



The economics of sanitation

Swachh Bharat Mission is not only bringing about improvements in the health of communities but also providing economic returns

School teachers in the now open defecation free (ODF) Latehar district of Jharkhand are observing an interesting outcome. They say that the Swachh Bharat Mission has led to a significant reduction in incidents of diarrhoea, vomiting and malaria among children, dropouts have reduced and attendance has improved. They believe learning outcomes are also improving as children attend classes more regularly.

Doctors in Narayanpur district in Chhattisgarh say that the number of visits by women with gastrointestinal related problems has significantly decreased. These women are not only spending less on getting themselves treated, but also have more time for productive activities that have helped them earn additional wages. Moreover, they can better contribute to their children's school-related activities.

Sibbulal Das and Rajo Devi from Halamala gram panchayat, district Kishanganj in Bihar revealed that owing to them living right beside the erstwhile popular open defecation site of the ward, the average monthly family medical expense including medicines, doctor fees and travel was about ₹3,500. The panchayat has now been ODF for 4 months and they claim to have visited the doctor only twice in the past four months, as against the previous average of four to five times in a month.

Are these benefits, hitherto based on anecdotal evidence, quantifiable?

To answer such questions — to quantify and articulate the economic benefits to households in ODF villages — UNICEF (United Nations Children's Fund) recently carried out a study covering over 18,000 respondents across 12 states. And it found that the benefits are not just anecdotal but rather very tangible at the household level. Its study estimated that in an ODF village, each family saves up to ₹50,000 per year on account of avoided medical costs, saved time (which can be used more productively), and saved lives. Additionally, they also estimated a one-time benefit of increase in property value of almost ₹19,000 per household. The study also concluded that the economic benefits of sanitation per household outweigh the cumulative investment (government spend plus other modes of financing including household contribution) by 4.3 times over a 10 year period.



PARAMESWARAN IYER

These findings echo global evidence. According to the World Health Organization (WHO), the global economic return on sanitation spending is \$5.50 per every dollar invested, while other estimates suggest it may be even higher. UN

Water estimates that improved sanitation gives every covered household an additional 1,000 hours a year to work, study, care for children, and so on. This is an additional 125 productive eight-hour work days per family per year. Applied to the Indian context, this means that achieving an ODF India will result in an

increase of over 10 billion working days every year!

Complementing the WHO-UN Water studies, the World Bank estimated that economic losses associated with inadequate sanitation are about \$260 billion per year, costing countries between 0.5 per cent and 7.2 per cent of their gross domestic product (GDP). In 2006 in India alone, inadequate sanitation resulted in a loss of \$53.8 billion due to losses from health, water, time spent accessing sanitation services, and tourism, accounting for 6.4 per cent of India's total GDP.

India's economic future depends to a large extent on our youthful population and our demographic dividend. Given that nearly 38 per cent of our children under five are physically and cognitively stunted, the lack of sanitation being a significant causal factor, there is a serious risk that a large proportion of our future workforce will not be able to reach their full productive capacity, thereby posing a direct threat to the economy. The Swachh Bharat Mission is changing this, one toilet at a time. With rural sanitation coverage sharply rising from 39 per cent at the start of the programme in October 2014 to 84 per cent today, and over 360,000 villages already declared ODF, the economic benefits of sanitation are showing.

According to a report published by the Toilet Board Coalition, the sanitation industry in India is currently estimated at approximately \$32 billion, and set to increase to \$62 billion by 2021. There are also direct employment opportunities being created for masons, labourers and industries involved in supplying sanitary ware, and indirect opportunities for several associated sectors. Simdega district in Jharkhand identified female masons for formal training in February and termed them "Rani Mistris". Jharkhand is now generating employment and increasing pay for over 50,000 Rani Mistris across the state, who earn ₹300-400 per day with an additional ₹1,800-2,400 per toilet constructed. At a macro level of wage employment, for construction of over 70 million toilets in the last three and a half years, it is estimated that 1.68 billion man-hours were logged in.

Recently, agricultural scientists in Khed district of Maharashtra found that manure from toilet pits gave a better yield for onions than both the traditionally used organic manure, and chemical fertilisers. That the government has been promoting twin-pit toilets through the Swachh Bharat Mission that automatically decomposes the night soil to this productive manure is a sign of a new potential industry. Officials in Maharashtra estimate that they will be able to generate 1,400 tonnes of this manure every year!

It is an accepted fact the world over that good sanitation has a positive effect on the health of communities. What is less apparent is that good sanitation is also good economics, at the macro and the micro level. And through the Swachh Bharat Mission, sanitation has now been put squarely on the national development agenda, and evidence of steady economic savings, in addition to health benefits are emerging from the field. Today, a toilet is not just a doctor, but also a bank, a fertiliser, an employment generator, a symbol of development and an investment in a better future.

*The writer is Secretary, Ministry of Drinking Water and Sanitation, Government of India
Views are personal*