

UNSD/United Nations Environment Programme Questionnaire on Environment Statistics and outcomes of the 5th meeting of the Expert Group on Environment Statistics



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

Section: WASTE

TABLE OF CONTENTS

Guidance	Introduction, Steps to Follow, Description of Tables
Definitions	List of Definitions
Table R1	Generation of Waste by Source
Table R2	Management of Hazardous Waste
Table R3	Management of Municipal Waste
Table R4	Composition of Municipal Waste
Table R5	Management of Municipal Waste — City Data
Table R6	Electronic waste generation and collection
Table R7	Supplementary information Sheet



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Section: WATER

TABLE OF CONTENTS

Guidance	Introduction, Steps to Follow, Description of Tables and Conversion Table
Definitions	List of Definitions
Table W1	Renewable Freshwater Resources
Table W2	Freshwater Abstraction and Use
Table W3	Water Supply Industry (ISIC 36)
Table W4	Wastewater Generation and Treatment
Table W5	Population Connected to Wastewater Treatment
Table W6	Supplementary information Sheet

Joint Task Force on Environmental Statistics and Indicators – Fifteenth session

Geneva, Switzerland, 25-26 October 2018

Environment Statistics Section, UNSD

UNSD/UN Environment Programme Questionnaire on Environment Statistics

- Objective: to provide internationally comparable statistics on environmental issues based on standard questionnaires and methodology.
- About 170 member states and areas in 5 languages.
- Complemented by the OECD/Eurostat Joint Questionnaire on the State of the Environment – their member states.
- UNSD/UN Environment Programme Questionnaire is consistent and harmonized with the OECD/Eurostat Questionnaire. Close collaboration is maintained on conceptual issues, validation procedures and data validation.
- Sent to National Statistical Offices and Ministries of Environment (usually) every two years.
- September, 2018 will be the 9th collection round since 1999.
- Strong integration with the System of National Accounts, System of Environmental-Economic Accounting through the use of the International Standard Industrial Classification of all economic activities, rev. 4 (ISIC).

UNSD/UN Environment Programme Questionnaire 2018 on Environment Statistics - water section

Table W1: Renewable Freshwater Resources

Table W2: Freshwater Abstraction and Use

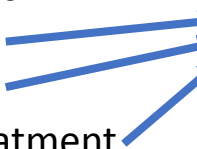
Table W3: Water Supply Industry (ISIC 36)

Table W4: Wastewater Generation and Treatment

Table W5: Population Connected to Wastewater Treatment

Table W6: Supplementary Information Sheet

Modified breakdown of
ISIC in 2018 per SDG
demand



UNSD/UN Environment Programme Questionnaire 2018 on Environment Statistics - waste section

Table R1: Generation of Waste by Source

Table R2: Management of Hazardous Waste

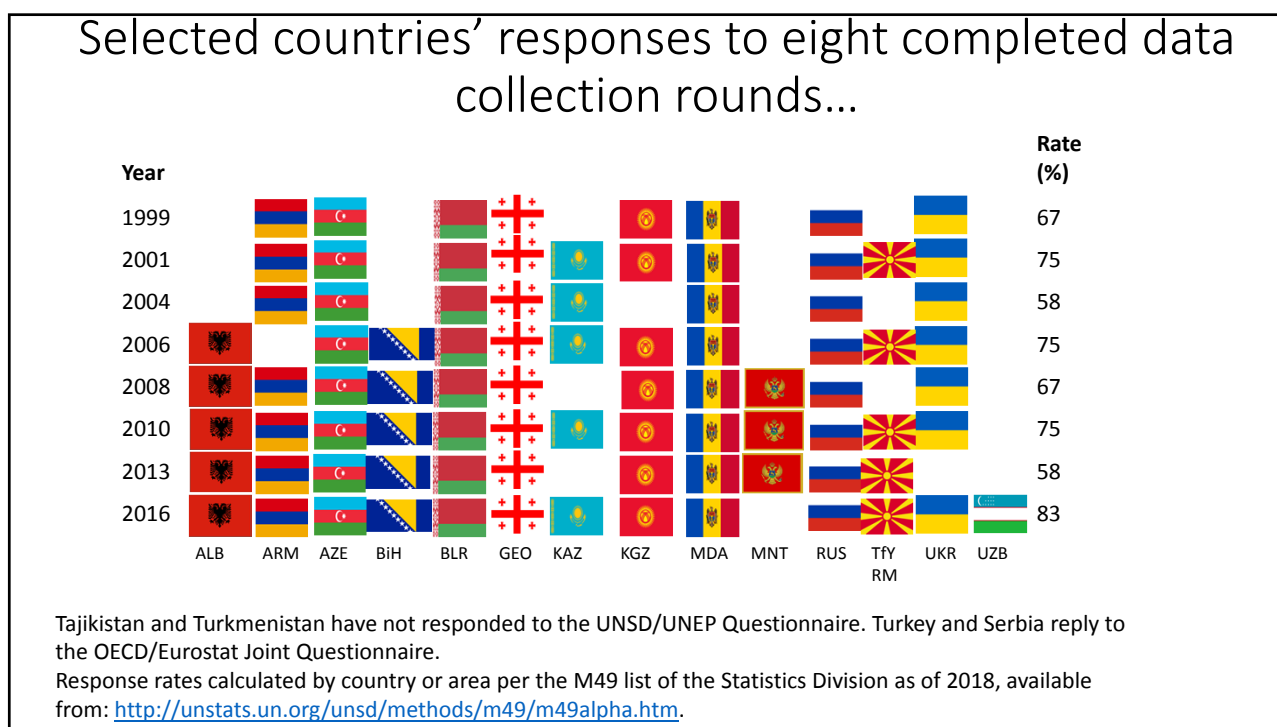
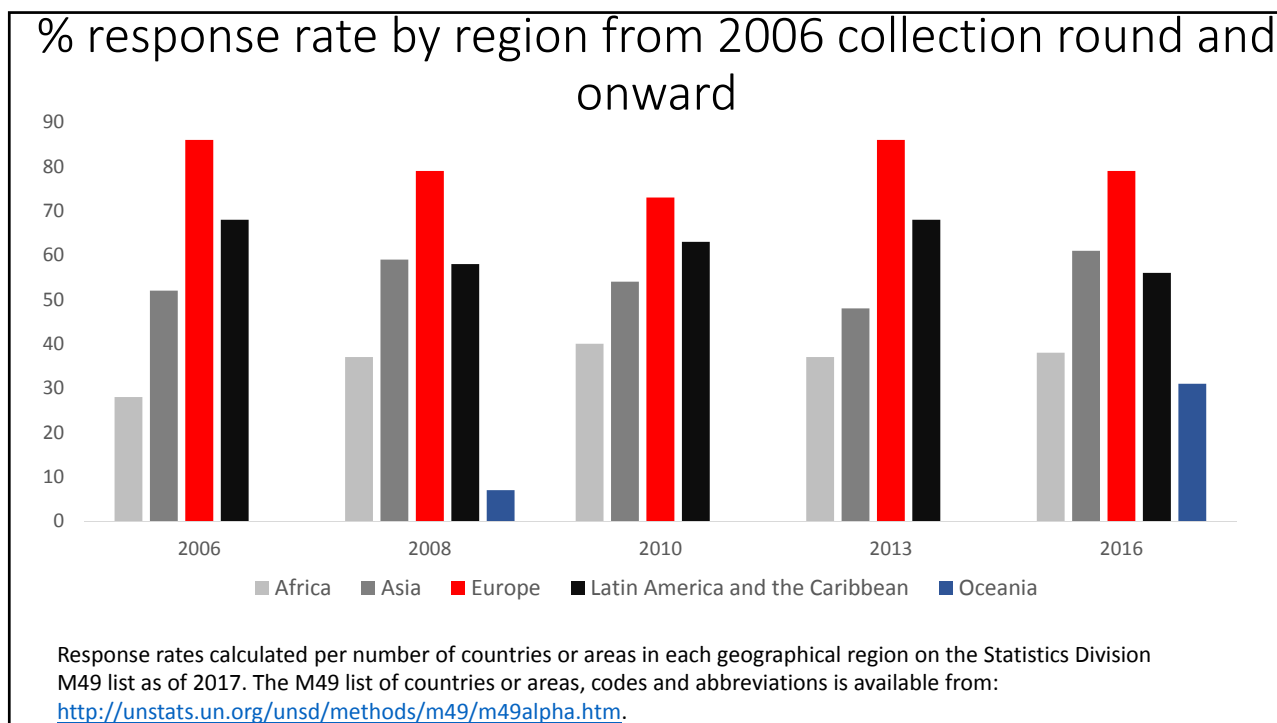
Table R3: Management of Municipal Waste (Municipal waste generated variable being added per SDG demand)

Table R4: Composition of Municipal Waste

Table R5: Management of Municipal Waste — City Data (new variable being added) (Municipal waste generated variable being added per SDG demand)

Table R6: Electronic waste generation and collection (Completely NEW in 2018)

Table R7: Supplementary Information Sheet



SDG indicators related to the UNSD/UN Environment Programme Questionnaire on Environment Statistics – indicators



IAEG-SDGs tier classification for global SDG indicators (updated 11 May 2018):

https://unstats.un.org/sdgs/files/Tier%20Classification%20of%20SDG%20Indicators_11%20May%202018_web.pdf

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 Programme, OECD and Eurostat
- Endeavouring to use the UNSD/UN Environment Programme Questionnaire to the extent possible.
- 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/files/Metadata-06-03-01.pdf>

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

$$\text{Indicator} = (\text{Lines } 7 + 11 + 15) / \text{Line } 1$$

Results of the 2016 data collection round...

Country	Latest year available	Total wastewater generated F	Wastewater treated in urban wastewater treatment plants F	Wastewater treated in other treatment plants	Wastewater treated in independent treatment facilities
1000 metres cubed per day					
Albania	2015	54 ¹	18		
Armenia	2015	2,221	325		
Azerbaijan	2015		595		
Belarus	2015		618		
Bosnia and Herzegovina	2015	443	13		126
Georgia	2000	1,116	650	0.004	
Kazakhstan	2015	16,216	1,553	34	
Montenegro	2012	30,501 ²	14,192		
Republic of Moldova	2015	1,842	306		
Serbia	2015	1,230	124	58	
The former Yugoslav Republic of Macedonia	2000		13		
Turkey	2014		9,593	1,374	
Ukraine	2002		5,784		

F1 Data refer to households only.

F2 Data refer to year 2011.

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

- Custodian Agency: FAO; partner agencies: UNSD, UN Environment Programme, IUCN, OECD and Eurostat
- Using the questionnaire's variables, a contribution to a prospective estimate of the indicator can be derived.
- Issues raised in discussions include definition of "abstraction" as opposed to "use".
- Abstraction is known to be used as a proxy for Use.
- Available metadata are here: <https://unstats.un.org/sdgs/metadata/files/Metadata-06-04-01.pdf>

Tables W2 and W3	Category	Unit
W2, 4	Freshwater abstracted by water supply industry (ISIC 36)	millions m ³ /y
W3,1	Gross freshwater supplied by water supply industry (ISIC 36)	

Results of the 2016 data collection round...

Country	2009	F	2010	F	2011	F	2012	F	2013	F	2014	F	2015	F
	(Gross freshwater supplied)/(Freshwater abstracted) (%)													
Armenia	23.8		24.1		21.2		18.2		17.8		17.5		15.2	
Azerbaijan	6.0		5.5		6.2		5.8		5.8		6.0		5.7	
Belarus	48.4		43.6		41.3		44.5		42.7		44.7		47.1	
Bosnia and Herzegovina	84.7 ₁		83.4 ₁		79.2 ₁		76.6 ₁		76.6 ₁		79.8 ₁		80.1 ₁	
Georgia	27.5		40.1		29.3		30.1		32.7		33.3		25.8	
Kazakhstan	9.8		8.5		9.2		9.7		9.1		8.6		9.2	
Kyrgyzstan	86.7								88.8		88.8		96.7	
Republic of Moldova	13.7		13.5		13.1		14.4		13.9		13.8		14.7	
Serbia	16.5		17.0		15.7		17.4		15.7		18.5		15.8	
Ukraine	19.7 _{2,3}													
Uzbekistan	4.0 ₄		3.6 ₄		4.2 ₄		3.6 ₄		3.9 ₄		4.1 ₄		3.8 ₄	

F1 Figures exclude freshwater abstracted by Agriculture, forestry and fishing (ISIC 01-03) and Electricity industry (ISIC 351).

F2 Data refer to water supply by public (government) supply only.

F3 Excludes abstraction by households.

F4 The water is supplied to the network - total.

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 Programme, IUCN, OECD and Eurostat
- Using the two variables below, a contribution to a prospective estimate of the indicator can be derived.
- Metadata are available here: <https://unstats.un.org/sdgs/metadata/files/Metadata-06-04-02.pdf>

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

Results of the 2016 data collection round...

Country	2009	F 2010	F 2011	F 2012	F 2013	F 2014	F 2015	F
	(Freshwater abstracted)/(Renewable freshwater resources) (%)							
Albania						2.9	3.4	
Armenia	30.1	26.8	26.3	50.5	46.3	51.7	50.8	
Azerbaijan	38.1	32.5	34.7	45.2	49.2	49.0	52.6	
Belarus	1.6							
Bosnia and Herzegovina	1.6 ₁	1.3 ₁	2.6 ₁	1.9 ₁	1.7 ₁	1.3 ₁	1.9 ₁	
Kazakhstan	21.5 ₂	16.6 ₂	21.6 ₂	23.1 ₂	18.6 ₂	21.0 ₂	20.2	
Kyrgyzstan	26.7 ₃	25.9	38.9	31.1				
Republic of Moldova	7.2	4.6	8.0	10.0	7.2	7.5	9.2	
Russian Federation	1.6	1.7	1.6	1.6	1.4			
Serbia	2.4	1.6	3.2	2.8	2.1	1.7	2.5	

- F1 Figures exclude freshwater abstracted by Agriculture, forestry and fishing (ISIC 01-03) and Electricity industry (ISIC 351). Annual volumes of the internal surface flows and inflows from neighbouring countries are calculated by the method of GGI.
- F2 Underground runoff is not taken into account.
- F3 Data on the intrinsic inflow of surface water (river runoff) without taking into account groundwater and precipitation.



Make cities and human settlements inclusive, safe, resilient and sustainable

- Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

=> **Indicator 11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities**

Indicator 11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities (tier II)

- Custodian Agencies: UN-Habitat and UNSD; partner agencies: UN Environment Programme
- UNSD participating in UN Environment and UN-HABITAT Joint Expert Group Meeting on Waste SDG indicators 11.6.1, 12.4.2, 12.5.1 (participating in refinements to draft methodologies)
- Issues:
 - No internationally agreed definition of urban solid waste
 - What is adequate final discharge? Could it be (recycling) + (composting) + (incineration with energy recovery)?
 - Denominator: Waste "collected" or "generated" ? => Difficult to estimate municipal waste generated.
 - OECD/Eurostat do not collect data at the city level. Eurostat did a pilot at the European regions level => No city level for "developed" countries.
- Available metadata are here: <https://unstats.un.org/sdgs/metadata/files/Metadata-11-06-01.pdf>

Table R5, line:	Category	Unit
1	Total amount of municipal waste generated (NEW!)	1000 t
6	Recycling	
7	Composting	
9	Incineration with energy recovery	

Indicator = (Lines 6 + 7 + 9)/Line 1



Ensure sustainable consumption and production patterns

- Target 12.4: By 2030, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

=> **Indicator 12.4.2: Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment**

=> **Indicator 12.5.1: National recycling rate, tons of material recycled**

Indicator 12.4.2: Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment (tier III)

- Custodian Agencies: UN Environment Programme (more specifically the BRS Secretariat) and UNSD; partner agencies: OECD and Eurostat
- UNSD involved in the methodology and data collection
- Issues:
 - Terminology of the UNSD/UN Environment Programme Questionnaire and national reports under the Basel Convention not harmonized.
 - Definition of treatment: recycled and incinerated or incinerated with energy recovery? (The Basel Convention does not have a definition of treatment)
 - Year of treatment can be different from year of generation.
- Work plan available here: <https://unstats.un.org/sdgs/tierIII-indicators/files/Tier3-12-04-02.pdf>

Table R2, line:	Category	Unit
Indicator = Line 2/Population	Indicator = Line 6/Line 2	Indicator = Line 7/Line 2
2	Hazardous waste generated during the year	tonnes
5	Hazardous waste treated or disposed of during the year	
6	Recycling	
7	Incineration	

	Country	2009	F	2010	F	2011	F	2012	F	2013	F	2014	F	2015	F
Results of the 2016 data collection round...	Hazardous waste generated per person (tonnes)														
	Armenia	15.27		15.13		16.10 ₁		16.33		20.01		19.83		19.03	
	Azerbaijan	1.48		1.55		2.03		3.21		2.16		4.80		2.73	
	Belarus	8.02 ₂		9.69 ₂		9.96 ₂		13.97 ₂		14.93 ₂		18.18 ₂		12.73 ₂	
	Bosnia and Herzegovina	0.26		0.28				0.12 ₃				0.24 ₃			
	Kazakhstan	1,406.04		1,848.39		2,526.93		2,103.59		2,221.24		1,929.43		1,417.30	
	Kyrgyzstan	106.42		107.09		184.38		88.13		140.00		177.04		179.00	
	Republic of Moldova	0.04		0.02		0.08		0.10		0.10		0.03		0.18	
	Russian Federation	98.55		79.89		83.87		79.25		81.25					
	Serbia	110.61		123.61		142.28		161.29		187.91		151.56		187.22	
	The former Yugoslav Republic of Macedonia			35.07	₄			32.14				0.003 ₅			
	Turkey			4.46				5.35				4.46			
	Ukraine											1.65		1.32	
	F1	Classification of waste by classes of hazard is done in accordance with the relevant legislation of RA and the Classifier, which was last amended in 2010.													
F2	Hazardous waste generated during the year includes waste imported during the year.														
F3	Significant change of quantities are due to corrected data provided by the Bosnia and Herzegovina entity Federal Institute for Statistics for 2010 and 2012.														
F4	Data covers manufacturing section only.														
F5	A new method of data collection was used, and also the response rate was lower, so these are the reasons why data are much lower than in previous years. The data are collected in tonnes.														

Indicator 12.5.1: National recycling rate, tons of material recycled (tier III)

Custodian Agencies: UN Environment Programme and UNSD; partner agencies: OECD and Eurostat

• Issues:

- Difficult to have statistics representing all waste, and other types of waste (hazardous waste) already monitored by other indicators => use of municipal waste as a proxy.
- Discussion with respect to municipal waste “collected” as opposed to municipal waste “generated” is also a feature (as in indicator 11.6.1).
- Should “composting” and “incineration with energy recovered” be excluded or included?
- Inclusion of imports-exports of municipal waste.
- Work plan available here: <https://unstats.un.org/sdgs/tierIII-indicators/files/Tier3-12-05-01.pdf>

Indicator = Line 8/Line 7; or

Indicator = Line 8/Line 1

Table R3, line:	Category	Unit
1	Total amount of municipal waste generated (NEW!)	1000 t
7	Municipal waste managed in the country	
8	Recycling	

Results of the 2016 data collection round...

Country	2009	F	2010	F	2011	F	2012	F	2013	F	2014	F	2015	F
	(Municipal waste recycled)/Municipal waste managed in the country (%)													
Albania									24.0		21.6		8.2	
Belarus	9.6 ₁		10.4 ₁		10.9 ₁		11.6 ₁		13.1 ₁		15.4 ₁		15.4 ₁	
Kazakhstan	0.8		0.7		0.8		0.6		0.8		0.6		0.3	
Serbia									1.3		0.9		1.0	
The former Yugoslav Republic of Macedonia	0 ₂				0		0		0		0		0	

Has been replaced by "Municipal waste generated" in the 2018 collection round per SDG demand

F1 Data are collected in cubic meters. In order to convert them in tonnes a waste density coefficient 0.18 tonnes/m³ is used as prescribed in the Order of the Ministry of Housing and Public Utility Services.

F2 Data are collected through the regular annual survey on municipal waste. The source of data are municipal enterprises that collected municipal waste. For areas not covered by a municipal waste collection system, the amount of waste generated is estimated. The methodology is fully compliant with EU Regulation 2150/2002.

Outcomes of the 5th Expert Group Meeting on Environment Statistics (New York, May, 2018)



5th Expert Group Meeting on Environment Statistics (New York, May, 2018)

The meeting was organized in four sessions as follows:

Session 1:	Environment Statistics Toolbox
Session 2:	Environment Statistics Data Collection and Surveys
Session 3:	Climate Change Statistics
Session 4:	Other Work in Environment Statistics

Main outcomes

- Periodic and continual release of the Manual on the Basic Set of Environment Statistics
 - Methodology sheets already released: Ecosystems and biodiversity; land cover and land use; mineral resources; energy resources; crops and livestock statistics; water resources; human settlements; environmental protection expenditure; forests
 - Other methodology sheets on air quality, disasters, waste soon to be released

5th Expert Group Meeting on Environment Statistics (New York, May, 2018)

- The development of a global set of climate change statistics and indicators based upon:
 - the UNECE set of climate change-related statistics and indicators,
 - the (intergovernmental panel on climate change) IPCC framework; and linked to the UNFCCC through the Paris Agreement
- UNSD to conduct a Global Consultation in 2019-2020 with results ready prior to the Global Stocktake of the Paris Agreement in 2023.
- Global Consultation to assess relevance, methodological soundness and availability of indicators to derive a Global Set of Climate Change Statistics and Indicators
- UNSD shall conduct a bottom-up and very broad stakeholder consultation in developing climate change statistics and indicators (e.g. consultation with international, regional, sub-regional, and national level organisations)
- Potential for the NSO to become the national aggregator of climate change information
 - Utilising National Communications (NCs) to UNFCCC for a key data source
- The significance of the role of the NSO in coordinating among other institutions in order to provide data to the United Nations Framework Convention on Climate Change (UNFCCC)