

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

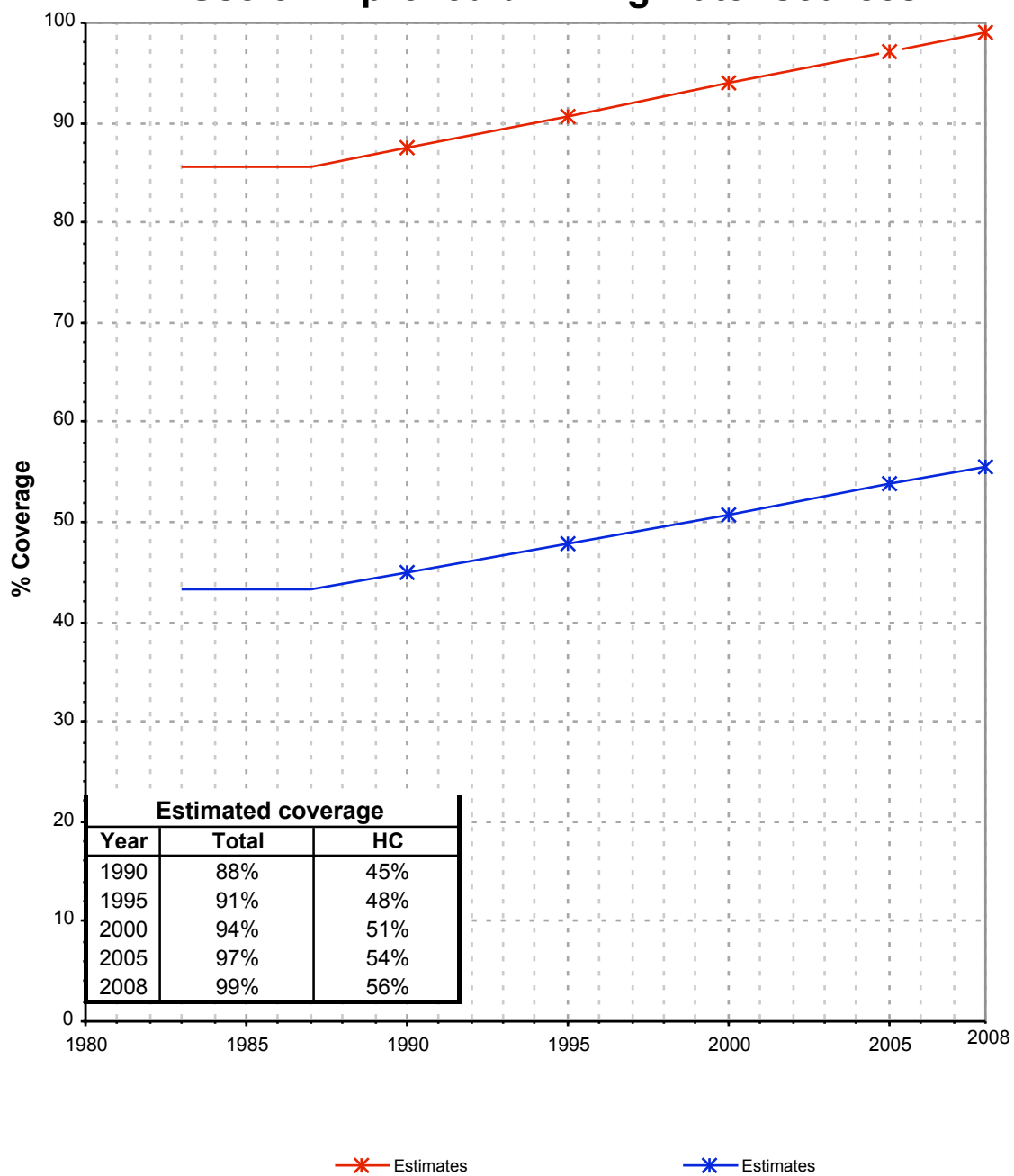
childinfo.org

Access to drinking water sources		CEN89			Vietnam			Access to drinking water sources		MICS96			Vietnam					
National Census					1989			Multiple Indicator Cluster Survey					1996					
10% micro dataset from IPUMS																		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total				
Inside	Tap water	66.9	3.7		Private tap	Tap water	52.5	2.0	15.4	Private tap	Tap water	43.7	0.8	12.2				
	House connections	50.7	1.8			House connections	34.3	0.8	12.2		House connections	34.3	0.8	12.2				
	Piped water into dwelling					Piped water into dwelling					Piped water into dwelling							
	Piped water to yard/plot					Piped water to yard/plot					Piped water to yard/plot							
	Public tap, standpipe	16.2	1.8			Public tap, standpipe	8.8	1.2	3.2		Public tap, standpipe	8.8	1.2	3.2	Public tap, standpipe	8.8	1.2	3.2
	Other					Other					Other							
	Ground water	18.9	43.4			drilled wells	Ground water	36.6	62.9		56.0	drilled wells	Ground water	34.3	47.8	44.3		
	Protected ground water						Protected ground water	34.3	47.8		44.3		Protected ground water	2.3	15.1	11.7		
	Unprotected ground water						Unprotected ground water	2.3	15.1		11.7		Unprotected ground water	34.3	47.8	44.3		
	Protected wells or springs						Protected wells or springs	34.3	47.8		44.3		Protected wells or springs					
Private				Private					Private									
Public				Public					Public									
Other				Other					Other									
Unprotected wells or springs				Unprotected wells or springs	2.3		15.1	11.7	Unprotected wells or springs									
Private				Private					Private									
Public				Public					Public									
Other				Other				Other										
Well	All wells	18.9	43.4		drilled wells	All wells	36.6	62.9	56.0	drilled wells	All wells	36.6	62.9	56.0				
	Private					Private					Private							
	Public					Public					Public							
	Other					Other					Other							
	Tubewell, borehole					Tubewell, borehole	5.4	9.2	8.2		Tubewell, borehole							
	Private					Private					Private							
	Public					Public					Public							
	Other					Other					Other							
	Traditional wells					sunk wells with walls	Traditional wells	31.2	53.7		47.8	sunk wells with walls	Traditional wells					
	Private						Private						Private					
Public				Public					Public									
Other				Other					Other									
Protected well				Protected well	28.9		38.6	36.1	Protected well									
Private				Private					Private									
Public				Public					Public									
Other				Other					Other									
Unprotected well				Unprotected well	2.3		15.1	11.7	Unprotected well									
Private				Private					Private									
Public				Public				Public										
Other				Other				Other										
All springs				sunk wells without walls	All springs				sunk wells without walls	All springs								
Private					Private					Private								
Public					Public					Public								
Other					Other					Other								
Protected spring					Protected spring					Protected spring								
Private					Private					Private								
Public					Public					Public								
Other					Other					Other								
Unprotected spring					Unprotected spring					Unprotected spring								
Private					Private					Private								
Public				Public				Public										
Other				Other				Other										
Rainwater					Rainwater	4.3	12.3	10.2	Rainwater	4.3	12.3	10.2						
Covered cistern/tank				rain water	Covered cistern/tank	4.3	12.3	10.2	Covered cistern/tank									
Uncovered cistern/tank					Uncovered cistern/tank				Uncovered cistern/tank									
Bottled water					Bottled water				Bottled water									
with other improved					with other improved				with other improved									
without other improved					without other improved				without other improved									
Surface water				river, lake, pond, spring water	Surface water	6.3	18.8	15.5	Surface water	6.3	18.8	15.5						
River					River				River									
Lake					Lake				Lake									
Dam					Dam				Dam									
Pond					Pond				Pond									
Stream					Stream				Stream									
Irrigation channel					Irrigation channel				Irrigation channel									
Other					Other				Other									
Other improved sources					Other improved sources				Other improved sources									
Other					Other				Other									
Other					Other				Other									
Other non-improved		14.2	53.0		Other non-improved	0.4	4.2	3.1	Other non-improved	0.4	4.2	3.1						
Cart with small tank/drum					Cart with small tank/drum				Cart with small tank/drum									
Tanker truck provided					Tanker truck provided				Tanker truck provided									
Other		14.2	53.0	tank water	Other	0.1	0.2	0.1	Other	0.1	0.2	0.1						
Other				other	Other	0.3	4.0	3.0	Other	0.3	4.0	3.0						
DK/missing					DK/missing				DK/missing									
Total		100.0	100.0		Total	100.1	100.2	100.2	Total	100.1	100.2	100.2						
Calculations	Springs, based on DHS97	0.1	3.1		Calculations	Springs, based on DHS97	0.5	6.6		Calculations	Springs, based on DHS97	0.5	6.6					
	Rainwater, based on MICS96	0.6	5.8			Rainwater, based on MICS96	0.6	5.8			Rainwater, based on MICS96	0.6	5.8					
Estimations	Rainwater, based on MICS96	0.6	5.8		Estimations	Protected spring, estimated using MICS00	0.4	5.2		Estimations	Protected spring, estimated using MICS00	0.4	5.2					
	Protected Well estimated using MICS96	17.7	33.0			Protected spring, estimated using MICS00	0.4	5.2			Protected spring, estimated using MICS00	0.4	5.2					
	Protected spring, estimated using MICS00	0.0	2.5															
Access to improved drinking water sources :		85%	45%		Access to improved drinking water sources :		92%	67%		Access to improved drinking water sources :		92%	67%					
Access to house connections :		51%	2%		Access to house connections :		44%	1%		Access to house connections :		44%	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			Used for the estimates	Yes	Yes			Used for the estimates	Yes	Yes					
Ratios	HC / Tap water	76%	50%		Ratios	HC / Tap water	83%	40%		Ratios	HC / Tap water	83%	40%					
	Public tap / Tap water	24%	50%			Public tap / Tap water	17%	60%			Public tap / Tap water	17%	60%					
	Tubewell + protected well / All wells					Tubewell + protected well / All wells	94%	76%			Tubewell + protected well / All wells	94%	76%					
	Protected wells / Traditional wells					Protected wells / Traditional wells	93%	72%			Protected wells / Traditional wells	93%	72%					
	Tubewell / All wells					Tubewell / All wells	15%	15%			Tubewell / All wells	15%	15%					
	Protected springs / All springs					Protected springs / All springs					Protected springs / All springs							
	Protect. well & spring / well & spring					Protect. well & spring / well & spring	94%	76%			Protect. well & spring / well & spring	94%	76%					
	Rainwater among non-improved					Rainwater among non-improved	4%	11%			Rainwater among non-improved	4%	11%					
Number of people covered by the census					Number of people covered by the survey					Number of people covered by the survey								
Number of households covered by the census					Number of households covered by the survey					Number of households covered by the survey								
Total population					Total population					Total population								
Comments					Comments					Comments								

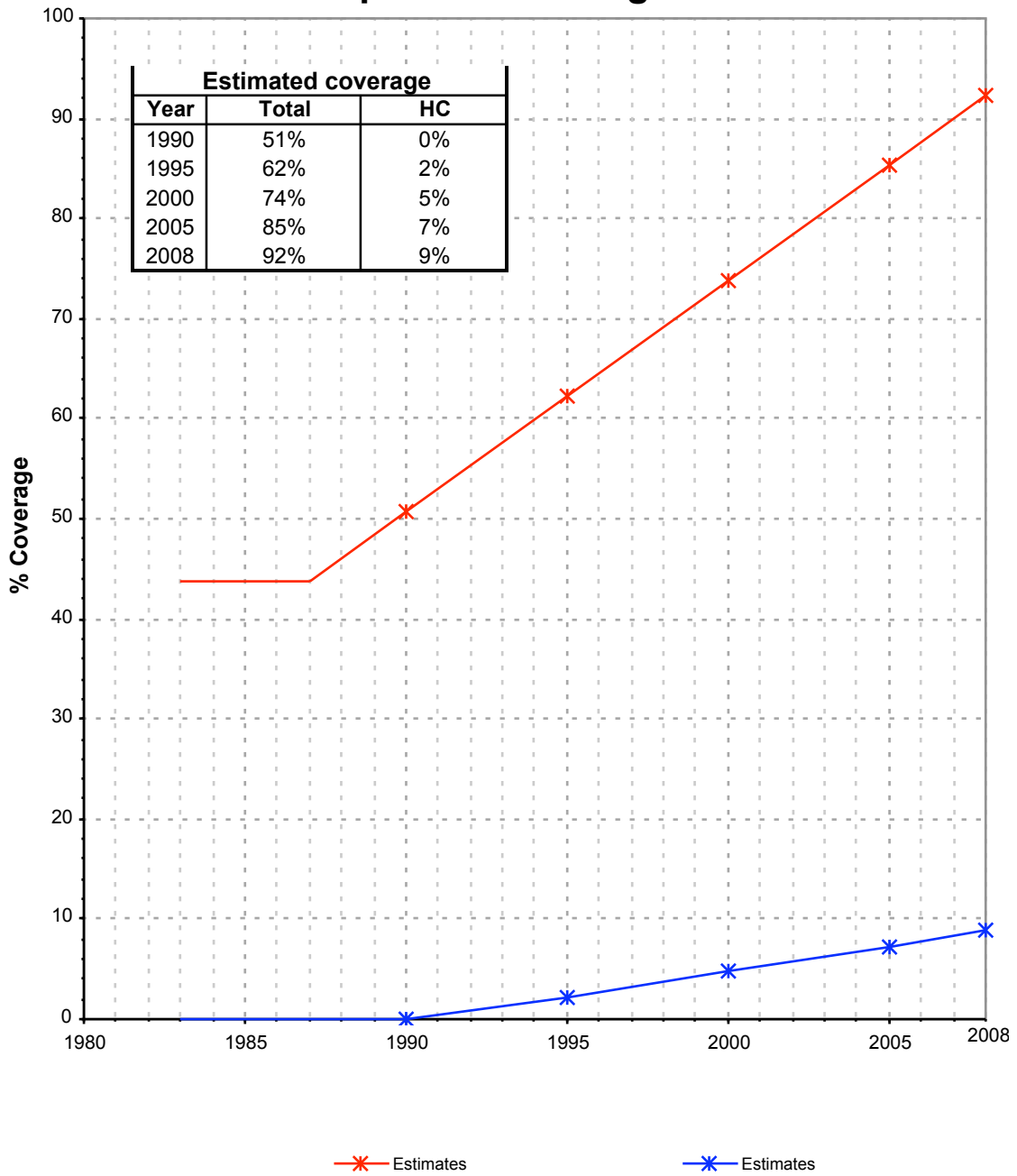
Access to drinking water sources		DHS97			Vietnam			Access to drinking water sources		CEN98			Vietnam		
Demographic and Health Survey					1997			National Census					1998		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total						
Piped into residence	Tap water	70.2	3.2	16.0	Private household connection	Tap water	62.5	2.0							
	House connections	66.2	2.6	14.7		House connections	43.7	0.8							
	Piped water into dwelling					Piped water into dwelling									
	Piped water to yard/plot					Piped water to yard/plot									
Public tap	Public tap, standpipe	4.0	0.6	1.3	Shared tap	Public tap, standpipe	8.8	1.2							
	Other					Other									
	Ground water	20.4	67.9	58.9		Ground water	36.6	62.9							
	Protected ground water					Protected ground water									
	Unprotected ground water					Unprotected ground water									
	Protected wells or springs					Protected wells or springs									
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected wells or springs					Unprotected wells or springs									
	Private					Private									
	Public					Public									
	Other					Other									
	All wells	20.0	61.8	53.8		All wells	36.6	62.9							
Well in residence	Private	17.7	53.3	46.5	Private well	Private	5.4	9.2							
Public well	Public	2.3	8.5	7.3	Hand-dug well	Public	31.2	53.7							
	Other					Other									
	Tubewell, borehole					Tubewell, borehole									
	Private					Private									
	Public					Public									
	Other					Other									
	Traditional wells					Traditional wells									
	Private					Private									
	Public					Public									
	Other					Other									
	Protected well					Protected well									
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected well					Unprotected well									
	Private					Private									
	Public					Public									
	Other					Other									
Spring	All springs	0.4	6.1	5.1		All springs									
	Private					Private									
	Public					Public									
	Other					Other									
	Protected spring					Protected spring									
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected spring					Unprotected spring									
	Private					Private									
	Public					Public									
	Other					Other									
	Rainwater	4.8	17.4	15.0		Rainwater	4.3	12.3							
Rain water	Covered cistern/tank	4.8	17.4	15.0	Rain water	Covered cistern/tank	4.3	12.3							
	Uncovered cistern/tank					Uncovered cistern/tank									
	Bottled water					Bottled water									
	with other improved					with other improved									
	without other improved					without other improved									
	Surface water	4.5	11.4	10.1	Surface sources	Surface water	6.3	18.8							
River, stream	River	4.4	10.2	9.1		River									
	Lake					Lake									
Dam	Dam	0.0	0.1	0.1		Dam									
Pond lake	Pond	0.1	1.1	0.9		Pond									
	Stream					Stream									
	Irrigation channel					Irrigation channel									
	Other					Other									
	Other improved sources					Other improved sources									
	Other					Other									
	Other					Other									
	Other non-improved	0.2	0.2	0.2		Other non-improved	0.4	4.1							
	Cart with small tank/drum					Cart with small tank/drum									
Tanker truck	Tanker truck provided	0.2	0.2	0.2	Other	Tanker truck provided	0.4	4.1							
	Other					Other									
	Other					Other									
	DK/missing					DK/missing									
	Total	100.1	100.1	100.2		Total	100.1	100.1							
Calculations					Calculations	Springs, based on DHS97	0.5	6.6							
Estimations	Protected wells, estimated using MICS96	18.7	47.0		Estimations	Protected Well, estimated using MICS96 and MICS2000	35.0	52.0							
	Protected spring, estimated using MICS00	0.3	0.8			Protected spring, estimated using MICS00	0.4	5.2							
Access to improved drinking water sources :		94%	68%		Access to improved drinking water sources :		92%	72%							
Access to house connections :		66%	3%		Access to house connections :		44%	1%							
Used for the estimates:		Yes	Yes		Used for the estimates:		Yes	Yes							
Used for the estimates:		No	Yes		Used for the estimates:		Yes	Yes							
Ratios	HC / Tap water	94%	81%		Ratios	HC / Tap water	83%	40%							
	Public tap / Tap water	6%	19%			Public tap / Tap water	17%	60%							
	Tubewell + protected well / All wells					Tubewell + protected well / All wells									
	Protected wells / Traditional wells					Protected wells / Traditional wells									
	Tubewell / All wells					Tubewell / All wells									
	Protected springs / All springs					Protected springs / All springs									
	Protect. well & spring / well & spring					Protect. well & spring / well & spring									
	Springs among surface water	8%	35%												
Springs among non-improved	0%	6%													
Number of people covered by the survey:					Number of people covered by the census:										
Number of households covered by the survey:					Number of households covered by the census:										
Total population:					Total population:										
Comments					Comments										

Vietnam			DRINKING WATER							
			URBAN				RURAL			
			House connection		Total		House connection		Total	
Source	Code	Year	Used	Not used	Used	Not used	Used	Not used	Used	Not used
National Census	CEN89	1989	50.7		85.2		1.8		44.9	
Living Standards Survey	LSS93	1993								
Multiple Indicator Cluster Survey	MICS96	1996	43.7		91.5		0.8		67.3	
Demographic and Health Survey	DHS97	1997		66.2	94.1		2.6		68.4	
National Census	CEN98	1998	43.7		92.2		0.8		71.6	
Global Water Supply and Sanitation Assessment 2000.	JMP99	1999		85.0		95.0		3.9		11.7
Multiple Indicator Cluster Survey	MICS00	2000	50.4		95.4		0.8		73.5	
Demographic and Health Survey	DHS02	2002		74.0	97.3		6.1		78.3	
World Health Survey	WHS03	2003	49.3		96.2		15.3		87.3	
Aids Indicator Survey	AIS05	2005	61.1		97.5		10.1		84.5	
Multiple Indicator Cluster Survey	MICS06	2006	58.6		97.1		5.4		86.2	
Living Standards Survey	LSS04	2004	49.7		92.5		3.5		77.0	

Viet Nam - urban - Use of improved drinking water sources



Viet Nam - rural - Use of improved drinking water sources



Drinking Water

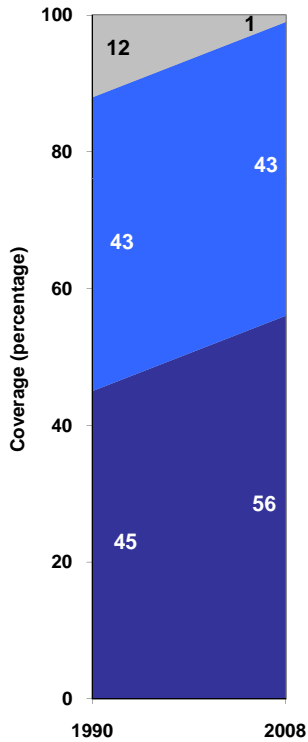
Vietnam	Drinking water coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1990	2008	1990	2008	1990	2008
Piped into premises	45	56	0	9	9	22
Other improved source	43	43	51	83	49	72
Unimproved source	12	1	49	8	42	6

Source: WHO/UNICEF JMP, 2010

Vietnam	Urban		Rural		Total	
	1990	2008	1990	2008	1990	2008
Population (x1000)	13418	24234	52829	62862	66247	87096

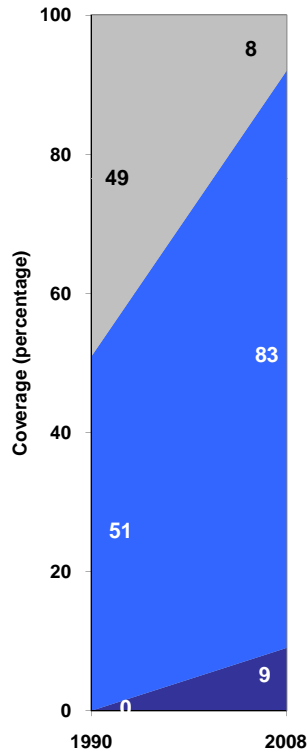
Source: UN / Population Division, 2008

Urban drinking water trends



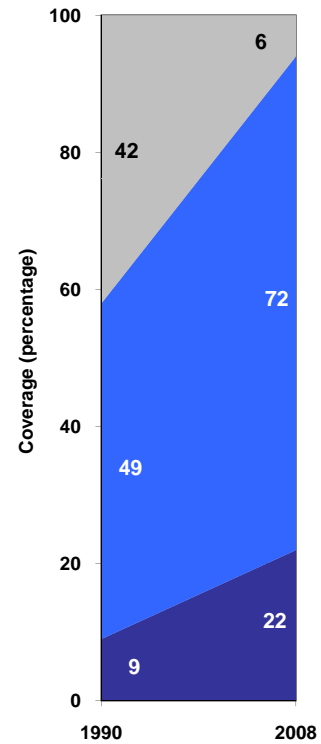
■ Unimproved sources
■ Other improved sources
■ Piped onto premises

Rural drinking water trends



■ Unimproved sources
■ Other improved sources
■ Piped onto premises

Total drinking water trends



■ Unimproved sources
■ Other improved sources
■ Piped onto premises