

Access to Safe Drinking Water by Country, 1970-2008

Description

Safe drinking water is one of the most basic human requirements. One of the Millennium Development Goals (MDGs) by 2015 is to reduce by half the proportion of people unable to reach or afford safe drinking water. As a result, estimates of access to safe drinking water are a cornerstone of most international assessments of progress, or lack thereof, toward solving global and regional water problems.

Data are given here for the percent of urban, rural, and total populations, by country, with access to safe drinking water for 1970, 1975, 1980, 1985, 1990, 1994, 2000, 2002, 2004, 2005, and 2008, the most recent year for which data are available. The World Health Organization (WHO) collected the data presented here over various periods. Most of the data presented were drawn from responses by national governments to WHO questionnaires. Participants in data collection include the Joint Monitoring Programme (JMP) of WHO, the United Nations Children's Fund, and the Water Supply and Sanitation Collaborative Council, which has continued sector monitoring and aims to support and strengthen the monitoring efforts of individual countries. The 40 largest countries in the developing world account for 90 percent of population in these regions. As a result, WHO spent extra effort to collect comprehensive data for these countries.

Data for 2000 and later reflect a significant change in definition. Data are now reported for populations without access to "improved" water supply. According to WHO, the following technologies were included in the assessment as representing "improved" water supply:

- Household connection
- Public standpipe
- Borehole
- Protected dug well
- Protected spring
- Rainwater collection

In comparison, "unimproved" drinking water sources refers to

- Unprotected well
- Unprotected spring

Rivers or ponds
Vendor-provided water
Bottled water
Tanker truck water

Limitations

A review of water and sanitation coverage data from the 1980s and 1990s shows that the definition of safe, or improved, water supply and sanitation facilities differs from one country to another and for a given country over time. Indeed, some of the data from individual countries often showed rapid and implausible changes in the level of coverage from one assessment to the next. This indicates that some of the data are also unreliable, irrespective of the definition used. Countries used their own definitions of “rural” and “urban.”

For the 1996 data, two-thirds of the countries reporting indicated how they defined “access.” At the time, the definition most commonly centered on walking distance or time from household to water source, such as a public standpipe, which varied from 50 to 2,000 meters and 5 to 30 minutes. Definitions sometimes included considerations of quantity, with the acceptable limit ranging from 15 to 50 liters per capita per day. The WHO considers safe drinking water to be treated surface water or untreated water from protected springs, boreholes, and wells.

WHO assessments since 2000 have attempted to shift from gathering information from water providers to only including consumer-based information. The current approach uses household surveys in an effort to assess the actual use of facilities. “Reasonable access” was broadly defined as the availability of at least 20 liters per person per day from a source within one kilometer of the user’s dwelling. A drawback of this approach is that household surveys are not conducted regularly in many countries. Thus, direct comparisons between countries, and across time within the same country, are difficult. Direct comparisons are additionally complicated by the fact that these data hide disparities between regions and socioeconomic classes.

Access to water, as reported by WHO, does not imply that the level of service or quality of water is “adequate” or “safe.” The assessment questionnaire did not include any methodology for discounting coverage figures to allow for intermittence of supply or poor quality of the water supplies. However, the instructions stated that piped systems should not be considered “functioning” unless they were operating at over 50 percent capacity on a daily basis; and that hand pumps should not be considered functioning unless they were operating for at least 70 percent of the time with a lag between breakdown and repair not exceeding two weeks. These aspects were taken into consideration when estimating coverage for countries for which national surveys had not been conducted. More details of the methods used, and their limitations, can be found at http://www.who.int/docstore/water_sanitation_health/Globassessment/GlobalTOC.htm.

SOURCES

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DATA TABLE 3 Access to Safe Drinking Water by Country, 1970–2008

Region and Country	Fraction of Population with Access to Improved Drinking Water																TOTAL																		
	URBAN								RURAL																										
	1970	1975	1980	1985	1990	1994	2000	2002	2004	2005	2008	1970	1975	1980	1985	1990	1994	2000	2002	2004	2005	2008													
AFRICA	66	68	69	77								94	80	80	81	79							94	87	85	85	83								
Algeria	84	100	85	87	73	69	34	70	75	54	60	10	15	20	15	20	15	40	40	40	39	38	26	33	35	32	38	50	53	47	50				
Angola	83	100	26	80	73	41	74	79	78	82	84	20	20	15	34	43	53	60	57	65	69	29	34	18	50	63	68	67	72	75					
Benin	71	95	84	100								90	90	90	90	90	90	90	90	90	90	90	90	95	95	95	95	95	95	95	95	95			
Botswana	35	50	27	43								44	54	65	72	12	25	31	67																
Burkina Faso	77	90	98	92	92	92	96	90	92	85	83	20	21	43	49	78	77	71	71																
Burundi	77		43	42								42	41	44	48	51	32																		
Cameroon	77		100	83								34	89	73	73	82	82																		
Cape Verde												26	18	43	61	50	51																		
Central African Republic	47	43										17	26	32	43	43	44	27	26																
Chad												95	96	82	96	97																			
Comoros	63	81	42									17	17	27	34	34	27	38	20																
Congo	33	38		52	68	37	89	83	82	82	80	4	12	21	24	23	26	29	29	28	28	11	19	32	36	27	45	46	45	46					
Congo, Democratic Rep.	98		57	59	90	98	97	92	93	29																									
Cote D'Ivoire			50	50								80	81	65	74	74	67	68	44																
Djibouti												100	100	67	59	55	52																		
Egypt	94		88		95	82	96	100	99	100	100	93	64																						
Equatorial Guinea			47		65	88	45	45	45	45	18	100	42	42	42	42																			
Eritrea												42	54	57	57	57																			
Ethiopia	61	58		69								13	11	11	24	26	6	8																	
Gabon												55	47	47	43	41																			

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DATA TABLE 3 continued

Region and Country	Fraction of Population with Access to Improved Drinking Water																		
	URBAN								RURAL								TOTAL		
	1970	1975	1980	1985	1990	1994	1999	2004	1970	1975	1980	1985	1990	1994	1999	2004	2002	2005	2008
Martinique																			
Mexico	71	70	90	99	94	91	94	97	100	100	96	96	96	96	96	96	93	93	94
Montserrat																	100	100	100
Netherlands Antilles																			
Nicaragua	58	100	67	76	81	95	93	90	27	59	65	63	66	68	35	56	39	48	61
Panama	100	100	100	100	88	99	99	97	86	79	79	83	83	69	77	81	82	83	87
Puerto Rico																			
Saint Kitts									99	99	100	100	100	100	100	100	99	100	100
Saint Lucia									98	98	99	97	98	98	98	98	98	98	98
Saint Vincent																			
Trinidad/Tobago	100	100	100	100	100	100	92	92	88	88	93	93	93	96	93	97	98	96	86
Turks/Caicos Islands									87			68					77		
United States of America																			
United States Virgin Islands									100	100	100	100	100	100	100	100	100	100	100
SOUTH AMERICA																			
Argentina	69	76	61	63	85	97	98	98	30	80	80	80	80	56	66	54	56	79	96
Bolivia	92	81	69	75	76	78	93	95	22	55	68	63	67	33	34	36	43	53	79
Brazil	78	87	83	85	95	85	96	96	31	54	58	57	81	84	55	72	77	87	87
Chile	67	78	100	98	94	99	100	100	37	66	59	58	75	56	70	84	87	85	94
Colombia	88	86	93	100	87	88	98	99	48	73	71	71	73	63	64	86	86	76	91
Ecuador	76	67	79	81	63	82	81	92	51	77	89	86	88	34	36	50	57	55	70
French Guiana									88	88	88								84
Guyana	100	100	100	100	100	90	98	83	45	91	83	83	90	93	75	84	72	76	81
Paraguay	22	25	39	53	61	95	100	99	58	62	68	93	66	11	13	21	28	34	79

Peru	58	72	68	73	68	74	87	87	89	90	90	8	15	18	17	24	24	51	66	65	58	61	35	47	50	55	55	60	77	81	83	81	82				
Suriname		100	71				94	98	98	97	97			79	94		96	73	73	78	81			88	83			95	92	92	92	93					
Uruguay	100	100	96	95	100		98	98	100	100	100	59	87	2	27		93	93	100	95	100	92	98	81	85	89		98	98	100	100	100					
Venezuela	92		93	93		80	88	85	85	94		38		53	65	36	75	58	70	70	75		75		86	89	79	84	83	83	93						
ASIA																																					
Afghanistan	18	40	28	38	40	39	19	19	63	66	78	1	5	8	17	19	5	11	11	31	33	39	3	9	8	17	23	12	13	13	39	41	48				
Armenia							99	99	99	99	98							80	80	89	93							92	92	95	96						
Azerbaijan							95	95	88	88								59	59	66	71							77	77	77	80						
Bahrain	100	100		100	100		100	100	100	100	100	94	100	100	0								99	100	100												
Bangladesh	13	22	26	24	39	100	99	82	82	85	85	47	61	40	49	89	97	97	72	72	78	78	45	56	39	46	81	97	97	75	74	80	80				
Bhutan			50		60	75	86	86	86	99	99			5	19	30	54	60	60	60	88	88		7		32	64	62	62	62	91	92					
Brunei Darus			100																																		
Cambodia							53	58	64	75	81							25	29	35	51	56						30	34	41	56	61					
China					87	93	94	92	93	98	98					68	89	66	68	67	78	82				73	90	75	77	77	86	89					
Cyprus	100	94		100	100		100	100	100	100	100							100	100	100	100	100						100	100	100	100	100					
East Timor							73	77	80	86									51	56	57	63						52	58	63	69						
Gaza Strip											94	91	91						88	91	91								92	91	91						
Georgia											90	96	99	100					61	67	92	96						76	82	96	98						
Hong Kong						100																															
India	60	80	77	76	86	85	92	96	95	95	96	6	18	31	50	69	79	86	82	83	81	84	17	31	42	56	73	81	88	86	86	85	88				
Indonesia	10	41	35	43	35	78	91	89	87	90	89	1	4	19	36	33	54	65	69	69	70	71	3	11	23	38	34	62	76	78	77	80	80				
Iran	68	76	82		100	89	99	98	99	98	98	11	30	50		75	77	89	83	84			35	51	66		89	83	95	93	94						
Iraq	83	100		100	93		96	97	97	93	91	7	11	54	54	41		48	50	50	53	55	51	66		86	78	44	85	81	81	80	79				
Israel																		100	100	100	100	100						100	100	100	100	100					
Japan																																					
Jordan	98		100	100	100		100	91	99	98	98	59						84	91	91	91	91	77		86	96	99	89	96	91	97	96	96				
Kazakhstan							98	96	97	99	99								82	72	73	91	90					91	86	86	96	95					
Korea																			100	100	100	100	100					100	100	100	100	100	100				
Democratic People's Republic																																					
Korea Republic	84	95	86	90	100		97	97	97	99	100	38	33	61	48	76		71	71	71	83	88	58	66	75	93		92	92	92	96	98					
Kuwait			60	100	86	97																															
Kyrgyzstan							98	98	98	99	99								66	66	66	80	85					77	76	77	87	90					

continues

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	URBAN								RURAL								TOTAL																
	1970	1975	1980	1985	1990	1994	2000	2002	2004	2005	2008	1970	1975	1980	1985	1990	1994	2000	2002	2004	2005	2008	2002	2004	2005	2008							
Laos	97	100	28	47	40	59	66	79	74	72	39	32	20	25	39	100	38	43	47	51	48	41	21	29	39	90	43	51	54	57			
Lebanon					100	100	100	100	100	100																							
Macau																																	
Malaysia	100	100	90	96	96		96	100	100	100	1	6	49	76	66	94	94	96	99	99	29	34	63	84	79		95	99	100	100			
Maldives			11	58	77	98	100	99	98	99	99		3	12	68	86	100	78	76	86	86		2	21	89	100	84	83	90	91			
Mongolia					100		77	87	87	94	97			58		30	30	30	30	45	49			82	60	62	62	62	73	76			
Myanmar (Burma)	35	31	38	36	79	36	88	95	80	75	75	13	14	15	24	72	39	60	74	77	69	18	17	21	27	74	38	68	80	78	71	71	
Nepal	53	85	83	70	66	66	85	93	96	93	93	5	7	25	34	41	80	82	89	85	87	2	8	11	28	38	44	81	84	90	86	88	
Oman	100			90			41	81		90	92	48		49		30	72		76	77		52		53	63	39	79		86	88			
Pakistan	77	75	72	83	82	77	96	95	96	95	95	4	5	20	27	42	52	84	87	89	86	87	21	25	35	44	55	60	88	90	91	89	90
Philippines	67	82	49	49	93	93	92	90	87	93	93	20	31	43	54	72	77	80	77	82	85	87	36	50	45	52	81	85	87	85	85	90	91
Qatar	100	100	76		100		100	100	100	100	100	75	83	43		100	100	100	100	99	95	97	71			100	100	100	100	100	100		
Saudi Arabia	100	97	92	100			100	97	97	97	97	37	56	87	88	64						49	64	90	94	95							
Singapore					100	100	100	100	100	100	100																						
Sri Lanka	46	36	65	82	80	43	91	99	98	97	98	14	13	18	29	55	47	80	72	74	84	88	21	19	28	40	60	46	83	78	79	86	90
Syria	98		98		92	94	94	94	98	95	94	50		54		78	64	64	87	82	84	71		74		85	80	79	93	89	89		
Tajikistan								93	92	93	94								47	48	57	61						58	59	67	70		
Thailand	60	69	65	56			89	95	98	99	99	10	16	63	66	85	77	80	100	97	98	17	25	63	64		80	85	99	98	98		
Turkey			95				82	96	98	99	100			62			84	87	93	92	96			76			83	93	96	97	99		
Turkmenistan							93	93	97	97							54	54	72									71	72	84			
United Arab Emirates			95				100	100	100	100	100					100	100	100	100	100	100						100	100	100	100	100	100	
Uzbekistan							96	97		98	98						78	84		82	81						85	89		88	87		
Vietnam				70	47	53	81	93	99	97	99			32	39	33	32	50	67	80	85	92			45	36	56	73	85	88	94		
Yemen A R	45		100	100			85	74	71	75	72	2	18	25		64	68	65	58	57	4		31	40		69	69	67	63	62			
Yemen Dem	88		85				85					43	25			64						57		52		69	69	67	63	62			

