

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		CEN98			Cambodia			Access to drinking water sources		JMP99			Cambodia						
National Census					Global Water Supply and Sanitation Assessment 2000.					Water Supply and Sanitation Sector Questionnaire - 1999. Form 6 sent to WHO.					Global Water Supply and Sanitation Assessment 2000.				
as recorded in the Global Water Supply and Sanitation Assessment 2000. Water Supply and Sanitation Sector Questionnaire - 1999					1998					1999					1999				
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total					
	Tap water	34.7	2.1			Tap water	29.8	0.8			Tap water	29.8	0.8						
	House connections	29.8	0.8		Population served with household connection.	House connections	29.8	0.8			House connections	29.8	0.8						
Piped in Dwelling	Piped water into dwelling	29.8	0.8			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	Public tap, standpipe	4.9	1.3			Public tap, standpipe					Public tap, standpipe								
	Other					Other					Other								
	Ground water	30.7	59.4			Ground water	23.1	23.7			Ground water	23.1	23.7						
	Protected ground water	18.1	22.4		Population without household connection but with reasonable access to a public.	Protected ground water	23.1	23.7			Protected ground water	23.1	23.7						
	Unprotected ground water	12.6	37.0			Unprotected ground water					Unprotected ground water								
	Protected wells or springs	18.1	22.4	0.0		Protected wells or springs					Protected wells or springs								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
	Unprotected wells or springs	12.6	37.0	0.0		Unprotected wells or springs					Unprotected wells or springs								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
	All wells	30.7	59.4			All wells					All wells								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
Tubed, Piped Well	Tubewell, borehole	14.2	17.1			Tubewell, borehole					Tubewell, borehole								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
	Traditional wells	16.5	42.3			Traditional wells					Traditional wells								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
Protected Dug Well	Protected well	3.9	5.3			Protected well					Protected well								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
Unprotected Dug Well	Unprotected well	12.6	37.0			Unprotected well					Unprotected well								
	Private					Private					Private								
	Public					Public					Public								
	Other					Other					Other								
	All springs					All springs					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					Rainwater								
	Covered cistern/tank					Covered cistern/tank					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								
Pond, River or Stream	Surface water	15.5	30.6			Surface water					Surface water								
	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	19.0	7.9		Total population unserved	Other non-improved	47.2	75.5			Other non-improved	47.2	75.5						
	Cart with small tank/drum					Cart with small tank/drum					Cart with small tank/drum								
Tanker/Bought	Tanker truck provided	16.1	3.5			Tanker truck provided					Tanker truck provided								
Other	Other	2.9	4.4			Other					Other								
	Other					Other					Other								
	DK/missing					DK/missing					DK/missing								
	Total	100.0	100.0			Total	100.0	100.0			Total	100.0	100.0						
Calculations						Calculations					Calculations								
Estimations						Estimations					Estimations								
Access to improved drinking water sources :		57%	35%		Access to improved drinking water sources :		53%	25%		Access to improved drinking water sources :		53%	25%						
Access to house connections :		30%	1%		Access to house connections :		30%	1%		Access to house connections :		30%	1%						
Used for the estimates.		Yes	Yes		Used for the estimates.		No	No		Used for the estimates.		No	No						
Used for the estimates.		Yes	Yes		Used for the estimates.		No	No		Used for the estimates.		No	No						
Ratios	HC / Tap water	86%	38%		Ratios	HC / Tap water	100%	100%		Ratios	HC / Tap water	100%	100%						
	Public tap / Tap water	14%	62%			Public tap / Tap water					Public tap / Tap water								
	Tubewell + protected well / All wells	24%	13%			Tubewell + protected well / All wells					Tubewell + protected well / All wells								
	Protected wells / Traditional wells					Protected wells / Traditional wells					Protected wells / Traditional wells								
	Tubewell / All wells					Tubewell / All wells					Tubewell / All wells								
	Protected springs / All springs					Protected springs / All springs					Protected springs / All springs								
	Protect. well & spring / well & spring	59%	38%			Protect. well & spring / well & spring					Protect. well & spring / well & spring								
Number of people covered by the census.		1793.94	9632.31		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.		1793.917	9632.306		Total population.		1793.917	9632.306						
Comments					Comments					Comments									

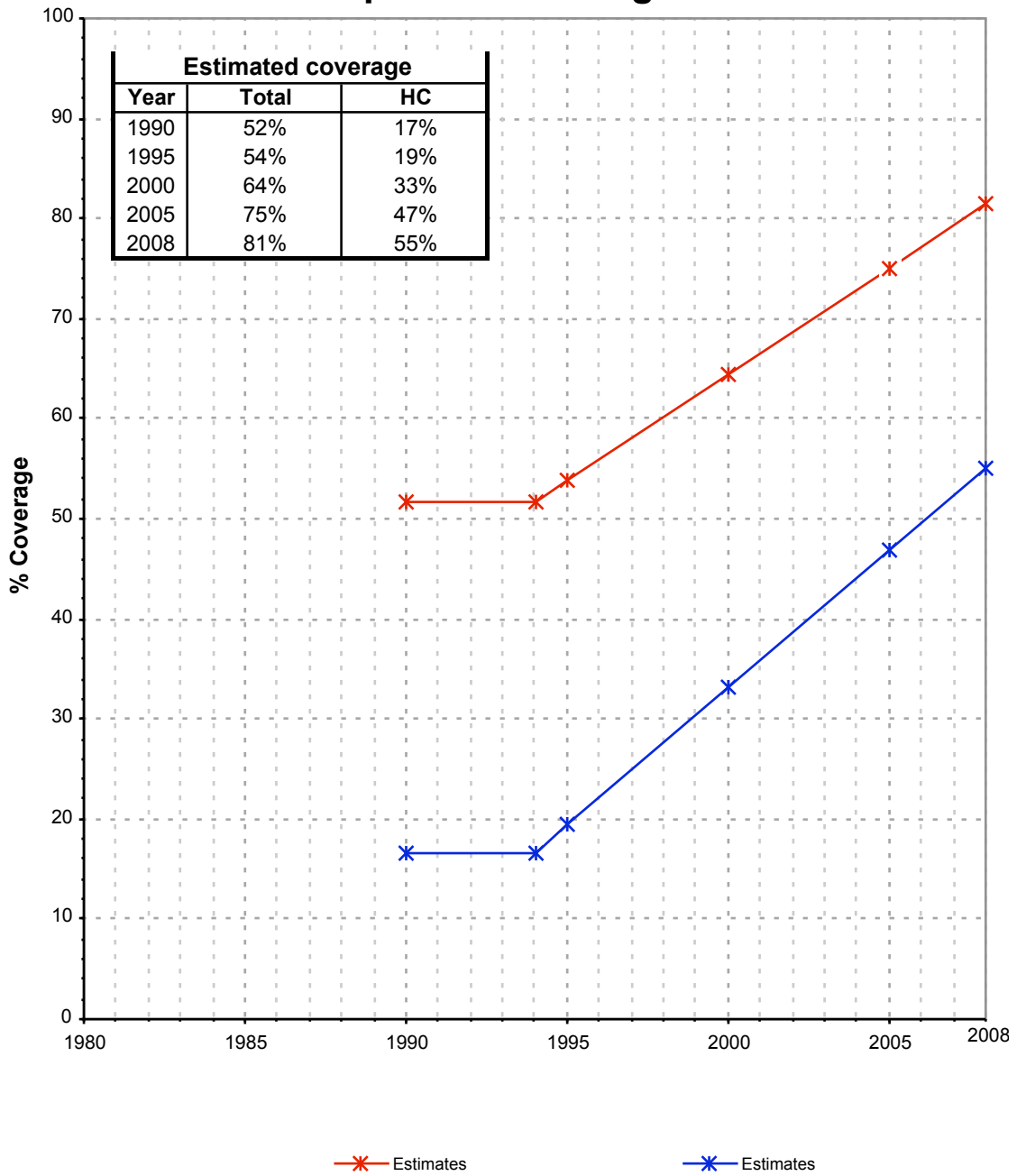
Access to drinking water sources		DHS00			Cambodia			Access to drinking water sources		ICPS04			Cambodia		
Demographic and Health Survey					2000			Inter-Censal Population Survey					2004		
Original denomination	Classification	Urban	Rural	Total	Original denomination	Classification	Urban	Rural	Total						
Piped in Dwelling/yard/plot	Tap water				Piped water	Tap water	37.4	3.3							
	House connections	32.5	0.7			House connections									
	Piped water into dwelling					Piped water into dwelling									
	Piped water to yard/plot					Piped water to yard/plot									
Public Tap	Public tap, standpipe	1.7	0.3			Public tap, standpipe									
	Other					Other									
	Ground water	34.7	58.1			Ground water	36.6	59.1							
	Protected ground water	17.4	24.4			Protected ground water	25.0	30.0							
	Unprotected ground water	16.7	32.9			Unprotected ground water	11.6	29.1							
	Protected wells or springs	17.4	24.4			Protected wells or springs	25.0	30.0	0.0						
	Private	11.2	9.8			Private									
	Public	6.2	14.6			Public									
	Other					Other									
	Unprotected wells or springs	16.7	32.9			Unprotected wells or springs	11.6	29.1	0.0						
	Private	6.0	10.0			Private									
	Public	10.7	22.9			Public									
	Other					Other									
	All wells	34.1	57.3	0.0		All wells	36.6	59.1							
	Private	17.2	19.8			Private									
	Public	16.9	37.5			Public									
	Other					Other									
	Tubewell, borehole	12.5	20.9		Tube/piped well	Tubewell, borehole	20.5	27.3							
	Private	7.8	8.4			Private									
	Public	4.7	12.5			Public									
	Other					Other									
	Traditional wells	21.6	36.4	0.0		Traditional wells	16.1	31.8							
	Private	9.4	11.4			Private									
	Public	12.2	25.0			Public									
	Other					Other									
	Protected well	4.9	3.5	0.0	Protected dug well	Protected well	4.5	2.7							
	Private	3.4	1.4			Private									
	Public	1.5	2.1			Public									
	Other					Other									
	Unprotected well	16.7	32.9	0.0	Unprotected dug well	Unprotected well	11.6	29.1							
	Private	6.0	10.0			Private									
	Public	10.7	22.9			Public									
	Other					Other									
	All springs	0.6	0.8			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	10.7	8.0			Rainwater									
Rainwater	Covered cistern/tank	10.7	8.0			Covered cistern/tank									
	Uncovered cistern/tank					Uncovered cistern/tank									
	Bottled water	0.2	0.1			Bottled water									
	with other improved					with other improved									
Bottled water	without other improved	0.2	0.1			without other improved									
River/ stream/ pond/ lake/ dam	Surface water	10.0	27.0		Spring, river, etc	Surface water	16.1	30.5							
	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	11.1	6.0			Other non-improved	9.9	7.0							
	Cart with small tank/drum					Cart with small tank/drum									
Tanker truck/ water vendor	Tanker truck provided	8.6	2.6		Bought	Tanker truck provided	9.6	6.3							
Other	Other	2.5	3.4		Other	Other	0.3	0.7							
	Other					Other									
	DK/missing					DK/missing									
	Total	100.9	100.2			Total	100.0	99.9							
Calculations					Calculations										
Estimations					Estimations										
	Springs estimated to be protected based on DHS00/04	0.2	0.1												
						Piped into dwelling based on CSES04	37.3	3.2							
Access to improved drinking water sources :		69%	44%		Access to improved drinking water sources :		66%	43%							
Access to house connections :		33%	1%		Access to house connections :		37%	3%							
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	95%	70%		Ratios	HC / Tap water									
	Public tap / Tap water	5%	30%			Public tap / Tap water									
	Tubewell + protected well / All wells	51%	43%			Tubewell + protected well / All wells	68%	51%							
	Protected wells / Traditional wells	23%	10%			Protected wells / Traditional wells	28%	8%							
	Tubewell / All wells	37%	36%			Tubewell / All wells	56%	46%							
	Protected springs / All springs					Protected springs / All springs									
	Protect. well & spring / well & spring	51%	43%			Protect. well & spring / well & spring	68%	51%							
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	Data represent averages of aggregated data for rainy and dry season				Comments										

Access to drinking water sources		CSES04			Cambodia			Access to drinking water sources		DHS05			Cambodia		
Socio Economic Survey					Demographic and Health Survey										
Preliminary data					Final report										
Original denomination		Classification			Urban	Rural	Total	Original denomination		Classification			Urban	Rural	Total
		Tap water			44.2	4.4				Tap water			39.0	5.0	
Piped in Dwelling/yard/plot		House connections			44.1	4.2		Piped in Dwelling/yard/plot		House connections			38.8	4.8	
		Piped water into dwelling								Piped water into dwelling					
		Piped water to yard/plot								Piped water to yard/plot					
Public Tap/standpipe		Public tap, standpipe			0.1	0.2		Public Tap/standpipe		Public tap, standpipe			0.2	0.2	
		Other								Other					
		Ground water			32.8	55.2				Ground water			26.5	55.1	
		Protected ground water			28.0	43.3				Protected ground water			21.6	40.7	
		Unprotected ground water			4.8	11.9				Unprotected ground water			4.9	14.4	
		Protected wells or springs			28.0	43.3	0.0			Protected wells or springs			21.6	40.7	0.0
		Private								Private					
		Public								Public					
		Other								Other					
		Unprotected wells or springs			4.8	11.9	0.0			Unprotected wells or springs			4.9	14.4	0.0
		Private								Private					
		Public								Public					
		Other								Other					
		All wells			32.8	55.2				All wells			25.9	54.1	
		Private								Private					
		Public								Public					
		Other								Other					
Tubewell or borehole		Tubewell, borehole			16.7	25.8		Tubewell or borehole		Tubewell, borehole			15.9	28.1	
		Private								Private					
		Public								Public					
		Other								Other					
		Traditional wells			16.1	29.4				Traditional wells			10.1	26.0	
		Private								Private					
		Public								Public					
		Other								Other					
Protected dug well		Protected well			11.3	17.5		Protected dug well		Protected well			5.6	12.5	
		Private								Private					
		Public								Public					
		Other								Other					
Unprotected dug well		Unprotected well			4.8	11.9		Unprotected dug well		Unprotected well			4.5	13.6	
		Private								Private					
		Public								Public					
		Other								Other					
		All springs								All springs			0.6	1.0	
		Private								Private					
		Public								Public					
		Other								Other					
		Protected spring						Protected spring		Protected spring			0.2	0.2	
		Private								Private					
		Public								Public					
		Other								Other					
Unprotected spring		Unprotected spring						Unprotected spring		Unprotected spring			0.4	0.9	
		Private								Private					
		Public								Public					
		Other								Other					
		Rainwater			6.4	13.1				Rainwater			14.1	18.0	
Rainwater		Covered cistern/tank			6.4	13.1		Rainwater		Covered cistern/tank			14.1	18.0	
		Uncovered cistern/tank								Uncovered cistern/tank					
		Bottled water								Bottled water			6.6	0.6	
		with other improved						Bottled water + improved source		with other improved			5.7	0.4	
		without other improved						Bottled water + not improved source		without other improved			0.9	0.3	
Surface water		Surface water			9.3	21.1		Surface water		Surface water			8.8	18.1	
		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			7.4	6.4				Other non-improved			5.3	3.3	
		Cart with small tank/drum								Cart with small tank/drum					
Tanker truck/ cart with small tank		Tanker truck provided			7.3	5.7		Tanker truck/ cart with small tank		Tanker truck provided			4.7	3.1	
Other		Other			0.1	0.7		Other		Other			0.6	0.2	
		Other								Other					
		DK/missing								DK/missing					
		Total			100.0	100.0				Total			100.0	100.0	
Calculations								Calculations							
Estimations								Estimations							
Access to improved drinking water sources :					75%	54%		Access to improved drinking water sources :					80%	61%	
Access to house connections :					44%	4%		Access to house connections :					39%	5%	
Used for the estimates:					Yes	Yes		Used for the estimates:					Yes	Yes	
					Yes	Yes							Yes	Yes	
Ratios		HC / Tap water			100%	97%		Ratios		HC / Tap water			99%	97%	
		Public tap / Tap water			0%	3%				Public tap / Tap water			1%	3%	
		Tubewell + protected well / All wells			85%	79%				Tubewell + protected well / All wells			83%	75%	
		Protected wells / Traditional wells			70%	60%				Protected wells / Traditional wells			55%	48%	
		Tubewell / All wells			51%	47%				Tubewell / All wells			61%	52%	
		Protected springs / All springs								Protected springs / All springs			36%	15%	
		Protect. well & spring / well & spring			85%	79%				Protect. well & spring / well & spring			82%	74%	
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		Data represent averages of aggregated data for rainy and dry season					

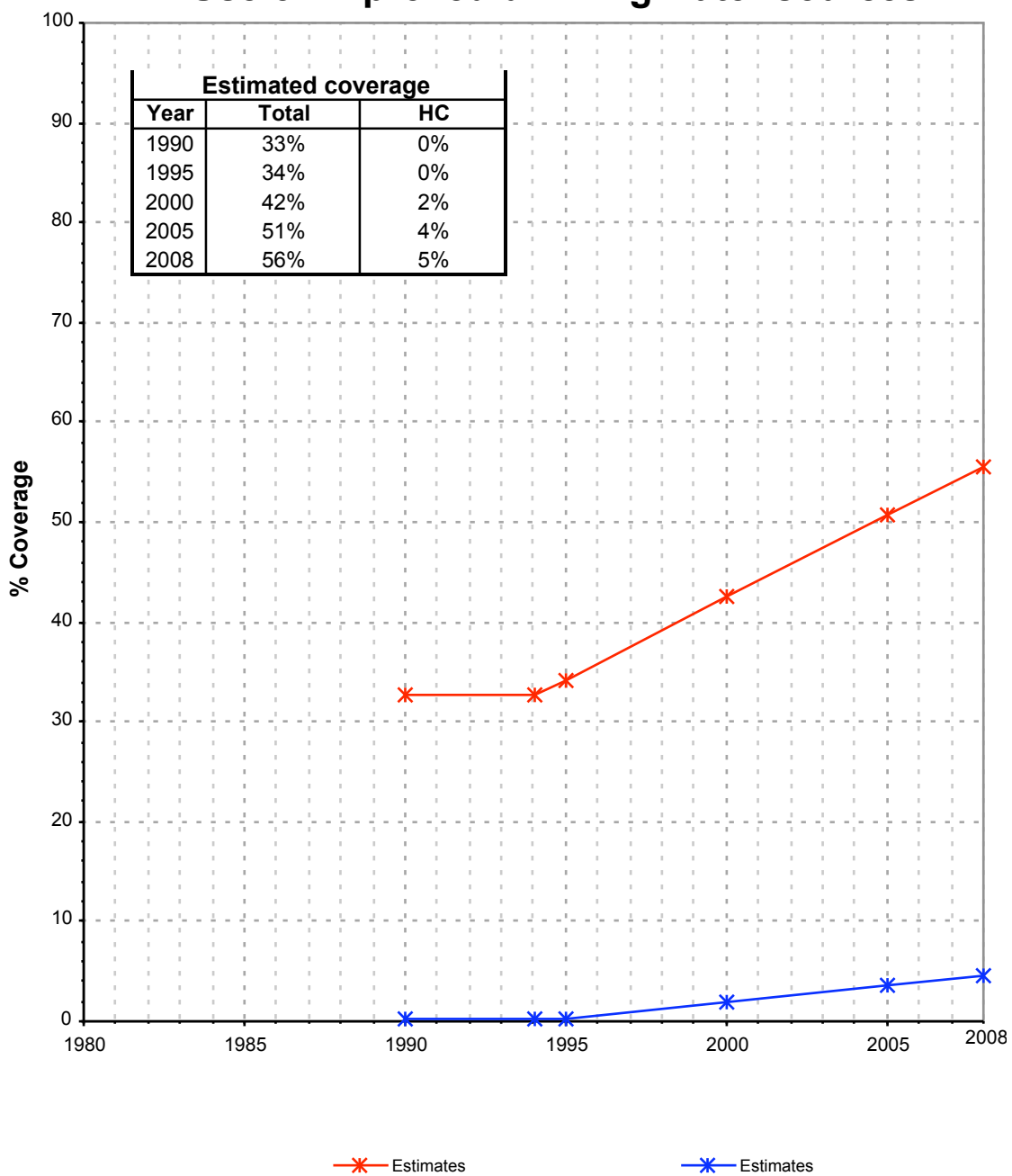
Access to drinking water sources		SES96			Cambodia			Access to drinking water sources		SES99			Cambodia		
Socio-Economic Survey					Socio-Economic Survey										
National Institute of Statistics					National Institute of Statistics										
Original denomination		Classification			Urban	Rural	Total	Original denomination		Classification			Urban	Rural	Total
		Tap water			28.8	2.5				Tap water			28.8	2.5	
		House connections			26.9	1.3				House connections			26.9	1.3	
Piped in dwelling		Piped water into dwelling			26.9	1.3		Piped in dwelling		Piped water into dwelling			26.9	1.3	
		Piped water to yard/plot								Piped water to yard/plot					
Public tap		Public tap, standpipe			1.9	1.2		Public tap		Public tap, standpipe			1.9	1.2	
		Other								Other					
		Ground water			37.7	60.0				Ground water			37.7	60.0	
		Protected ground water			30.8	42.9				Protected ground water			30.8	42.9	
		Unprotected ground water			6.9	17.0				Unprotected ground water			6.9	17.0	
		Protected wells or springs			30.8	42.9	0.0			Protected wells or springs			30.8	42.9	0.0
		Private								Private					
		Public								Public					
		Other								Other					
		Unprotected wells or springs			6.9	17.0	0.0			Unprotected wells or springs			6.9	17.0	0.0
		Private								Private					
		Public								Public					
		Other								Other					
		All wells			37.7	60.0				All wells			37.7	60.0	
		Private								Private					
		Public								Public					
		Other								Other					
Tubed/piped well/or borehole		Tubewell, borehole			18.3	19.2		Tubed/piped well/or borehole		Tubewell, borehole			18.3	19.2	
		Private								Private					
		Public								Public					
		Other								Other					
		Traditional wells			19.4	40.8				Traditional wells			19.4	40.8	
		Private								Private					
		Public								Public					
		Other								Other					
Protected dug well		Protected well			12.6	23.8		Protected dug well		Protected well			12.6	23.8	
		Private								Private					
		Public								Public					
		Other								Other					
Unprotected dug well		Unprotected well			6.9	17.0		Unprotected dug well		Unprotected well			6.9	17.0	
		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			1.4	0.6				Rainwater			1.4	0.6	
Rainwater		Covered cistern/tank			1.4	0.6		Rainwater		Covered cistern/tank			1.4	0.6	
		Uncovered cistern/tank								Uncovered cistern/tank					
		Bottled water								Bottled water					
		with other improved								with other improved					
		without other improved								without other improved					
Pond, river or stream		Surface water			15.4	30.6		Pond, river or stream		Surface water			15.4	30.6	
		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			16.8	6.4				Other non-improved			16.8	6.4	
		Cart with small tank/drum								Cart with small tank/drum					
Tanker truck, vendor or otherwise bought		Tanker truck provided			15.7	4.4		Tanker truck, vendor or otherwise bought		Tanker truck provided			15.7	4.4	
Other		Other			1.1	1.9		Other		Other			1.1	1.9	
		Other								Other					
		DK/missing								DK/missing					
		Total			100.0	100.0				Total			100.0	100.0	
Calculations								Calculations							
Estimations								Estimations							
Access to improved drinking water sources :					58%	38%		Access to improved drinking water sources :					58%	38%	
Access to house connections :					27%	1%		Access to house connections :					27%	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		HC / Tap water			93%	51%		Ratios		HC / Tap water			93%	51%	
		Public tap / Tap water			7%	49%				Public tap / Tap water			7%	49%	
		Tubewell + protected well / All wells			82%	72%				Tubewell + protected well / All wells			82%	72%	
		Protected wells / Traditional wells			65%	58%				Protected wells / Traditional wells			65%	58%	
		Tubewell / All wells			48%	32%				Tubewell / All wells			48%	32%	
		Protected springs / All springs								Protected springs / All springs					
		Protect. well & spring / well & spring			82%	72%				Protect. well & spring / well & spring			82%	72%	
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							

Cambodia			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	CEN98	1998	29.8		57.3		0.8		35.3	
Global Water Supply and Sanitation Assessment 2000.	JMP99	1999		29.8		52.8		0.8		24.5
Demographic and Health Survey	DHS00	2000	32.5		68.6		0.7		43.9	
Inter-Censal Population Survey	ICPS04	2004	37.3		66.1		3.2		42.7	
Socio Economic Survey	CSES04	2004	44.1		75.4		4.2		54.4	
Demographic and Health Survey	DHS05	2005	38.8		79.9		4.8		61.4	
Socio-Economic Survey	SES96	1996	26.9		58.3		1.3		37.8	
Socio-Economic Survey	SES99	1999	26.9		58.3		1.3		37.8	
Socio-Economic Survey	SES07	2007	63.1		84.4		3.5		56.8	
Census 2008	CEN08	2008	56.8		76.2		4.4		46.3	

Cambodia - urban - Use of improved drinking water sources



Cambodia - rural - Use of improved drinking water sources



Drinking Water

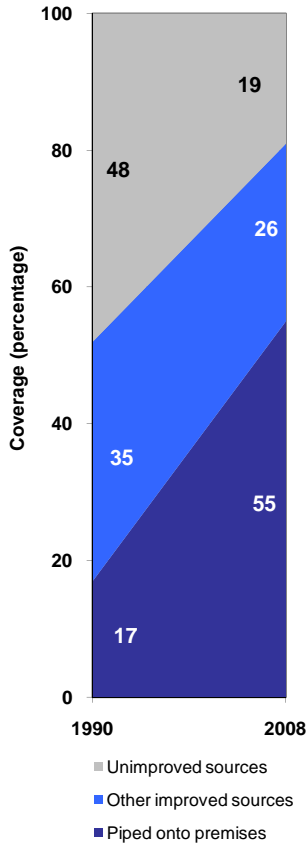
Cambodia	Drinking water coverage estimates					
	Urban (%)		Rural (%)		Total (%)	
	1990	2008	1990	2008	1990	2008
Piped into premises	17	55	0	5	2	16
Other improved source	35	26	33	51	33	45
Unimproved source	48	19	67	44	65	39

Source: WHO/UNICEF JMP, 2010

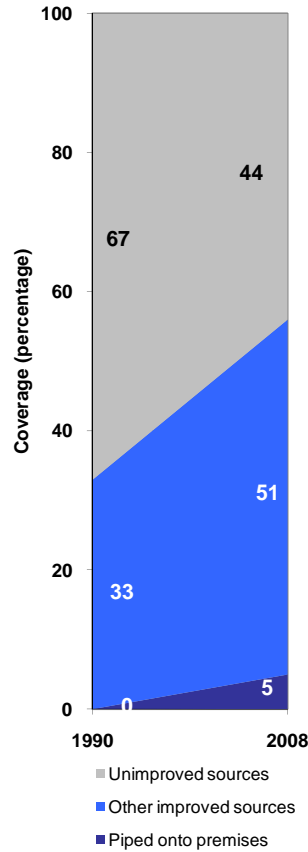
Cambodia	Urban		Rural		Total	
	1990	2008	1990	2008	1990	2008
Population (x1000)	1221	3137	8469	11425	9690	14562

Source: UN / Population Division, 2008

Urban drinking water trends



Rural drinking water trends



Total drinking water trends

