

Session 3.2: Water Questionnaire



UNSD



United Nations Statistics Division (UNSD) and United Nations Environment Programme
QUESTIONNAIRE 2018 ON ENVIRONMENT STATISTICS

Section: WATER

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Regional Workshop on Environment Statistics and Climate Change Statistics for the Caribbean Community (CARICOM) Region

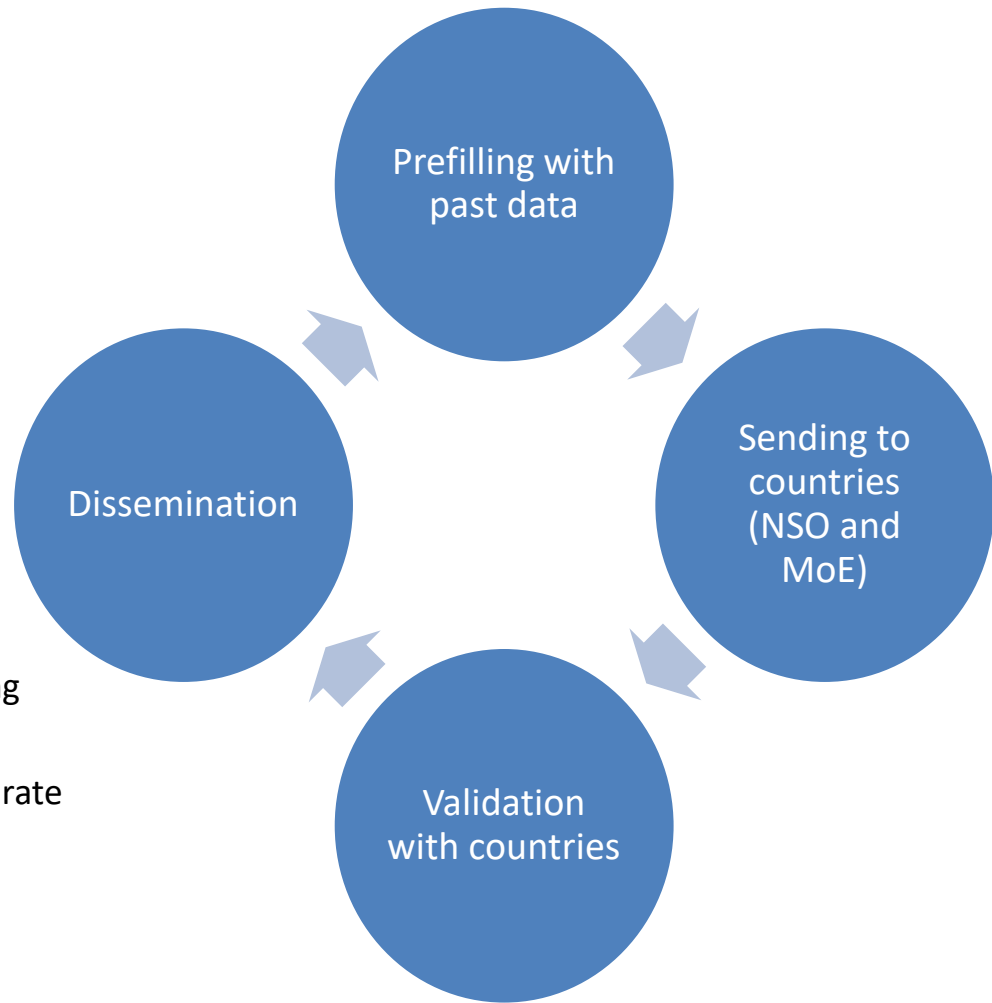
St. George's, Grenada, 4-8 November 2019



General Information

- Since 1999, about every two years. 9th round sent out in September 2018 (waste and water statistics)
- About 172 member states and areas in 5 languages
- Complemented by the OECD/Eurostat Joint Questionnaire on the State of the Environment – their member states
- Waste statistics
 - R1: Generation of Waste by Source
 - R2: Management of Hazardous Waste
 - R3: Management of Municipal Waste
 - R4: Composition of Municipal Waste
 - R5: Management of Municipal Waste — City Data
 - R6: Electronic Waste Generation and Collection
- Water statistics
 - W1: Renewable Freshwater Resources
 - W2: Freshwater Abstraction and Use
 - W3: Water Supply Industry (ISIC 36)
 - W4: Wastewater Generation and Treatment
 - W5: Population Connected to Wastewater Treatment

Cycle



- No estimation or imputation for missing values from UNSD
- Data considered accurate only if confirmed by countries



Dissemination: Environment statistics — UN Data



Data Glossary Metadata API More

34 databases - 60 million records Update calendar

Databases	Updates	Country data services
Crime <ul style="list-style-type: none">UNODC Homicide Statistics 2012, UNODC	24 Oct @undata The World Tourism Data table in @UNdata was updated with available stats as of mid-Oct 2014: bit.ly/1yulpAm ; thanks @UNWTO	Afghanistan Albania Algeria Andorra Angola

MBS Monthly Bulletin of Statistics and other UNSD data resources

▶ Popular searches

▶ Feedback and reviews



Dissemination: UNSD Environmental Indicators

- Air and Climate
- Biodiversity
- Energy and Minerals
- Forests
- Governance
- Inland Water Resources
- Land and Agriculture
- Marine and Coastal Areas
- Natural Disasters
- Waste

Air Pollution

- Consumption of ozone-depleting substances **XLS**
- NO_x emissions **XLS**
- SO₂ emissions **XLS**
- Links to other international data sources
- Additional indicators and selected time series

Climate Change

- Climatological disasters (see Natural Disasters)
- Participation in climate change agreements (see Governance)
- Links to other international data sources

Greenhouse Gases

- CO₂ emissions **XLS**
- Greenhouse gas emissions **XLS**
- Greenhouse gas emissions by sector (absolute values) **XLS**
- Greenhouse gas emissions by sector (percentage) **XLS**
- CH₄ and N₂O emissions **XLS**
- Links to other international data sources
- Additional indicators and selected time series

<https://unstats.un.org/unsd/envstats/index.cshtml>





Air and climate

Emissions of:	Year	
SO ₂ (1000t)	...	
SO ₂ per capita (kg)	...	
NO _x (1000t)	...	
NO _x per capita (kg)	...	
CO ₂ (million tonnes)	0	2011
CO ₂ per capita (tonnes)	2	2011
GHG (million tonnes CO ₂ eq.)	2	1994
GHG per capita (tonnes CO ₂ eq.)	16	1994
Consumption of ozone depleting CFCs (ODP t)	0	2013

Biodiversity

Proportion of terrestrial and marine areas protected (%)	0	2014
Number of threatened species	54	2016
Fish catch (tonnes)	2,707	2015
Change in fish catch from previous year (%)	-5	2015

Economy

GDP growth rate from previous year (%)	2	2016
GDP per capita (at current prices - \$US)	9,469	2016
% Value added: agriculture, hunting, forestry, fishing	7	2016
% Value added: mining, manufacturing, utilities	8	2015

Energy

Total population served by municipal waste collection (%)	...	2015
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Note: The boundaries, the names shown, and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Permanent meadows and pastures (% of agric. land)	12	2015
Change in agricultural land area since 1990 (%)	-38	2015
Forest area (sq km)	170	2015
Change in forest area since 1990 (%)	0	2015

Population

Population (1000)	107	2015
Population growth rate from previous year (%)	0	2015

Waste

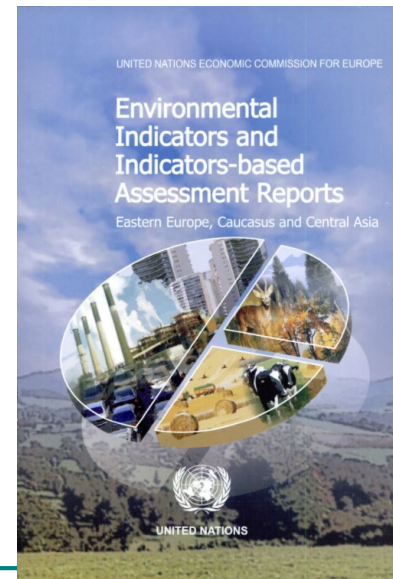
Total population served by municipal waste collection (%)	...	2015
Municipal waste collected (1000t)	...	2015

Dissemination : Country Snapshot — Grenada



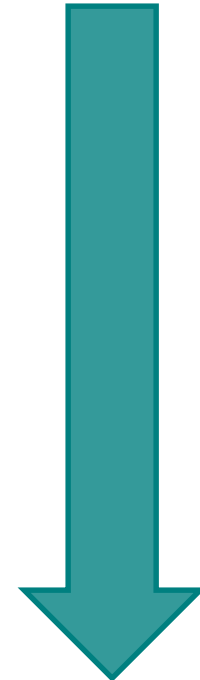
Key Data Users

- International agencies (UNEP, UN-HABITAT, WORLD BANK)
- Academia/Students
- Journalists
- General Public

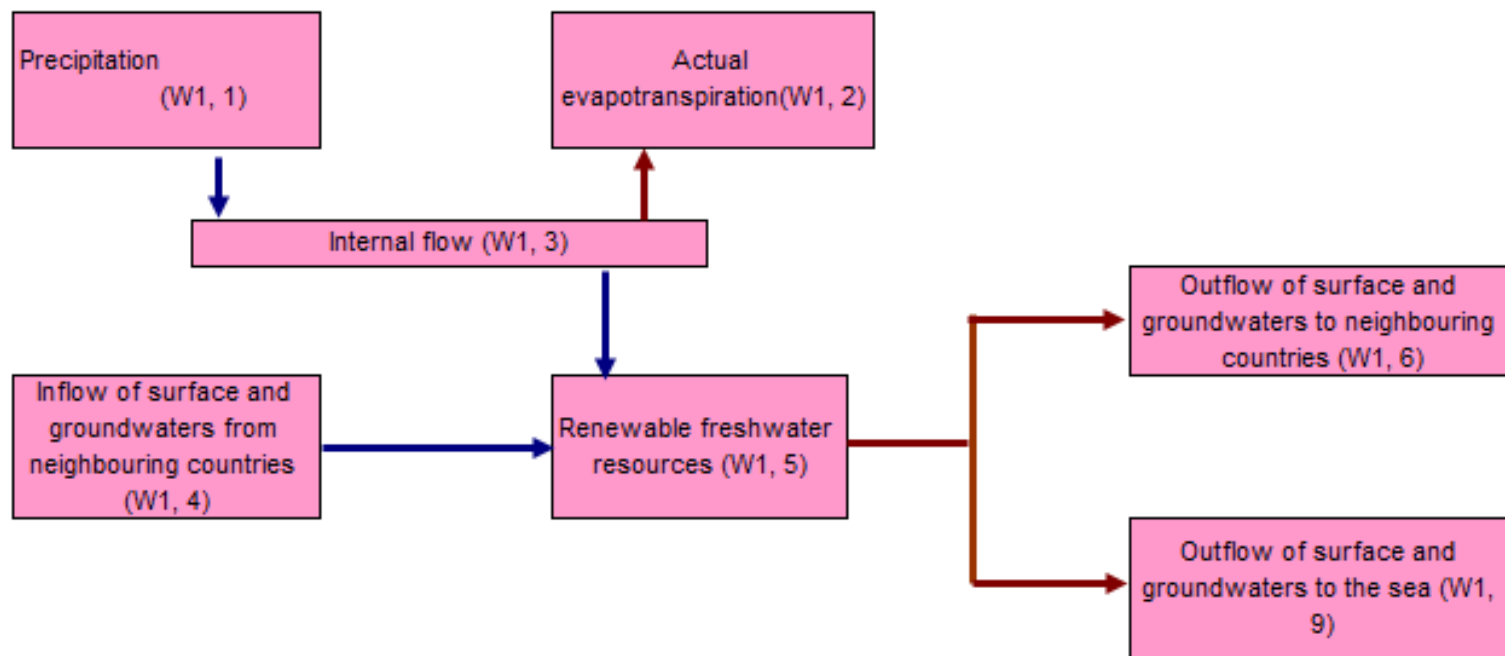


Water Section

- Introduction, Steps to Follow, Description of Tables
- List of Definitions
- W1: Renewable Freshwater Resources
- W2: Freshwater Abstraction and Use
- W3: Water Supply Industry (ISIC 36)
- W4: Wastewater Generation and Treatment
- W5: Population Connected to Wastewater Treatment



W1 Renewable Freshwater Resources

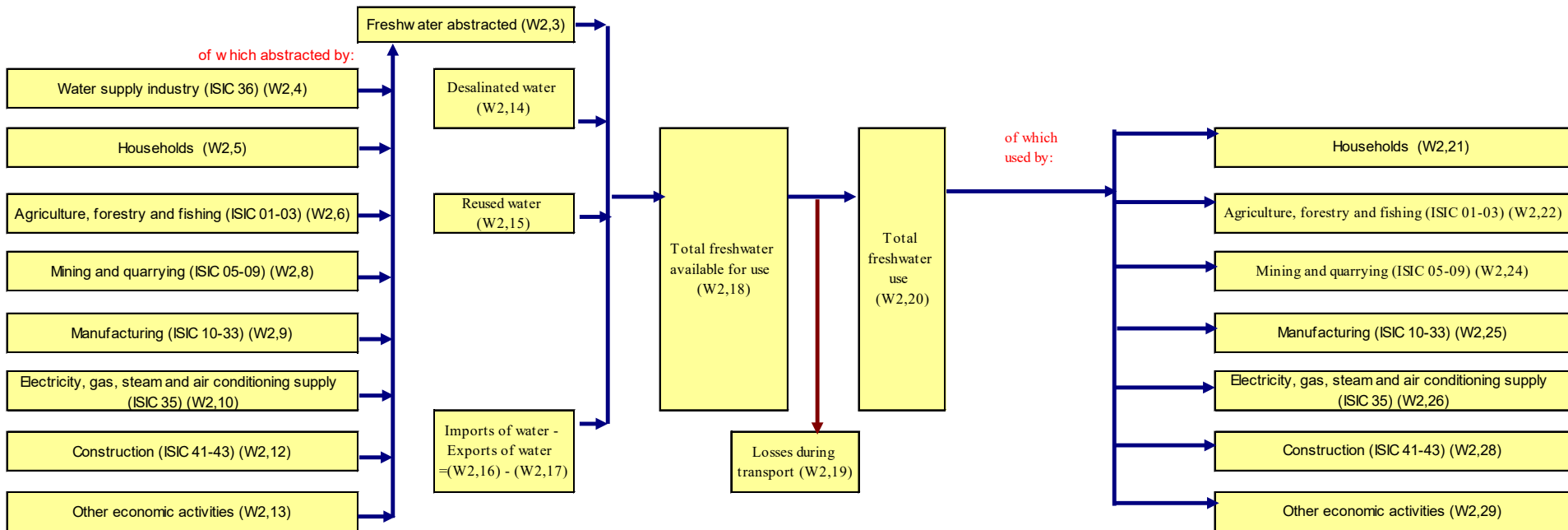


W1 Renewable Freshwater Resources (mio metres³/year)

Country	latest year	Precipitation	Actual evapotranspiration	Internal flow	Inflow of surface and groundwaters from neighbouring countries	Renewable freshwater resources	Outflow of surface and groundwaters to neighbouring countries
Belize	2005	49017	36045	12972		12972	
Bermuda	2017	71.6	49.4	22.2	0	22.2	
Dominica	2005				0		
Jamaica	2017	23708	10051 ¹	11029 ¹	0	10822	0
Suriname	2017	2192.4 ²					

Footnotes: 1. Year 2005. 2: Data unit is mm.

W2 Freshwater Abstraction and Use

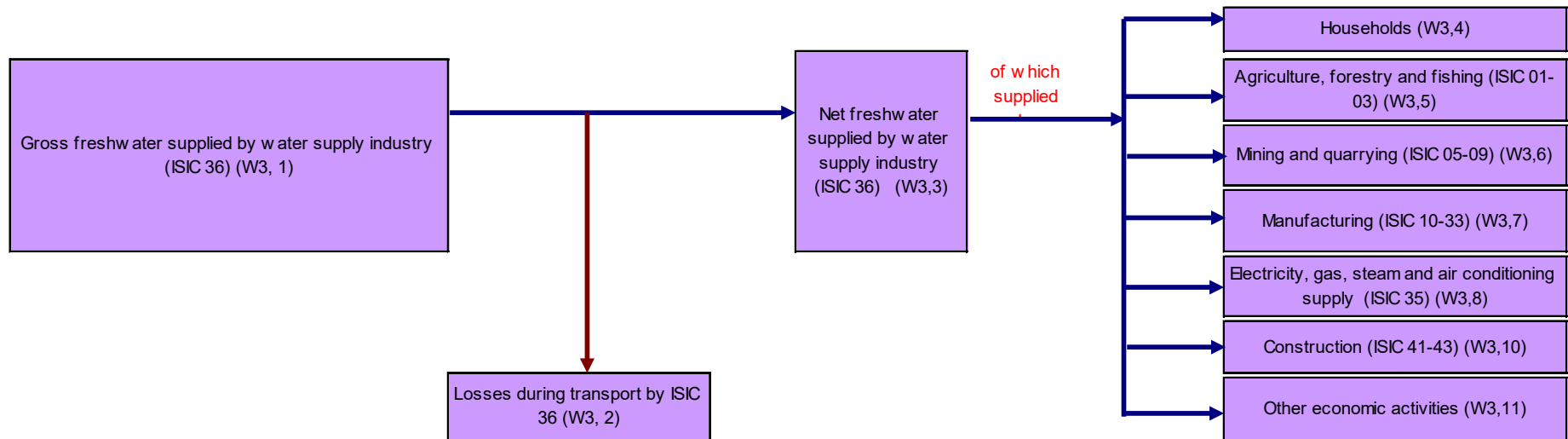


Freshwater Abstraction and Use (mio metres³/year)

Country	latest year	Freshwater abstracted	Total freshwater available for use	Total freshwater use
Belize	2012	9.88	10.56	7.65
Saint Vincent and the Grenadines	2000	8.53 ¹		

Footnote: 1: Data refer to fresh surface water only.

W3 Water Supply Industry (ISIC 36)

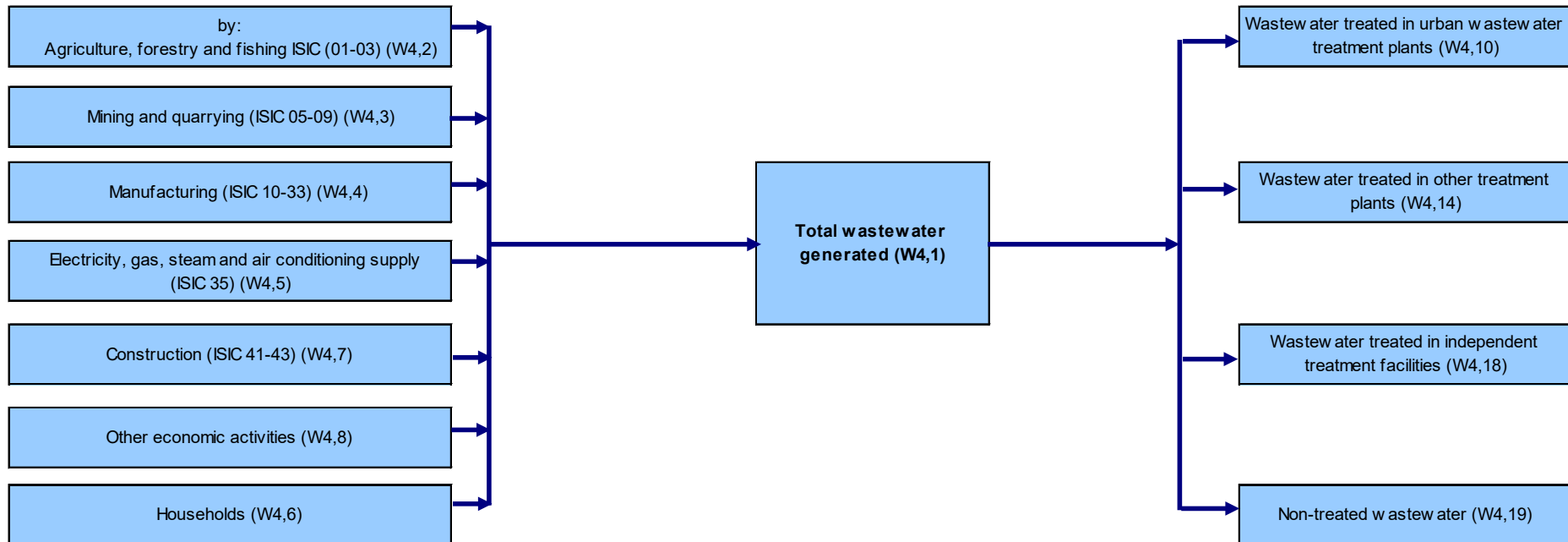


Gross freshwater supplied by water supply industry (ISIC 36) (mio metres³/year)

	2001	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17
Belize	9.7	11.6	11.1	11	10.6	10.3	10.8	10.5	10	10.1	10.3	10.6					
Jamaica	278 ¹	277 ¹	293 ¹	280 ¹	296 ¹	294 ¹	292 ¹	292 ¹	299 ¹	284 ¹	303 ¹	302 ¹	298 ¹	296 ¹	292 ¹	317 ¹	322 ¹
Suriname		28.7	31.6	33.3	32.6	33.1	33.7	33.9	35	36	41	42.8	45.9	47.9	48.3	48.8	48.5

Footnote: 1: Data refers to public water supply from the major supplier and does not include smaller operations.

W4 Wastewater Generation and Treatment



Wastewater generation, treatment, and proportion of wastewater treated

- No data available.

W5 Population Connected to Wastewater Treatment

Line	Category	Unit
1	Population connected to wastewater collecting system	%
2	Population connected to wastewater treatment	%
3	<i>of which at least secondary treatment</i>	%
4	Population with independent wastewater treatment (e.g., septic tanks)	%
5	Population not connected to wastewater treatment (100% - (2) - (4))	%

Population Connected to Wastewater Treatment (%)

Country	latest year	Population connected to wastewater collecting system	Population connected to wastewater treatment	Population with independent wastewater treatment (e.g., septic tanks)	Population not connected to wastewater treatment
Belize	2010	60.37	10.57	49.81	39.63
Dominica	2005	23	13		87



The Sustainable Development Goals



The Sustainable Development Goals



IAEG-SDGs tier classification for global SDG indicators (updated 15 Dec 2017):

<https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/>



6 CLEAN WATER
AND SANITATION



Ensure availability and sustainable management of water and sanitation for all

Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

=> Indicator 6.3.1: Proportion of wastewater safely treated

Target 6.4: 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.

=> Indicator 6.4.1: Change in water-use efficiency over time

=> Indicator 6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

Indicator 6.3.1: Proportion of wastewater safely treated (tier II)

- Custodian Agencies: WHO, UN-Habitat, UNSD; partner agencies: UN Environment, OECD and Eurostat
- Endeavouring to use the UNSD/UN Environment Questionnaire to the extent possible.
 - Response rates remain a challenge
- UNSD participated in an Expert Group Meeting on Global Wastewater Monitoring for the SDGs with co-custodians and other experts.
- Available metadata are here: <https://unstats.un.org/sdgs/metadata/>

Table W4, Line:	Category	Unit
1	Total wastewater generated	1000 m ³ /d
10	Wastewater treated in urban wastewater treatment plants	
14	Wastewater treated in other treatment plants	
18	Wastewater treated in independent treatment facilities	

Indicator = (Lines 10 + 14 + 18)/Line 1

Table W4: Wastewater Generation and Treatment

Line	Category	Unit
1	Total wastewater generated	Millions metres ³ per year
2	By: Agriculture, forestry and fishing (ISIC 01-03)	
3	Mining and quarrying (ISIC 05-09)	
4	Manufacturing (ISIC 10-33)	
5	Electricity, gas, steam and air conditioning supply (ISIC 35)	
6	Electricity industry (ISIC 351)	
7	Construction (ISIC 41-43)	
8	Other economic activities	
9	Households	
10	Wastewater treated in urban wastewater treatment plants	
11	Of which: Primary treatment	
12	Secondary treatment	
13	Tertiary treatment	
14	Wastewater treated in other treatment plants	
15	Of which: Primary treatment	
16	Secondary treatment	
17	Tertiary treatment	
18	Wastewater treated in independent treatment facilities	
19	Non-treated wastewater	
20	Sewage sludge production (dry matter)	1000 t

Indicator 6.4.1: Change in water-use efficiency over time (tier II)

- Custodian Agency: FAO; partner agencies: UNSD, UN Environment, IUCN, OECD and Eurostat
- The indicator can be derived using the seven variables in the table below.
- Application of International Standard Industrial Classification of All Economic Activities (ISIC) Rev. 4.
- Ensuring data provided by countries can inform SDG indicator compilation, but also environment statistics, and environmental-economic accounting.
- Issues raised in discussions include definition of “abstraction” as opposed to “use”. Per the Questionnaire, “Total freshwater available for use” is equal to “Freshwater abstracted” + “Desalinated water” + “Reused water” + “Imports of water” – “Exports of water”.
- Abstraction is known to be used as a proxy for Use.
- Available metadata are here: <https://unstats.un.org/sdgs/metadata/>

Tables W2 and W3, line:	Category	Unit
W2, 4	Freshwater abstracted by water supply industry (ISIC 36)	millions m ³ /y
W2, 5	Freshwater abstracted by households	
W2, 6	Freshwater abstracted by agriculture, forestry and fishing (ISIC 01-03)	
W2, 8	Freshwater abstracted by mining and quarrying (ISIC 05-09)	
W2, 9	Freshwater abstracted by manufacturing (ISIC 10-33)	
W2, 10	Freshwater abstracted by electricity, gas, steam and air conditioning supply (ISIC 35)	
W2, 11	<i>Of which for:</i> Electric power generation, transmission and distribution (ISIC 351)	
W2, 12	Freshwater abstracted by construction (ISIC 41-43)	
W2, 13	Freshwater abstracted by other economic activities	
W3,1	Gross freshwater supplied by water supply industry (ISIC 36)	



Table W2: Freshwater Abstraction and Use

Line	Category	Unit
1	Fresh surface water abstracted	Millions m ³ per year
2	Fresh groundwater abstracted	
3	Freshwater abstracted (=1+2)	
	<i>Of which abstracted by:</i>	
4	Water supply industry (ISIC 36)	
5	Households	
6	Agriculture, forestry and fishing (ISIC 01-03)	
7	<i>of which for:</i> Irrigation in agriculture	
8	Mining and quarrying (ISIC 05-09)	
9	Manufacturing (ISIC 10-33)	
10	Electricity, gas, steam and air conditioning supply (ISIC 35)	
11	<i>of which for:</i> Electric power generation, transmission and distribution (ISIC 351)	
12	Construction (ISIC 41-43)	
13	Other economic activities	

Table W3: Water Supply Industry (ISIC 36)

Line	Category	Unit
1	Gross freshwater supplied by water supply industry (ISIC 36)	Millions m ³ per year
2	Losses during transport by (ISIC 36)	
3	Net freshwater supplied by water supply industry (ISIC 36) (=1-2) (=4+5+6+7+8)	
of which supplied to:		
4	Households	
5	Agriculture, forestry and fishing (ISIC 01-03)	
6	Mining and quarrying (ISIC 05-09)	
	Manufacturing (ISIC 10-33)	
7	Electricity, gas, steam and air conditioning supply (ISIC 35)	
	<i>of which to:</i> Electric power generation, transmission and distribution (ISIC 351)	
8	Construction (ISIC 41-43)	
	Other economic activities	
	Population supplied by water supply industry (ISIC 36)	
19	Total population supplied by water supply industry (ISIC 36)	
10	Urban population supplied by water supply industry (ISIC 36)	
11	Rural population supplied by water supply industry (ISIC 36)	

Indicator 6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (tier I)

- Custodian Agency: FAO; partner agencies: UNSD, UN Environment, IUCN, OECD and Eurostat
- The two variables below contribute to the calculation of the indicator.
- Metadata are available here: <https://unstats.un.org/sdgs/metadata/>

Tables W1, W2, line:	Category	Unit
W1,5	Renewable freshwater resources	millions m ³ /y
W2,3	Freshwater abstracted	

Indicator = Line W2,3/Line W1,5

Table W2: Freshwater Abstraction and Use

Line	Category	Unit
1	Fresh surface water abstracted	Millions m ³ per year
2	Fresh groundwater abstracted	
3	Freshwater abstracted (=1+2)	
	<i>Of which abstracted by:</i>	
4	Water supply industry (ISIC 36)	
5	Households	
6	Agriculture, forestry and fishing (ISIC 01-03)	
7	<i>of which for:</i> Irrigation in agriculture	
8	Mining and quarrying (ISIC 05-09)	
9	Manufacturing (ISIC 10-33)	
10	Electricity, gas, steam and air conditioning supply (ISIC 35)	
11	<i>of which for:</i> Electric power generation, transmission and distribution (ISIC 351)	
12	Construction (ISIC 41-43)	
13	Other economic activities	

Table W1: Renewable Freshwater Resources

Line	Category	Unit
1	Precipitation	Millions m ³ per year
2	Actual evapotranspiration	
3	Internal flow (=1-2)	
4	Inflow of surface and groundwaters from neighbouring countries	
5	Renewable freshwater resources (=3+4)	
6	Outflow of surface and groundwaters to neighbouring countries	
7	Of which: Secured by treaties	
8	Not secured by treaties	
9	Outflow of surface and groundwaters to the sea	

Thank you for your attention!

For more information please contact
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