

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		DHS89		Bolivia		Access to drinking water sources		CEN92		Bolivia	
Demographic and Health Survey				National Census							
				1989				1992			
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total		
	Tap water	87.9	36.9			Tap water	81.4	19.1			
	House connections	76.8	26.3			House connections	81.4	19.1			
Domestic connection	Piped water into dwelling	67.7	21.3		Por caneria dentro de la vivienda	Piped water into dwelling	41.0	4.3			
Yard tap	Piped water to yard/plot	9.1	5.1		De caneria fuera d ela vivienda	Piped water to yard/plot	40.3	14.9			
Public tap	Public tap, standpipe	11.1	10.6			Public tap, standpipe					
	Other					Other					
	Ground water	6.5	29.4			Ground water	9.7	35.2			
	Protected ground water					Protected ground water	1.9	1.8			
	Unprotected ground water					Unprotected ground water					
	Protected wells or springs					Protected wells or springs	1.9	1.8			
	Private					Private					
	Public					Public					
	Other					Other					
	Unprotected wells or springs					Unprotected wells or springs	0.0	0.0			
	Private					Private					
	Public					Public					
	Other					Other					
Well or cistern	All wells	6.5	29.4			All wells	9.7	35.2			
	Private					Private					
	Public					Public					
	Other					Other					
	Tubewell, borehole				De pozo o noria por caneria	Tubewell, borehole	1.9	1.8			
	Private					Private					
	Public					Public					
	Other					Other					
	Traditional wells				De pozo o noria sin caneria	Traditional wells	7.8	33.4			
	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					
	All springs					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	0.5	0.8			Rainwater					
Rainwater	Covered cistern/tank	0.5	0.8			Covered cistern/tank					
	Uncovered cistern/tank					Uncovered cistern/tank					
	Bottled water					Bottled water					
	with other improved					with other improved					
	without other improved					without other improved					
River, irrigated channel	Surface water	0.7	30.2		De rio o vertiente	Surface water	2.1	42.3			
	River					River					
	Lake					Lake					
	Dam					Dam					
	Pond					Pond					
	Stream					Stream					
	Irrigation channel					Irrigation channel					
	Other					Other					
	Other improved sources					Other improved sources					
	Other					Other					
	Other					Other					
	Other non-improved	4.4	2.7			Other non-improved	6.9	3.4			
	Cart with small tank/drum					Cart with small tank/drum					
Truckborne	Tanker truck provided	1.5	0.2		De carro cisterna	Tanker truck provided	4.6	1.1			
Other source	Other	2.9	2.5		Otro	Other	2.2	2.3			
	Other					Other					
Missing	DK/missing	0.0	0.1			DK/missing					
	Total	100.0	100.0			Total	100.0	100.0			
Calculations					Calculations						
Estimations					Estimations						
	wells estimated at % of MICS2000	4.7	18.1		"Pozo o noria sin caneria" estimated improved, based on MICS00	5.1	14.4				
	Protected springs, based on MICS00	0.2	1.4		Protected springs, based on MICS00	0.7	2.0				
					HC corrected for public standpipe, based on CEN92 (PUMS)	72.0	14.3				
Access to improved drinking water sources :		93%	57%		Access to improved drinking water sources :		89%	37%			
Access to house connections :		77%	26%		Access to house connections :		72%	14%			
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	HC / Tap water	87%	71%		Ratios	HC / Tap water	100%	100%			
	Public tap / Tap water	13%	29%			Public tap / Tap water					
	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	100%	100%			
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:		3615	2679			
Comments					Comments						

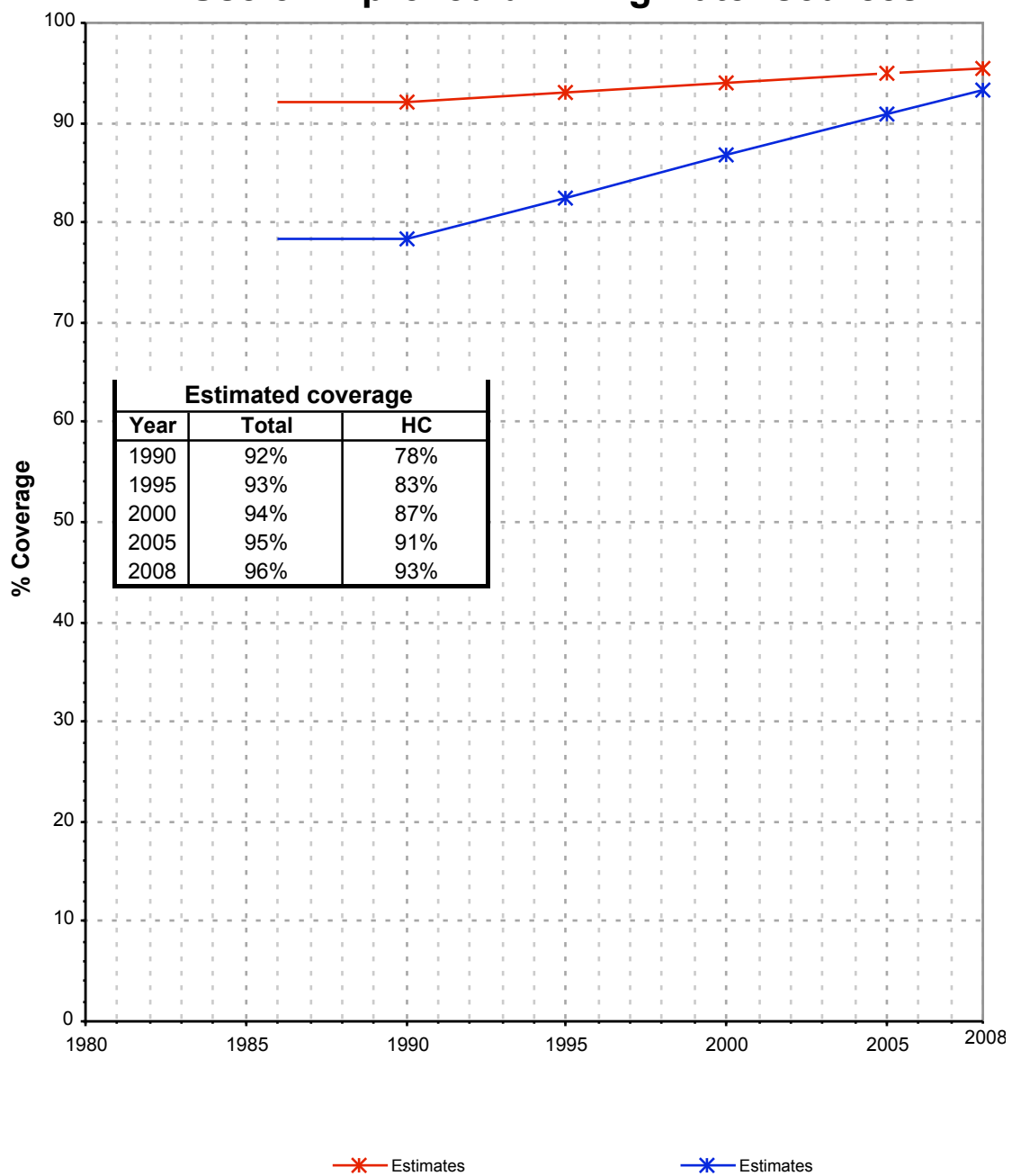
Access to drinking water sources		CEN92			Bolivia			Access to drinking water sources		DHS94			Bolivia		
National Census					Demographic and Health Survey										
IPUMS					1992					1994					
Original denomination	Classification				Urban	Rural	Total	Original denomination	Classification				Urban	Rural	Total
	Tap water				76.7	12.4			Tap water				86.2	31.8	
		House connections			67.9	9.3		Pipeborne water		House connections			77.5	23.4	
Piped inside the dwelling		Piped water into dwelling			37.8	2.8				Piped water into dwelling					
Piped outside the dwelling but within the building, to		Piped water to yard/plot			30.1	6.4				Piped water to yard/plot					
Piped outside the lot or property		Public tap, standpipe			8.8	3.1		Public tap		Public tap, standpipe			7.4	8.1	
		Other						Neighbour (drinking water)		Other			1.3	0.3	
	Ground water				11.4	36.3			Ground water				5.4	33.3	
		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			11.4	36.3		Well		All wells			5.4	33.3	
		Private								Private					
		Public								Public					
		Other								Other					
		Tubewell, borehole								Tubewell, borehole					
		Private								Private					
		Public								Public					
		Other								Other					
Well or water wheel		Traditional wells			11.4	36.3				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					
		All springs								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								Rainwater						
		Covered cistern/tank								Covered cistern/tank					
		Uncovered cistern/tank								Uncovered cistern/tank					
	Bottled water								Bottled water						
		with other improved								with other improved					
		without other improved								without other improved					
River, lake, spring or stream	Surface water				3.1	46.4		River, lake, spring	Surface water				1.0	32.6	
		River								River					
		Lake								Lake					
		Dam								Dam					
		Pond								Pond					
		Stream								Stream					
		Irrigation channel								Irrigation channel					
		Other								Other					
	Other improved sources								Other improved sources						
		Other								Other					
		Other								Other					
	Other non-improved				8.8	4.9			Other non-improved				7.2	2.1	
Delivery truck		Cart with small tank/drum			4.3	1.0		Truck distribution		Cart with small tank/drum			4.1	0.5	
Other		Tanker truck provided			2.2	2.5		Neighbour (no specification)		Tanker truck provided			3.0	1.2	
		Other			2.3	1.5		Other		Other			0.1	0.4	
NIU (not in universe)	DK/missing							No information	DK/missing						
		Total			100.0	100.0				Total			100.0	100.0	
Calculations								Calculations							
Estimations		*Well or water wheel estimated improved, based on MICS00			7.4	15.6				wells estimated at % of MICS2000			3.9	20.5	
		Protected springs, based on MICS00			1.0	2.2				Protected springs, based on MICS00			0.3	1.6	
	Access to improved drinking water sources :				85%	30%			Access to improved drinking water sources :				90%	54%	
	Access to house connections :				68%	9%			Access to house connections :				78%	23%	
	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		HC / Tap water			89%	75%				HC / Tap water			90%	74%	
		Public tap / Tap water			11%	25%				Public tap / Tap water			9%	25%	
		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					
	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							

Access to drinking water sources		JMP99			Bolivia			Access to drinking water sources		MICS00			Bolivia		
Global Water Supply and Sanitation Assessment 2000.					Multiple Indicator Cluster Survey					Encuesta de múltiples indicadores por conglomerados Informe preliminar, febrero 2001					
Water Supply and Sanitation Sector Questionnaire - 1999. Form 6 sent to WHO.					1998					2000					
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total						
Population served with household connection	Tap water	87.4	30.4			Tap water	91.6	59.5							
	House connections					House connections	90.2	53.2							
	Piped water into dwelling					Piped water into dwelling	43.7	11.3							
	Piped water to yard/plot					Piped water to yard/plot	46.5	41.9							
	Public tap, standpipe					Public tap, standpipe	1.4	6.3							
	Other					Other									
Population without household connection but with reasonable access to a public	Ground water	5.7	13.6			Ground water	3.1	22.8							
	Protected ground water	5.7	13.6			Protected ground water	2.2	11.8							
	Unprotected ground water					Unprotected ground water	0.9	11.0							
	Protected wells or springs					Protected wells or springs	2.2	11.8	0.0						
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected wells or springs					Unprotected wells or springs	0.9	11.0	0.0						
	Private					Private									
	Public					Public									
	Other					Other									
	All wells					All wells	2.9	18.0							
	Private					Private									
	Public					Public									
	Other					Other									
	Tubewell, borehole					Tubewell, borehole	0.6	5.9							
	Private					Private									
	Public					Public									
	Other					Other									
	Traditional wells					Traditional wells	2.3	12.1							
	Private					Private									
	Public					Public									
	Other					Other									
	Protected well					Protected well	1.5	5.2							
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected well					Unprotected well	0.8	6.9							
	Private					Private									
	Public					Public									
	Other					Other									
	All springs					All springs	0.2	4.8							
	Private					Private									
	Public					Public									
	Other					Other									
	Protected spring					Protected spring	0.1	0.7							
	Private					Private									
	Public					Public									
	Other					Other									
	Unprotected spring					Unprotected spring	0.1	4.1							
	Private					Private									
	Public					Public									
	Other					Other									
	Rainwater					Rainwater									
	Covered cistern/tank					Covered cistern/tank									
	Uncovered cistern/tank					Uncovered cistern/tank									
	Bottled water					Bottled water									
	with other improved					with other improved									
	without other improved					without other improved									
	Surface water					Surface water	0.1	9.9							
	River					River									
	Lake					Lake									
	Dam					Dam									
	Pond					Pond									
	Stream					Stream									
	Irrigation channel					Irrigation channel									
	Other					Other									
	Other improved sources					Other improved sources									
	Other					Other									
	Other					Other									
Total population unserved	Other non-improved	6.9	56.0			Other non-improved	5.2	7.7							
	Cart with small tank/drum					Cart with small tank/drum									
	Tanker truck provided					Tanker truck provided	2.0	0.1							
	Other					Other	3.2	7.6							
	Other					Other									
	DK/missing					DK/missing									
	Total	100.0	100.0			Total	100.0	99.9							
Calculations					Calculations										
Estimations					Estimations										
Access to improved drinking water sources :		93%	44%		Access to improved drinking water sources :		94%	71%							
Access to house connections :		87%	30%		Access to house connections :		90%	53%							
Used for the estimates:		No	No		Used for the estimates:		Yes	No							
Used for the estimates:		No	No		Used for the estimates:		Yes	No							
Ratios	HC / Tap water	100%	100%		Ratios	HC / Tap water	98%	89%							
	Public tap / Tap water					Public tap / Tap water	2%	11%							
	Tubewell + protected well / All wells					Tubewell + protected well / All wells	72%	62%							
	Protected wells / Traditional wells					Protected wells / Traditional wells	65%	43%							
	Tubewell / All wells					Tubewell / All wells	21%	33%							
	Protected springs / All springs					Protected springs / All springs	50%	15%							
	Protect. well & spring / well & spring					Protect. well & spring / well & spring	71%	52%							
					Protected springs among surface water	33%	5%								
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:		4770	3180		Total population:										
Comments					Comments										

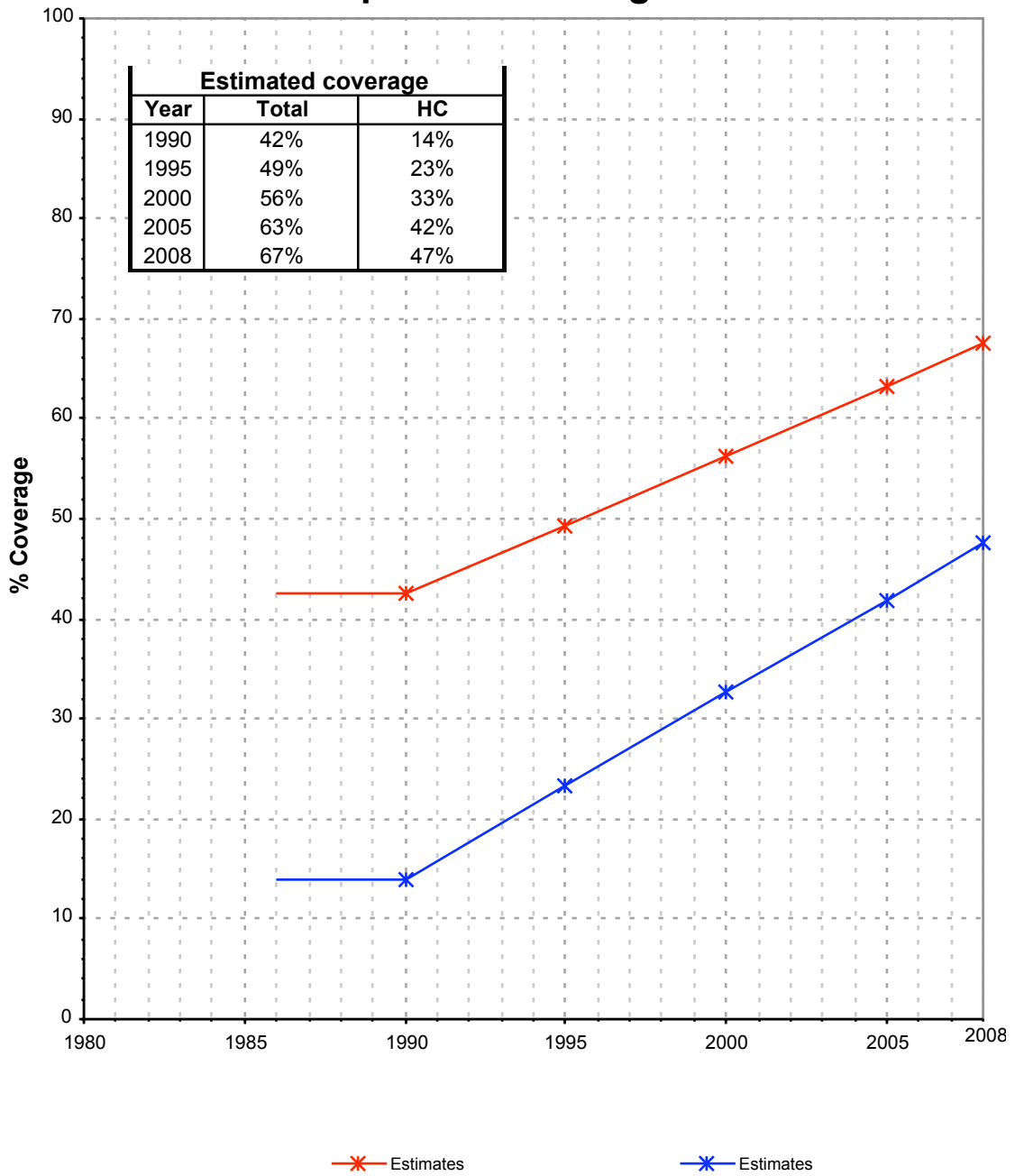
Access to drinking water sources		DHS08		Bolivia		
Demographic and Health Survey				2008		
Original denomination	Classification	Urban	Rural	Total		
Tap water		94.1	66.4	82.3		
	House connections	91.5	57.4	77.0		
Tubería dentro de la vivienda/patio	Piped water into dwelling	91.5	57.4	77.0		
	Piped water to yard/plot					
Tubería pública fuera de la vivienda	Public tap, standpipe	2.6	9.0	5.3		
	Other					
Ground water		3.1	18.2	9.5		
	Protected ground water	0.5	4.5	2.2		
	Unprotected ground water					
	Protected wells or springs	0.5	4.5	2.2		
	Private					
	Public					
	Other					
	Unprotected wells or springs					
	Private					
	Public					
	Other					
	All wells	3.1	18.2	9.5		
	Private					
	Public					
	Other					
Pozo or noria con bomba	Tubewell, borehole	0.5	4.5	2.2		
	Private					
	Public					
	Other					
Pozo or noria sin bomba	Traditional wells	2.6	13.7	7.3		
	Private					
	Public					
	Other					
	Protected well					
	Private					
	Public					
	Other					
	Unprotected well					
	Private					
	Public					
	Other					
	All springs					
	Private					
	Public					
	Other					
	Protected spring					
	Private					
	Public					
	Other					
	Unprotected spring					
	Private					
	Public					
	Other					
Rainwater						
	Covered cistern/tank					
	Uncovered cistern/tank					
Bottled water						
	with other improved					
	without other improved					
Surface water		0.3	13.6	6.0		
Río/vertiente/acequia	River	0.3	12.4	5.4		
Lago/laguna/caniche	Lake	0.0	1.2	0.6		
	Dam					
	Pond					
	Stream					
	Irrigation channel					
	Other					
Other improved sources						
	Other					
	Other					
Other non-improved		2.5	1.6	2.1		
	Cart with small tank/drum					
Carro repartidor (aguatero)	Tanker truck provided	2.0	0.4	1.3		
Otro	Other	0.5	1.2	0.6		
	Other					
Sin información	DK/missing	0.0	0.2	0.1		
	Total	100.0	100.0	100.0		
Calculations						
Estimations						
	Traditional wells considered improved, based on MICS00	1.7	5.9			
Access to improved drinking water sources :		96%	77%	85%		
Access to house connections :		92%	57%	77%		
Used for the estimates:		Yes	Yes			
Used for the estimates:		Yes	Yes			
Ratios						
	HC / Tap water	97%	86%			
	Public tap / Tap water	3%	14%			
	Tubewell + protected well / All wells					
	Protected wells / Traditional wells					
	Tubewell / All wells	16%	25%			
	Protected springs / All springs					
	Protect. well & spring / well & spring					
Number of people covered by the survey:						
Number of households covered by the survey:						
Total population:						
Comments						

Bolivia			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
Demographic and Health Survey	DHS89	1989		76.8		93.3		26.3		57.2
National Census	CEN92	1992	72.0		89.1		14.3		37.3	
National Census	CEN92	1992		67.9		85.2		9.3		30.2
Demographic and Health Survey	DHS94	1994	77.5		90.4		23.4		53.9	
Multiple Indicator Cluster Survey	MICS96	1996	85.6		94.6		33.9		58.7	
Encuesta Continua de Hogares	ECH96	1996	84.5		95.1		26.0		49.9	
Encuesta Continua de Hogares	ECH97	1997	88.8		96.0		29.1		52.0	
Demographic and Health Survey	DHS98	1998	87.4		95.4		30.4		59.9	
Encuesta Continua de Hogares	ECH98	1998	87.3		95.1		30.3		58.4	
Encuesta Continua de Hogares	ECH99	1999	90.5		95.4		23.0		46.5	
Global Water Supply and Sanitation Assessment 2000.	JMP99	1998		87.4		93.1		30.4		44.0
Multiple Indicator Cluster Survey	MICS00	2000	90.2		93.8			53.2		71.3
Encuesta Continua de Hogares	ECH00	2000	90.1		95.4		35.6		54.5	
Encuesta Continua de Hogares	ECH01	2001	87.2		92.3		35.6		60.7	
National Census	CEN02	2002	86.9		92.6		27.3		53.5	
National Census	CEN02	2002		80.6		90.6		29.8		56.8
Encuesta Continua de Hogares	ECH02	2002	86.9		92.4		27.3		51.9	
Demographic and Health Survey	DHS03	2003	87.1		94.1		46.3		69.4	
Encuesta Continua de Hogares	ECH04	2004	86.3		92.7		33.6		56.0	
Encuesta Continua de Hogares	ECH05	2005	89.3		95.4		38.8		55.3	
Demographic and Health Survey	DHS08	2008	91.5		96.3		57.4		76.8	

Bolivia - urban - Use of improved drinking water sources



Bolivia - rural - Use of improved drinking water sources



Drinking Water

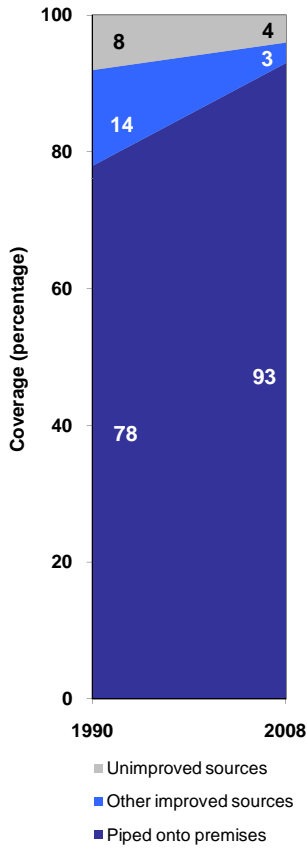
Bolivia	Drinking water coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1990	2008	1990	2008	1990	2008
Piped into premises	78	93	14	47	50	77
Other improved source	14	3	28	20	20	9
Unimproved source	8	4	58	33	30	14

Source: WHO/UNICEF JMP, 2010

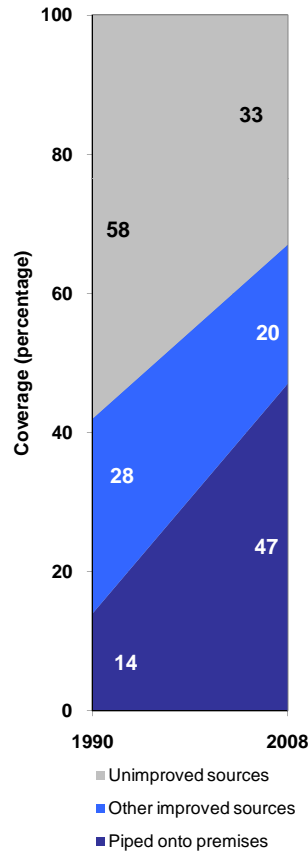
Bolivia	Urban		Rural		Total	
	1990	2008	1990	2008	1990	2008
Population (x1000)	3,707	6,361	2,963	3,333	6,671	9,694

Source: UN / Population Division, 2008

Urban drinking water trends



Rural drinking water trends



Total drinking water trends

