Progress on Water-Use Efficiency (SDG target 6.4)

19$/m3

is the value added from the use of water by people and the economy at the global level (SDG indicator 6.4.1, 2020)

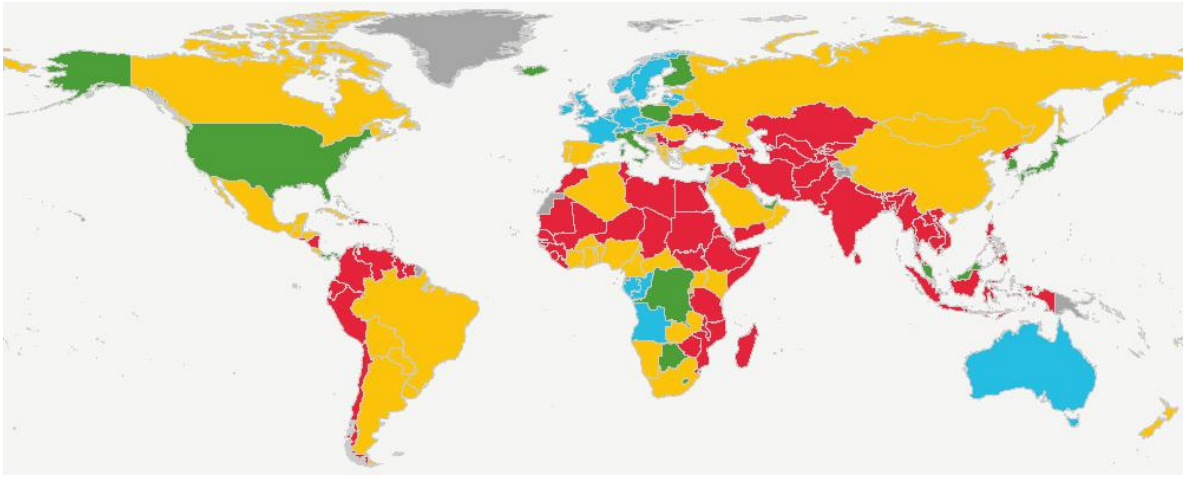
- Data provider: FAO through AQUASTAT
- Available data series: 2000-2020
- Number of countries (and areas) reporting in the last five years: 168
- Proportion of world population covered by reporting in the last five years: 100%
- Proportion of world economy covered by reporting in the last five years: 98%
- Proportion of world land area covered by reporting in the last five years: 99%
- Learn more about the indicator here
  Read the latest progress report here

Increasing water-use efficiency, for example by repairing leaking water distribution systems, using less thirsty crops and investing in new technology, results in more sustainable food and industrial production systems. Water savings are also often associated with energy savings, as less water needs to be extracted, treated, transported and heated.

SDG target 6.4 is: ‘By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.’

To track progress towards the target, SDG indicator 6.4.1 monitors the change in water-use efficiency over time, measured as the ratio of dollar value added to the volume of water used.

Global status of indicator 6.4.1 Change in water-use efficiency over time (2020) [1]

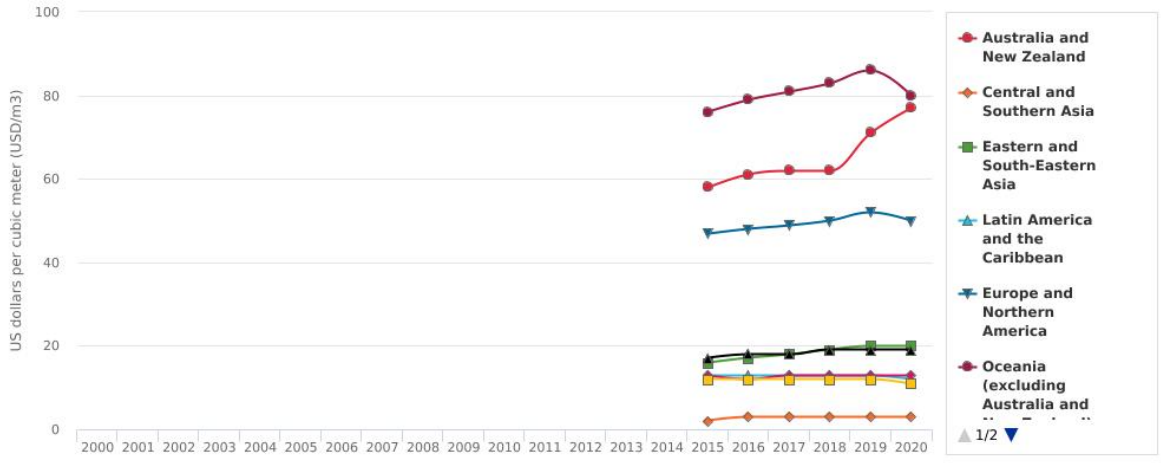


The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. Final status of the Abyei area is not yet determined. A dispute exists between the Governments of Argentina and the United Kingdom of Greater Britain and Northern Ireland concerning the sovereignty over the Falkland Islands (Malvinas).

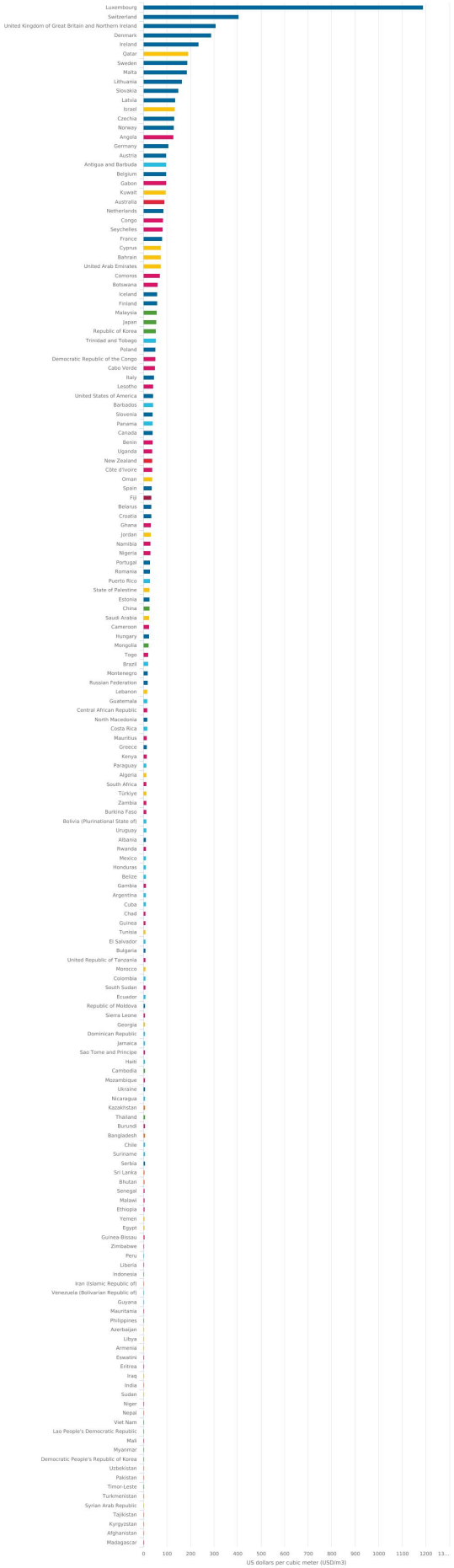
US dollars per cubic meter (USD/m3)

>80	>40-80	>10-40
0-10	Data not available	Not applicable

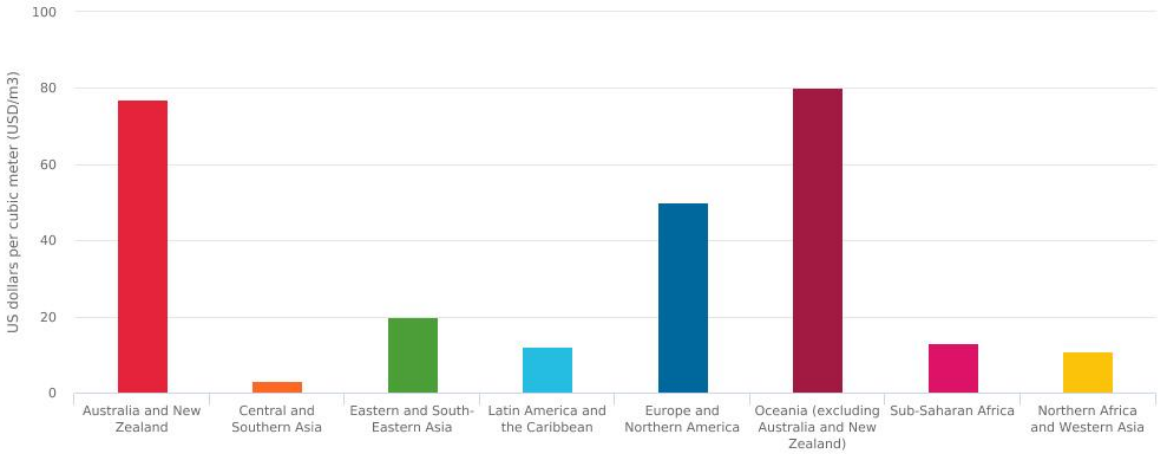
Progress over time of indicator 6.4.1 Change in water-use efficiency over time [3]



Status in different countries (or areas) of indicator 6.4.1 Change in water-use efficiency over time (2020) [5]

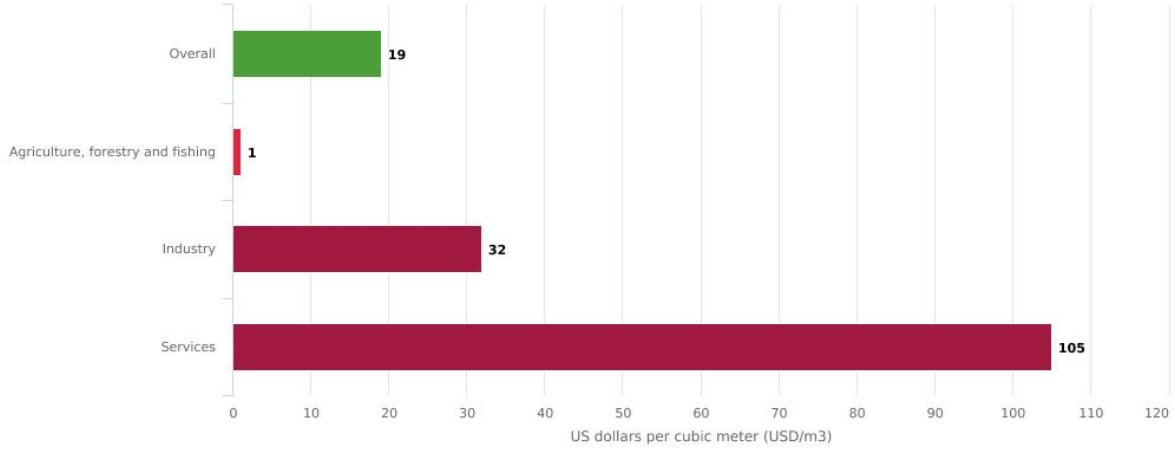


Status in different SDG regions of indicator 6.4.1 Change in water-use efficiency over time (2020) [6]

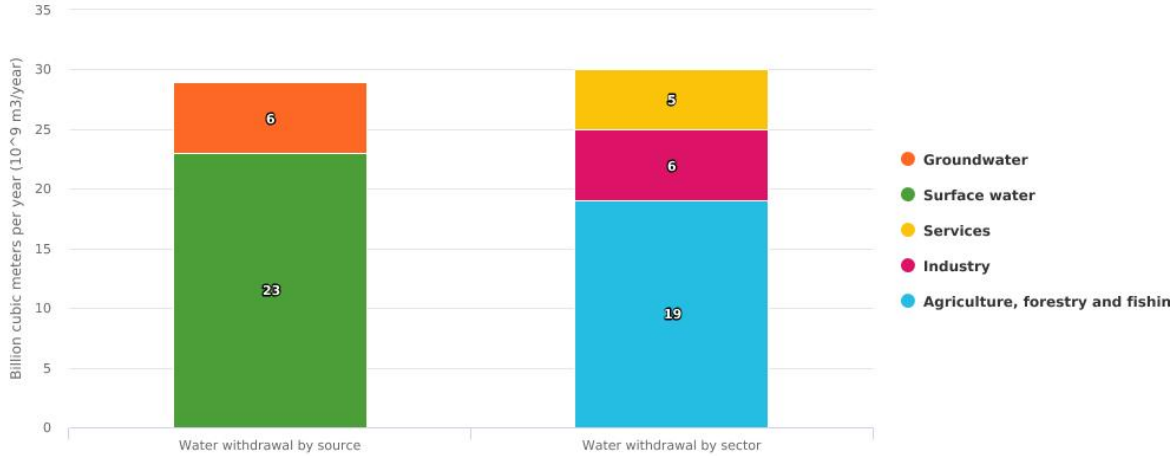


Status of different components of indicator 6.4.1 Change in water-use efficiency over time

Water-use efficiency, by sector (2020) [7]



Water withdrawal, by source and sector, for one reporting country (2020) [8]



Source data indicator 6.4.1 Change in water-use efficiency over time[8]

Country (or area), region and world data for the latest year of reporting: 2020

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Afghanistan	2020	0.8	0.12	12.67	57.21
Albania	2020	12.1	1.72	134.43	28.53
Algeria	2020	13.81	0.99	272.11	23.87
Angola	2020	129	0.32	195.15	138.48
Antigua and Barbuda	2020	98.08	2.06	86.94	125.96
Azerbaijan	2020	3.63	0.23	36.3	56.42
Argentina	2020	11.41	0.09	28.18	54
Australia	2020	90.26	0.36	109.28	403
Austria	2020	98.09	2.6	32.74	352.89
Bahamas	2020				271.51
Bahrain	2020	74.73	0.61	954.78	68.62
Bangladesh	2020	7.09	0.84	101.52	41.58
Armenia	2020	3.5	0.17	14.83	10.42
Barbados	2020	41.59	0.51	63.92	147.24
Belgium	2020	97.49	1.14	23.08	453.99
Bermuda	2020			255.18	798.13
Bhutan	2020	6.07	0.37	212.11	76.39
Bolivia (Plurinational State of)	2020	12.97	0.42	258.98	132.27

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Bosnia and Herzegovina	2020			51.12	34.35
Botswana	2020	61.35	0.08	122.25	90.46
Brazil	2020	21.29	0.51	28.47	70.61
Belize	2020	11.53	0.16	7.07	88.04
Brunei Darussalam	2020		7.94		37.73
Bulgaria	2020	9.02	0.11	2.93	42.37
Myanmar	2020	1.84	0.17	53.3	8.98
Burundi	2020	7.18	0.06	38.4	32.96
Belarus	2020	35.43	0.1	39.57	56
Cambodia	2020	7.83	0.39	237.64	86.32
Cameroon	2020	25.05	0.05	80.78	76.07
Canada	2020	40.38	0.24	12.68	228.8
Cabo Verde	2020	49.72	0.23	820.88	630.32
Central African Republic	2020	17.59	0.13	33.67	14.5
Sri Lanka	2020	6.18	0.32	26.93	67.01
Chad	2020	10.47	0.05	23.47	65.01
Chile	2020	6.93	0.23	42.34	114.26
China	2020	25.81	2.1	53.64	74.51
Colombia	2020	8.63	0.05	168.2	50.97
Comoros	2020	70.04	0.12	189.04	126.11

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Congo	2020	84.36	0.18	160.9	60.81
Democratic Republic of the Congo	2020	50.83	0.42	107.24	40.81
Costa Rica	2020	17.49	0.42	44.24	52.74
Croatia	2020	34.47	0.68	13.22	72.58
Cuba	2020	11.19	0.17	25.27	34.34
Cyprus	2020	74.94	0.8	153.5	173.41
Czechia	2020	132.47	1.53	80.01	198.81
Benin	2020	39.55	0.69	70.47	48.97
Denmark	2020	288.42	1.32	1320.4	540.49
Dominica	2020		0		15.49
Dominican Republic	2020	8.2	0.22	36.2	57.27
Ecuador	2020	8.52	0.63	51.76	39.44
El Salvador	2020	9.6	0.03	23.05	32.45
Equatorial Guinea	2020			1401.19	316.81
Ethiopia	2020	5.35	0.18	400.01	42.27
Eritrea	2020	3.31	0.02	683.17	39.67
Estonia	2020	26.29	0.57	6.53	274.75
Fiji	2020	35.44	0.49	70	91.39
Finland	2020	59.43	0.02	26.48	310.03
France	2020	80.61	1.93	19.13	333.66

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Djibouti	2020		13.73		169.97
Gabon	2020	97.04	0.33	409.2	91.09
Georgia	2020	8.27	0.44	9.35	16.81
Gambia	2020	11.52	0.12	12.92	21.64
State of Palestine	2020	26.51	3.91	70.21	43.45
Germany	2020	108.4	4.65	45.66	219.07
Ghana	2020	32.58	0.23	186.26	99.42
Greece	2020	15.63	0.42	61.49	79.82
Grenada	2020		2.36		57.25
Guatemala	2020	18.1	0.94	22.73	53.51
Guinea	2020	10.47	0.05	70.44	21.99
Guyana	2020	3.92	0.01	135.53	47.14
Haiti	2020	7.92	0.29	63.94	41.45
Honduras	2020	11.8	0.23	43	43.78
Hungary	2020	24.46	0.43	9.08	125.27
Iceland	2020	60.17	0.83	15.57	170.77
India	2020	2.89	0.44	34.92	23.28
Indonesia	2020	4.09	0.33	41.65	19.7
Iran (Islamic Republic of)	2020	4.02	0.34	111.01	36.15
Iraq	2020	2.98	0.14	11.57	14.4

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Ireland	2020	236.17	0	278.15	223.21
Israel	2020	134.15	2.12	554.14	247.91
Italy	2020	45.62	0.83	42.99	128.97
Côte d'Ivoire	2020	38.51	0.32	45.89	104.55
Jamaica	2020	8.12	2.06	2.12	60.12
Japan	2020	55.42	0.66	109.96	214.67
Kazakhstan	2020	7.42	0.05	10.13	41.8
Jordan	2020	32.58	1.49	245.35	52.48
Kenya	2020	14.9	0.19	42.4	94.23
Democratic People's Republic of Korea	2020	1.6	0.33	5	6.55
Republic of Korea	2020	54.41	1.05	110.76	144.46
Kuwait	2020	95.95	0.61	1932.33	166.04
Kyrgyzstan	2020	0.86	0.12	5.8	16.85
Lao People's Democratic Republic	2020	2.05	0.17	24.17	75.11
Lebanon	2020	18.31	1.22	2.15	128.78
Lesotho	2020	43.4	0.02	34.3	60.75
Latvia	2020	135.59	0.03	138.18	219.09
Liberia	2020	4.27	0.04	3.6	5.36
Libya	2020	3.53	0.07	27.37	17.99

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Liechtenstein	2020				459.92
Lithuania	2020	163.69	0.05	179.46	225.05
Luxembourg	2020	1189.98	0	1483.59	1124.19
Madagascar	2020	0.72	0.11	14.2	15.4
Malawi	2020	5.6	0.06	36.37	40.47
Malaysia	2020	57.34	1.21	69.21	147.59
Maldives	2020			1113.69	471.33
Mali	2020	1.95	0.04	927.4	57.72
Malta	2020	185.85	1.27	1538.52	266.91
Mauritania	2020	3.91	0.31	56.56	32.39
Mauritius	2020	16.19	0.38	188.73	27.32
Mexico	2020	11.9	0.27	37.48	55.18
Monaco	2020				1062.87
Mongolia	2020	22.85	0.39	28.95	124.9
Republic of Moldova	2020	8.45	2.8	2.91	30.65
Montenegro	2020	18.92	3.58	7.1	26.89
Morocco	2020	8.71	0.42	123.16	57.23
Mozambique	2020	7.76	0.06	135.49	21.44
Oman	2020	38.1	1.02	150.11	274.35
Namibia	2020	30.49	0.08	169.74	87.54
Nepal	2020	2.64	0.66	100.63	108.31

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Netherlands	2020	85.98	19.88	21.77	281.59
New Zealand	2020	38.69	4.19	30.49	280.02
Nicaragua	2020	7.56	0.14	4481.2	35.25
Niger	2020	2.76	0	60.52	24.74
Nigeria	2020	30.12	0.25	69.58	47.53
Norway	2020	129.58	0.38	88.72	326.84
Pakistan	2020	1.54	0.33	36.63	18.03
Panama	2020	41.12	0.32	1804.29	50.7
Papua New Guinea	2020			50.88	46.07
Paraguay	2020	13.9	0.17	66.55	63.42
Peru	2020	4.42	0.27	15.05	48.55
Philippines	2020	3.9	0.19	9.06	28.48
Poland	2020	51.6	0.09	22.68	174.98
Portugal	2020	28.49	0.5	18.19	158.09
Guinea-Bissau	2020	4.67	0.11	14.32	20.6
Timor-Leste	2020	1.53	0.09	267.86	11.77
Puerto Rico	2020	28.35	1.8	19.31	59.01
Qatar	2020	192.42	1.44	2069.34	169.04
Romania	2020	28.47	0.29	12.34	123.56
Russian Federation	2020	18.91	0.06	13.43	48.68

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Rwanda	2020	12.08	0.43	191.44	22.52
Saint Kitts and Nevis	2020		0.49		37.14
Saint Lucia	2020		0		96.18
Saint Vincent and the Grenadines	2020			40348.48	60.91
Sao Tome and Principe	2020	7.92	0.39	70.13	18.49
Saudi Arabia	2020	25.08	0.79	184.18	111.22
Senegal	2020	5.72	0.07	3417	46.92
Serbia	2020	6.53	0.17	2.33	37.5
Seychelles	2020	83	2.77	40.2	109.1
Sierra Leone	2020	8.41	3.55	3.51	12.86
Singapore	2020			226.7	802.4
Slovakia	2020	149.87	1.7	96.71	206.94
Viet Nam	2020	2.63	0.27	23.91	100.56
Slovenia	2020	41.39	8.64	15.21	169.91
Somalia	2020	0.2	0.03	50.05	30.21
South Africa	2020	13.77	0.11	16.2	63.25
Zimbabwe	2020	4.47	0.04	47.29	19.86
Spain	2020	36.23	0.57	36.24	184.49
South Sudan	2020	8.57	0.03	9.76	17.81
Sudan	2020	2.88	0.18	255.44	56.57

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Suriname	2020	6.92	0.84	10.95	49.08
Eswatini	2020	3.45	0.11	64.94	54.17
Sweden	2020	187.93	3.62	78.78	524.5
Switzerland	2020	404.82	6.35	267.2	562.58
Syrian Arab Republic	2020	1.08	0.12	9.95	6.98
Tajikistan	2020	1.02	0.29	1.44	6.16
Thailand	2020	7.27	0.42	46.8	96.88
Togo	2020	21.38	0.02	180.93	25.77
Trinidad and Tobago	2020	53.36	2.46	50.44	58.53
United Arab Emirates	2020	74.45	1.47	3631.1	88.69
Tunisia	2020	10.02	0.32	143.33	32.14
Türkiye	2020	13.75	0.38	251.77	83.31
Turkmenistan	2020	1.17	0.22	16.87	30.02
Uganda	2020	38.74	0.04	168.24	49.55
Ukraine	2020	7.62	0.1	4.25	20.84
North Macedonia	2020	17.56	1.86	67.49	20.66
Egypt	2020	4.87	0.75	21.83	19.91
United Kingdom of Great Britain and Northern Ireland	2020	307.62	0.7	421.82	347.4

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
United Republic of Tanzania	2020	8.83	0.23	775.41	48.06
United States of America	2020	43.03	0.19	14.72	274.03
Burkina Faso	2020	13.36	0.07	204.96	17.18
Uruguay	2020	12.75	0.23	108.85	90.79
Uzbekistan	2020	1.6	0.43	14.77	16.52
Venezuela (Bolivarian Republic of)	2020	4.01	0.11	57.14	8.48
Yemen	2020	5.19	0.67	62.31	46.42
Zambia	2020	13.75	0.03	66.64	44.54
Northern Africa and Western Asia	2020	11.15	0.46	71	52.78
Oceania (excluding Australia and New Zealand)	2020	79.98	0.49	66.99	105.53
Europe and Northern America	2020	49.51	0.33	20.05	220.9
Eastern and South-Eastern Asia	2020	19.91	1.09	55.17	81.58
Central and Southern Asia	2020	2.86	0.41	30.34	25.37
World	2020	18.9	0.59	32.08	104.65

Country (or area), SDG region, world	Year	6.4.1 Change in water-use efficiency over time			
		Overall (USD/m3)	Agriculture, forestry and fishing (USD/m3)	Mining and quarrying, manufacturing, constructions and energy (USD/m3)	Service sectors (USD/m3)
Australia and New Zealand	2020	76.73	1.4	86.39	380.98
Sub-Saharan Africa	2020	12.82	0.13	51.29	50.62
Latin America and the Caribbean	2020	11.79	0.27	31.99	55.38

Description of indicators

[1]

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Overall

Water-use efficiency measured as the ratio of dollar value added to the volume of water used. It considers water use by all economic activities, with a focus on agriculture, industry and the service sectors.

[2]

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Overall

Water-use efficiency measured as the ratio of dollar value added to the volume of water used. It considers water use by all economic activities, with a focus on agriculture, industry and the service sectors.

[3]

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Overall

Water-use efficiency measured as the ratio of dollar value added to the volume of water used. It considers water use by all economic activities, with a focus on agriculture, industry and the service sectors.

[4]

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Overall

Water-use efficiency measured as the ratio of dollar value added to the volume of water used. It considers water use by all economic activities, with a focus on agriculture, industry and the service sectors.

[5]

6.4.1 Change in water-use efficiency over time > Gross value added to GDP > Agriculture, forestry and fishing

Gross value added (GVA) from agriculture, forestry and fishing (ISIC A).

6.4.1 Change in water-use efficiency over time > Gross value added to GDP > Industry

Gross value added (GVA) from mining and quarrying, manufacturing, constructions and energy (ISIC B, C, D and F).

6.4.1 Change in water-use efficiency over time > Gross value added to GDP > Services

Gross value added (GVA) from service sectors (ISIC 36-39 and ISIC 45-99), including water collection, treatment and supply industry (ISIC 36).

[6]

Renewable water resources > Surface water > Total

This is the sum of the internal renewable surface water resources and the total external renewable surface water resources.

Renewable water resources > Groundwater > Total

This is the sum of the internal renewable groundwater resources and the total external renewable groundwater resources.

Water withdrawal > Total > Agriculture, forestry and fishing

Annual quantity of self-supplied (own use and not for distribution, as opposed to supplied to other economic units) water withdrawn for irrigation, livestock and aquaculture purposes (ISIC A). It includes water from primary renewable freshwater resources and secondary sources of water, as well as water from over-abstraction of renewable groundwater or withdrawal of fossil groundwater, direct use of agricultural drainage water and (treated) wastewater, and desalinated water. Water for the dairy and meat industries and industrial processing of harvested agricultural products is included under industrial water withdrawal.

Water withdrawal > Total > Industry

Annual quantity of water withdrawn for industrial uses (ISIC B, C, D and F). It includes water from primary renewable freshwater resources and secondary sources of water, as well as over-abstraction of renewable groundwater or withdrawal of fossil groundwater and potential use of desalinated water or direct use of (treated) wastewater. This sector refers to self-supplied industries not connected to the public distribution network. The ratio between net consumption and withdrawal is estimated at less than 5 percent. It includes water for the cooling of thermoelectric plants, but it does not include hydropower.

Water withdrawal > Total > Services

Annual quantity of water withdrawn primarily for the direct use by the population (ISIC 36-39 and 45-99). It includes water from primary renewable freshwater resources and secondary sources of water, as well as potential over-abstraction of renewable groundwater or withdrawal of fossil groundwater and the potential use of desalinated water or direct use of treated wastewater. It is usually computed as the total water withdrawn by the public distribution network. It can include that part of the industries, which is connected to the municipal network. The ratio between the net consumption and the water withdrawn can vary from 5 to 15 percent in urban areas and from 10 to 50 percent in rural areas.

[7]

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Overall

Water-use efficiency measured as the ratio of dollar value added to the volume of water used. It considers water use by all economic activities, with a focus on agriculture, industry and the service sectors.

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Agriculture, forestry and fishing

Water-use efficiency, measured as the ratio of dollar value added to the volume of water used, in agriculture, forestry and fishing (ISIC A).

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Industry

Water-use efficiency, measured as the ratio of dollar value added to the volume of water used, in mining and quarrying, manufacturing, constructions and energy (ISIC B, C, D and F).

6.4.1 Change in water-use efficiency over time > Water-use efficiency (USD/m3) > Services

Water-use efficiency, measured as the ratio of dollar value added to the volume of water used, in service sectors (ISIC 36-39 and ISIC 45-99), including water collection, treatment and supply industry (ISIC 36).

About

Through the UN-Water Integrated Monitoring Initiative for Sustainable Development Goal (SDG) 6, the United Nations seeks to support countries in monitoring water- and sanitation-related issues within the framework of the 2030 Agenda for Sustainable Development, and in compiling country data to report on global progress towards SDG 6. The Initiative brings together the United Nations agencies who are formally mandated to compile country data for the purpose of global reporting on SDG 6.

To learn more about water and sanitation in the 2030 Agenda for Sustainable Development, and the Integrated Monitoring Initiative for SDG 6, visit our website: www.sdg6monitoring.org

Monitoring SDG 6 involves a wide range of stakeholders across different sectors and levels of government. To enable a comprehensive assessment and analysis of the state of water resources and possible development paths, one of the monitoring effort's key objectives is to collate all the information, in support of an integrated management approach that helps reduce institutional fragmentation. For this reason, the Integrated Monitoring Initiative has developed the SDG 6 Data Portal, which brings together data on all the SDG 6 global indicators, as well as other key social, economic and environmental data.

To explore the data and assess progress towards SDG 6, and generate snapshots such as this one, visit our portal: www.sdg6data.org.

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