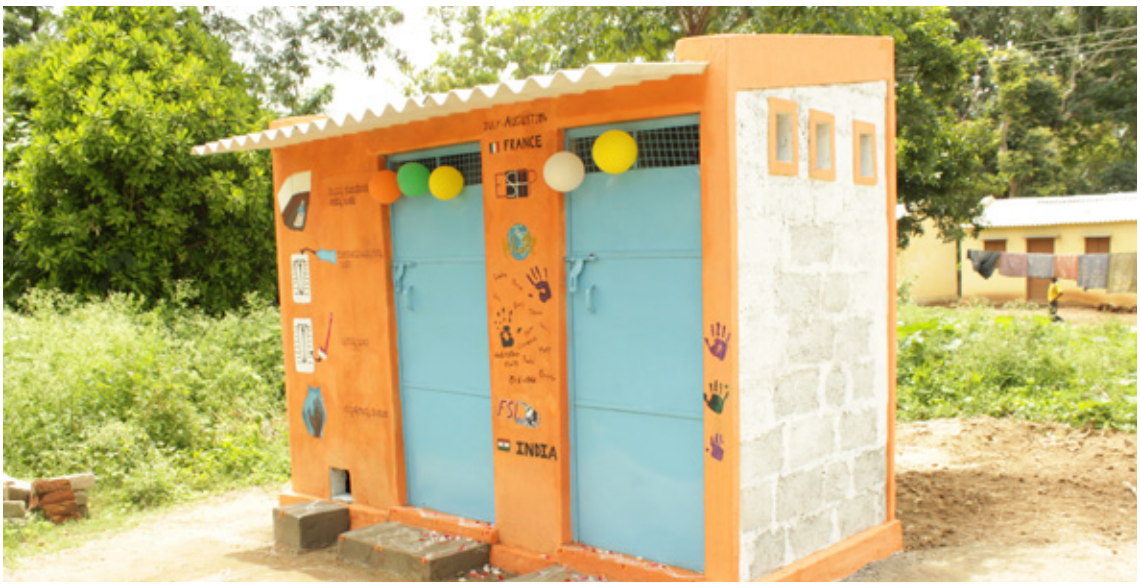
This particularly affects women and young children. For a girl, lack of access to a clean, safe toilet, especially during menstruation, can lead to absence from school and increases the risk of harassment as many have to leave home in the cover of night to relieve themselves. This has long-term impacts on their health, education, livelihoods and safety, ultimately limiting the productivity of half of the potential workforce and therefore impacting the economy.

Primary health care facilities, critical in responding to outbreaks of diseases, such as cholera or Ebola, are frequently lacking in good sanitation despite the fact that they are the first point of care, especially for those in rural areas. Lack of basic water, sanitation and hygiene facilities compromises the ability of health care workers to carry out proper infection prevention and control measures, and demonstrate safe practices to communities, both of which are especially important in controlling and stopping outbreaks.

SDG status has done much to change the political cache of sanitation policy. However accountability for its provision is complex and crosses a number of different government departments, ministries for health, water and local government, of the environment, and those with central, regional, district, and city responsibilities. All are becoming increasingly aware of the pollution problems which on-site sanitation can cause to groundwater, coastal waters, and surface water, and the net result is often a tangled web of overlapping, uncoordinated, unworkable policies, low budget allocations, and low prioritisation.

Our habitat



As better understanding emerges on the health impacts that improved water, sanitation and hygiene (WASH) can have on populations, expect new collective government bodies to make more strategic investments in projects. The World Bank Group is currently taking a lead in this area and is integrating WASH, nutrition and health in at least 13 projects across India, Pakistan, Lao PDR, Cambodia, Vietnam, Ethiopia, Mozambique, Uganda, Zambia, and Haiti at a cost of around US$440 million.

Alongside this is the need to strengthen the mechanisms for tracking investments, as better measurement and research is vital. Although the number of public toilet facilities available is relatively easy to monitor, personal sanitation habits are not. Often developing countries are ill-equipped to monitor the many sector indicators simultaneously, especially if these indicators are themselves not easily measurable to begin with. The WHO and UNICEF[1] are now committed to addressing this and are working with a number of countries to identify and use simple, measurable indicators essential to provide planners and decision-makers with relevant information.

Many previous government and NGO initiatives have often come to nothing, primarily because of the failure to address the need to change the behavioural habits of generations. As a result toilets have been built but not maintained or perhaps not used for their original purpose. Developing behaviour-focused sanitisation campaigns alongside providing the necessary facilities will gain more traction. This is not a simple task, as it will require considerable investment in human capital at both national and local levels; it will also require citizens' involvement, smart targets and good monitoring systems, as well as room for experimentation and learning. Alongside improved basic education, addressing cultural habits is key to instigating change.

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In particular campaigns may benefit from turning the spotlight on the personal advantages of sanitation, such as convenience, status and safety rather than the more distant, albeit important, impact of sanitation on public health. Such campaigns not only mean government-built latrines have a better chance of being used; they may also encourage households to build them for themselves.

Aside from education and investment in facilities, innovation, both in the process of building new facilities and in funding, will have a significant role to play going ahead. In emerging markets one of the main obstacles is often complexity; people have to cobble all of the components and tradesmen together from different places and then find the materials for the toilet separately. This can take time and effort; efforts to change this will make a huge difference, as will improve efforts around the mechanical waste removal and treatment.

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Recently, the Gates Foundation challenged designers to reinvent the toilet, suitable for the developing markets. The winning product, by Michael Hoffman of the California Institute of Technology, uses solar panels to power an electrochemical system that produces hydrogen and a compound that oxidises the salts in urine to generate chlorine. This creates a mildly disinfecting solution that can be used to flush the toilet. The hydrogen is suitable for cooking or for powering a fuel cell to produce electricity. The solid residue from the process can be employed as fertiliser. Prototypes will soon be tested in the field, and may well be deployed in as little as two years. The foundation now intends to spend up to $80m a year on sanitation, an investment that the World Health Organisation estimates will produce a return of 900% in the form of social and economic benefits coming from increased productivity and reduced health care costs.

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