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Environment statistics

Report of the Secretary-General

Summary

The present report, which was prepared in accordance with Economic and Social Council decision 2017/228 and past practices, provides a summary of activities carried out during the biennium 2016–2017, including on: progress made towards the implementation of the Framework for the Development of Environment Statistics 2013; developments in methodological work (including the Framework for the Development of Environment Statistics toolkit); the third and fourth meetings of the Expert Group on Environment Statistics; and training and capacity-building provided to regions, subregions and countries. It also lays out the work plan for the biennium 2018–2019. Since the work programme includes global collection, compilation and dissemination of environment statistics and indicators, the report also provides a summary of the results of the international collections of environment statistics carried out by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat from 1999 to 2016, as well as conclusions with relevance to future work (especially in relation to the environmentally related Sustainable Development Goals). The Statistical Commission is invited to take note of the report.

* E/CN.3/2018/1.



I. Introduction

1. At its forty-seventh session, held from 8 to 11 March 2016, the Statistical Commission took note of the report of the Secretary-General on environment statistics (E/CN.3/2016/27), in which the Secretary-General summarized developments in the implementation of the Framework for the Development of Environment Statistics 2013, its associated technical cooperation and capacity-building activities and the plans for the biennium 2016–2017.

2. The present report provides an overview of the activities carried out in 2016 and 2017, including a status report on the publication and use of the Framework for the Development of Environment Statistics, the progress of methodological work, the third and fourth meetings of the Expert Group on Environment Statistics, the advancement of the application of the Framework in countries worldwide, related training and capacity-building activities, data-collection activities and advocacy. It also discusses the tasks and plans for the biennium 2018–2019. A background document to the report (see https://unstats.un.org/unsd/envstats/Inventory_datacollection_dissemination and para. 23 below) contains more detailed information on the data collection and dissemination activities carried out by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat and by other international organizations.

II. Activities carried out in 2016 and 2017

A. Methodological work

Framework for the Development of Environment Statistics 2013 and the Expert Group on Environment Statistics

3. The Framework for the Development of Environment Statistics 2013, which was officially edited in 2016 and is currently being finalized for printing, is available from the website of the Statistics Division in English only (<https://unstats.un.org/unsd/envstats/fdes.cshtml>).

4. Further developments in the implementation of the Framework include the continuation of the work of the Expert Group on Environment Statistics, which is assisting the work of the Statistics Division on methodological development, in particular with the Manual on the Basic Set of Environment Statistics, which provides detailed guidance on how to compile environment statistics. The Expert Group held its third meeting in New York in April 2016 and its fourth meeting in Prague in May 2017 (see https://unstats.un.org/unsd/envstats/fdes/fdes_eges.cshtml). The meetings were attended by experts from developed and developing countries, the United Nations regional commissions, the European Environment Agency, the Statistical Office of the European Union (Eurostat), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme (UNEP), United Nations University, the secretariat of the United Nations Framework Convention on Climate Change and academia. These and previous meetings of the Expert Group were chaired by Ms. Iva Ritschelová, late President of the Czech Statistical Office.

5. The discussions of the Expert Group were based on documents and corresponding presentations prepared by the members of the Group and by the Statistics Division. All papers and presentations submitted for the meetings of the

Group, as well as the reports of the meetings, are available on the website of the Expert Group (see https://unstats.un.org/unsd/envstats/fdes/fdes_eges.cshtml).

Manual on the Basic Set of Environment Statistics

6. The members of the Expert Group expressed their appreciation to the Statistics Division and to all experts who contributed to the work on the Manual on the Basic Set of Environment Statistics and discussed the content of the chapters of the Manual at both of its meetings. Presentations were given and discussions held on several methodology sheets contained in the Manual. The Statistics Division is working on the revision of the methodology sheets in line with the comments made at the meetings. Several sheets have been published on the Division's website, including sheets covering the topics of minerals, energy, water and crops and livestock in the Framework for the Development of Environment Statistics (https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshtml). Methodology sheets on air quality, ecosystems and biodiversity, emissions of greenhouse gases, environmental protection, environmental information and awareness, forests, geology and soils, human settlements, land use and land cover, natural disasters and waste are forthcoming.

Environment Statistics Self-Assessment Tool

7. Following the completion of the Environment Statistics Self-Assessment Tool, the Statistics Division developed a reporting template for it, which was reviewed by the Expert Group. Comments were received on the template requesting that it be tailored for use in the implementation of the Framework for the Development of Environment Statistics in national environment statistics programmes and in the development of national action plans for the implementation of the Framework. The Statistics Division is working on the revision of the reporting template.

8. The Environment Statistics Self-Assessment Tool, which has been applied successfully in regional training workshops and through country initiatives in all regions, is available in Arabic, Chinese, English, French, Russian and Spanish from the website of the Statistics Division (<https://unstats.un.org/unsd/envstats/fdes/essat.cshtml>).

Repository of environmental surveys

9. In order to assist countries with the conduct of surveys in various environmental fields, the Statistics Division, with the support of the Expert Group, has developed a repository of national census and survey questionnaires related to environment statistics (<https://unstats.un.org/unsd/envstats/censuses/>). The Statistics Division welcomes the contributions of censuses and surveys from experts in the field of environment statistics from all countries in all official United Nations languages and in other languages. The censuses and surveys are being made available for information and to help improve environment statistics collections. Available censuses and surveys cover the environmental aspects of a variety of themes relevant to environment statistics, including agriculture, air and climate, energy, environmental expenditure, fisheries, waste and water. Additional supporting documentation to complement these censuses and surveys, such as reporting instructions, field reports, quality reports and analytical reports, are being sought from countries. Once received, they will also be made available on the website.

Climate change statistics

10. The Statistics Division has been engaged in work on climate change statistics, and more details on its work in this field are available in the report of the Secretary-General on climate change statistics to the forty-ninth session of the Statistical Commission (E/CN.3/2018/14).

B. Implementation of the Framework for the Development of Environment Statistics 2013 through training and capacity-building activities

11. The Framework for the Development of Environment Statistics was used in the project under tranche 9 of the Development Account, entitled “Supporting Member States in developing and strengthening environment statistics and integrated environmental-economic accounting for improved monitoring of sustainable development”, which ran from 2014 to 2017, and it is now being used in the project under tranche 10 on statistics and data, running from 2016 until 2019.

12. For the above-mentioned project under tranche 9 of the Development Account, the Statistics Division provided capacity development for the strengthening of environment statistics to the secretariat of the East African Community and its member States, Burundi, Kenya, Rwanda, Uganda and the United Republic of Tanzania, through three regional workshops and national missions (<https://unstats.un.org/unsd/envstats/EAC/>). South Sudan, a new member of the Community, also participated in the final workshop, held in October 2017. The secretariat of the East African Community has developed a regional compendium on environment statistics linked to the Sustainable Development Goals and a regional action plan on environment statistics, and it is in the process of establishing a regional technical working group on environment statistics. A number of countries have made good progress in developing environment statistics, using the Framework for the Development of Environment Statistics and the Environment Statistics Self-Assessment Tool, in the development of national compendiums of environment statistics and national action plans, as well as in the establishment of national technical working groups on environment statistics.

13. In June 2017, as part of the ongoing project under tranche 10 of the Development Account on statistics and data, the Statistics Division provided training for participants from over 30 African countries on the Framework through an e-training session organized in cooperation with the Economic Commission for Africa. This was followed by a regional seminar on the Framework, organized in Kenya in cooperation with the Economic Commission for Africa and UNEP, for participants from eight African countries. The seminar was aimed at deepening the knowledge and skills of individuals active in the field of environment statistics. Further capacity-building activities will take place through country missions focusing on the development of compendiums of statistics based on the Framework and the development of national action plans to further enhance its implementation. The Statistics Division has also participated in training activities organized by other regional commissions, such as the Economic and Social Commission for Western Asia, related to the project under tranche 10 of the Development Account.

14. Several United Nations regional commissions and regional economic communities, such as the Common Market for Eastern and Southern Africa and the Economic Community of West African States, have been using the Framework and

the Environment Statistics Self-Assessment Tool for the further advancement of environment statistics in their member States. The Statistics Division has been collaborating with these institutions and has organized joint activities, including regional or subregional training workshops or national missions (<https://unstats.un.org/unsd/envstats/comesa/>). Most recently, in November 2017, the Statistics Division partnered with the African Development Bank to organize a workshop on the Framework for the member States of the Economic Community of Central African States.

15. The National Institute of Statistics and Geography of Mexico, together with the Economic Commission for Latin America and the Caribbean, led a regional public goods project, with the support of the Inter-American Development Bank, to strengthen the collection of data on environment statistics in the region, using the Framework and the Basic Set of Environment Statistics and by adapting the Environment Statistics Self-Assessment Tool to serve as an instrument for data collection. The final workshop was held in November 2017.

16. Implementation of the Framework is advancing well and progress has been made in several countries in all regions. This has been aided by additional materials establishing the relevance of the Framework to the Sustainable Development Goals, including a comparison table identifying those statistics within the Framework that are necessary for compiling data on the indicators of the individual Goals. Several countries have made a good start by developing compendiums of environment statistics based on the Framework, which are being made available on the website of the Statistics Division (see <https://unstats.un.org/unsd/envstats/fdescompendia.cshtml>).

C. Data collection and dissemination activities

17. The Statistics Division conducted its first data collection in 1999, requesting data from 168 countries and areas. Seven subsequent data collection rounds have taken place, with the most recent one, in 2016, requesting data from 173 countries and areas. According to the agreement between the Organization for Economic Cooperation and Development (OECD), Eurostat and the Statistics Division, the countries and areas covered by the joint OECD/Eurostat Questionnaire on the State of the Environment were not included in the process of data collection carried out by the Statistics Division. Both data collection processes are well coordinated and the questionnaires are fully compatible using identical definitions and classifications. Those indicators already being collected by other United Nations agencies and other international institutions were excluded from the Statistics Division/UNEP Questionnaire on Environment Statistics, wherever possible, thus allowing the Statistics Division to focus its limited resources on more narrowly concentrated fields and to avoid duplication in selected tables. In the 1999, 2001 and 2004 data collection rounds, the Statistics Division obtained data on air, land, waste and water. Since 2006, the Division has collected data solely on waste and water, with a view to harmonizing its data with other international collections.

18. Following the adoption of the global indicator framework for the Sustainable Development Goals and targets at the forty-eighth session of the Statistical Commission (E/2017/24-E/CN.3/2017/35), the Statistics Division/UNEP Questionnaire on Environment Statistics has received increased attention from international agencies that are key stakeholders in this field of work. The increased attention reveals the robustness of the questionnaire and its applicability to data compilation relevant to the targets of the Sustainable Development Goals.

19. Although the trend shows that more countries and areas are responding, with an unprecedented number of completed questionnaires in the 2016 collection round, there is still much scope for improvement in response rates, given the growing demands for environment statistics, especially in the light of the equal standing given to the environment alongside economy and society as pillars of the 2030 Agenda for Sustainable Development.

20. Table 1 presents a summary of the responses received in the eight Statistics Division data collection rounds by year of data collection. Fluctuation in the number of questionnaires sent by the Statistics Division across the eight rounds is the result of a number of factors, including the emergence of newly independent countries and the accession of a number of States Members of the United Nations to OECD or the European Union.

Table 1
Summary of responses for all data collection rounds: 1999–2016

	1999	2001	2004	2006	2008	2010	2013	2016
Total responses	51	62	68	80	84	84	81	89
Response rate (percentage)	30	35	43	49	49	49	47	51
Countries and areas that received the questionnaire	168	177	158	163	171	172	173	173

21. Substantial differences can be observed in the development and availability of environment statistics when the results of the questionnaire are analysed at the regional level. Table 2 gives a regional overview of the number of responses and the percentage of responses for each year of the data collection round.

Table 2
Number of responses and percentage of responses by geographical region and year of data collection^a

	1999		2001		2004		2006		2008		2010		2013		2016	
	No.	%														
Africa	8	14	13	23	22	39	16	28	22	37	23	40	20	37	21	38
Asia	20	43	21	46	20	43	24	52	27	59	25	54	23	48	28	61
Europe	10	71	9	64	7	50	12	86	11	79	11	73	12	86	11	79
Northern America	–	–	–	–	–	–	1	100	1	100	1	100	1	100	1	100
Latin America and the Caribbean	11	28	18	45	19	48	27	68	22	58	24	63	26	68	23	56
Oceania	2	13	1	7	–	–	–	–	1	7	–	–	–	–	5	31
Total	51	29	62	35	68	43	80	49	84	49	84	49	81	47	89	51

^a Response rates were calculated according to the number of countries or areas in each geographical region on the Statistics Division M49 list (showing standard country or area codes for statistical use) as of 2017. The M49 list of countries or areas, codes and abbreviations is available from: <http://unstats.un.org/unsd/methods/m49/m49alpha.htm>.

22. As mentioned above, existing and future data collected by the Statistics Division will be invaluable, in particular for those targets under the Sustainable Development Goals that require data on environment statistics. Table 3 shows counts of responses for selected variables that have high relevance to Goals 6, 11 and 12. The table shows

an increased number of responses and greater stability in time series data. Given the importance of producing national data on water and waste for quality and informed decision-making, and the fact that these data are extremely pertinent to the monitoring of the Goals, it is critical to improve the production of environment statistics; thus the heightened need for training and capacity-building in the field of environment statistics.

Table 3
Number of responses by selected variables that have high relevance to the Sustainable Development Goals, targets and indicators (Goals, targets and indicators given in parentheses)^{a,b,c}

	2010	2011	2012	2013	2014	2015
Water						
Renewable freshwater resources (6.4.2)	24	26	26	21	19	20
Freshwater abstracted (6.4.2)	50	46	53	44	40	40
Freshwater abstracted by water supply industry (6.4.1)	34	31	37	32	27	26
Gross freshwater supplied by water supply industry (6.4.1)	48	49	55	44	37	36
Total wastewater generated (6.3.1)	15	16	16	16	17	18
Wastewater treated in urban wastewater treatment plants (6.3.1)	27	30	29	26	27	29
Wastewater treated in other treatment plants (6.3.1)	9	9	9	7	7	7
Wastewater treated in independent treatment facilities (6.3.1)	4	4	5	4	4	4
Waste						
Total amount of municipal waste collected (11.6.1, 12.5.1)	44	47	47	44	39	38
Municipal waste managed in country (11.6.1, 12.5.1)	21	30	32	33	32	31
Municipal waste managed in country (recycled) (11.6.1, 12.5.1)	21	26	28	26	25	27
Municipal waste managed in country (composted) (11.6.1)	18	23	27	24	22	24
Municipal waste managed in country (incinerated) (11.6.1)	20	24	25	26	24	26
Municipal waste managed in country (landfilled) (11.6.1)	33	35	38	35	33	35
Hazardous waste generated (12.4.2)	35	33	34	30	32	28
Hazardous waste treated or disposed of (12.4.2)	30	24	26	28	23	23
Hazardous waste recycled (12.4.2)	25	24	25	26	24	25
Hazardous waste incinerated (12.4.2)	24	21	23	24	20	22

^a Additional variables that are also needed to compile the Sustainable Development Goal indicators are included in the background document to the present report (see para. 23 below).

^b Years in the table refer to the year for which the data were provided.

^c Note that the lower values for the last two wastewater treatment variables are mainly attributable to the fact that these data have only been collected twice, in the data collections of 2013 and 2016.

23. The background document to the present report provides further analysis of all water and waste variables collected in the data collection of 2016. The document also contains the Inventory of Regular, International Primary Environmental Data Collection, Reporting and Dissemination from Countries undertaken by the United Nations, its specialized agencies, intergovernmental organizations and conventions (https://unstats.un.org/unsd/envstats/Inventory_datacollection_dissemination). In light of the adoption of the Sustainable Development Goals, targets and indicators, and the emerging demands for climate change indicators, as well as the emphasis on the need for environmental statistics and indicators, there is great demand for the coordination

of data collection and dissemination on environmental statistics and indicators as well as a need for greater collaboration between organizations on this subject. The Inventory serves as a useful resource to assist in alleviating the reporting burden on countries.

24. Complementarily, the Statistics Division compiles and disseminates environmental indicators and global environment statistics on 10 indicator themes from a wide range of statistical sources. The themes and indicator tables are selected on the basis of current demands for international environment statistics and the availability of internationally comparable data. Indicator tables and charts with relatively good quality and coverage across countries and areas, as well as links to other international data sources, are available from the website of the Statistics Division (<http://unstats.un.org/unsd/environment/qindicators.htm>). In addition, the Division provides country snapshots on a selection of national environment statistics, complemented by key economic and social indicators (see https://unstats.un.org/unsd/envstats/country_snapshots.cshtml).

25. In March 2017, the Statistics Division sent pilot questionnaires on electronic waste (e-waste) and water quality to 42 countries spanning all regions. Eurostat, OECD, the Economic Commission for Europe, UNEP and the United Nations University all collaborated with the Division on the pilot questionnaires. The questionnaire on e-waste contained pre-filled data sourced from the best estimates provided by the United Nations University. Countries were encouraged to review the pre-filled data against their own sources and to provide their best available data. Several countries provided numerical data, and very informative qualitative information (regarding legislation, policy, collection method of e-waste, etc.) was provided by most countries. Regarding the e-waste questionnaire, the most commonly responded to variables were: total e-waste generated; lamps generated as e-waste; and total e-waste collected. Rarely were countries able to provide data broken down by type of e-waste, either generated or collected (for example, large equipment; screens, monitors and equipment containing screens; small information technology and telecommunications equipment).

26. The pilot questionnaire on water quality was designed to capture data relevant to the monitoring of Sustainable Development Goal indicator 6.3.2, “Proportion of bodies of water with good ambient water quality”. It consisted of separate tables for three water bodies, rivers, lakes and groundwater bodies, and variables, including dissolved oxygen, pH levels and electrical conductivity. Response rates were highest for variables within the tables on rivers and lakes. The responses provided better information to the Statistics Division and its collaborating partners on the ability of countries to provide data on these two challenging fields of environment statistics. The responses will help the Division to take a decision when considering the possible addition of variables regarding e-waste and water quality into its regular Questionnaire on Environment Statistics (waste and water sections) in 2018.

D. Advocacy

Side events at the forty-seventh and forty-eighth sessions of the Statistical Commission

27. A side event entitled “Empowering national statistical offices to produce environment statistics for monitoring climate change and the Sustainable Development Goals” was held during the forty-seventh session of the Statistical Commission in 2016 (see <https://unstats.un.org/unsd/statcom/47th-session/side-events/20160308->

[1M-empowering-nsos/](https://unstats.un.org/unsd/statcom/48th-session/side-events/20170307-1M-empowering-nsos/)) and another entitled “Promoting official statistics for monitoring environmentally-related Sustainable Development Goal indicators and climate change” (see <https://unstats.un.org/unsd/statcom/48th-session/side-events/20170307-1M-promoting-official-statistics-for-monitoring-environmentally-related-sdg-indicators-and-climate-change/>) was held during the forty-eighth session of the Commission in 2017. Both side events drew large audiences of statisticians, and support was expressed for the data provided through the work of the Statistics Division in collecting data on environment statistics as well as for the further development of environment statistics and climate change statistics in countries worldwide.

Newsletter on environment statistics: ENVSTATS

28. The Statistics Division publishes ENVSTATS, a biannual newsletter on environment statistics (<https://unstats.un.org/unsd/envstats/newsletters>). Countries and institutions working on environment statistics are invited to contribute articles to the newsletter describing relevant activities.

III. Plans for the biennium 2018–2019

29. In the biennium 2018–2019, work on the implementation of the Framework for the Development of Environment Statistics will focus on: (a) the finalization of the methodology sheets of the Manual on the Basic Set of Environment Statistics; (b) the encouragement and facilitation of the use of the Environment Statistics Self-Assessment Tool in countries, including the finalization of its reporting template; (c) the continued development of training material and platforms in support of the implementation of the Framework in countries worldwide; (d) the continuation of the project under tranche 10 of the Development Account and support to other training and capacity-building activities in all regions; and (e) the linkage of the work on climate change statistics to the Framework. These activities will be carried out in close collaboration with the Expert Group on Environment Statistics.

30. The following work will also be undertaken by the Statistics Division: (a) the ninth round of the Statistics Division/UNEP Questionnaire on Environment Statistics; (b) a global consultation on climate change statistics and indicators, and other related activities as outlined in the report of the Secretary-General on climate change statistics to the forty-ninth session of the Statistical Commission ([E/CN.3/2018/14](https://unstats.un.org/unsd/statcom/49th-session/)); (c) the updating of the Inventory of Regular, International Primary Environmental Data Collection, Reporting and Dissemination from Countries; and (d) the continuation of the development of the repository of environmental surveys and censuses.

IV. Action required by the Statistical Commission

31. The Statistical Commission is invited to take note of the present report.