UNSD/UN Environment Questionnaire on Environment Statistics

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Statistics Division

UNSD/UNE data collection

- 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/UNEP Questionnaire is consistent and harmonized with the OECD/Eurostat Questionnaire. Close collaboration is maintained on conceptual issues, validation procedures and data validation.

UNSD/UNE data collection

- Collaboration is also maintained with, inter alia, FAO/Aquastat (water statistics), the Basel Convention (hazardous waste), UN Regional Commissions on similar issues, including translation.

- UNSD/UNEP Questionnaire on Environment Statistics is sent to National Statistical Offices and Ministries of Environment. The Questionnaire started with just UNSD but since 2004 it has been conducted jointly with UNEP.

- Those indicators already being collected by other UN agencies or other international institutions were excluded from the UNSD/UNEP Questionnaire on Environment Statistics, wherever possible.

- In the 1999, 2001 and 2004 data collection rounds, UNSD obtained data on air, land, waste and water, but in harmonizing with other international collections, as of 2006, UNSD has solely collected data on waste and water.

UNSD/UNE data collection

- UNSD/UNEP Questionnaire is linked to economic statistics through the use of ISIC Rev. 4 in several tables, and contains:
  - time series tables
  - detailed guidance section as well as relevant definitions to assist the user to complete the Questionnaire
  - extensive built-in validation procedures
  - notes section for footnotes or other references
  - supplementary sheets for additional information

- Better alignment with the System of National Accounts, System of Environmental-Economic Accounting through the use of ISIC.

Waste Questionnaire

Waste

R1: Generation of Waste by Source

R2: Management of Hazardous Waste (SDG-related)

R3: Management of Municipal Waste (SDG-related)

R4: Composition of Municipal Waste

R5: Management of Municipal Waste – City Data (SDG-related)

R6: Supplementary information sheet

http://unstats.un.org/unsd/environment/questionnaire.htm

Table R2: Management of Hazardous Waste

Line	Category	Unit
1	Stock of hazardous waste at the beginning of the year	tonnes
2	Hazardous waste generated during the year	tonnes
3	Hazardous waste imported during the year	tonnes
4	Hazardous waste exported during the year	tonnes
5	**Hazardous waste treated or disposed of during the year (=6+7+9+10)**	tonnes
6	*Amounts going to:* Recycling	tonnes
7	Incineration	tonnes
8	*of which:* with energy recovery	tonnes
9	Landfilling	tonnes
10	Other, please specify in the footnote	tonnes
11	Stock of hazardous waste at the end of the year (=1+2+3-4-5)	tonnes

Table R3: Management of Municipal Waste

Line	Category	Unit
1	Municipal waste collected from households	1000 t
2	Municipal waste collected from other origins	1000 t
3	**Total amount of municipal waste collected (=1+2)**	1000 t
4	Municipal waste imported for treatment/disposal	1000 t
5	Municipal waste exported for treatment/disposal	1000 t
6	**Municipal waste managed in the country (=3+4-5)**	1000 t
7	*Amounts going to:* Recycling	1000 t
8	Composting	1000 t
9	Incineration	1000 t
10	*of which:* with energy recovery	1000 t
11	Landfilling	1000 t
12	*of which:* controlled landfilling	1000 t
13	Other, please specify in the footnote	1000 t
14	Total population served by municipal waste collection	%
15	Urban population served by municipal waste collection	%
16	Rural population served by municipal waste collection	%

Table R5: Management of Municipal Waste – City Data

Line	Category	Unit
1	Total population of the city	1000 inh.
2	Percentage of city population served by municipal waste collection	%
3	Municipal waste collected from households	1000 t
4	Municipal waste collected from other origins	1000 t
5	**Total amount of municipal waste collected (=3+4)**	1000 t
6	*Amounts going to:* Recycling	1000 t
7	Composting	1000 t
8	Incineration	1000 t
9	*of which:* with energy recovery	1000 t
10	Landfilling	1000 t
11	*of which:* controlled landfilling	1000 t
12	Other, please specify in the footnote	1000 t

Water Questionnaire

- Water
  - 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
  - W6 Supplementary information sheet
    Tables W2, W3 and W4 are linked to economic statistics through the use of ISIC Rev. 4

http://unstats.un.org/unsd/environment/questionnaire.htm

Table W1: Renewable Freshwater Resources

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

Table W2: Freshwater Abstraction and Use

Line	Category	Unit
1	Fresh surface water abstracted	mio m^3/y
2	Fresh groundwater abstracted	mio m^3/y
3	**Freshwater abstracted (=1+2)**	mio m^3/y
	of which abstracted by:	
4	Water supply industry (ISIC 36)	mio m^3/y
5	Households	mio m^3/y
6	Agriculture, forestry and fishing (ISIC 01-03)	mio m^3/y
7	Manufacturing (ISIC 10-33)	mio m^3/y
8	Electricity industry (ISIC 351)	mio m^3/y
9	Other economic activities	mio m^3/y
10	Desalinated water	mio m^3/y
11	Reused water	mio m^3/y
12	Imports of water	mio m^3/y
13	Exports of water	mio m^3/y
14	**Total freshwater available for use (=3+10+11+12-13)**	mio m^3/y
15	**Losses during transport**	mio m^3/y
16	**Total freshwater use (=14-15)**	mio m^3/y
	of which used by:	
17	Households	mio m^3/y
18	Agriculture, forestry and fishing (ISIC 01-03)	mio m^3/y
19	*of which for:* Irrigation in agriculture	mio m^3/y
20	Manufacturing (ISIC 10-33)	mio m^3/y
21	Electricity industry (ISIC 351)	mio m^3/y
22	Other economic activities	mio m^3/y

Table W4: Wastewater Generation and Treatment

Line	Category	Unit
1	**Total wastewater generated**	1000 m^3/d
2	by: Agriculture, forestry and fishing ISIC (01-03)	1000 m^3/d
3	Manufacturing (ISIC 10-33)	1000 m^3/d
4	Electricity industry (ISIC 351)	1000 m^3/d
5	Other economic activities	1000 m^3/d
6	Households	1000 m^3/d
7	Wastewater treated in urban wastewater treatment plants	1000 m^3/d
8	*Of which:* Primary treatment	1000 m^3/d
9	Secondary treatment	1000 m^3/d
10	Tertiary treatment	1000 m^3/d
11	Wastewater treated in other treatment plants	1000 m^3/d
12	*Of which:* Primary treatment	1000 m^3/d
13	Secondary treatment	1000 m^3/d
14	Tertiary treatment	1000 m^3/d
15	Wastewater treated in independent treatment facilities	1000 m^3/d
16	Non-treated wastewater	1000 m^3/d
17	Sewage sludge production (dry matter)	1000 t

UNSD data validation

– To promote data quality assurance UNSD carries out extensive data validation procedures that include built-in automated procedures, manual checks and cross-references to national sources of data.

– Communication is carried out with countries for clarification and validation of data.

– UNSD does not make any estimation or imputation for missing values so the number of data points provided are actual country data.

– Only data that are considered accurate or those confirmed by countries during the validation process are included in UNSD's environment statistics database and disseminated on UNSD's website.

UNSD data collection – responses

Year:	1999	2001	2004	2006	2008	2010	2013	2016
Count of countries sent questionnaire:	168	177	158	163	171	172	172	170
Number of responses (water and/or waste):	49	62	68	78	83	83	81	51 and counting

– Responses refer to the number of countries that provided data, either in water or waste, or both.

– Although there has been a trend in more data and more countries responding, it is still insufficient given the growing demand for environment statistics.

– The gap between data points collected and validated against total potential data points reflects the relatively emerging nature of environment statistics, particularly in developing countries.

UNSD data collection

Report of the Secretary-General on Environment Statistics (E/CN.3/2016/27) for the 47th session of the Statistical Commission, along with its Background Document, provide a summary of the results of the international collections of environment statistics carried out by UNSD from 1999-2013.

http://unstats.un.org/unsd/statcom/47th-session/documents/2016-27-Environment-statistics-E.pdf

http://unstats.un.org/unsd/statcom/47th-session/documents/BG-2016-27-EnvironmentStats-E.pdf

UNSD data collection – responses

Table 2 (SG report on environment statistics - (E/CN.3/2016/27))
Number of responses and percentage of response rates by geographical region and year of data collection

	1999		2001		2004		2006		2008		2010		2013	
	No.	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*	*No.*	*%*
Africa	8	14	13	23	22	39	16	28	21	37	23	40	21	37
Asia	19	41	21	46	20	43	24	52	27	59	25	54	22	48
Europe	10	71	9	64	7	50	11	79	11	79	10	71	11	79
Latin America and the Caribbean	11	28	18	45	19	48	27	68	23	58	25	63	27	68
Oceania	1	7	1	7	–	–	–	–	1	7	–	–	–	–
Total	**49**	**29**	**62**	**35**	**68**	**43**	**78**	**48**	**83**	**49**	**83**	**48**	**81**	**47**

	1999	2001	2004	2006	2008	2010	2013
Countries that received the questionnaire	168	177	158	163	171	172	173

The Background Document to the Statistical Commission contains detailed tables (pgs. 6-15) that present the number of responses to all variables in the latest data collection round (the 2013 collection round) for the years 2000 to 2012 for both water and waste respectively.

Statistics Division

What's different this collection round?

- Eurostat added tables to the waste collection for six countries who are implementing the Shared Environmental Information System (SEIS) in close collaboration with UNSD

- UNSD's periodic dissemination of data when finalized

- UNSD and several key users (institutional: [UNEP, UN-HABITAT, World Bank]; academia) of this data collection have been liaising with one another on new (often SDG-related) issues.

UNSD data dissemination

UNSD disseminates data through:

– UNSD Environmental Indicators (Air and climate, Biodiversity, Energy and minerals, Forests, Governance, Inland water resources, Land and agriculture, Marine and coastal areas, Natural disasters, and Waste) (http://unstats.un.org/unsd/environment/qindicators.htm)

– Country Files (access to country files is restricted to countries and international organizations that participate in the data collection (http://unstats.un.org/unsd/environment/Questionnaires/index.asp)

– Country Snapshots (these include UNSD environmental indicators and other economic/demographic data (http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm)

– Environment statistics in UNData (http://data.un.org/)

UNSD data collection – Conclusion

- Data completeness and data quality remain a challenge (in particular for developing countries).

- Challenges: national capacity constraints (financial, human, technical), inadequate institutional set-up and collaboration within countries in environment statistics.

- Measures to address challenges: Environment Statistics Section of UNSD, in collaboration with key partners, is assisting countries in strengthening their statistical capacity through training workshops and direct country assistance.