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

2015 Update

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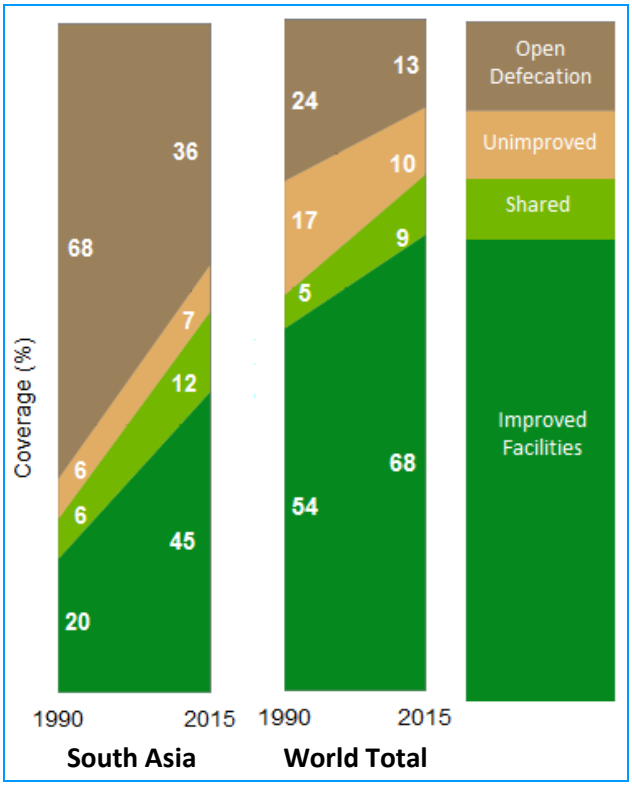
Overview

South Asia has made considerable progress over the last 25 years

- The proportion of people using improved sanitation has increased by 25 percentage points from 1990 to 2015 (compared to just 14 points globally)
- Three countries met their MDG sanitation target (Maldives, Pakistan and Sri Lanka) and good progress was made in three others (Bangladesh, Bhutan, and Nepal)
- The proportion of people who practice open defecation has dropped by 32 percentage points, a faster rate of reduction than in any other region
- 545 million more people use improved sanitation facilities than 25 years ago
- The proportion of schools with adequate sanitation increased by 23 percentage points from 2008 to 2013, a faster rate than in any other region (see page 10)

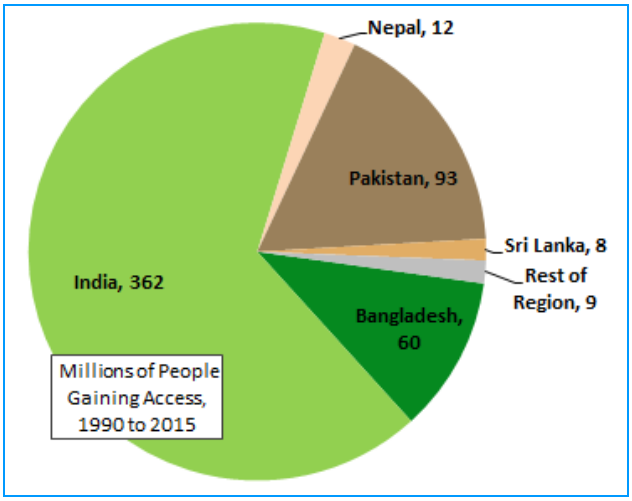
Improved Sanitation Coverage Trends



However, substantial challenges remain

- South Asia has missed the MDG sanitation target. Maldives, Pakistan and Sri Lanka have met the MDG sanitation target.
- India is the only country in South Asia where the number of people without improved sanitation facilities increased: 774 million in 2015 vs. 723 million in 1990
- About 60% of the world's open defecators live in India
- Richer households are much more likely to use improved sanitation than poorer households, and in Bangladesh, India, Nepal and Pakistan gaps are widening
- Richer households also have higher rates of handwashing and safe child faeces disposal

Population gaining access 1990 to 2015



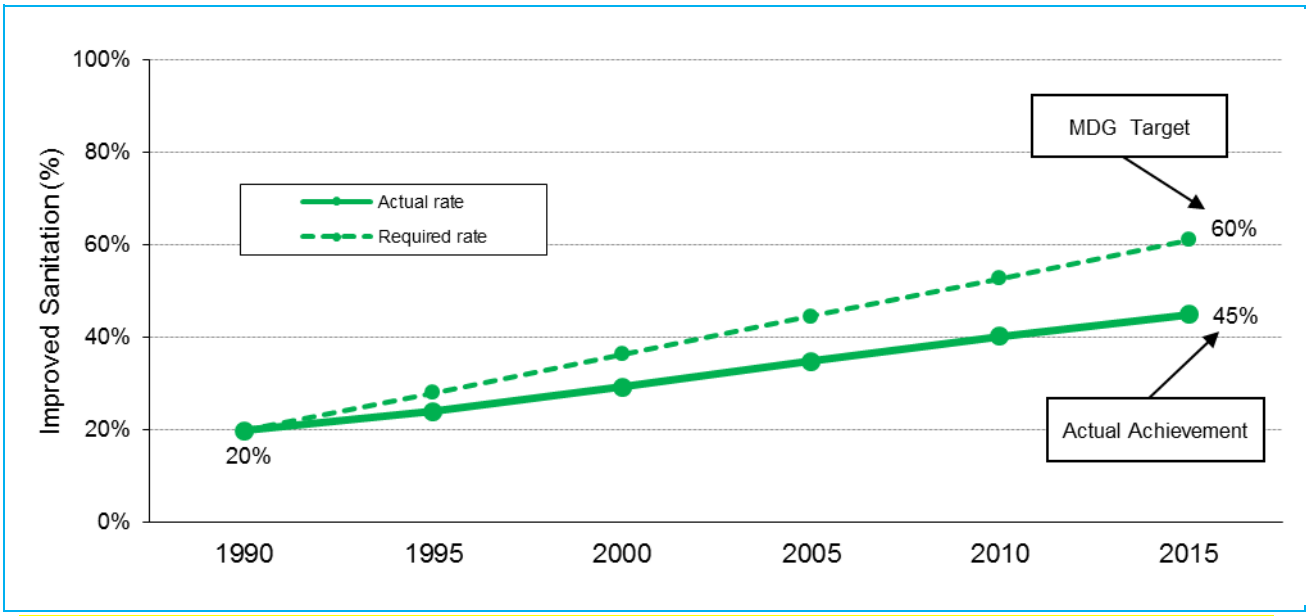
Number of people who gained access to improved sanitation from 1990 to 2015, millions

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 2015 dataset, the latest available. See last page for sources and credits.

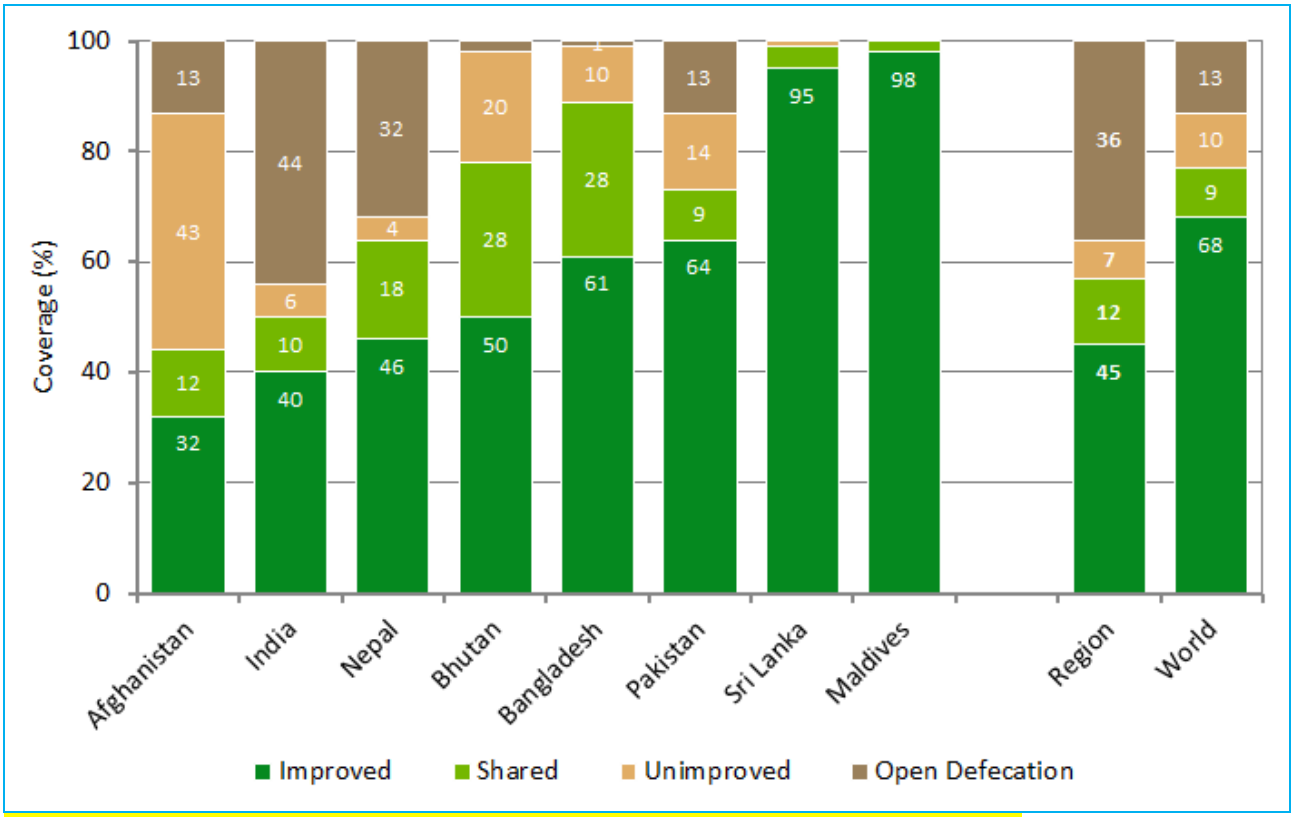
Progress and Challenges

South Asia did not meet the MDG target for sanitation



Improved sanitation coverage: actual progress vs. progress that was necessary to meet the MDG target (per cent)

Sanitation coverage varies significantly from country to country



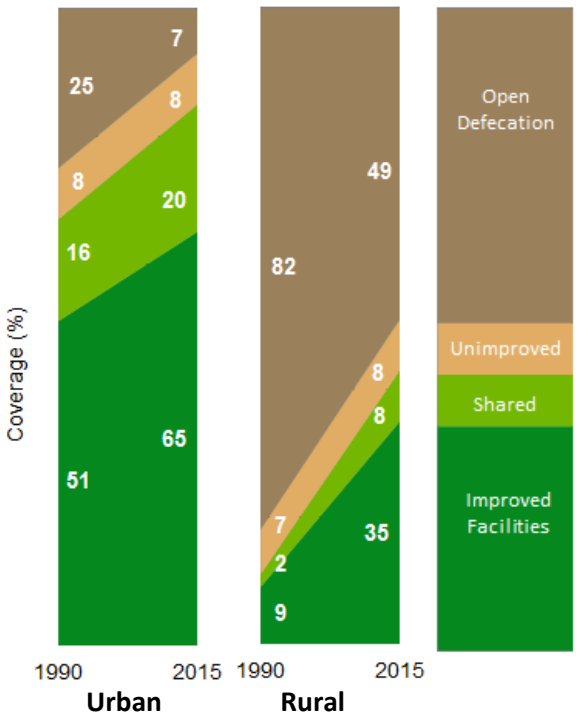
Sanitation coverage in South Asian countries, 2015, with South Asia and World comparators

Sanitation Inequities

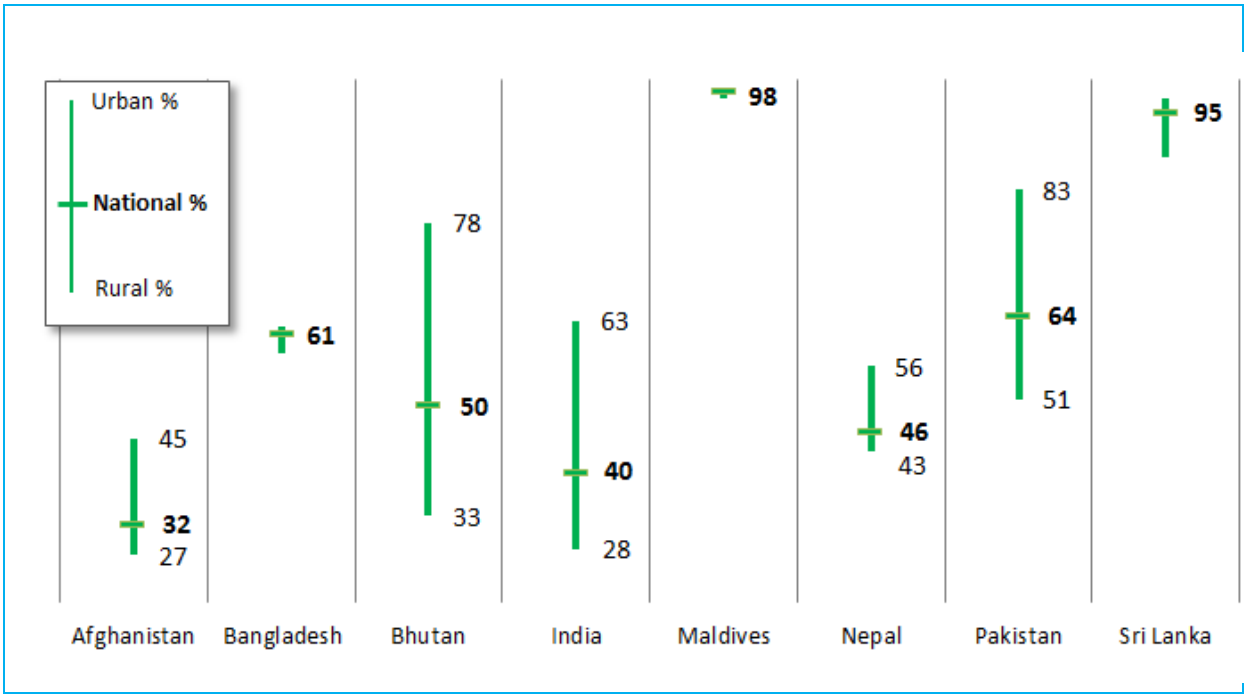
Urban-rural disparities in sanitation are pronounced in South Asia

- In the South Asia region, there is a 30 percentage point difference between use of improved sanitation facilities in rural and urban areas: this is the highest differential of all UNICEF regions
- The degree of disparity varies greatly from country to country: from Bhutan, with a 45 percentage point difference, to Bangladesh, the Maldives and Sri Lanka with little or no difference
- 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 2015 the ratio has improved to 1:2

Sanitation coverage is much higher in urban areas in South Asia



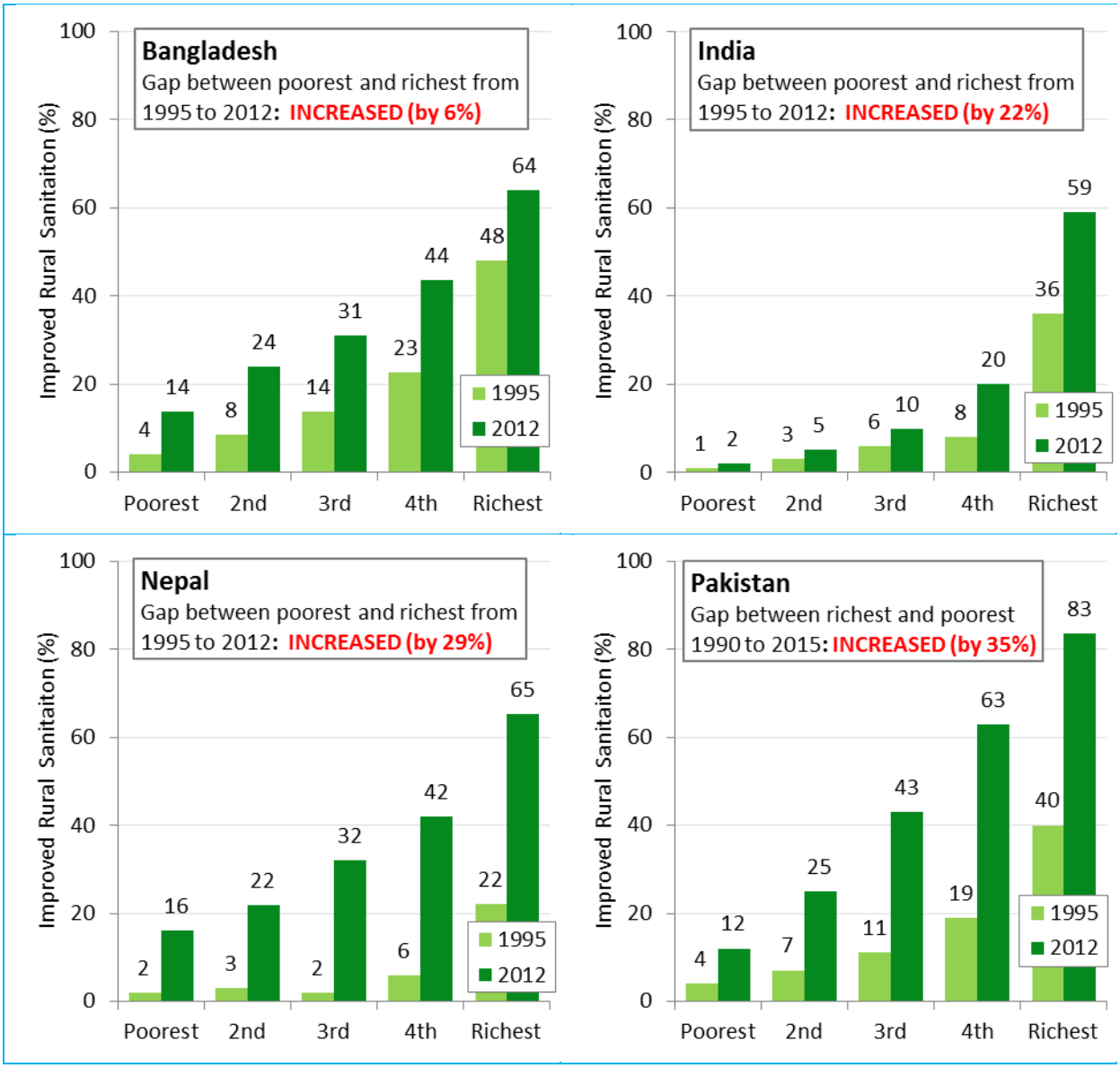
The degree of urban-rural disparity varies significantly from country to country



Use of improved sanitation facilities: urban-rural range in South Asian countries, 2015
(In Bangladesh, the Maldives and Sri Lanka, urban coverage is lower than rural coverage)

Economic inequities are also significant in South Asia, with widening gaps

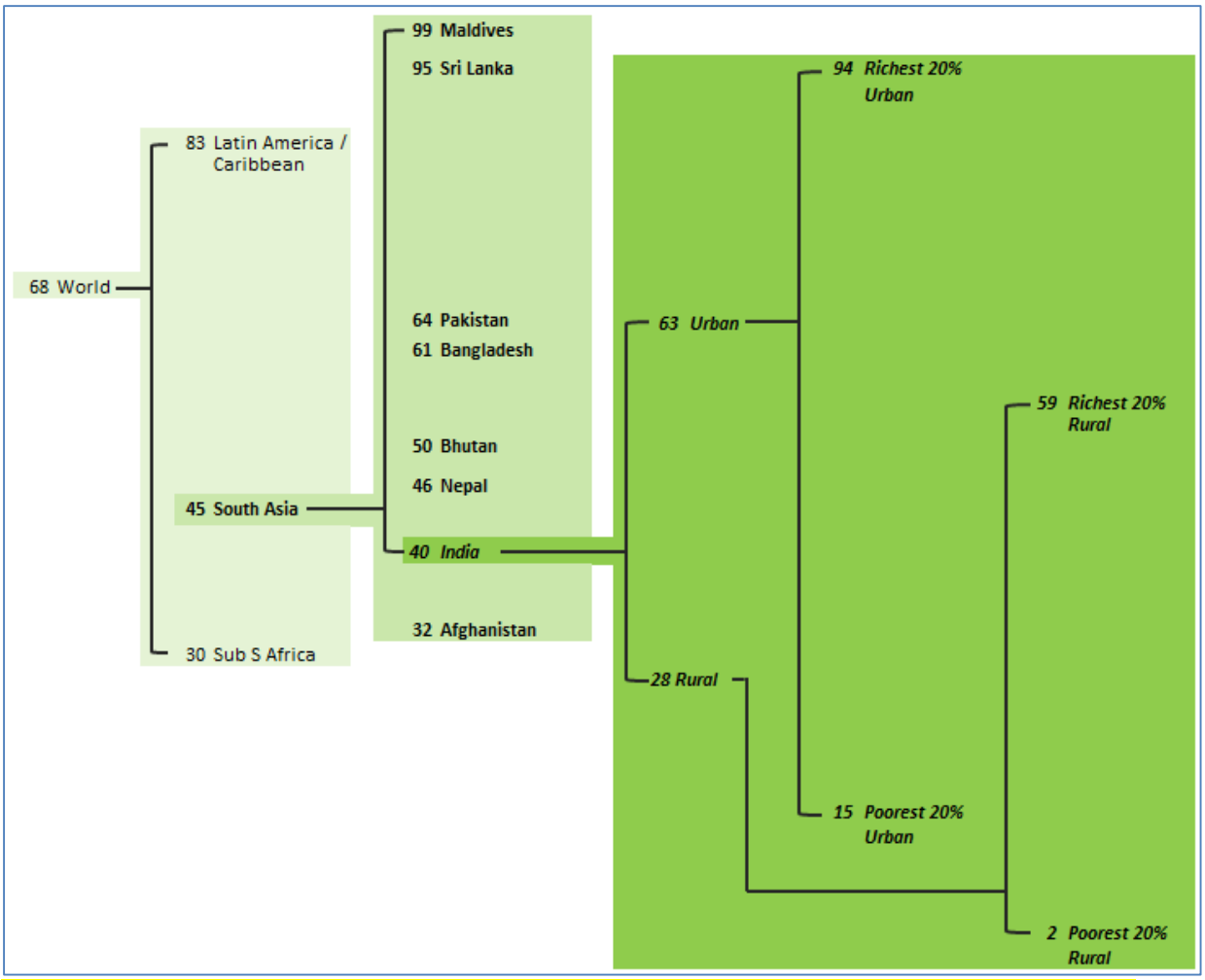
- Disparities in improved sanitation coverage between rich and poor households in rural areas are pronounced in the region (see four examples below)
- In the four countries with available data, the average gap between poorest and richest ranges from 71 percentage points in Pakistan to 49 percentage points in Nepal
- Of even greater concern is the fact that the gaps between the poorest and richest households are getting wider: in all four countries not enough progress has been made increasing sanitation usage among the poorest households
- The trends are similar for open defecation (see pg. 6)
- However, progress has been better in urban areas: in these four countries the gap between richest and poorest has decreased from 1995 to 2012 (not shown here)



Use of improved sanitation, rural, by household wealth quintile, per cent, in 1995 and 2012. Source: JMP analysis based on multiple MICS, DHS and other surveys, JMP Update Report 2015.

Regional and country averages mask large disparities within countries

- This 'equity tree' example from India illustrates the extent of disparities in the country



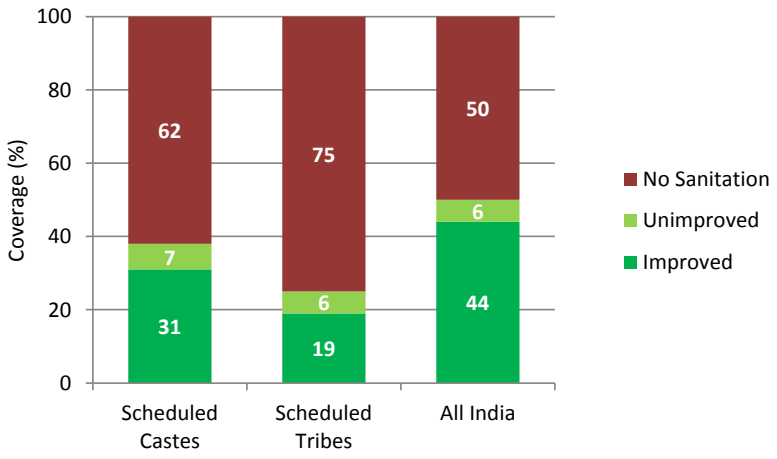
Use of improved sanitation. Source: JMP Update Report 2015, and 2012 estimates of wealth quintile data

Other forms of disparity

- Other forms of sanitation inequalities include disparities based on gender, on education level, and in the India example below, by lower castes and indigenous peoples (known as scheduled castes and scheduled tribes in India)

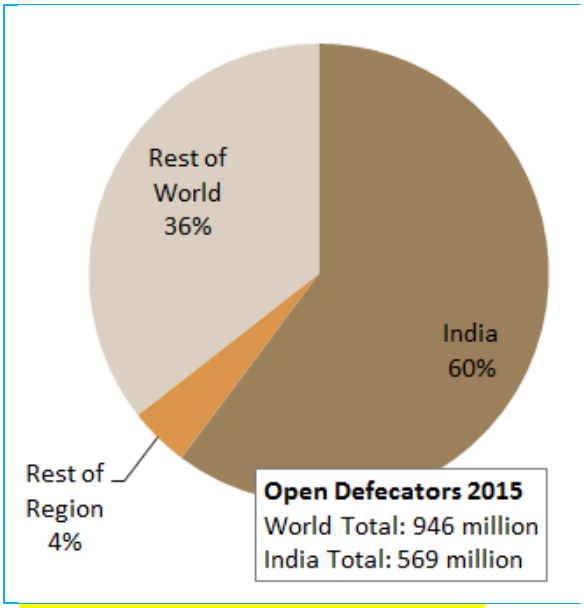
Sanitation Coverage Among Scheduled Castes and Scheduled Tribes in India

Source: Census of India, 2011 data



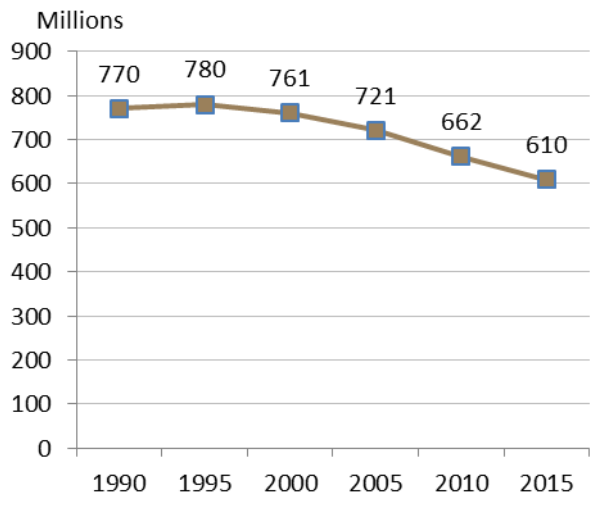
Open Defecation

The majority of people practicing open defecation live in South Asia



Proportion of global population practicing open defecation, 2015, per cent

Open defecation numbers continue to decline in the region

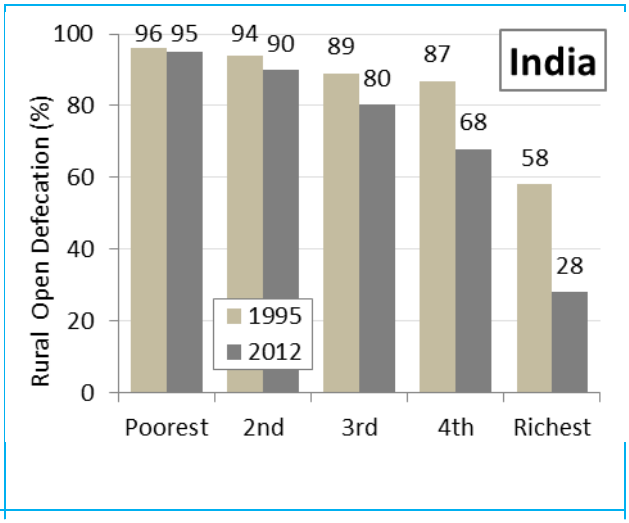


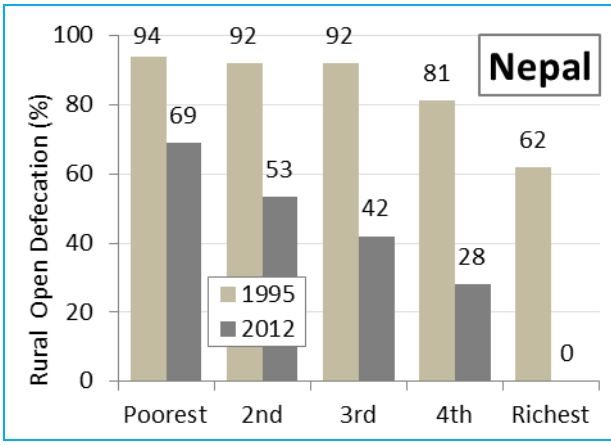
Population practicing open defecation in 1990 to 2015, millions of people

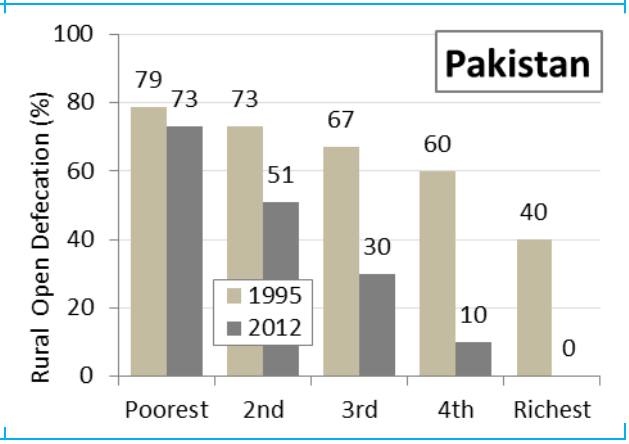
Open defecation levels are much higher among the poor

- Rural open defecation levels are falling at a much greater rate among richer households than poorer households in the three countries with the highest numbers of open defecators in the region (India, Pakistan and Nepal)
- Very little progress has been made among the poorest households in India

Rural population practicing open defecation, 1995 and 2012 by wealth quintiles; Source: JMP analysis based on MICS, DHS and other surveys, JMP Update Report 2015

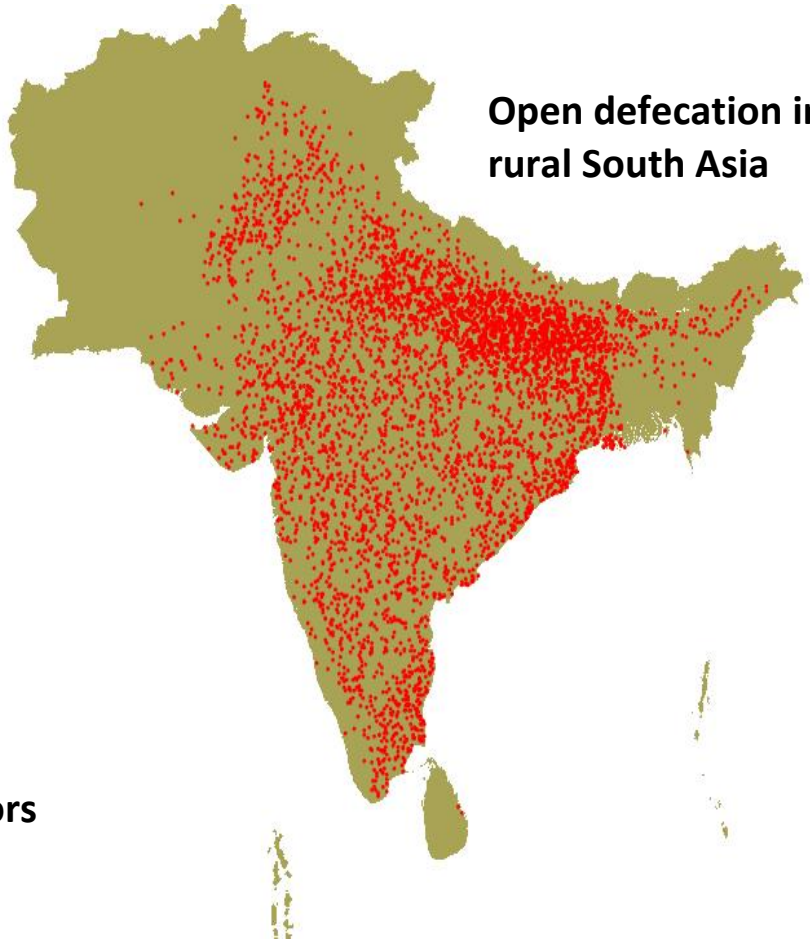






Open defecation is widespread in South Asia, with a concentration in the Gangetic plain

- 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



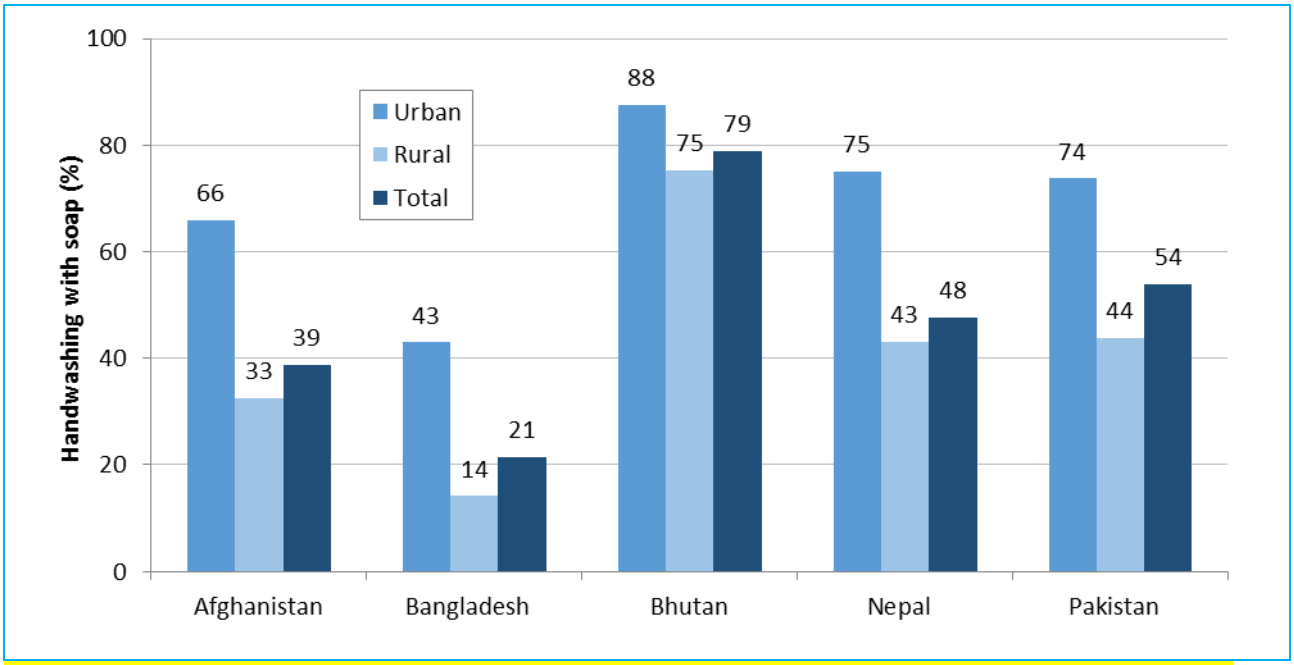
● **100,000 open defecators**

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)

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 the India Census 2011

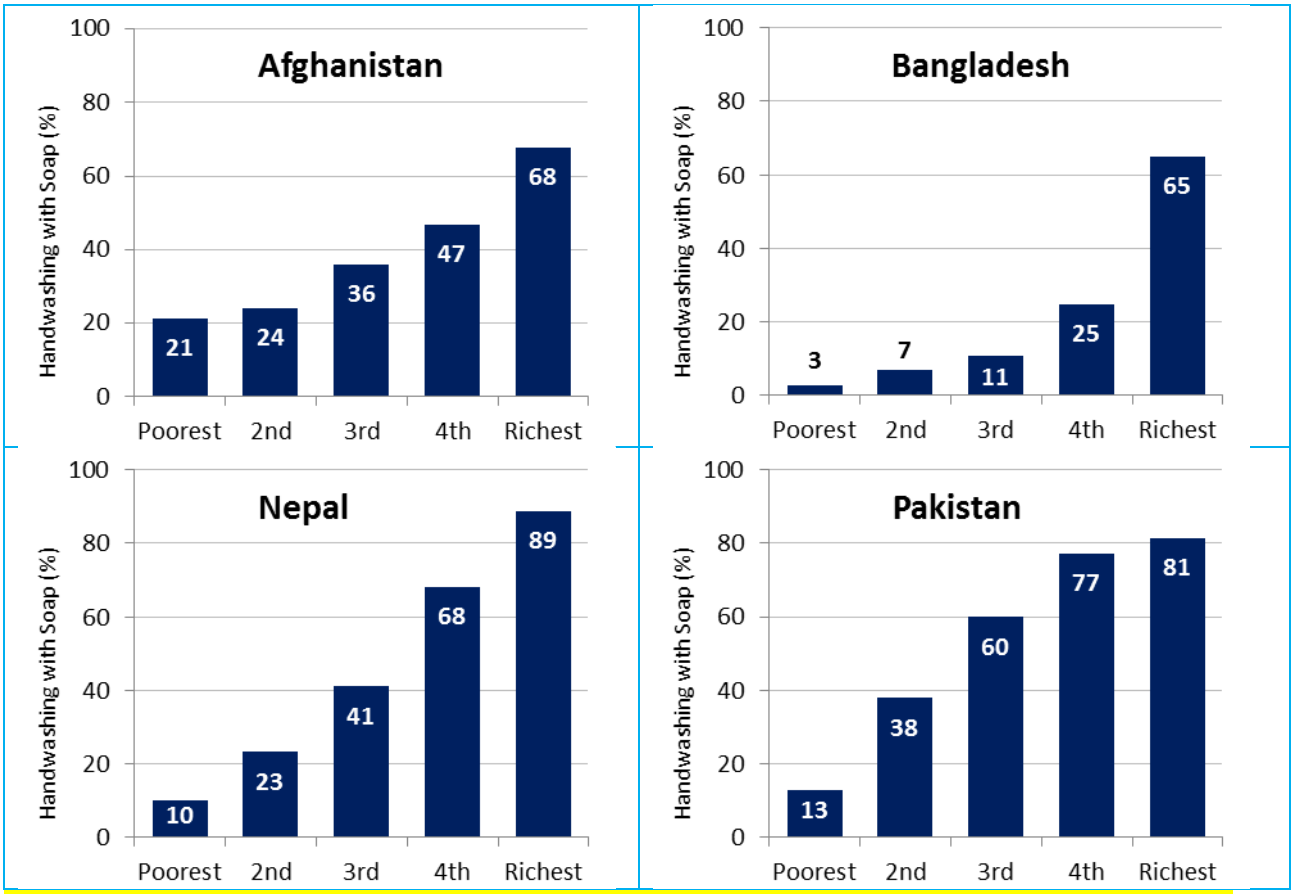
Handwashing with Soap and Water

Handwashing with soap varies by country but is always more common in urban areas



Handwashing with soap, per cent, using the standardized MICS/DHS proxy indicator: percentage of households where a place for handwashing was observed with soap and water

Handwashing with soap is much more common among richer households



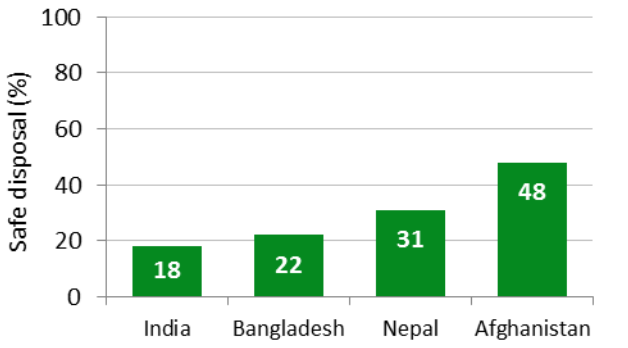
Handwashing with soap, per cent, using the standardized MICS/DHS proxy indicator: percentage of households where a place for handwashing was observed with soap and water

Child Faeces Disposal Practices

The safe disposal of child faeces is even more important as the disposal of adult faeces for the prevention of diarrhoea. However it is common in the region (and globally) for child faeces to be unsafely disposed.

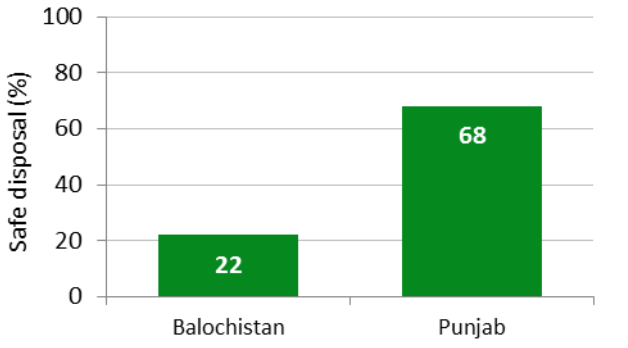
Most households do not dispose child faeces safely

In all countries in South Asia with available data, child faeces are usually disposed of unsafely (left in the open, buried in the courtyard, or thrown in a ditch or drain) instead of safely (child uses toilet, faeces disposed of in toilet/latrine).



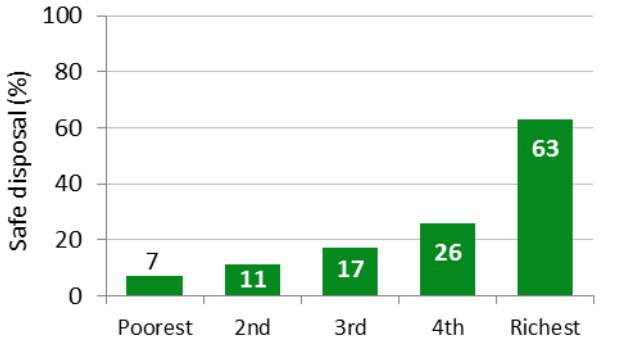
Regional variations: Pakistan Example

The proportion of households that practice safe child faeces disposal can vary widely within countries. Additionally, rural households have lower safe disposal rates than urban households (not shown).



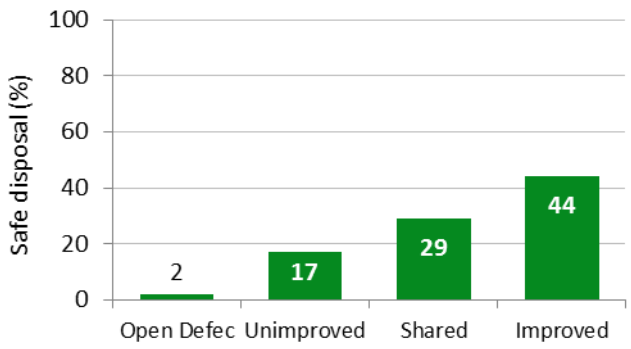
Wealth quintile variation: Bangladesh Example

Richer households are much more likely to dispose of child faeces correctly, and not only because of the greater availability of toilets in these households (see below).



Availability of toilets is not the only factor: India Example

As expected, households with improved sanitation facilities are more likely to dispose of child faeces correctly. However, even in households with improved toilets, child faeces are disposed of unsafely in many cases.

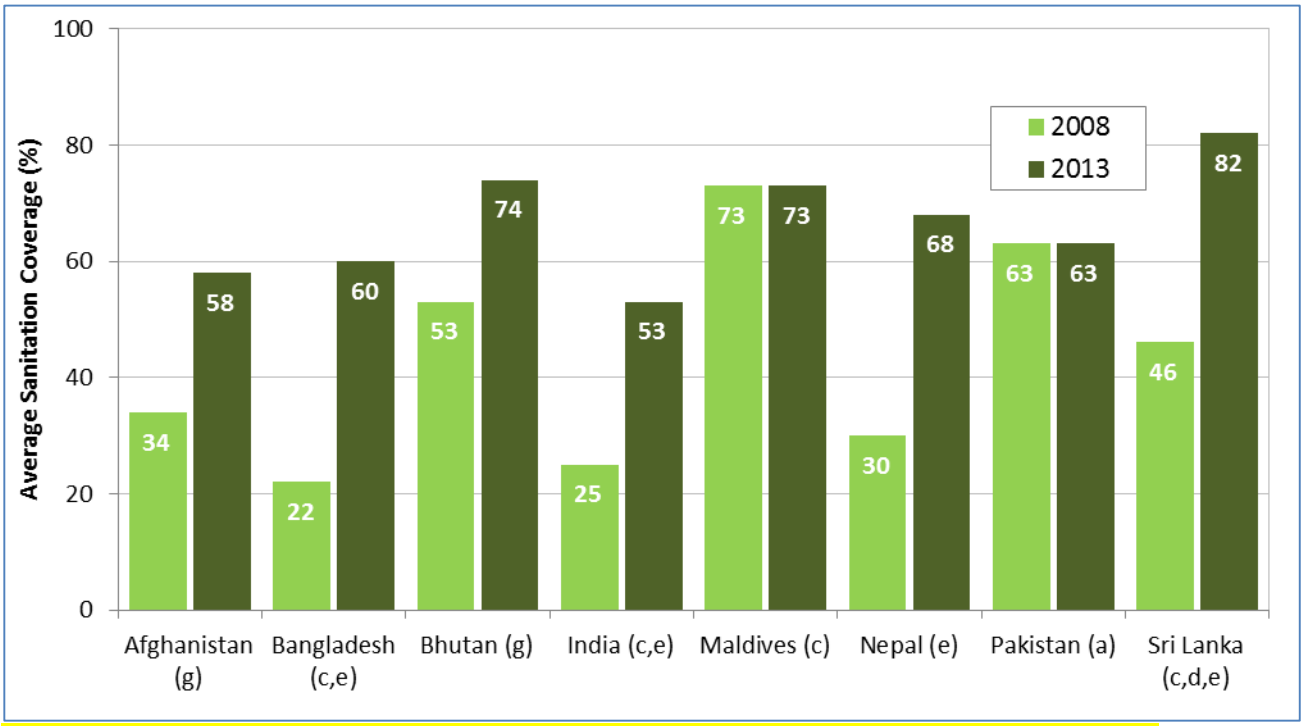


The proportion of children aged under three with safe feces disposal reported in MICS and DHS surveys. Source: *Management of Child Feces: Current Disposal Practices*, June 2015, WSP and UNICEF

Sanitation in Schools

School sanitation coverage varies in South Asian countries, but is improving

- Major gains have been made in the region over the last five years, notably in Bangladesh, India, Nepal and Sri Lanka
- However, these national averages do not take into account geographic and urban-rural disparities



Sanitation coverage in schools, national average, 2008 and 2013 (criteria for coverage varies by country, as per table below)

Data Quality and Completeness

Coverage criteria for countries

As marked on graph above, countries use different benchmarks to determine coverage:

a = existence of facilities
b = improved services
c = functional services
d = national quantity standards met
e = single-sex toilets
f = access to soap
g = other indicator or unknown

The completeness of EMIS indicators varies by country

The UNICEF WASH in Schools monitoring working paper (see source below) includes scores for the completeness of source data from the national Education Monitoring Information System (EMIS) in five areas for sanitation:

	Quantity	Functio-nality	Gender	Quality	Accessi-bility
Afghanistan					
Bangladesh					
Bhutan					
India					
Nepal					
Pakistan					

No WASH indicators in EMIS in Maldives and Sri Lanka

Green: indicators present; red: indicators absent

Source: figures on this page are from *Advancing WASH in schools monitoring*, 2015, UNICEF

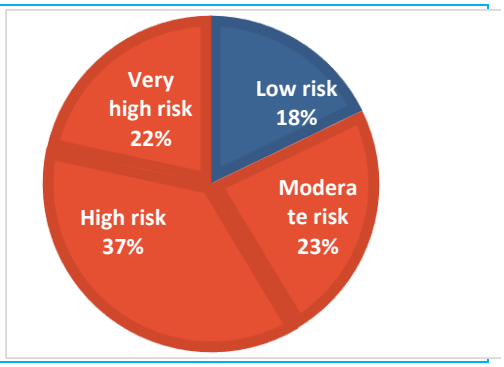
Drinking Water Safety

Water quality is a cause for concern in South Asia

Over the past 3 years household surveys in South Asia have pioneered water quality testing methods. Results are indicating that both bacteriological and chemical contamination of drinking water supplies is a serious problem in the region.

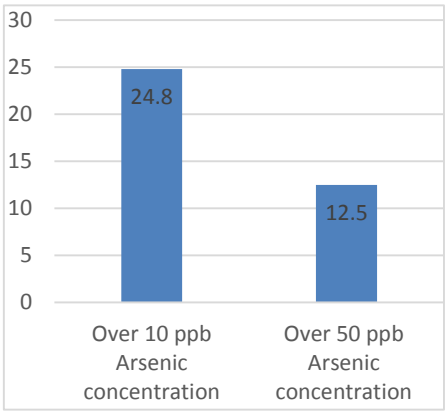
Bacteriological Contamination (Nepal example)
The 2014 Nepal MICS collected data on the quality of water consumed throughout Nepal by testing of microbiological parameters *Escherichia coli* and other coliform.

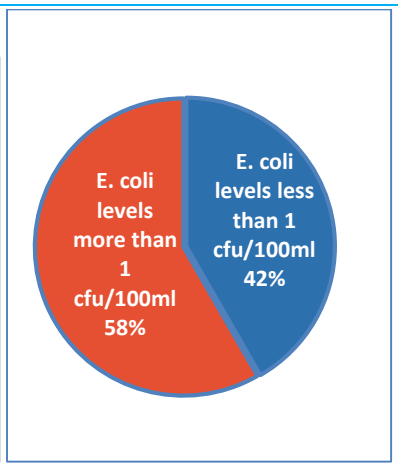
Overall, more than four fifths (82 percent) of household members are using drinking water at risk of E. *coli* concentration ≥ 1 cfu/100 ml. One fifth of the population are using drinking water with E.*coli* levels at very high levels of risk.



Arsenic and Bacterial Contamination (Bangladesh example)
Household drinking water tested in MICS 2012-13 confirmed widespread arsenic and E. *coli* contamination.

A quarter of the population are using water with arsenic levels above the WHO provisional guidelines.



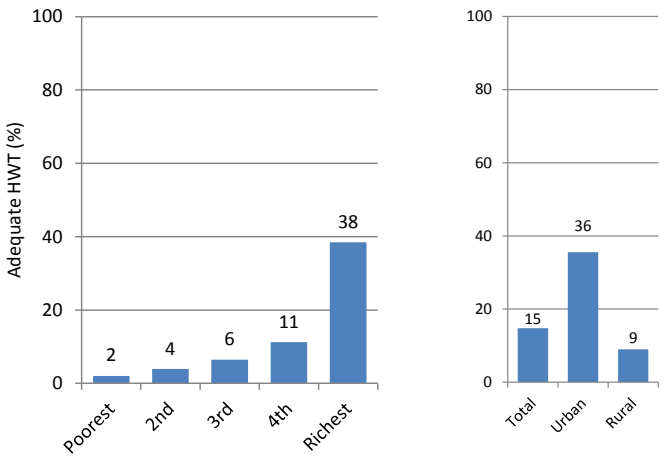


Household water treatment levels are low and uneven

- Only 15 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

Source: MICS and DHS from India (2005-06), Bangladesh (2006/11) and Nepal (2006/11).



Population in households reporting the use of appropriate water treatment methods, per cent (non-weighted average of most recent data from surveys in three countries)

Sanitation Coverage Data

Country estimates by type of sanitation practice, 1990, 2000, 2015

Country	Year	Population		Urban (%)				Rural (%)				National				
		Total (,000)	Urban (%)	Improved	Shared	Other Unimproved	Open Defecation	Improved	Shared	Other Unimproved	Open Defecation	Improved (%)	Shared (%)	Other Unimproved %%)	Open Defecation (%)	Open Defecation (,000)
Afghanistan	1990	11,731	18	-	-	-	-	-	-	-	-	-	-	-	-	-
	2000	20,595	21	31	15	43	11	21	6	41	32	23	8	41	28	5,721
	2015	32,007	27	45	22	33	0	27	8	48	17	32	12	43	13	4,077
Bangladesh	1990	107,386	20	47	24	19	10	31	14	15	40	34	16	16	34	36,499
	2000	132,383	24	51	27	16	6	44	19	14	23	45	21	15	19	25,365
	2015	160,411	34	58	30	12	0	62	28	8	2	61	28	10	1	1,936
Bhutan	1990	536	16	44	13	38	5	14	13	61	12	19	13	57	11	60
	2000	564	25	58	17	20	5	22	21	45	12	31	20	38	11	60
	2015	776	39	78	22	0	0	33	32	31	4	50	28	20	2	18
India	1990	868,891	26	49	16	6	29	6	1	2	91	17	5	3	75	652,568
	2000	1,042,262	28	55	18	6	21	15	3	3	79	26	7	4	63	659,886
	2015	1,282,390	33	63	21	6	10	28	5	6	61	40	10	6	44	569,397
Maldives	1990	216	26	98	2	0	0	58	1	10	31	68	1	8	23	49
	2000	273	28	98	2	0	0	72	1	8	19	79	2	5	14	38
	2015	358	46	97	2	1	0	98	2	0	0	98	2	0	0	0
Nepal	1990	18,111	9	35	24	7	34	1	0	6	93	4	2	6	88	15,899
	2000	23,184	13	44	29	5	22	18	6	5	71	22	9	5	64	14,912
	2015	28,441	19	56	37	1	6	43	13	7	37	46	18	4	32	8,974
Pakistan	1990	111,091	31	66	6	20	8	5	1	27	67	24	2	25	49	54,620
	2000	143,832	33	72	6	16	6	20	4	23	53	37	5	21	37	53,366
	2015	188,144	39	83	7	9	1	51	10	18	21	64	9	14	13	25,100
Sri Lanka	1990	17,324	19	83	8	5	4	68	2	15	15	71	3	13	13	2,314
	2000	18,846	18	85	9	3	3	80	3	9	8	81	4	8	7	1,376
	2015	21,612	18	88	9	2	1	97	3	0	0	95	4	1	0	40
UNICEF South Asia Region	1990	1,135,285	25	51	16	8	25	9	2	7	82	20	6	6	68	770,424
	2000	1,381,940	27	56	17	9	18	19	5	7	69	29	8	8	55	760,723
	2015	1,714,139	33	65	20	8	7	35	8	8	49	45	12	7	36	609,542

Sources and Notes

Main sanitation dataset from *Progress Report on Drinking Water and Sanitation: 2015 Update and MDG Assessment* (with supplemental data from *wssinfo.org*), from the 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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