A Snapshot of Sanitation, Hygiene and Drinking Water Safety in South Asia

2012 Update
Overview

South Asia has made considerable progress over the last 20 years

- The proportion of people using improved sanitation has increased by 16 percentage points from 1990 to 2010 (at about the same rate as the world as a whole)
- The proportion of people who practice open defecation has dropped by 26 percentage points over the same period, a faster rate of reduction than in most other regions
- 369 million more people use improved sanitation than 20 years ago

However, substantial challenges remain

- A much smaller proportion of people in South Asia use improved sanitation than in the rest of the world, and the region is not on track to the MDG sanitation target
- 59 per cent of the world’s open defecators live in South Asia
- The pace of sanitation improvements has not kept up to population growth: there were 31 million more people without access in the region in 2010 than in 1990
- Richer households and urban dwellers are much more likely to use improved sanitation than poorer and rural households
- New data indicates that handwashing rates are lower in rural areas and among poorer households in some countries
- Institutional monitoring data indicates that on average the proportion of schools with functioning sanitation facilities is only 56 per cent

Information about this Snapshot

- This snapshot is produced by the UNICEF Regional Office for South Asia
- The UNICEF South Asia region encompasses Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka (which is different from the MDG Southern Asia region)
- Unless otherwise indicated, data in this snapshot is from the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation 2010 dataset, the latest available
- See last page for sources and credits
Progress and Challenges

South Asia is not on track to meet the MDG target for sanitation

Improved sanitation coverage: actual progress, progress at same rate, progress to meet MDG target (per cent)

Sanitation coverage varies significantly from country to country

Sanitation coverage in South Asian countries, 2010, with South Asia and World comparators
Sanitation Inequities

Disparities in sanitation are pronounced within countries

- In the South Asia region, there is a 32 percentage point difference between use of improved sanitation in rural and urban areas: this is the highest differential in all UNICEF regions
- The degree of disparity varies greatly from country to country: from Bhutan, with a 44 point differential to the Maldives, where there is no significant urban-rural disparity
- There is an improving trend in urban-rural disparity in the region: in 1990 the ratio of rural to urban coverage was 1:5 (for every rural resident covered, five urban residents were covered), while in 2010 the ratio has improved to 1:2

The degree of urban-rural disparity varies significantly

Use of improved sanitation facilities: urban-rural range in South Asian countries, 2010
(In Sri Lanka, urban coverage at 88% is lower than rural coverage at 93%. Note that JMP figures for Sri Lanka are based on surveys not fully representative of Northern and Eastern Provinces.)
Beyond averages: coverage in poor urban areas is low (Bangladesh example)

- The JMP does not report separately on coverage in informal settlements, slums and peri-urban areas, mainly because its sources of information do not allow for such level of disaggregation
- Where surveys have included slums, coverage is generally lower than urban averages
- In some cases (such as this Bangladesh example) sanitation coverage in slums is even lower than in rural areas

Coverage levels in this example are from a single survey and are thus different from JMP figures, which are derived from multiple surveys.

However, coverage in slums varies (India example)

- In this two-city example, use of improved sanitation in slums is lower than in non-slum areas, but the difference is not as pronounced as in the Bangladesh example
- Coverage in slums is lower than coverage in the surrounding rural areas in only one of the two cities

This two-city example is for illustrative purposes only; it is neither representative of India nor of the region.

Economic inequities are also significant in South Asia

- The poorest households have much lower access to improved sanitation facilities than richer households in many South Asia countries.
- Open defecation rates are also higher for poorer households.

Use of improved sanitation facilities, unimproved facilities, and open defecation by wealth quintiles, with improved figures labelled (per cent). Data sources as shown. Shared not included for multi-study comparison. Wealth quintiles are based on the asset indices used by the household surveys, divided into five categories.

Regional and country averages mask large disparities within countries

- This ‘equity tree’ example from Nepal illustrates that the poorest households in rural areas have much lower coverage levels than national, regional and global averages.

Open Defecation

The majority of people practicing open defecation live in South Asia

The elimination of open defecation is beginning to accelerate in the region

Population practicing open defecation in 1990, 2000 and 2010, millions of people

Open defecation trends vary by household wealth

- In Bangladesh the number of people practicing open defecation has decreased significantly across all wealth quintiles
- In India and Nepal open defecation levels have decreased only among richer households

Open defecation is widespread in South Asia, with a concentration in the Gangetic plain

- Open defecation is practiced throughout South Asia, mainly in rural areas
- Levels tend to be higher in districts with higher rural population densities, but beyond that partial correlation there is a clustering of open defecators in the Gangetic plain

Open defecation in rural South Asia, population by district, compiled by the UNICEF South Asia regional office with data from UNICEF country offices and from India Census 2011.

Notes:
- based on data from 1,323 districts
- Nepal and Maldives figures are for total OD (not rural)
- Afghanistan dataset is incomplete (63 of 398 districts)

The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.
Handwashing with Soap and Water

New standardized hygiene indicators

- A standardized set of proxy indicators for handwashing with soap is now included in some DHS and MICS surveys
- Surveyors use observation to establish whether or not households have a specific place for handwashing and whether or not water and soap is available at that place
- This methodology is more robust than past hygiene surveys that relied mainly on self-reported behaviour
- As more surveys are carried out, regional and global datasets on handwashing will become available: two of the three national datasets are summarized below

Results from Nepal and Afghanistan

- In both countries urban dwellers and richer households are more likely to have a handwashing place with both water and soap (or other cleansing agents such as ash or mud) than rural and poorer householders
- In Afghanistan, handwashing with soap levels are lower than in Nepal across all categories
- Cleansing agents are more commonly used than soap among the poorest 40 per cent of households in Nepal (in Afghanistan the data is not disaggregated between the two)

Nepal, DHS 2011
Handwashing with water, soap or other cleansing agents

Proportion of households where a place for handwashing was observed with water and soap or other cleansing agent (e.g., ash) present, by household wealth quintile and urban/rural

![Graph showing handwashing rates in Nepal, DHS 2011](image1)

Afghanistan, MICS 2010-2011
Handwashing with water, soap or other cleansing agents

Proportion of households where a place for handwashing was observed with water and soap, by household wealth quintile and urban/rural

![Graph showing handwashing rates in Afghanistan, MICS 2010-2011](image2)
Sanitation in Schools

School sanitation coverage is under 60 per cent in most South Asian countries

- Available data\* shows that sanitation coverage is low in public schools in the region, especially when the functionality of sanitation facilities is taken into account\**
- This is a cause for concern, given the importance of adequate, functioning sanitation facilities for education achievement, health and gender equality
- The dataset does not take into account other important parameters, including facilities for handwashing and menstrual hygiene, or the existence of hygiene education in schools

\*Data on water and sanitation in schools presented here is from a variety of government institutional reporting systems (compiled by UNICEF country offices), and generally not from surveys. School coverage data is based on national standards, which vary from country to country (e.g., on pupil to toilet ratios).

\**Other datasets that only account for the existence of facilities in schools indicate higher regional averages

Proportion of public schools with functioning sanitation systems, nationally. Data from 1.53 million schools in six South Asian countries
Drinking Water Safety

Water quality is a cause for concern in South Asia

Water quality testing is not a component of most household surveys, however special studies (such as the examples below) suggest that both bacteriological and chemical contamination of drinking water supplies is a serious problem in the region.

**Bacteriological Contamination (India example)**
Thermotolerant coliform tests of *improved drinking water sources* (boreholes with handpumps) in Madhya Pradesh indicated high rates of human faecal contamination.

Thermotolerant coliforms are a proxy indicator of human faecal contamination. 1,600 clustered samples were tested, representative of in-use water sources for the 20 million population of Indore, Madhya Pradesh.


*Although not measured in this study, water quality in households is generally worse than in sources due to contamination during collection, transportation, storage and use.*

**Arsenic Contamination (Bangladesh example)**

Household water supplies tested through MICS 2009 confirmed widespread arsenic contamination nationally.

A total of 13,423 household samples tested representing the entire country (MICS).

**Household water treatment levels are low and uneven**

- Only 14 per cent of the population practice appropriate household water treatment in South Asia (based on studies in 3 countries)
- Households using unimproved water supplies are more likely to treat water (19%) than those with improved supplies (13%)
- The richest households and urban households are by far the most likely to treat their home water supplies

* Appropriate treatment methods include boiling, bleaching/chlorinating, filtering, and solar disinfecting

## Sanitation Coverage Data

**Country estimates by type of sanitation practice, 1990, 2000, 2010**

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## Sources and Notes

Main sanitation dataset from *Progress on Drinking Water and Sanitation: 2012 Update* (with supplemental data from wssinfo.org), from WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation

Country-specific DHS data from published Demographic and Household Surveys available at measuredhs.com, from USAID and national statistics bureaus. Country-specific MICS data from published Multiple Indicator Cluster Surveys available at childinfo.org, from UNICEF, other UN agencies, and national statistics bureaus


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