

WHO / UNICEF

Joint Monitoring Programme
for Water Supply and Sanitation

Estimates for the use of

**Improved Drinking-Water Sources
and Improved Sanitation Facilities**

Updated March 2010

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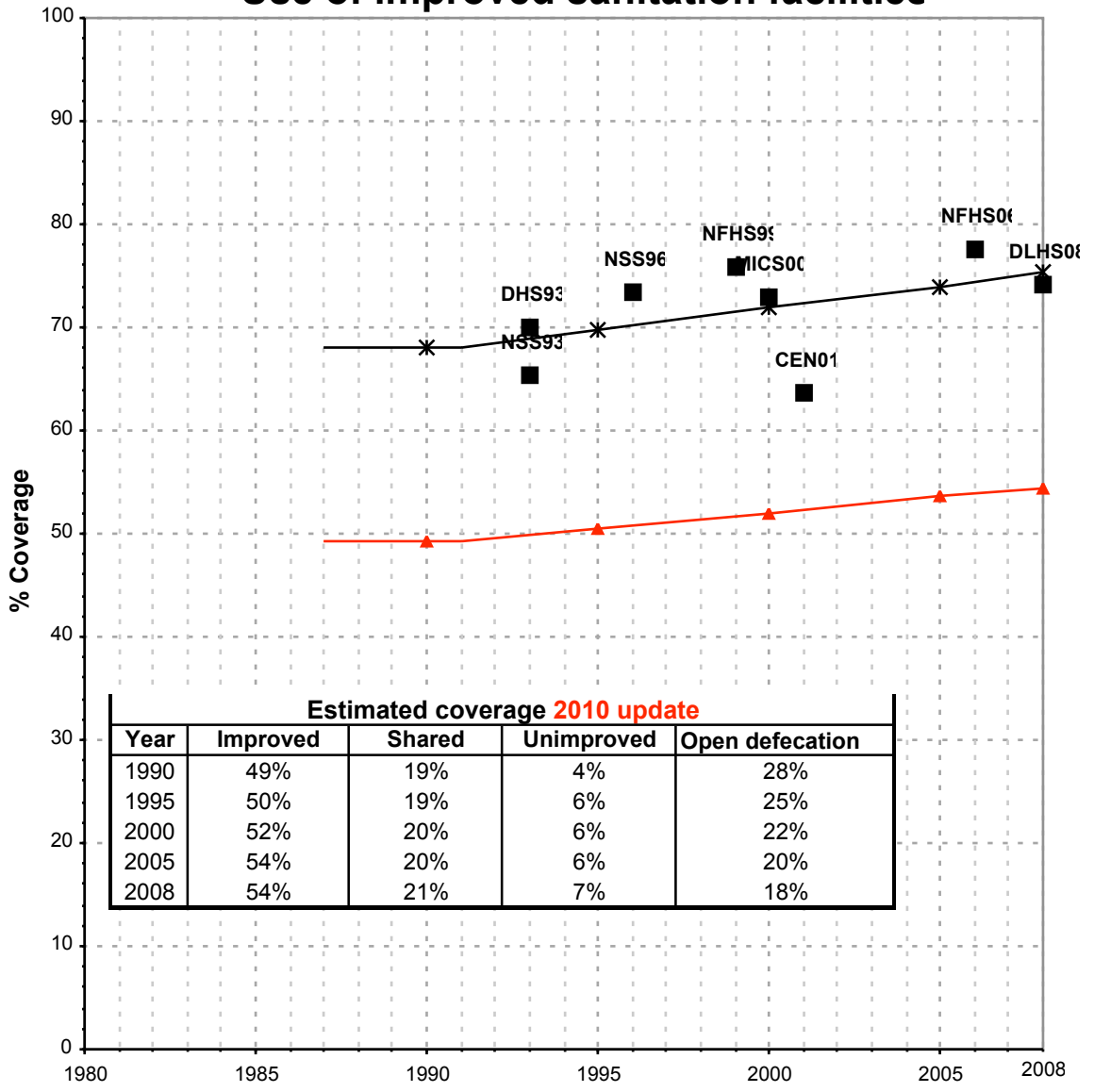
Use of sanitation facilities		DHS93			India			Use of sanitation facilities		NSS93			India		
Demographic and Health Survey					1993			National Sample Survey					1993		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total						
	Flush and pour flush	60.1	6.9			Flush and pour flush	58.1	6.3							
	to piped sewer system					to piped sewer system	28.5	0.8							
	to septic tank					to septic tank	29.6	5.5							
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
Flush Toilet1	Flush/toilets	60.1	6.9			Flush/toilets	58.1	6.3							
	to piped sewer system				Flush System *	to piped sewer system	28.5	0.8							
	to septic tank				Septic tank *	to septic tank	29.6	5.5							
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Private flush/toilet					Private flush/toilet									
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Public/shared flush/toilet					Public/shared flush/toilet									
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Latrines	15.5	5.9			Latrines	7.4	2.4							
	Pour flush latrines					Pour flush latrines									
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Private pour flush latrine					Private pour flush latrine									
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Public/shared pour flush latrine					Public/shared pour flush latrine									
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Dry latrines	15.5	5.9			Dry latrines	7.4	2.4							
	Improved latrines					Improved latrines									
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine									
	Pit latrine with slab/covered latrine					Pit latrine with slab/covered latrine									
	Traditional latrine	15.5	5.9			Traditional latrine									
	Pit latrine without slab/open pit					Pit latrine without slab/open pit									
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine									
	Bucket latrine				Service Latrine	Bucket latrine	7.4	2.4							
	Other					Other									
	Private Latrines					Private Latrines									
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine									
	Pit latrine with slab/covered latrine					Pit latrine with slab/covered latrine									
	Traditional latrine					Traditional latrine									
	Pit latrine without slab/open pit					Pit latrine without slab/open pit									
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine									
	Bucket latrine					Bucket latrine									
	Other					Other									
	Public/shared Latrines					Public/shared Latrines									
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine									
	Pit latrine with slab/covered latrine					Pit latrine with slab/covered latrine									
	Traditional latrine					Traditional latrine									
	Pit latrine without slab/open pit					Pit latrine without slab/open pit									
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine									
	Bucket latrine					Bucket latrine									
	Other					Other									
	Composting toilets					Composting toilets									
	Composting toilet (private)					Composting toilet (private)									
	Composting toilet (shared)					Composting toilet (shared)									
	Other improved					Other improved									
	Other					Other									
	Other					Other									
No Facility	No facility, bush, field	24.1	87.1		No Latrine	No facility, bush, field	30.6	85.8							
	Other unimproved	0.3	0.1			Other unimproved	3.8	5.2							
	Other	0.3	0.1		Others	Other	3.8	5.2							
	Other					Other									
	DK/missing information				N.R.	DK/missing information	0.1	0.3							
	Total	100.0	100.0			Total	100.0	100.0							
Calculations						Calculations									
	Estimated improved pit latrines based on NFHS 06	9.9	4.3			Estimated improved pit latrines based on NFHS 06	7.2	4.9							
Estimations						Estimations									
	SC, based on NSS93	29.5	0.9												
Access to improved sanitation : 70% 11%					Access to improved sanitation : 65% 11%										
Access to sewerage connections : 29% 1%					Access to sewerage connections : 29% 1%										
Used for the estimates Yes Yes					Used for the estimates Yes Yes										
Used for the estimates Yes Yes					Used for the estimates Yes Yes										
Ratios	Shared improved facilities/all improved facilities					Shared improved facilities/all improved facilities									
	Improved latrine / All latrines					Improved latrine / All latrines									
	Covered dry latrines / All dry latrines					Covered dry latrines / All dry latrines									
	VIP / All latrines					VIP / All latrines									
	Traditional latrines / All latrines	100%	100%			Traditional latrines / All latrines									
	Improved + traditional latrines / All latrines					Improved + traditional latrines / All latrines									
	Sewerage connection among flush/pour flush					Sewerage connection among flush/pour flush	49.1	12.7							
	Sewerage connection among flush					Sewerage connection among flush	49.1	12.7							
	Number of people covered by the survey					Number of people covered by the survey									
	Number of households covered by the survey					Number of households covered by the survey									
	Total population					Total population									
Comments	NOTE: The improved sanitation coverage is probably slightly overestimated as "service latrines" are probably included in the category Pit Latrine/Latrine.				Comments	NOTE: The improved sanitation coverage is probably slightly underestimated as Pit latrines are included in the category Others.									

Use of sanitation facilities		JMP99			Access to drinking water sources			MICS00		
Global Water Supply and Sanitation Assessment 2000.		India			Multiple Indicator Cluster Survey			India		
Water Supply and Sanitation Sector Questionnaire - 1999. Form 6 sent to WHO.		1999			preliminary report			2000		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total	
	Flush and pour flush	28.2				Flush and pour flush	57.3	9.8	23.1	
Population served with household connections to conventional	to piped sewer system	28.2				to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Flush/toilets				Flush to sewage system or septic tank	Flush/toilets	40.2	7.2	16.4	
	to piped sewer system					to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Private flush/toilet					Private flush/toilet				
	to piped sewer system					to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Public/shared flush/toilet					Public/shared flush/toilet				
	to piped sewer system					to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Latrines					Latrines	37.6	11.7	18.9	
	Pour flush latrines				Pour flush (water seal) type	Pour flush latrines	17.1	2.6	6.7	
	to piped sewer system					to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Private pour flush latrine					Private pour flush latrine				
	to piped sewer system					to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Public/shared pour flush latrine					Public/shared pour flush latrine				
	to piped sewer system					to piped sewer system				
	to septic tank					to septic tank				
	to pit					to pit				
	to unknown place/ not sure/DK					to unknown place/ not sure/DK				
	to elsewhere					to elsewhere				
	Dry latrines					Dry latrines	20.5	9.0	12.2	
	Improved latrines				Improved pit (e.g. VIP)	Improved latrines	12.8	3.4	6.0	
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine	12.8	3.4	6.0	
	Pit latrine with slab/covered latrine				Simple pit	Pit latrine with slab/covered latrine	5.2	5.1	5.1	
	Traditional latrine					Traditional latrine				
	Pit latrine without slab/open pit					Pit latrine without slab/open pit				
	Hanging toilet/hanging latrine				Service/bucket type	Hanging toilet/hanging latrine	2.4	0.6	1.1	
	Bucket latrine					Bucket latrine				
						Other				
	Private Latrines					Private Latrines				
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine				
	Pit latrine with slab/covered latrine					Pit latrine with slab/covered latrine				
	Traditional latrine					Traditional latrine				
	Pit latrine without slab/open pit					Pit latrine without slab/open pit				
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine				
	Bucket latrine					Bucket latrine				
						Other				
	Public/shared Latrines					Public/shared Latrines				
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine				
	Pit latrine with slab/covered latrine					Pit latrine with slab/covered latrine				
	Traditional latrine					Traditional latrine				
	Pit latrine without slab/open pit					Pit latrine without slab/open pit				
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine				
	Bucket latrine					Bucket latrine				
						Other				
	Composting toilets					Composting toilets				
	Composting toilet (private)					Composting toilet (private)				
	Composting toilet (shared)					Composting toilet (shared)				
Population without household connections but served	Other improved	21.1				Other improved				
	Other					Other				
	Other					Other				
	No facility, bush, field				No toilet	No facility, bush, field	22.0	81.1	64.6	
Total population unserved	Other unimproved	50.7				Other unimproved				
	Other					Other				
	Other					Other				
	DK/missing information					DK/missing information				
	Total	100.0				Total	99.8	100.0	99.9	
Calculations					Calculations					
Estimations					Estimations	Estimated simple pit considered improved based on NFHS 06	2.7	2.4		
						SC, based on NSS96	25.3	0.8		
Access to improved plus shared sanitation:		49%			Access to improved sanitation:		73%	16%		
Access to sewerage connections:		28%			Access to sewerage connections:		25%	1%		
Used for the estimates		No	No		Used for the estimates		Yes	Yes		
Used for the estimates		No	No		Used for the estimates		Yes	Yes		
Ratios	Shared improved facilities/all improved facilities				Ratios	Shared improved facilities/all improved facilities				
	Improved latrine / All latrines					Improved latrine / All latrines	80%	52%	67%	
	Covered dry latrines / All dry latrines					Covered dry latrines / All dry latrines	63%	38%	27%	
	VIP / All latrines					VIP / All latrines	14%	43%	27%	
	Traditional latrines / All latrines					Improved + traditional latrines / All latrines	94%	95%	94%	
	Improved + traditional latrines / All latrines					Sewerage connection among flush/pour flush				
					Sewerage connection among flush					
	Number of people covered by the survey					Number of people covered by the survey				
	Number of households covered by the survey					Number of households covered by the survey				
	Total population	239312				Total population				
Comments					Comments	Although the MICS 2000 report states that "four-thirds" of the latrines are private. For consistency the ratio private shared of NFHS99 has been taken for estimating the private latrines in MICS2000.				

Access to drinking water sources		CEN01			India			Access to drinking water sources		WHS03			India		
National Census					2001			World Health Survey					2003		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total						
	Flush and pour flush	46.1	7.1	18.0		Flush and pour flush	81.6	15.0							
	to piped sewer system					to piped sewer system	34.3	2.6							
	to septic tank					to septic tank	25.5	7.0							
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
Water closet1	Flush/toilets	46.1	7.1	18.0		Flush/toilets	59.8	9.6							
	to piped sewer system					to piped sewer system	34.3	2.6							
	to septic tank					to septic tank	25.5	7.0							
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Private flush/toilet					Private flush/toilet	45.4	8.6							
	to piped sewer system				Private domestic connection to sewage system	to piped sewer system	28.7	2.5							
	to septic tank				Private flush to septic tank	to septic tank	16.7	6.1							
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Public/shared flush/toilet					Public/shared flush/toilet	14.4	0.9							
	to piped sewer system				Shared domestic connection to sewage system	to piped sewer system	5.6	0.1							
	to septic tank				Shared flush to septic tank	to septic tank	8.8	0.8							
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Latrines	27.6	14.8	18.4		Latrines	36.6	12.0							
	Pour flush latrines					Pour flush latrines	21.8	5.5							
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Private pour flush latrine				Private pour flush latrine	Private pour flush latrine	15.0	4.3							
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Public/shared pour flush latrine				Shared pour flush latrine	Public/shared pour flush latrine	6.7	1.2							
	to piped sewer system					to piped sewer system									
	to septic tank					to septic tank									
	to pit					to pit									
	to unknown place/ not sure/DK					to unknown place/ not sure/DK									
	to elsewhere					to elsewhere									
	Dry latrines	27.6	14.8	18.4		Dry latrines	4.9	6.5							
	Improved latrines					Improved latrines	3.7	3.9							
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine									
	Pit latrine with slab/covered latrine					Pit latrine with slab/covered latrine	3.1	3.9							
	Traditional latrine	14.6	10.3	11.5		Traditional latrine									
	Pit latrine without slab/open pit				Uncovered dry latrine (without privacy)	Pit latrine without slab/open pit	0.3	1.7							
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine									
	Bucket latrine				Bucket latrine (where fresh excreta are manually removed)	Bucket latrine	1.5	0.9							
	Other	13.0	4.5	6.9		Other									
	Private Latrines					Private Latrines	7.6	3.3							
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine									
	Pit latrine with slab/covered latrine				Private covered dry latrine (with privacy)	Pit latrine with slab/covered latrine	1.6	3.3							
	Traditional latrine					Traditional latrine									
	Pit latrine without slab/open pit					Pit latrine without slab/open pit									
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine									
	Bucket latrine					Bucket latrine									
	Other					Other									
	Public/shared Latrines					Public/shared Latrines	1.5	0.6							
	Ventilated Improved Pit latrine					Ventilated Improved Pit latrine									
	Pit latrine with slab/covered latrine				Shared covered dry latrine (with privacy)	Pit latrine with slab/covered latrine	1.5	0.6							
	Traditional latrine					Traditional latrine									
	Pit latrine without slab/open pit					Pit latrine without slab/open pit									
	Hanging toilet/hanging latrine					Hanging toilet/hanging latrine									
	Bucket latrine					Bucket latrine									
	Other					Other									
	Composting toilets					Composting toilets									
	Composting toilet (private)					Composting toilet (private)									
	Composting toilet (shared)					Composting toilet (shared)									
	Other improved					Other improved									
	Other					Other									
	Other					Other									
No latrine	No facility, bush, field	26.3	78.1	63.6	No facilities (open defecation)	No facility, bush, field	13.6	78.4							
	Other unimproved					Other unimproved	0.0	0.1							
	Other				Other	Other	0.0	0.1							
	Other					Other									
	DK/missing information					DK/missing information									
	Total	100.0	100.0	100.0		Total	100.0	100.0							
Calculations					Calculations										
	Estimated improved pit latrines based on NFHS 06	17.6	9.5												
Estimations					Estimations										
	SC, based on NSS96	20.3	0.6												
Access to improved sanitation : 64% 17%					Access to improved sanitation : 85% 19%										
Access to sewerage connections : 20% 1%					Access to sewerage connections : 34% 3%										
Used for the estimates Yes Yes					Used for the estimates No No										
Used for the estimates Yes Yes					Used for the estimates No No										
Ratios	Shared improved facilities/all improved facilities				Ratios	Shared improved facilities/all improved facilities									
	Improved latrine / All latrines					Improved latrine / All latrines	93%	78%							
	Covered dry latrines / All dry latrines					Covered dry latrines / All dry latrines	64%	59%							
	VIP / All latrines					VIP / All latrines									
	Traditional latrines / All latrines	53%	70%	63%		Traditional latrines / All latrines									
	Improved + traditional latrines / All latrines					Improved + traditional latrines / All latrines									
	Sewerage connection among flush/pour flush					Sewerage connection among flush/pour flush	42.1	17.4							
	Sewerage connection among flush					Sewerage connection among flush	57.4	27.3							
	Number of people covered by the survey					Number of people covered by the survey									
	Number of households covered by the survey					Number of households covered by the survey									
	Total population					Total population									
Comments					Comments										

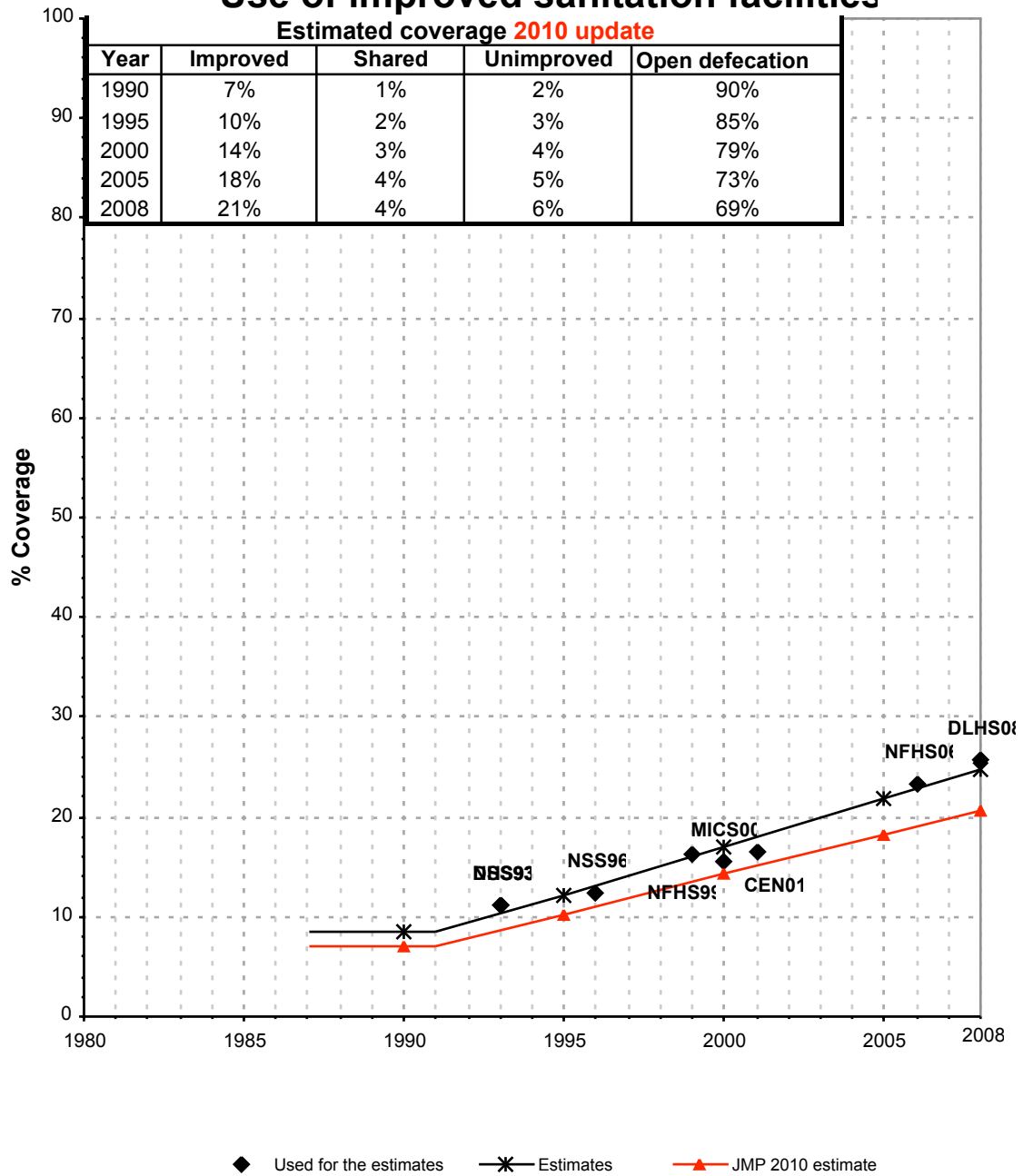
India			SANITATION															
			URBAN								RURAL							
			Sewer connection		Total		Open defecation		Shared		Sewer connection		Total		Open defecation		Shared	
Source	Code	Year	Used	Not used	Used	Not used	Used	Not used	Used	Not used	Used	Not used	Used	Not used	Used	Not used	Used	Not used
Demographic and Health Survey	DHS93	1993	29.5		70.0		24.1				0.9		11.2		87.1			
National Sample Survey	NSS93	1993	28.5		65.3		30.6				0.8		11.2		85.8			
National Sample Survey	NSS96	1996	29.6		73.4		23.0				0.6		12.4		84.4			
Demographic and Health Survey	NFHS99	1999	28.2		75.9		19.3		26.1		0.8		16.4		81.1		12.2	
Global Water Supply and Sanitation Assessment 2000.	JMP99	1999		28.2		49.3												
Multiple Indicator Cluster Survey	MICS00	2000	25.3		72.9		22.0				0.8		15.6		81.1			
National Census	CEN01	2001	20.3		63.8		26.3				0.6		16.6		78.1			
World Health Survey	WHS03	2003		34.3		84.7		13.6				2.6		18.9		78.4		
Demographic and Health Survey	NFHS06	2006	28.3		77.5		17.0		29.2		0.8		23.2		73.9		20.4	
District Level Health Survey	DLHS08	2008			74.2		19.2						25.7		65.8			

India - urban - Use of improved sanitation facilities



Used for the estimates
 * Estimates
 JMP 2010 estimate

India - rural - Use of improved sanitation facilities



Sanitation

India	Sanitation coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1990	2008	1990	2008	1990	2008
Improved facilities	49	54	7	21	18	31
Shared facilities	19	21	1	4	6	9
Unimproved facilities	4	7	2	6	2	6
Open defecation	28	18	90	69	74	54

Source: WHO/UNICEF JMP, 2010

India	Urban		Rural		Total	
	1990	2008	1990	2008	1990	2008
Population (x1000)	220,256	348,091	641,905	833,321	862,162	1,181,412

Source: UN / Population Division, 2008

