DATA TABLE 1

Total Renewable Freshwater Supply, by Country

Description

Average annual renewable freshwater resources are listed by country. This table is the same as the table in the previous version of *The World's Water*. Some newer data are reported for some countries in the latest UN FAO Aquastat database, but these data are typically produced by modeling or estimation, rather than measurement, and we have chosen not to update them in this version. We will be reviewing methods and data for the next volume.

The data in this table are typically comprised of both renewable surface water and groundwater supplies, including surface inflows from neighboring countries. The UN FAO refers to this as total natural renewable water resources. Flows to other countries are not subtracted from these numbers. All quantities are in cubic kilometers per year (km^3/yr). These data represent average freshwater resources in a country — actual annual renewable supply will vary from year to year.

Limitations

These detailed country data should be viewed, and used, with caution. The data come from different sources and were estimated over different periods. Many countries do not directly measure or report internal water resources data, so some of these entries were produced using indirect methods. For example, Margat compiles information from a wide variety of sources and notes that there is a wide variation in the reliability of the data. In the past few years, new assessments have begun to standardize definitions and assumptions.

Not all of the annual renewable water supply is available for use by the countries to which it is credited here; some flows are committed to downstream users. For example, the Sudan is listed as having 154 cubic kilometers per year, but treaty commitments require them to pass significant flows downstream to Egypt. Other countries, such as Turkey, Syria, and France, to name only a few, also pass significant amounts of water to other users. The annual average figures hide large seasonal, inter-annual, and long-term variations.

SOURCES

Compiled by P. H. Gleick and H. Cooley, Pacific Institute.
nd = no data

a. Total natural renewable surface and groundwater. Typically includes flows from other countries. (FAO: Natural total renewable water resources)
b. Estimates from Belyaev, Institute of Geography, USSR (1987).
c. Estimates from FAO (1995). Water resources of African countries. Food and Agriculture Organization, United Nations, Rome, Italy.
d. Estimates from WRI (1994). See this source for original data source.
e. Estimates from Goscomstat, USSR, 1989 as cited in Gleick 1993, Table A16.
f. Estimates from FAO (1997). Water resources of the Near East region: A review. Food and Agriculture Organization, United Nations, Rome, Italy.
g. Estimates from FAO (1997). Irrigation in the countries of the Former Soviet Union in figures. Food and Agriculture Organization, United Nations, Rome, Italy.
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j. UNFAO. 2000. Irrigation in Latin America and the Caribbean. Food and Agriculture Organization, United Nations, Rome, Italy.
k. AQUASTAT Web site as of February 2003.
l. Margat, J. OSS. 2001. Les ressources en eau des pays de l'OSS. Evaluation, utilisation et gestion. UNESCO/Observatoire du Sahara et du Sahel. (Updating of 1995).
m. Estimates from FAO (2003). Review of world water resources by country. Food and Agriculture Organization, United Nations, Rome, Italy (see specific references in this document for more information).
n. United States Geological Survey Revised: Conterminous US (2071); Alaska (980); Hawaii (18).
o. EUROSTAT, U. Wieland. 2003. Water resources in the EU and in the candidate countries. Statistics in Focus, Environment and Energy, European Communities.
p. Margat, J., and Vallée, D. 2000. Blue Plan—Mediterranean Vision on Water, Population and the Environment for the 21st Century. France: Sophia Antipolis. 62 pp.
q. Geres, D. 1998. Water resources in Croatia. International Symposium on Water Management and Hydraulic Engineering. Dubrovnic, Croatia (September 14–19).
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s. EUROSTAT. 2005.
t. Pearse, P. H., Bertrand, F., MacLaren, J. W. 1985. *Currents of Change, Final Report of Inquiry on Federal Water Policy*. Ottawa, Canada: Environment Canada.

DATA TABLE 1 Total Renewable Freshwater Supply, by Country (2006 Update)

Region and Country	Annual Renewable Water Resources[a] (km^3/yr)	Year of Estimate	Source of Estimate
AFRICA			
Algeria	14.3	1997	c,f
Angola	184.0	1987	b
Benin	25.8	2001	l
Botswana	14.7	2001	l
Burkina Faso	17.5	2001	l
Burundi	3.6	1987	b
Cameroon	285.5	2003	m
Cape Verde	0.3	1990	c
Central African Republic	144.4	2003	m
Chad	43.0	1987	b
Comoros	1.2	2003	m
Congo	832.0	1987	b
Congo, Democratic Republic (formerly Zaire)	1283	2001	l
Cote D'Ivoire	81	2001	l
Djibouti	0.3	1997	f
Egypt	86.8	1997	f
Equatorial Guinea	26	2001	l
Eritrea	6.3	2001	l
Ethiopia	110.0	1987	b
Gabon	164.0	1987	b
Gambia	8.0	1982	c
Ghana	53.2	2001	l
Guinea	226.0	1987	b
Guinea-Bissau	31.0	2003	m
Kenya	30.2	1990	c
Lesotho	5.2	1987	b
Liberia	232.0	1987	b
Libya	0.6	1997	c,f
Madagascar	337.0	1984	c
Malawi	17.3	2001	l
Mali	100.0	2001	k
Mauritania	11.4	1997	c,f
Mauritius	2.2	2001	k
Morocco	29.0	2003	m
Mozambique	216.0	1992	c
Namibia	45.5	1991	c
Niger	33.7	2003	m
Nigeria	286.2	2003	m
Reunion	5.0	1988	m
Rwanda	5.2	2003	m
Senegal	39.4	1987	b
Sierra Leone	160.0	1987	b
Somalia	15.7	1997	f
South Africa	50.0	1990	c

continues

DATA TABLE 1 *continued*

Region and Country	Annual Renewable Water Resources[a] (km^3/yr)	Year of Estimate	Source of Estimate
AFRICA (*continued*)			
Sudan	154.0	1997	c,f
Swaziland	4.5	1987	b
Tanzania	91	2001	l
Togo	14.7	2001	l
Tunisia	4.6	2003	m
Uganda	66.0	1970	c
Zambia	105.2	2001	l
Zimbabwe	20.0	1987	b
NORTH AND CENTRAL AMERICA			
Antigua and Barbuda	0.1	2000	j
Bahamas	nd	nd	
Barbados	0.1	2003	m
Belize	18.6	2000	j
Canada	3300.0	1985	t
Costa Rica	112.4	2000	j
Cuba	38.1	2000	j
Dominica	nd	nd	
Dominican Republic	21.0	2000	j
El Salvador	25.2	2001	l
Grenada	nd	nd	
Guatemala	111.3	2000	j
Haiti	14.0	2000	j
Honduras	95.9	2000	j
Jamaica	9.4	2000	j
Mexico	457.2	2000	j
Nicaragua	196.7	2000	j
Panama	148.0	2000	j
St. Kitts and Nevis	0.02	2000	j
Trinidad and Tobago	3.8	2000	j
United States of America	3069.0	1985	n
SOUTH AMERICA			
Argentina	814.0	2000	j
Bolivia	622.5	2000	j
Brazil	8233.0	2000	j
Chile	922.0	2000	j
Colombia	2132.0	2000	j
Ecuador	432.0	2000	j
Guyana	241.0	2000	j
Paraguay	336.0	2000	j
Peru	1913.0	2000	j
Suriname	122.0	2003	m
Uruguay	139.0	2000	j
Venezuela	1233.2	2000	j

Region and Country	Annual Renewable Water Resources[a] (km^3/yr)	Year of Estimate	Source of Estimate
ASIA			
Afghanistan	65.0	1997	f
Bahrain	0.1	1997	f
Bangladesh	1210.6	1999	h
Bhutan	95.0	1987	b
Brunei	8.5	1999	h
Cambodia	476.1	1999	h
China	2829.6	1999	h
India	1907.8	1999	h
Indonesia	2838.0	1999	h
Iran	137.5	1997	f
Iraq	96.4	1997	f
Israel	1.7	2001	l,m
Japan	430.0	1999	h
Jordan	0.9	1997	f
Korea DPR	77.1	1999	h
Korea Rep	69.7	1999	h
Kuwait	0.02	1997	f
Laos	333.6	2003	m
Lebanon	4.8	1997	f
Malaysia	580.0	1999	h
Maldives	0.03	1999	h
Mongolia	34.8	1999	h
Myanmar	1045.6	1999	h
Nepal	210.2	1999	h
Oman	1.0	1997	f
Pakistan	233.8	2003	k
Philippines	479.0	1999	h
Qatar	0.1	1997	f
Saudi Arabia	2.4	1997	f
Singapore	0.6	1975	d
Sri Lanka	50.0	1999	h
Syria	46.1	1997	f
Taiwan	67.0	2000	r
Thailand	409.9	1999	h
Turkey	234.0	2003	k, l, m, o
United Arab Emirates	0.2	1997	f
Vietnam	891.2	1999	h
Yemen	4.1	1997	f
EUROPE			
Europe			
Albania	41.7	2001	p
Austria	84.0	2005	s
Belgium	20.8	2005	s
Bosnia and Herzegovina	37.5	2003	m
Bulgaria	19.4	2005	s

continues

DATA TABLE 1 *continued*

Region and Country	Annual Renewable Water Resources[a] (km^3/yr)	Year of Estimate	Source of Estimate
EUROPE (*continued*)			
Croatia	105.5	1998	o, q
Cyprus	0.4	2005	s
Czech Republic	16.0	2005	s
Denmark	6.1	2003	o
Estonia	21.1	2005	s
Finland	110.0	2005	s
France	189.0	2005	s
Germany	188.0	2005	s
Greece	72.0	2005	s
Hungary	120.0	2005	s
Iceland	170.0	2005	s
Ireland	46.8	2003	o
Italy	175.0	2005	s
Luxembourg	1.6	2005	s
Macedonia	6.4	2001	p
Malta	0.07	2005	s
Netherlands	89.7	2005	s
Norway	381.4	2005	s
Poland	63.1	2005	s
Portugal	73.6	2005	s
Romania	42.3/211.90	2003	o, m
Slovakia	80.3/50.1	2003	o, m
Slovenia	32.1	2005	s
Spain	111.1	2005	s
Sweden	179.0	2005	s
Switzerland	53.3	2005	s
United Kingdom	160.6	2005	s
Serbia-Montenegro*	208.5	2003	m
Russia	4498.0	1997	e,g
Armenia	10.5	1997	g
Azerbaijan	30.3	1997	g
Belarus	58.0	1997	g
Estonia	12.8	1997	g
Georgia	63.3	1997	g
Kazakhstan	109.6	1997	g
Kyrgyzstan	46.5	1997	m
Latvia	49.9	2005	s
Lithuania	24.5	2005	s
Moldova	11.7	1997	g
Tajikistan	99.7	1997	m
Turkmenistan	60.9	1997	m
Ukraine	139.5	1997	g
Uzbekistan	72.2	2003	m

Region and Country	Annual Renewable Water Resources[a] (km^3/yr)	Year of Estimate	Source of Estimate
OCEANIA			
Australia	398.0	1995	i
Fiji	28.6	1987	b
New Zealand	397.0	1995	i
Papua New Guinea	801.0	1987	b
Solomon Islands	44.7	1987	b

*Referred to as Yugoslavia in previous World's Water.