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ISSUE AT HAND IS NOT WATER SCARCITY

The world needs better management of water

ASIT K BISWAS AND CECILIA TORTAJADA

The 7th World Water Forum — the largest water-related event in the world — kicked off in South Korea yesterday. About 20,000 participants, including roughly 100 ministers, from all over the world are attending the week-long forum to discuss the future of water. This will be an undertaking fraught with difficulties, as water is an issue that cuts across all human activities and many non-water-related fields.

Take, for example, the projected growth of the global middle class from 1.8 billion in 2009 to 3.2 billion in 2020 and 4.9 billion by 2030. Two of the salient requirements of this exploding middle class are better quality of food and more energy. Nearly 70 per cent of global water-use is for food and agriculture. As standards of living of billions of people improve, they will move to a more protein-based diet, which includes food that needs significantly more water to produce.

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Equally, as lifestyles improve, energy needs go up significantly. Middle-class people aspire to have cars. Water is needed to produce all car components, from steel to electronic parts. Manufacturing electronic components requires more water than needed by humans for drinking.

Cars need oil to run, which cannot be extracted without pumping water into oil fields. For good fields, each barrel of oil extracted needs around eight barrels of water. For mature oil fields, this ratio is as high as 1:16.

In a nutshell, the explosive growth of the middle class will place tremendous demands on water.

What, then, can countries and governments do?

First, water-use efficiencies must significantly increase for all sectors. Water prices are universally low and water is often free or highly subsidised. Thus, water is used profligately by people, agriculture and industry. This has to be changed.

An efficient city such as Hamburg uses 110 litres per capita per day (lpcd). Singapore uses 152lpcd, while Hong Kong uses 220lpcd. However, in Qatar, where people receive water free, the figure is a staggering 1200lpcd. This is 11 times as much as in Hamburg. In addition, 35 per cent is lost from the national water system, because of poor operation and maintenance.

Adjusting the price of water can significantly change the behaviour of those who use it. This is perhaps something policymakers in Singapore and Hong Kong may wish to consider, especially since prices of water in both cities have remained the same since 2000 and 1995, respectively. During the intervening periods, household incomes have almost doubled in both cities. What the average household pays for water now makes up less than 1 per cent of its income.

European cities such as Berlin, Copenhagen, Hamburg and Amsterdam have reduced their daily per capita consumption to between 105 and 135 litres by using water pricing as a conservation measure. In fact, Denmark, Germany and The Netherlands have the highest water tariffs among countries in the European Union.

LESSONS FROM PHNOM PENH AND NESTLE

There will be considerable handwringing in South Korea about how the world is running out of water and possible wars between countries because of water shortages. Both are incorrect.

Water is a renewable resource. It can be used, treated properly and then reused again and again. Every drop of Colorado River is used and then reused another six times for domestic, industrial irrigation and environmental purposes. With good management, it can be used 30 or more times.

The United Nations claims that, today, only 840 million people do not have access to clean water. Scientists believe a more accurate figure is 3.5 billion people. There are no financial, technical and management reasons that any city of 200,000 or more people cannot have clean water. For this, both the rich and the poor must pay for the water they consume, with targeted subsidies for the poor.

Take, for example, Phnom Penh, whose Water Supply Authority was bankrupt in 1993. Then, households were lucky to receive water for just one hour each day. A decade later, the authority was completely overhauled, all corrupt personnel were fired, management was made more efficient and transparent, and water was appropriately priced, with subsidies only for the poor. The city has been providing clean water for both the rich and the poor, at prices they can afford. The profits of this public-sector company have increased each year. Many of its performance indicators are now better than those of London or Los Angeles. The question that must be asked is, if Phnom Penh can do it, why not Delhi,

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Dhaka or Jakarta?

Sadly, most governments and international organisations have been singularly inept at water management. In contrast, some major multinational companies have improved their water management practices dramatically.

Consider Nestle. Over the past 10 years, it has reduced its water requirements per dollar of sale by more than 65 per cent, by using new technology and educating and training its staff on the importance of conserving water. Two Nestle factories in India and Mexico will become the first in the company's history to be water-positive: They will return more water to the environment than they will withdraw, by using new technology and focusing on good management.

Phnom Penh and Nestle have shown that given sound management and strong political and business support, the world's water problems can be solved with available technology and resources. The world is not facing a water crisis because of scarcity of the resource, but due to a serious crisis in water management.

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