



## *News and Events*

**Dr. Bhaswati Sengupta\***

### **Sanitation and open defecation**

In 2010, the UN General Assembly recognized access to safe and clean drinking-water and sanitation as a human right, and called for international efforts to help countries to provide safe, clean, accessible and affordable drinking-water and sanitation.

The government has a target to make India “Open Defecation Free” by 2019 and has launched the flagship programme - Swachh Bharat Mission (SBM) to achieve this target.

### **Challenges**

Eliminating open defecation is the main aim of improving access to sanitation worldwide and is a proposed indicator for the Sustainable Development Goals. Despite progress, the 2015 Millennium Development Goal target to halve the proportion of the population without access to improved sanitation facilities was missed by almost 700 million people. Extreme poverty and lack of sanitation are statistically linked, hence eliminating open defecation is said to be an important part of development efforts.

In 2015, 68% of the world’s population had access to improved sanitation facilities including flush toilets and covered latrines, compared with 54% in 1990.

Nearly one third of the current global population has gained access to an improved sanitation facility since 1990, a total of 2.1 billion people. 946 million still defecate in the open, for example in street gutters, behind bushes or into open bodies of water. At least 10% of the world’s population is thought to consume food irrigated by wastewater.

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**\*Director Professor,  
Department of Public Health Administration  
All India Institute of Hygiene and Public Health, Kolkata.  
e-mail: [sengupta.bhaswati@rediffmail.com](mailto:sengupta.bhaswati@rediffmail.com)**

India has the highest number of people practicing open defecation (around 490 million people, or over a third of the population - most of them in rural areas, where the prevalence is estimated at 52 percent of the population, as compared to urban areas, where prevalence is estimated at 7.5 percent). The situation of the urban poor poses a growing challenge as they live increasingly in mega cities where sewerage is precarious or non-existent. Inequalities in access are compounded when sewage removed from wealthier households is discharged into storm drains, waterways or landfills, polluting poor residential areas. High levels of open defecation in a country are usually correlated with a high child mortality, as well as high levels of under nutrition, high levels of poverty and large disparities between the rich and poor.

A preference for open defecation behavior may be due to traditional cultural practices or lack of access to toilets, or both. Even if toilets are available, people still need to be convinced to refrain from open defecation and use toilets. Therefore, the need for behavior change is critical in addition to the provision of toilets.

### **Sanitation and health**

Some 842 000 people in low- and middle-income countries die as a result of inadequate water, sanitation and hygiene each year, representing 58% of total diarrheal deaths. Better water, sanitation and hygiene could prevent the deaths of 361 000 children aged under 5 each year.

### **Health Benefits of improving sanitation include:**

- reducing spread of intestinal worms, schistosomiasis and trachoma;
- reducing severity and impact of malnutrition;
- reducing transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio.

A WHO study in 2012 calculated that for every \$1 invested in sanitation, there was a return of \$5.50 in lower health costs, more productivity and fewer premature deaths.

### **WHO's response**

WHO works with partners on promoting effective risk assessment and management practices for sanitation through Sanitation Safety Planning, Guidelines on Safe Use of Wastewater,

Excreta, Sanitation and Health Guidelines and Global Strategy on Water, Sanitation and Hygiene and Neglected Tropical Diseases.

WHO is also working with UNICEF for ending preventable child deaths from pneumonia and diarrhoea by 2025. This aims to meet several prevention and treatment targets, including promoting universal access to drinking water, sanitation and hygiene in health care facilities and homes by 2030.

India still struggles with its sanitation targets. Thirty eight per cent of South Asia defecates in the open, and India is responsible for a full 30%.

What can be done about this? This was discussed at the international conclave organized by the CLTS Foundation and the Water Supply and Sanitation Collaborative Council (WSSCC), where government and international agency officials, NGOs and community representatives discussed the nuts and bolts of behavioral change.

"India spends on the hardware, on big subsidies to build toilets, but many of them are never used," said development expert Robert Chambers. Even out of 9.5 million toilets in rural India built in the first year of the Swachh Bharat Abhiyan (2014-15), only 46% were being used, according to NSSO data.

UNICEF in India is working in collaboration with the Health ministry to map WASH compliance in health facilities in the most deprived districts and is making recommendations to address non-compliance.

The WASH section is working with state governments to identify institutions like State Water and Sanitation Missions for capacity-building. In West Bengal, there is a pilot project under way to create a model institutional and delivery structure for making districts open defecation free.

The WASH section also provided technical support to the Government of India to develop the national Sanitation and Hygiene, Advocacy and Communication Strategy (SHACS). Jointly, UNICEF's WASH, and Advocacy and Communication sections developed the Poo2Loo campaign. This unique campaign addresses young Indians who have a toilet at home, in order to sensitize them to the plight of those who do not have toilets, and create a youth social movement to stand up and advocate for the need for everyone to have a toilet.

**Source:**

Eliminate Open Defecation | UNICEF [unicef.in/Whatwedo/11/Eliminate-Open-Defecation](http://unicef.in/Whatwedo/11/Eliminate-Open-Defecation)

Open Defecation: UN [opendefecation.org](http://opendefecation.org) accessed on 22.08.2016.

**Water scarcity and water conservation**

Water scarcity is the lack of sufficient available water resources to meet water needs within a region. It affects every continent and around 2.8 billion people around the world at least one month out of every year. More than 1.2 billion people lack access to clean drinking water.

Water scarcity involves water stress, water shortage or deficits, and water crisis. The relatively new concept of water stress is difficulty in obtaining sources of fresh water for use during a period of time; it may result in further depletion and deterioration of available water resources. Water shortages may be caused by climate change, such as altered weather-patterns (including droughts or floods), increased pollution, and increased human demand and overuse of water. The term water crisis labels a situation where the available potable, unpolluted water within a region is less than that region's demand. Two converging phenomena drive water scarcity: growing freshwater use and depletion of usable freshwater resources.

Water scarcity can result from two mechanisms:

Physical (absolute) water scarcity and economic water scarcity

Physical water scarcity results from inadequate natural water resources to supply a region's demand, and economic water scarcity results from poor management of the sufficient available water resources. According to the United Nations Development Programme, the latter is found more often to be the cause of countries or regions experiencing water scarcity, as most countries or regions have enough water to meet household, industrial, agricultural, and environmental needs, but lack the means to provide it in an accessible manner.

The UN recognizes the importance of reducing the number of people without sustainable access

to clean water and sanitation. The Millennium Development Goals addressed the effects of economic water scarcity by making increased access to safe drinking water an international development goal. MDG 7 set a target for reducing the proportion of the population without sustainable safe drinking water access by half by 2015.

### **Water scarcity's effects on environment**

Water scarcity has many negative impacts on the environment, including lakes, rivers, wetlands, and other fresh water resources. Water overuse that is related to water scarcity, harms the environment in several ways including increased salinity, nutrient pollution, and the loss of floodplains and wetlands. Furthermore, water scarcity makes flow management in the rehabilitation of urban streams problematic.

Through the last hundred years, more than half of the Earth's wetlands have been destroyed and have disappeared. These wetlands are important not only because they are the habitats of numerous inhabitants such as mammals, birds, fish, amphibians, and invertebrates, but they support the growing of rice and other food crops as well as provide water filtration and protection from storms and flooding. Freshwater lakes such as the Aral Sea in central Asia have also suffered. Once the fourth largest freshwater lake, it has lost more than 58,000 square km of area and vastly increased in salt concentration over the span of three decades.

Subsidence, or the gradual sinking of landforms, is another result of water scarcity. The U.S. Geological Survey estimates that subsidence has affected more than 17,000 square miles in 45 U.S. states, 80 percent of it due to groundwater usage. In some areas east of Houston, Texas the land has dropped by more than nine feet due to subsidence.

India's huge and growing population is putting a severe strain on all of the country's natural resources. Most water sources are contaminated by sewage and agricultural runoff. India has made progress in the supply of safe water to its people, but gross disparity in coverage exists across the country. World Bank estimates that 21% of communicable diseases in India are related to unsafe water. In India, diarrhea alone causes more than 1,600 deaths daily—the same as if eight 200-person jumbo-jets crashed to the ground each day. Hygiene practices also continue to be a problem in India. Hand washing is also very low, increasing the spread of disease. All these are directly and indirectly linked to water scarcity.

**Source:**

Water Scarcity - [pulitzercenter.org](http://pulitzercenter.org)

[www.pulitzercenter.org](http://www.pulitzercenter.org) accessed on 22.08.2016.

Water scarcity in India - Wikipedia, the free encyclopedia

[https://en.wikipedia.org/wiki/Water\\_scarcity\\_in\\_India](https://en.wikipedia.org/wiki/Water_scarcity_in_India) accessed on 22.082016

**India's strategy towards polio eradication**

India's success in eliminating wild polioviruses (WPVs) has been acclaimed globally. Since the last case on January 13, 2011 success has been sustained for two years. Extensive and exhaustive search for WPVs among children with any disease even remotely resembling poliomyelitis has proved negative since January 13, 2011. Sewage waters in Mumbai, Delhi, Patna and Kolkata have also been diligently searched; these have been negative for WPVs in 2011 and 2012. On February 25, 2012, the World Health Organization (WHO) removed India from the list of 'polio-endemic' countries.

Until early 1990s India was hyper endemic for polio, with an average of 500 to 1000 children getting paralysed daily. In spite of introducing trivalent oral poliovirus vaccine (tOPV) in the Expanded Programme on Immunization (EPI) in 1979, the burden of polio did not fall below that of the pre-EPI era for a decade. One of the main reasons was the low vaccine efficacy (VE) of tOPV against WPV types 1 and 3. The VE of tOPV was highest for type 2 and WPV type 2 was eliminated in 1999. The VE against types 1 and 3 was the lowest in Uttar Pradesh and Bihar, where the force of transmission of WPVs was maximum on account of the highest infant-population density. Transmission was finally interrupted with sustained and extraordinary efforts.

Since 2004 annual pulse polio vaccination campaigns were conducted 10 times each year, virtually every child was tracked and vaccinated (including all transit points and transport vehicle), monovalent OPV types 1 and 3 were licensed and applied in titrated campaigns according to WPV epidemiology and bivalent OPV (bOPV, with both types 1 and 3) was developed and judiciously deployed.

Elimination of WPVs with OPV is only phase 1 of polio eradication. India is poised to progress to phase 2, with introduction of inactivated poliovirus vaccine (IPV), switch from tOPV to

bOPV and final elimination of all vaccine-related and vaccine-derived polioviruses. True polio eradication demands zero incidence of poliovirus infection, wild and vaccine.

India's success has silenced critics who predicted that polio itself was non-eradicable; or that polio was not eradicable in India with its low standards of sanitation and hygiene; or that wild polioviruses (WPVs) cannot be eradicated using live oral poliovirus vaccine (OPV); or that polio was not worth eradicating as it was a low priority disease but with very high cost of eradication.

India had to overcome not only formidable biomedical obstacles but also serious programmatic deficiencies that contributed to the delay in achieving the elimination of WPVs.

#### **Source:**

Polio Eradication & Endgame Strategic Plan 2013-2018

[www.polioeradication.org/.../strategywork/endgamestratplan\\_20130409](http://www.polioeradication.org/.../strategywork/endgamestratplan_20130409). accessed on 28.03 2016.

Eradicating poliomyelitis: India's journey from hyperendemic...

[icmr.nic.in/ijmr/2013/may/centenary%20review%20article.pdf](http://icmr.nic.in/ijmr/2013/may/centenary%20review%20article.pdf) accessed on 28.03.2016.

#### **Highlights of Dengue Fever - Situation in Bengal 2016**

Global incidence of dengue has drastically is on the rise in the last few years. According to the World Health Organization (WHO), there are about 390 million cases of dengue fever worldwide, and of the total number of cases, 96 million require medical treatment. Transmission of dengue is now present in every World Health Organization (WHO) region of the world and more than 125 countries are known to be dengue endemic. India also saw a doubling up of cases of dengue from 2014 to 2015 and the worst hit city was Delhi with over 1800 cases of the fever.

This year, monsoon is expected to be heavier and so, we expect a rise in dengue cases. We are expecting at least a 25 per cent hike in its incidence than the previous year. Though dengue

trends have shown a more severe outbreak in alternate years, for past few years, the incidence has been getting worse with each passing year.

## **Dengue Symptoms**

Dengue is an acute mosquito-borne viral disease caused by one of the many closely related dengue viruses transmitted by mosquitoes in the genus *Aedes Aegypti*. . Dengue like all other viruses has undergone mutation and nearly four variant strains of dengue have been identified. Dengue virus is mostly active in the early morning and later afternoon.

The true impact of dengue is difficult to ascertain due to factors such as inadequate disease surveillance, misdiagnosis, and low levels of reporting. Currently available data likely grossly underestimates the social, economic, and disease burden. Estimates of the global incidence of dengue infections per year have ranged between 50 million and 200 million; however, recent estimates using suggest this number is closer to almost 400 million. The expansion of dengue is expected to increase due to factors such as the modern dynamics of climate change, globalization, travel, trade, socioeconomics, settlement and also viral evolution.

People infected with dengue virus are asymptomatic (80 per cent) and only 5 per cent have severe illness. . Early signs of dengue may include high fever, joint pains, headache, nausea, appetite loss, vomiting, dip in blood pressure and a characteristic skin rash. Symptoms manifest within the first 2 to 4 days of commencement of infection. Though mostly the fever doesn't last beyond a week, some cases may develop more critical and pose life threatening danger from Dengue Hemorrhagic Fever or Dengue Shock Syndrome. The former is characterized by hemorrhage, blood plasma leakage, and an exceptionally low platelet count. While, the latter occurs due to dangerously low blood pressure, which may lead to a circulatory collapse (shock).

Though the disease can attack anybody, the ones with a weak immune system are at greater risk than others. The worst hit age group has been school and college children.

Tropical and sub-tropical areas are more prone to dengue outbreaks. Travelers from and across such regions can also carry the disease.

## **Dengue Prevention**

## **Effective vector control is the mainstay of dengue prevention and control.**

Reduction of number of mosquitoes by improved water storage, proper waste disposal, and checking water stagnancy.

Mosquito repellents are also quite effective but they should be used with following points of caution:

- Avoid them for infants below 2 months of age;
- For infants older than 2 months, apply repellents containing 10 per cent DEET;
- Avoid applying them on palms, near eyes or mouth;
- Always read the instruction on the label, particularly for babies, pregnant and breastfeeding women.

Avoid wearing dark and tight clothing because mosquitoes are attracted to dark colors. Wear loose, white and long clothes, which cover the whole body. Mosquitoes find it difficult to bite through loose clothes than tight fitting clothes.

## **Treatment**

Prompt case detection and appropriate clinical management can reduce the mortality from severe dengue. An early detection and proper medication help in lowering fatality rate of the disease. If the situation worsens in the first 24 hours, delay should not be made in hospital referral.

Aspirin and other NSAIDs may cause severe bleeding. Hence, it is advisable to prescribe paracetamol to relieve muscle and joint aches, fever and headache.

## **Immunization against Dengue**

The first vaccine was registered last year (2015) December in Mexico. WHO Strategic Advisory Group of Experts (SAGE) has recommended that the vaccine should be considered only in geographic settings with high endemicity. Five other vaccines under clinical evaluation right now. Ongoing research for dengue immunization at the Ministry of AYUSH is looking to find an answer for the disease in Ayurveda.

### **Situation in West Bengal:**

As on the report on 30.08.2016, the State Health Director of Health Services, 239 new cases of Dengue have been reported from various parts of West Bengal. Number of persons infected were about 5,129 since January, with a death toll of about 23. Maximum reported cases were from District of Hooghly and North 24 Parganas. The prevalence of DEN 2 and DEN 4 serotypes which are more virulent, is the reason for high morbidity and mortality in West Bengal. These two types trigger a quick drop in platelet count and cause capillary leakage. Blood becomes thicker due to capillary leakage resulting in less blood supply to the vital organs. This leads multi-organ failure and shock syndrome.

Surveillance and improved reporting of dengue cases is also essential to gauge the true global situation as indicated in the objectives of the WHO Global Strategy for Dengue Prevention and Control, 2012-2020.

The government should ensure a live reporting of its incidence. This will keep people informed and aware of the areas it is more prevalent in, which should translate into a heightened cautiousness.

More accurate data will inform the prioritization of research, health policy, and financial resources toward reducing this poorly controlled disease.

### **Source:**

WHO | Dengue and severe dengue

[www.who.int/mediacentre/factsheets/fs117/en/](http://www.who.int/mediacentre/factsheets/fs117/en/) accessed on 22.08.2016.

Dengue 2016: Here's all you need to know - Times of India

[timesofindia.indiatimes.com](http://timesofindia.indiatimes.com) › Life & Style › Health & Fitness

accessed on 22.08.2016.