The availability of sufficient and safe water supplies is a precursor to health and development and has long been identified as a major global concern. 1.6 million people, mostly children living in developing countries, die from diarrhoeal disease related to unsafe water, improper hygiene, and inadequate sanitation. An additional 1 million people, again mostly children, die from malaria, which is partly spread by improperly planned irrigation projects and dams. While waters of poor microbiological quality cause the overwhelming burden of disease, chemical contamination, notably excessive levels of fluoride and arsenic, are increasingly becoming a concern.

Areas where water is scarce, where water is of poor quality, or where water resources are managed poorly, are frequently the same areas where poverty is rampant, exacerbating an already dire situation. For example, malaria has been estimated to cost Africa more than US$ 12 billion every year in lost GDP. In China, the loss of welfare due to poor water quality on health alone was estimated at 13.4 billion for late 1990s. Lack of safe water impacts the poor disproportionately, causing disease in those with already weakened immune systems, forcing many to spend valuable time fetching water, or compelling them to pay more for water through tanker trucks. Every month the Indian economy misses out on over 100 million working days because of time spent collecting water.

Poor families lacking safe water are disadvantaged further because they often lack access to, or cannot pay for, medical care required to treat water-related disease. The worst off are often disempowered, lacking access to information, for example, on understanding the links between unsafe water and disease, or an unawareness that simple, and cheap methods exist to ensure the safety of their household supplies. Lack of safe water perpetuates a cycle whereby poor populations become further disadvantaged.

The converse, however, is also true. Advantaged populations are the least affected by limited access to safe water supplies. For example prosperous communities are beginning to better manage a finite resource, through, for example, more effective water re-use strategies, the use of technologies like desalination, and by advanced water treatment systems. Therefore, efforts should focus on increasing access to the disadvantaged, where its impact be felt most. These include not only developing regions, but certain communities in developed countries that are served by insecure drinking water supplies.

Expanding access to safe water has been shown to be cost effective, especially in terms of time saving and averted health costs. Halving the proportion of Africans without access to an improved water supply and improved sanitation would save US$ 1.2 billion in health treatment costs. Universal access for African to a piped water supply and sewerage connection their homes would save US$ 6.4 billion. However, providing improved services to disadvantaged populations remains a huge challenge. In remote rural areas and urban slums, upfront investments in infrastructure have prevented hundreds of millions disadvantaged households from benefiting, while in “organized” urban areas, aging distributions systems make maintaining services difficult.

Against this backdrop, continued incremental health gains in disadvantaged populations can be achieved through a multi-pronged approach encompassing proven, achievable, and cost-effective interventions at the national, community, and household level. These include accelerating access to safe “organized” piped water supplies and sanitation by advocating for increased investment in coverage, along with improved legislation and regulation; strengthening management of small or remote community water systems, through Water Safety Plans, which offer a holistic catchment to consumer approach; and finally by promoting household level interventions like handwashing and point-of-use treatment and safe storage. Providing disadvantaged homes with range of options to treat and safely store their families’ water, together with support for behaviour change, are immediate steps that can be taken at the household level, and could cost as little as US$ 0.33 per person per year in Africa.

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