

**Global Health & Development**



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## **The Third World's Drinking Problem**

SINGAPORE – During its recent gathering in Davos, the World Economic Forum released its ninth annual *Global Risks* report, which relies on a survey of more than 700 business leaders, government officials, and non-profit actors to identify the world's most serious risks in the next decade. Perhaps most remarkable, four of the ten threats listed this year are water-related.

These risks include water crises stemming from droughts and floods, the deterioration of water quality, and poor water management; failure to mitigate and adapt to climate change; higher incidence of extreme weather events; and food crises, driven at least partly by water shortages. But the report fails to highlight the most pressing water-related concern: ensuring enough potable water. Moreover, while

international organizations recognize the problem, their approach to addressing it is entirely wrong.

In 2012, the United Nations announced that the Millennium Development Goals' target of halving the number of people without sustainable access to safe drinking water had been achieved well ahead of schedule, with only 783 million people still lacking access to clean water. But the Third World Center for Water Management estimates that at least three billion people worldwide still drink water of dubious quality. AquaFed, which represents private water companies, puts this figure at 3.4 billion – nearly half the world's population. This suggests that the UN's declaration of victory was premature, to say the least.

There is no shortage of evidence. In 2011, more than half of China's largest lakes and rivers were deemed unfit for human consumption. Last year, China's Ministry of Environmental Protection admitted that "toxic and hazardous chemical pollution has caused many environmental disasters, cutting off drinking-water supplies and even leading to severe health and social problems, such as 'cancer villages.'"

India's situation is not much better, with the state-run Central Pollution Control Board reporting last year that nearly half of the country's 445 rivers are too polluted in terms of biochemical oxygen demand (an indicator of the organic quality of water) and coliform bacteria to be safely consumed. If other pollutants – such as nitrates, fluorides, pesticides, and heavy metals – were considered, the figure would be significantly higher.

Likewise, Pakistan's National Assembly was informed last year that 72% of samples collected from the country's water-delivery systems were unfit for human consumption, with 77% of groundwater in urban areas and 86% in rural areas deemed hazardous. In Nepal, the Department of Water Supply and Sewerage has concluded that 85% of its traditional water-supply systems are seriously contaminated with bacteria, iron, manganese, and ammonia. Meanwhile, in Mexico,

90% of the country's nearly 25,000 water utilities were operating in a state of bankruptcy in 2013.

The problem with international organizations' approach is that they conflate the vague notion of "improved water sources" with genuinely clean, safe drinking water. In the same way, they have diluted the goal of "improved sanitation" – the process of collecting, treating, and safely discharging wastewater – by applying it to indoor toilets in people's homes.

This glosses over a major discrepancy between sanitation and adequate wastewater management. While nearly 90% of the households in the Indian region of Delhi are said to have adequate sanitation, because they have indoor toilets, nearly all of the untreated wastewater is discharged to the Yamuna River – a source of drinking water for cities downstream. Likewise, Mexico City is considered to have a high level of sanitation, even though it transports untreated wastewater, loaded with pathogens and toxic chemicals, to the Mezquital Valley, where it is used to irrigate crops.

In fact, the Third World Center for Water Management estimates that only about 10-12% of domestic and industrial wastewater produced in Latin America is properly managed. The situation is probably very similar in developing countries in Asia, and likely worse in Africa.

In 2011, a survey by the Central Pollution Control Board of India indicated that only 160 of 8,000 towns had both a sewerage system and a sewage-treatment plant. Furthermore, most government-owned sewage plants are non-functional or closed most of the time, owing to bad management, poor maintenance, faulty design, lack of regular electricity supply, and absent, untrained, or uncaring employees.

Similarly, China's Ministry of Housing and Urban-Rural Development reported in 2012 that while 640 of 647 cities and roughly 73% of counties had wastewater-treatment facilities, 377 plants built in the course of one year did not meet national

requirements, and that the average operating efficiency was less than 60%. The ministry also found that only 12% of the plants met Grade 1A standards.

This does not reflect a dearth of knowledge, technology, or expertise. Nor can it be blamed on a lack of investment. China spent \$112.4 billion on water infrastructure in the 2006-2011 period, and India has channeled massive amounts of public funds toward cleaning up the Yamuna River. Yet both countries' water supplies remain highly polluted.

The world's water and sanitation challenges are by no means insurmountable. Resolving them will require sustained political will, with governments building strong water institutions and ensuring that public funds are used as effectively as possible. At the same time, the public must recognize that they can have better water services, if they are willing to contribute through taxes, tariffs, and transfers.

For their part, the media must stress the benefits of functional water-delivery and wastewater-management systems – and hold politicians and bureaucrats accountable if they fail to do their part. Finally, water professionals need to shift their focus from providing more water to providing better water more sustainably.

Given that failing to address the water challenge would, within a generation, bring about a global crisis of unprecedented proportions, such efforts could not be more urgent.

*<http://www.project-syndicate.org/commentary/asit-k-biswas-and-peter-brabeck-letmathe-recommend-a-new-approach-to-addressing-developing-countries-water-and-sanitation-challenges>*

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