

Access to Safe Drinking Water by Country, 1970 to 2004

Description

Safe drinking water is one of the most basic human requirements, and 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 (see Chapter 4 in this volume). 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, and 2004—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 forty 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 only to include 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 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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Region and Country	Fraction of Population with Access to Improved Drinking Water																										
	URBAN								RURAL								TOTAL										
	1970	1975	1980	1985	1990	1994	2000	2002	2004	1970	1975	1980	1985	1990	1994	2000	2002	2004	1970	1975	1980	1985	1990	1994	2000	2002	2004
AFRICA	66	68	69	77						61	55								77	68							
Algeria	84	100	85	87	73	69	34	70	75		10	15	20	15	40	40	40	40	26	33	35	32	38	50	53		
Angola			85	87	80	73	41	74	79	78	20	20	15	34	43	53	60	57	29	34	18	50	54	63	68	67	
Benin	83	100	26	80	73	41	74	79	78	26	39	46	88	90	90	90	90	90	29	45	53	91					
Botswana	71	95	84	100	100	100	100	100	100	10	23	31	69	70	44	54	44	54	12	25	31	67	78	51	61		
Burkina Faso	35	50	27	43						20	21	43	49	78	77	23	25	45	52	79	79						
Burundi	77	90	98	92	92	92	96	90	92	21	24	45	42	41	44	44	44	32	32	44	62	63	66				
Cameroon	77		100	83	43	42	82	84	86	86	21	50	34	89	73	73	25	52	51	74	80	80					
Cape Verde										13	19	18	80	93	93	23	18	60	75	75							
Central African Republic																											
Chad	47	43								24	23	17	26	32	43	43	43	27	26	24	27	34	42				
Comoros																											
Congo	63	81	42							6	9	7	17	17	27	27	27	27	38	20	51	46	58				
Congo, Democratic Rep.	33	38	52	68	37	89	83	82	82	4	12	21	24	23	26	29	29	11	19	32	36	27	45	46	46		
Cote D'Ivoire	98									29	80	81	65	74	74	74	74	44		71	72	77	84	84			
Djibouti																											
Egypt	94	88	50	50	77	100	82	76	76	20	20	100	100	67	59	59	59	43	45	90	100	80	73				
Equatorial Guinea										93	64	86	50	94	97	97	97	93	84	90	64	95	98	98			
Eritrea	47									18	100	42	42	42	42	42	42			32	95	43	44	43			
Ethiopia																											
Gabon	61	58	69							1	9	13	11	11	11	11	11	6	8	16	24	22	22				
Gambia	97																										
Ghana	86	86	72	93	63	70	87	93	88	14	33	39	49	68	64	64	64	35	35	45	56	21	56	64	79	75	
Guinea	68	69	69	41	100	61	72	78	78	2	12	37	62	36	38	35	35	14	15	18	53	62	48	51	50		
Guinea-Bissau										8	22	57	55	49	49	49	49	10	21	53	49	59	59				
Kenya	100	100	85							2	4	15	49	31	46	46	46	15	17	26	53	49	62	61			
Lesotho	100	65	37	65						1	14	11	30	64	88	74	76	3	17	15	36	52	91	76	79		

Liberia	100	100	100	58	72	72	72	23	8	52	52	15	53	30	62	61
Libya	100	100	100		72	72				68	68	58	87	96	72	72
Madagascar	67	76	80	81	83	85	75	17	10	31	34	11	25	21	29	47
Malawi		77	97		52	95	96	50	44	44	62		41	56	45	57
Mali	29	37	46	41	36	74	76	10	4	38	61		16	13	37	65
Mauritania	98	80	73		84	34	63		69	40	45	17	84		76	37
Mauritius	100	100	100	100	95	100	100	100	100	100	100	61	60	99	98	100
Morocco	92	100	100	100	98	100	99	25	18	14	58	51		59	56	80
Mozambique		38			17	86	76	9	40	43	24		15	32	60	42
Namibia					90	87	100	37	42	67	72			52	77	80
Niger	37	36	41	35	98	46	70	49	45	55	36	20	27	33	53	46
Nigeria					100	100	63	20	22	26	39			38	49	39
Reunion																
Rwanda	81	84	48	79	84	60	92	48	67	40	69	67	68	55	50	68
Sao Tome and Principe						89	89	45		73	73		45		41	73
Senegal	87	56	77	79	65	82	92	38	26	28	65		43	53	42	50
Seychelles							100	95			75		95		78	72
Sierra Leone	75	50	68	80	58	23	75	2	7	20	31	12	14	24	39	34
Somalia	17	77	58			32	32	22			27	15	38	34		29
South Africa						92	98			80	73			70	86	87
Sudan	61	96	100		66	86	78		45	69	64	19	50	51	50	75
Swaziland		83		100	41		87	7	44	42	54		37		43	52
Tanzania	61	88	90		80	92	85	42		62	49	13	39	53	54	73
Togo	100	49	70	100	74	85	80	41	58	38	36	17	16	38	54	51
Tunisia	92	93	100	100	100	94	99	31	89		60	49	60	70	99	82
Uganda	88	100		37	60	47	87	18	30	32	46	22	35	20	33	34
Zambia	70	86	76		64	88	90	41	27	48	36	37	42	58	43	64
Zimbabwe				95	100	100	98	32	80	77	74			84	85	83
NORTH & CENTRAL AMERICA & CARIBBEAN																
Anguilla							60									60
Antigua and Barbuda						95	95			89	89				91	91

continues

Turks/Caicos Islands	87	100	100	100	68	100	100	100	77	100	100	
United States of America		100	100	100		100	100	100		100	100	
United States Virgin Islands		100				100					100	
SOUTH AMERICA												
Argentina	69	76	61	63	12	26	17	17	56	66	54	56
Bolivia	92	81	69	75	2	6	10	13	33	34	36	43
Brazil	78	87	83	85	28	51	56	61	55	72	77	87
Chile	67	78	100	98	13	28	17	29	56	70	84	87
Colombia	88	86	93	100	28	33	73	76	63	64	86	86
Ecuador	76	67	79	81	7	8	20	31	34	36	50	57
Falkland Islands (Malvinas)												
French Guiana	100	100	100	100	63	75	60	65	75	84	72	76
Guyana	22	25	39	53	5	5	9	8	11	13	21	28
Paraguay	58	72	68	73	8	15	18	17	35	47	50	55
Peru					8	15	18	17	35	47	50	55
Suriname					8	15	18	17	35	47	50	55
Uruguay	100	100	96	95	59	87	2	27	92	98	81	85
Venezuela	92	93	93		38	53	65	36	75	86	89	89
ASIA												
Afghanistan	18	40	28	38	1	5	8	17	3	9	8	17
Armenia												
Azerbaijan												
Bahrain	100	100	100	100	94	100	100	0	99	100	100	100
Bangladesh	13	22	26	24	47	61	40	49	45	56	39	46
Bhutan												
Brunei Darus												
Cambodia												
China												
Cyprus	100	94	100	100	92	96	100	100	95	95	100	100
East Timor												

(continued)

Sri Lanka	46	36	65	82	80	43	91	99	98	14	13	18	29	55	47	80	72	74	21	19	28	40	60	46	83	78	79				
Syria	98	98	98	92	94	94	98	93	92	50	54	78	64	64	87	71	74	47	48	85	80	79	93	58	59	85	80	79			
Tajikistan	60	69	65	56			89	95	98	10	16	63	66	85		77	80	100	17	25	63	64		80	85	99	85	99			
Thailand			95				82	96	98		62					84	87	93		76				83	93	96	83	93			
Turkey							93	93	93		81					54	54	54		92					71	72			100		
Turkmenistan			95						100																						
United Arab Emirates																															
Uzbekistan							96	97								78	84								85	89					
Vietnam			70	47	53	81	93	99			32	39	33	32		50	67	80			45	36	36	56	73	85					
Yemen A R	45	100	100				85	74	71	2	18	25				64	68	65	4	31	40			69	69	67					
Yemen Dem	88	85					85			43	25					64			57	52				69							
OCEANIA																															
American Samoa							100									100															
Australia							100	100	100							100	100	100							100	100	100				
Cook Islands			100	99	100		100	98	98			88	100			100	88	88			92			100	95	94					
Fiji	78	89	94				96	100	43	15	56	66	69	100	51		51		37	69	77	80	100	47		47					
French Polynesia							100	100	100				18			100	100	100						100	100	100					
Guam							100	100	100							100	100														
Kiribati			93				82	77	77				63		25	53	53							47	64	65					
Marshall Islands							80	82					45		95	96									85	87					
Micronesia							100	95	95				38	100	94	94								100	94	94					
Nauru																															
New Caledonia							100	100	100																						
New Zealand							0	100	100																						
Niue							100	98	98																						
Northern Mariana Islands							100																								
Palau							100	100	79																						
Papua New Guinea	44	30	55	95	94	84	88	88	88	72	19	10	15	20	17	32	32	32	70	20	16	26	32	28	42	39	39				
Pitcairn																															
Samoa	86	100	97				100	95	91																						
Solomon Islands			96				82	94	94																						
Tokelau							100																								

continues

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	2000	2002	2004	1970	1975	1980	1985	1990	1994	2000	2002	2004	1970	1975	1980	1985	1990	1994	2000	2002	2004		
<i>OCEANIA (continued)</i>																													
Tonga	100	100	86	99	92	100	100	100	100	53	71	70	99	98	100	100	100	100	63	83	17	99	96	100	100	100	100		
Tuvalu				100	100	100	94	94				100	100	95	100	92	92					98	100	93	100				
Vanuatu			65	95		63	85	86		53	54	53	54	94	52	52	52		63	83	17	64		88	60	60	100		
Wallis and Futuna Islands																	100												
Western Samoa			97	75					94	67											69								
<i>EUROPE</i>																													
Albania						99	99	99						95	94									97	96				
Bosnia and Herzegovina								99							96											97			
Bulgaria								100							97												99		
Estonia								100							99												100		
Hungary						100	100	100						98	98									99	99				
Latvia								100							96												99		
Netherlands						100	100	100						99	100									100	100				
Republic of Moldova						97	97	97						88	88											92	92		
Romania						91	91	91						16	16											57	57		
Russian Federation						99	100	100						88	88											96	97		
Serbia and Montenegro						99	99	99						86	86											93	93		
Slovakia								100							99											100			
Ukraine						100	99	99						94	91											98	96		
Sources:																													
	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1993	WHO 1996	WHO 2000	WHO/UNICEF 2004	WHO/UNICEF 2006	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1993	WHO 1996	WHO 2000	WHO/UNICEF 2004	WHO/UNICEF 2006	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	UNEP 1989, WRI 1988	WHO 1996	WHO 2000	WHO/UNICEF 2004	WHO/UNICEF 2006

Sources:

The UN considers all European countries, except those shown, to have 100 percent water supply and sanitation coverage.