Better sanitation systems lead to economic growth

Providing total and improved sanitation services is a challenge across Asia, as population growth—up 5.7% on average in the past two decades—overwhelms existing infrastructure and outpaces planning.

In Central Asia, South Asia, East Asia, and Southeast Asia, 1.7 billion people do not have access to safe sanitation, 780 million still practice open defecation, and 80% of waste water is dumped without proper treatment.

The region needs to invest more than $71 billion to provide sanitation services to all.

Countries in Asia and the Pacific can learn from the Republic of Korea and Malaysia about how to improve sanitation services, improve water quality and availability, broaden sanitation and strengthen governance, establish institutional mechanisms, and implement city-wide planning—all of which spur economic growth.

Korea and Malaysia have harnessed innovative sanitation systems and involved the private sector in identifying projects that provide maximum coverage for communities.

They have also put together sanitation projects funded by both the public and private sectors.

Vedanti Kelkar, a capacity building and training associate at the Asian Development Bank Institute, explains the economic benefits of such a strategy.

> There is a link between the sanitation sector and economic progress. Countries in Asia need to prioritize investments in sanitation services to support vibrant and livable cities amid increasing demand from industrialization, public health, and

> the environment. Asian countries should look at what Korea and Malaysia have done since the current economic situation in many developing countries resembles that of Korea and shares the same ethnic diversity as Malaysia from around four decades ago.

Korea improved its water and sanitation systems through decisive policies and actions.

First, the government developed and implemented policies effectively, such as introducing the Sewerage Law of 1966 to upgrade sewage and waste water services, and made sure these policies were supported by robust institutional arrangements, with two ministries made responsible for developing the sector to meet the industrial and domestic demand for wastewater services, and drawing up wastewater plans in line with national development plans.

Korea translated these actions into city-wide sanitation and sewer master plans and incorporated them into the broader urban masterplans.

As a result, sanitation coverage and wastewater collection and treatment improved as water pollution fell—by 2012, 91% of the population was connected to sewers from only 30% in 1987.

> In 2014, when I first moved to Korea from India, I was awestruck by the country's infrastructure and ease of mobility. As an architect, I found most impressive the access and provision of toilets almost everywhere, be it at metro train stations, bus terminals, shopping plazas, parks, or even on mountain hiking trails. The convenience of having clean and hygienic toilets in public places was truly a gift for me during my stay there for a few years. And to think that 45 years ago, Korea was an underdeveloped country receiving substantial official development assistance. But the government identified the linkages between the water and sanitation sector and economic progress and worked to meet the increasing demand from industrialization, public health, and the environment. Successive governments carried on the work.

Malaysia also improved its sanitation services as the government gave priority to the sector starting from the country's independence in 1957. It chose a comprehensive approach of managing centralized, community, and onsite sanitation systems and introducing robust regulatory frameworks and involving the private sector.

In the peninsular urban region, Malaysia adopted uniform policy, regulation, and service delivery to ensure maximum coverage.

When the aging infrastructure of Penang City faced frequent collapses and overflows in the 1990s, industrialization, urbanization, and the growing tourism industry compelled the government to upgrade the sewer infrastructure, which proved to be a major economic driver.

Countries in Asia and the Pacific face many challenges in delivering sanitation services to their people.

Providing sewer-based, or piped networks, an approach that governments favor, may not necessarily be the ideal, because it only focuses on the technical capacities to solve the sanitation challenge and does not entirely estimate the cost returns and economic spillovers from improved sanitation services for all. Sewer-based networks can be delayed due to insufficient funds, resulting in poor sanitation coverage rates, and are also difficult to set up in informal settlements and remote rural areas.

Non-sewer sanitation systems are a better alternative and may prove more effective. They use onsite systems to collect, transport, contain, treat, safely reuse, and safely dispose of human waste, and do not depend on municipal sewer networks.

Many onsite sewage disposal techniques qualify as non-sewer sanitation, including several decentralized sanitation solutions that work with existing urban infrastructure.

In many countries, the private sector, nongovernment organizations, and social enterprises have set up non-sewer sanitation and fecal sludge management systems in hard-to-reach sites.

But with few service providers and professionals in the sector, institutional frameworks are needed to hasten efforts to provide such systems.

In India, nongovernment organizations and social enterprises have set up non-sewer sanitation for wastewater treatment and waste disposal at more than 200 sites without support from local governments.

> **In the existing scenario, onsite sanitation services coupled with a strategic approach of identifying greater economic benefits from improved water and sanitation services may be the way to go to speed up total coverage and achieve prosperity in developing Asia.**

That was Vedanti Kelkar, capacity building and training associate at the Asian Development Bank Institute in Tokyo.

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