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## Statistical Commission

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Item 5 (e) of the provisional agenda\*

**Items for information: environment statistics**

## Environment statistics

### Report of the Secretary-General

#### *Summary*

The present report, which was prepared in accordance with Economic and Social Council decision 2022/324 and past practices, provides a summary of activities carried out during the period 2020–2022, including on: the impact of the coronavirus disease (COVID-19) pandemic on the implementation of the Framework for the Development of Environment Statistics; advancements in methodological work (the Manual on the Basic Set of Environment Statistics); and the seventh, eighth and ninth meetings of the Expert Group on Environment Statistics. Major developments in climate change statistics were fully documented in the reports of the Secretary-General submitted to the Statistical Commission at its fifty-second and fifty-third sessions. These developments led to the adoption of the global set of climate change statistics and indicators as the statistical framework to be used by countries in their efforts to implement the enhanced transparency framework under the Paris Agreement. The report also contains the workplan for the biennium 2023–2024. Since the workplan includes global collection, compilation and dissemination of environmental statistics and indicators, the report 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 in 1999 and 2020, as well as conclusions relevant to future work, especially in relation to the environment-related Sustainable Development Goals. The Commission is invited to take note of the report.

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\* E/CN.3/2023/1.



## I. Introduction

1. At its fifty-first session, held from 3 to 6 March 2020, the Statistical Commission took note of the report of the Secretary-General on Environment Statistics (E/CN.3/2020/33), in which the Secretary-General summarized developments in methodological work on the Framework for the Development of Environment Statistics and climate change statistics, its associated technical cooperation and capacity-building activities, data collection and dissemination activities and the plans for the biennium 2023–2024.

2. The present report provides an overview of the activities carried out by the Statistics Division in 2020, 2021 and 2022, including the following:

(a) Pilot survey and global consultation on climate change statistics and indicators;

(b) Seventh, eighth and ninth meetings of the Expert Group on Environment Statistics;

(c) Further implementation of the Framework for the Development of Environment Statistics;

(d) Assistance to countries in their application of the supporting tools of the Framework for the Development of Environment Statistics, such as the Environment Statistics Self-Assessment Tool and the Manual on the Basic Set of Environment Statistics;

(e) Continuation of the project work under tranche 10 of the Development Account and support to other training and capacity-building activities in all regions through regular programmes of technical cooperation;

(f) Conducting and completion of the tenth round of the questionnaire produced by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat and the United Nations Environment Programme (UNEP) on environment statistics;

(g) Commencement of the eleventh round of the questionnaire.

The report also includes information on the tasks and plans for the biennium 2023–2024. A background document to the present report contains more detailed information on the data collection and dissemination activities (see paras. 23 to 34 below).

## II. Activities carried out in 2020, 2021 and 2022

### A. Methodological work

#### **Framework for the Development of Environment Statistics and the Expert Group on Environment Statistics**

3. The Framework for the Development of Environment Statistics is currently available on the website of the Statistics Division in all United Nations official languages, except for French which is forthcoming, as well as Portuguese. A brochure describing the developments and use of the Framework is also available in the official languages of the United Nations on the Division's website.<sup>1</sup>

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<sup>1</sup> See <https://unstats.un.org/unsd/envstats/fdes.cshtml>.

4. Further developments in the implementation of the Framework for the Development of Environment Statistics, as well as in the advancement of the global set of climate change statistics and indicators, have been made thanks to the continuing work of the Expert Group on Environment Statistics, and the engagement countries continue to show. Contributions and efforts by experts from countries and international agencies are shown in the work of the seventh meeting in November 2020, where responses to the pilot survey were discussed, and the agenda focused on work towards compiling the global set of climate change statistics and indicators for adoption by the Statistical Commission. During the eighth meeting of the Expert Group in October 2021, contributions to the draft global set of climate change statistics and indicators were discussed through the global consultation. At the ninth Expert Group meeting in October 2022, discussions centred on improving the coordination of global work on climate change statistics and indicators, as well as focusing attention on the global set of climate change statistics and indicators and its value, bearing in mind related intergovernmental, regional and national initiatives on climate change. In addition to working on climate change statistics, the Expert Group has continued to provide support to the Statistics Division on existing initiatives, especially the implementation of the Framework for the Development of Environment Statistics, and the continued data collection on water and waste statistics, in close collaboration with UNEP. Detailed documentation of the seventh, eighth and ninth meetings of the Expert Group, held in a virtual format in November 2020, November 2021 and October 2022, is maintained and publicly available on the website of the Division.<sup>2</sup>

5. The meetings were attended by experts from a growing number of countries spanning all regions, with 39 countries present at the ninth meeting. The meetings were also regularly attended by regional commissions, the secretariat of the United Nations Framework Convention on Climate Change, as well as several international and intergovernmental agencies, academic institutions and other key stakeholders. In fact, the meetings benefited greatly from the breadth and diversity of those attending. Several experts mentioned finding value in comparing the environment and climate change statistics programmes used in their countries with methods used by others. The meetings served as a platform to exchange information with a strong focus on environment and climate change statistics, helping experts to resolve problems related to their statistics programmes. The seventh and eighth meetings of the Expert Group were chaired by the Director for Population Census and Social Statistics Directorate at the National Bureau of Statistics of Tanzania, Ruth Minja. The ninth meeting was chaired by a staff member of the Scientific Research and Planning Division, General Bureau of Statistics, Suriname, Anjali Kisoensingh.

### **Manual on the Basic Set of Environment Statistics**

6. The Manual on the Basic Set of Environment Statistics consists of methodology sheets for the collection or compilation of all environment statistics in the Basic Set of Environment Statistics embedded in the Framework for the Development of Environment Statistics.<sup>3</sup> The Expert Group expressed its appreciation to the Statistics Division and to all the experts who had contributed to the Manual and discussed the content of the methodology sheets at its seventh, eighth and ninth meetings. Presentations were given and discussions held on several methodology sheets contained in the Manual. The Division, in collaboration with experts in various countries, is working on the revision of the methodology sheets in line with comments made at meetings and written feedback received. The methodology sheets for wastewater, marine water quality and greenhouse gas emissions have recently been

<sup>2</sup> See [https://unstats.un.org/unsd/envstats/fdes/fdes\\_eges.cshtml](https://unstats.un.org/unsd/envstats/fdes/fdes_eges.cshtml).

<sup>3</sup> See [https://unstats.un.org/unsd/envstats/fdes/manual\\_bsdes.cshtml](https://unstats.un.org/unsd/envstats/fdes/manual_bsdes.cshtml).

published on the Division's website, along with several others that were already completed. Methodology sheets on geological and geographical information and freshwater quality are forthcoming.

### **Environment Statistics Self-Assessment Tool**

7. 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 the official languages of the United Nations on the website of the Statistics Division.<sup>4</sup> Countries continue to apply the Self-Assessment Tool to identify priorities for improvement in environment statistics, regularly sharing observations and comments with the Division. The results of countries completing the Self-Assessment Tool can be seen when countries compile their own compendiums on environment statistics.

### **Repository of environmental surveys**

8. In order to further empower countries with the data collection tools necessary for compiling their own compendiums on environment and climate change statistics, the Statistics Division, with the support of the Expert Group and many Member States, has further developed a repository of national census and survey questionnaires related to environment and climate change statistics.<sup>5</sup> The repository has grown gradually and now includes 98 national censuses and surveys from 27 countries. The Division welcomes the contributions of censuses and surveys from experts in the field of environment statistics from all countries in the official languages of the United Nations and in other languages. The censuses and surveys are being made available for information and to help to improve the collection of environment statistics at the national level. Available censuses and surveys cover the environmental aspects of a variety of themes relevant to environment and climate change statistics, including agriculture, air and climate, energy, environmental expenditure, fisheries, waste and water. Additional supporting documentation to complement the censuses and surveys, such as reporting instructions, field reports, quality reports and analytical reports, is also available via the same link. The additional documentation adds context to the censuses and surveys and accredits the country that has shared them with the Division.

### **Climate change statistics**

9. Major developments in climate change statistics were fully documented in the reports of the Secretary-General submitted to the Statistical Commission at its fifty-second and fifty-third sessions. These developments led to the adoption of the global set of climate change statistics and indicators as the statistical framework to be used by countries in their efforts to implement the enhanced transparency framework for action and support under the Paris Agreement.

10. In its decision 47/112, adopted in 2016 (see [E/2016/24](#)), the Statistical Commission requested the Statistics Division to, inter alia, develop a global set of climate change statistics and indicators applicable to countries at various stages of development. Pursuant to the decision, the Division began a systematic review of climate change statistics and indicators from 130 countries with representative regional coverage, promoting a bottom-up approach to the selection of about 134 indicators included in a draft global set of climate change statistics and indicators. A pilot survey on the draft was conducted in 2020 and the global consultation was carried out in 2021. The Expert Group and the secretariat of the United Nations

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<sup>4</sup> See <https://unstats.un.org/unsd/envstats/fdes/essat.cshtml>.

<sup>5</sup> See <https://unstats.un.org/unsd/envstats/censuses/>.

Framework Convention on Climate Change have been contributing to the work on the draft set through the review of iterative versions and discussions at Expert Group meetings. Many international organizations also contributed substantively, specifically to develop metadata for the 158 indicators included in the final version. The final global set of climate change statistics and indicators, contained in Statistical Commission decision 53/116, adopted by the Commission at its fifty-third session, in March 2022 (see [E/2022/24](#)), serves as the statistical framework to be used by countries when preparing their own sets of climate change statistics and indicators according to their individual concerns, priorities and resources. The full description of the global set of climate change statistics and indicators and its metadata are included in a report entitled “Background document to the report of the Secretary-General on climate changes statistics ([E/CN.3/2022/17](#)): global set and metadata”, which is available on the website of the Division.

11. Following the adoption of the global set of climate change statistics and indicators, the Statistics Division stepped up its efforts to support countries in its application. Implementation support materials were drafted, including implementation guidelines for the global set, training presentations and a climate change statistics and indicators self-assessment tool. The development of implementation support materials is being carried out in parallel with methodological development for the tier 3 indicators in the global set. The areas of adaptation and vulnerability contain a higher share of tier 3 indicators that require novel methodological development. A higher share of statistics is also required to compile these indicators, which source data from censuses and surveys. Therefore, national statistical offices have a potential to lead work in these areas, due to their expertise in surveys and censuses and the amount of data required by these data collection instruments. The Division is following up and supporting several initiatives, including the Pacific Community’s development of a survey module for the Pacific Islands on climate change and disasters. The survey is designed to address climate change indicators and statistics of the global set of climate change statistics and indicators, the Framework for the Development of Environment Statistics, the Sendai Framework for Disaster Risk Reduction 2015–2030 and the Sustainable Development Goals and is aimed at providing data at a disaggregated level.

12. Moreover, in the area of adaptation indicators, the Statistics Division was invited to contribute to the third workshop under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation. Topics discussed included methodological advances and challenges pertaining to the international comparability of indicators in this area. The summary report of the discussions and proceedings of workshop included an annex with examples of global, regional, national and local indicators to monitor progress towards the global goal on adaptation, in which reference to the global set of climate change statistics and indicators is provided.

13. The Statistics Division has been collaborating with ongoing initiatives on the methodological development of climate change indicators, including the Organisation for Economic Co-operation and Development (OECD) International Programme for Action on Climate, which is aimed at supporting countries in their efforts to progress towards net-zero emissions and a more resilient economy by 2050. In exploring the possibilities to systematically pursue updates and further methodological development, priority was given to the topics of health and gender since both contain tier 3 indicators and/or statistics in the global set of climate change statistics and indicators. In accordance with paragraph (b) of Statistical Commission decision 51/115, the work on gender will adopt a gender perspective and integrate it into all the agenda items of the Commission. The United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) was engaged to contribute to this area on the basis of its experience with environment and gender indicators, many of which

will be measured through a gender-environment survey, with a special module on climate change and disasters. Disasters are another topic for which the structure of the global set of climate change statistics and indicators has been deemed helpful to support further methodological development. As emphasized by the United Nations Office for Disaster Risk Reduction, the global set can assist countries in identifying indicators and statistics that support monitoring of the Sendai Framework.

14. In addition, as requested by the Statistical Commission at its forty-ninth session, in 2018, the Statistics Division has been working closely with the secretariat of the United Nations Framework Convention on Climate Change to develop the global set of climate change statistics and indicators and to strengthen the link between statistics and policy. This collaboration was achieved, inter alia, by the holding of joint side events at Commission meetings, the participation of the secretariat of the Convention in the Expert Group meetings and the participation of the Division in a side event at the twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change and the organization of a workshop on the global goal on adaptation in advance of the twenty-seventh session of the Conference. In addition, the global consultation on the draft global set was instrumental in bringing together national statistical offices and climate reporting authorities to the secretariat of the Convention, as requested by the Commission in 2018.

## **B. Implementation of the Framework for the Development of Environment Statistics and the global set of climate change statistics and indicators through training and capacity-building activities**

15. Using the Framework for the Development of Environment Statistics and the Environment Statistics Self-Assessment Tool, several countries have made progress in developing environment statistics, national compendiums of environment statistics and national action plans, as well as in establishing national technical working groups or inter-agency committees on environment statistics. The implementation of the Framework is advancing well and progress has been made in many countries in all regions. The progress has been aided by additional materials establishing the relevance of the Framework to the Sustainable Development Goals, including a comparison table identifying the statistics within the Framework that are necessary for compiling the environment-related Sustainable Development Goal indicators.<sup>6</sup> Several countries have made a good start by developing compendiums of environment statistics based on the Framework, available on the Statistics Division's website. So far, 56 compendiums from 28 countries have been shared with the Division. All countries are encouraged to share their compendiums with the Division for promotion on its website.

16. The Framework was used in the project under tranche 10 of the Development Account on statistics and data. The Statistics Division provided capacity development for the strengthening of environment statistics in the Gambia and Namibia, which published national compendiums on environment statistics in 2020. Both compendiums can be accessed online on the website of the Division.<sup>7</sup> Additional missions had been planned in 2020 (Belize and Sudan) but the coronavirus disease (COVID-19) pandemic obstructed their completion. The remaining funds were therefore allocated for hiring consultants to carry out implementation support activities on environment and climate change statistics. Specifically, two consultants were hired to conduct a review of national capacities for climate change impacts, the

<sup>6</sup> See [https://unstats.un.org/unsd/envstats/fdes/SDG\\_FDES\\_matrix.pdf](https://unstats.un.org/unsd/envstats/fdes/SDG_FDES_matrix.pdf).

<sup>7</sup> See <https://unstats.un.org/unsd/envstats/fdescompendia.cshtml>.

availability of indicators, as well as vulnerability and adaptation indicators in selected African countries and small island developing States of the Caribbean Community (CARICOM). Adaptation and vulnerability indicators are especially important for small island developing States, developing and least-developed countries and are among the most challenging to develop into internationally comparable statistics and indicators.

17. During 2021 and 2022, the Statistics Division continued to deliver implementation support and capacity development activities through two projects under the regular programme of technical cooperation: on training materials and the implementation guidelines on developing national sets of climate change statistics, in 2021; and on support to countries to initiate the development of national programmes of climate change statistics and indicators, in 2022. In 2021, key activities were carried out by consultants in various French- and English-speaking African countries, where more in-depth training and support were provided to build capacity for developing national programmes on climate change statistics. Also in 2021, the Division began to develop the implementation guidelines and the climate change statistics and indicators self-assessment tool and to finalize the global set of climate change statistics and indicators. In 2022, the implementation support materials were further developed with the help of consultants, were thoroughly reviewed at the ninth meeting of the Expert Group and were planned for finalization before the end of 2022. The climate change statistics and indicators self-assessment tool was also piloted in a number of Caribbean, South American and African countries. As part of the 2022 project under the regular programme of technical cooperation, the Division, in collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC) and the National Institute of Statistics and Information of Peru, is organizing a five-day national mission in Peru, from 12 to 16 December 2022, which includes a three-day workshop to assist the country in developing a national programme of climate change statistics and indicators.

18. All five regional commissions and several regional economic communities, such as the Common Market for Eastern and Southern Africa (COMESA), the East African Community, the Economic Community of West African States and CARICOM have been using the Framework for the Development of Environment Statistics and the Environment Statistics Self-Assessment Tool to further the advancement of environment statistics in their member States. Furthermore, following the adoption of the global set of climate change statistics and indicators, national statistical offices are being increasingly encouraged to take a leading role in collaboration with line ministry stakeholders to advance work on climate change statistics, bearing in mind its application towards policy. The Statistics Division has been collaborating with the above-mentioned institutions and has organized joint activities, including regional and subregional training workshops and national workshops.<sup>8</sup>

19. As part of the project under tranche 12 of the Development Account entitled “Caribbean relevant climate change and disasters indicators for evidence-based sustainable development policies”, led by ECLAC and supported by the Statistics Division and the CARICOM secretariat, training was provided at several national and subregional workshops. In most cases, the methodological resources being used were those produced by the Division following prior mandates from the Statistical Commission, so the collaborative approach between the Division and ECLAC for such workshops has been a very natural process. The project focused on eight Caribbean countries – Antigua and Barbuda, Belize, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Suriname. The project was aimed at building capacity in those countries to overcome challenges in the

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<sup>8</sup> See <https://unstats.un.org/unsd/envstats/otherworkshops/>.

production and dissemination of climate change statistics and indicators. Utilizing the Environment Statistics Self-Assessment Tool and applying the global set of climate change statistics and indicators through the conduct of hybrid workshops, the project helped countries to identify existing data gaps and needs, among other things. Furthermore, it was acknowledged that strengthened collaboration at the global and regional level enabled the delivery of increased capacity-building in countries.

20. As part of the planned project under tranche 14 of the Development Account, the Statistics Division is expected to contribute to the activity entitled “Agile national statistical systems for accelerated responsiveness to demands for statistics related to climate change and disasters”. This activity will be led by the Economic and Social Commission for Asia and the Pacific while UNEP and the remaining regional commissions are co-implementing entities.

21. The Statistics Division has been actively supporting the COMESA secretariat to implement a project funded by the African Development Bank. The overarching objective of the project is to build or strengthen the capacity of the 35 African Development Fund countries to develop environment statistics and climate change statistics and indicators. In this regard, the COMESA secretariat organized a workshop in Kenya from 28 November to 1 December, with support from the Division and the secretariat of the United Nations Framework Convention on Climate Change, to provide assistance to those countries with regard to environment and climate change statistics. In addition, the Division has been supporting the COMESA secretariat and the Commission of the Economic Community of West African States in an effort to streamline their capacity-development activities in the area of environment and climate change statistics.

22. For many years, the Statistics Division has annually contributed to the Joint Task Force on Environment Statistics and Indicators hosted by the Economic Commission for Europe. This collaboration has contributed towards having the Framework for the Development of Environment Statistics translated into Russian and has facilitated dialogue between the Division and Member States in the region regarding their self-assessment of climate change statistics at the national level and the application of metadata used in the questionnaire produced by the Division and UNEP on environment statistics.

### **C. Data collection and dissemination activities**

23. Since 1999, and following the mandate of the Statistical Commission at its twenty-eighth session, in 1995, and further reinforced by it at its thirty-fourth session, in 2003, that the Statistics Division carry out an international compilation of environmental indicators from national statistical services, the Division has completed 10 rounds of data collection on themes pertinent to environment statistics. The most recent completed round of data collection is the 2020 cycle, in which Statistics Division/UNEP questionnaire on environment statistics (water and waste sections) was sent to 164 countries and areas. The 2022 cycle is ongoing, with many countries and areas already having sent completed questionnaires to the Division by the original deadline of 7 October 2022. The Division is validating and finalizing responses while concurrently liaising with countries and areas who have not yet provided a response. According to a long-standing agreement between the OECD, Eurostat and the Division, the countries and areas covered by the joint OECD/Eurostat questionnaire on the state of the environment are not included in the process of data



collection carried out by the Division.<sup>9</sup> Both data collection processes are well coordinated and the questionnaires are fully compatible using identical definitions and classifications. Statistics already being collected by other United Nations entities and other international institutions have been excluded from the Statistics Division/UNEP questionnaire, wherever possible. Since 2006, the Division has collected data solely on waste and water, developing expertise in these fields of statistics to the point where the data are now the much-preferred source for six Sustainable Development Goal indicators. This endeavour has allowed the Division to focus limited resources on specific fields and to avoid duplication of effort in countries and areas, and at the international level.

24. Following the adoption of the global indicator framework for the Sustainable Development Goals and targets at the forty-eighth session of the Statistical Commission (see [E/2017/24](#)), international agencies that are key stakeholders in the environmental field have focused increased attention on the Statistics Division/UNEP questionnaire. Similarly to what the Statistics Division advocates for national statistical offices to practise at the national level in a regular manner with appropriate stakeholders, the Division regularly meets together in a multilateral format with organisations such as the World Health Organization, the United National Human Settlements Programme (UN-Habitat) and UNEP, all of whom are custodian agencies to at least one Sustainable Development Goal indicator.

25. For the 2020 data collection round, two variables – “water returned without use” and “net freshwater abstracted” – reappeared for the first time since 2010 in the water section of the Statistics Division/UNEP questionnaire. Moreover, the variable, “Freshwater abstracted” was renamed as “Gross freshwater abstracted” since these two terms are conceptually identical. The decision for the two variables to be reintroduced was taken following an initial suggestion from a Member State, and subsequent conversations with the Division and other key stakeholders. Although data collection on food waste is in high demand in the context of Sustainable Development Goal indicator 12.3.1 (b): food waste index, and dialogue was held with UNEP in that regard, there was no change in variables for the 2022 data collection round.

26. Data reported by countries in response to the questionnaire have tended to show that whenever new variables are added, response rates may be relatively low in the first collection round. However, over time, and following subsequent collection rounds, responses tend to accumulate to meet demand. As has been the case since the questionnaire was first used, content collected – which may become invaluable when long-term time series are established for certain variables over decades – is subject to modification. The Division takes a consultative, circumspect and statistically professional approach to making modifications, always considering, inter alia, relevance, demand, stability of long-term time series and burden upon Member States before committing to any change. Furthermore, since any newly added variables are typically in high demand, the capacity-development activities of the Division (and other international stakeholders) may support countries in compiling such data. Striking the appropriate balance between meeting demand for statistics with supply of available statistics is a key consideration when making modifications. The Expert Group typically includes a session on data collection with a focus on the questionnaire that, time and again, has attracted the attention of many international agencies, including those that collect data on water and waste (namely, Food and Agriculture Organization of the United Nations (FAO), OECD and Eurostat) and, of course,

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<sup>9</sup> For example, for the 2020 data collection round, both Colombia and Costa Rica moved out of the scope of the Statistics Division/UNEP questionnaire on environment statistics and into the scope of the joint OECD/Eurostat questionnaire on the state of the environment.

countries and areas that spend significant time and resources in providing data for the questionnaire.

27. Although a response rate<sup>10</sup> of over 50 per cent was reached in the 2016 and 2018 data collection rounds, the response rate fell to approximately 45 per cent in the 2020 collection round, possibly due to the COVID-19 pandemic. Much scope remains 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. The Statistics Division continues to make clear to key stakeholders (both to countries and areas providing data, and to international agencies interested in observing and analysing the results of the questionnaire) that the notion of burdening countries just once to provide data which are then used for many purposes is paramount. Some well-known uses of the data provided by countries and areas are for the Sustainable Development Goal indicators, the global set of climate change statistics and indicators, the Framework for the Development of Environment Statistics, and for the System of Environmental-Economic Accounting (especially water accounts and waste accounts).

28. Table 1 presents a summary of the responses received in the 10 completed Statistics Division data collection rounds by year of data collection. Fluctuation in the number of questionnaires sent by the Division across the 10 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, 1999–2020**

	1999	2001	2004	2006	2008	2010	2013	2016	2018	2020
Total responses	51	62	68	80	84	84	81	89	86	74
Response rate (percentage)	30	35	43	49	49	49	47	51	52	45
Countries and areas that received the questionnaire	168	177	158	163	171	172	173	173	166	164

29. 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.

<sup>10</sup> Throughout the present report, a response is any case in which a country or area provides any numerical data in response to the Statistics Division/UNEP questionnaire on environment statistics (typically in the questionnaire itself). Invariably, in every collection cycle there is a small number of cases in which countries or areas confirm receipt of the questionnaire, but thereafter do not provide any data. Such cases are not considered responses since the Division is trying to measure the capacity of a country or area to provide data for the questionnaire.

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

	2004		2006		2008		2010		2013		2016		2018		2020	
	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage	No.	Percentage
Africa	22	39	16	28	22	37	23	40	20	37	21	38	22	40	18	33
Asia	20	43	24	52	27	59	25	54	23	48	28	61	32	71	25	52
Europe	7	50	12	86	11	79	11	73	12	86	11	79	7	88	6	75
Americas	19	48	27	68	22	58	24	63	26	68	23	56	21	53	21	54
Oceania	–	–	–	–	1	7	–	–	–	–	5	31	4	25	4	29
<b>Total</b>	<b>68</b>	<b>43</b>	<b>80</b>	<b>49</b>	<b>84</b>	<b>49</b>	<b>84</b>	<b>49</b>	<b>81</b>	<b>47</b>	<b>89</b>	<b>51</b>	<b>86</b>	<b>52</b>	<b>74</b>	<b>45</b>

Note: Response rates were calculated according to the number of countries or areas in each geographical region on the Statistics Division list of standard country or area codes for statistical use (M49 list) as of 2022. The list of countries or areas, codes and abbreviations is available at <http://unstats.un.org/unsd/methods/m49/m49alpha.htm>.

30. 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. Data collections can also encourage inter-institutional liaisons and help with data compilation at the national level for multilateral environmental agreements. Table 3 shows the number 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 effective 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 and to address 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**

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<b>Water</b>										
Renewable freshwater resources (6.4.2)	32	33	33	29	31	31	24	25	16	13
Freshwater abstracted (6.4.2)	61	57	62	57	60	61	49	44	28	21
Freshwater abstracted by water supply industry (6.4.1)	38	36	42	43	43	43	37	37	23	16
Gross freshwater supplied by water supply industry (6.4.1)	57	59	65	58	59	59	47	46	27	19
Total wastewater generated (6.3.1)	21	22	22	25	27	30	25	25	15	14
Wastewater treated in urban wastewater treatment plants (6.3.1)	33	36	37	38	39	43	37	35	24	23
Wastewater treated in other treatment plants (6.3.1) <sup>a</sup>	10	10	9	7	9	10	8	6	4	4
Wastewater treated in independent treatment facilities (6.3.1) <sup>a</sup>	8	8	9	9	9	9	7	6	4	4
<b>Waste</b>										
Total amount of municipal waste generated (national level) (12.5.1)	8	6	9	8	11	10	11	12	8	10
Total amount of municipal waste generated (city level) (11.6.1)	7	6	9	6	21	22	25	27	10	12
Total amount of municipal waste collected (11.6.1, 12.5.1)	54	52	59	53	55	54	48	50	33	34
Municipal waste managed in country (11.6.1, 12.5.1)	36	36	42	41	44	43	38	32	21	21
Municipal waste managed in country (recycled) (11.6.1, 12.5.1)	37	39	41	39	40	43	34	33	22	24

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Municipal waste managed in country (composted) (11.6.1)	44	42	51	46	48	50	38	36	23	24
Municipal waste managed in country (incinerated) (11.6.1)	27	27	31	29	29	31	22	19	12	13
Municipal waste managed in country (landfilled) (11.6.1)	44	42	51	46	48	50	38	36	23	24
Hazardous waste generated (12.4.2)	25	27	32	31	31	28	23	26	22	26
Hazardous waste treated or disposed of (12.4.2)	33	27	29	30	31	29	27	30	19	21
Hazardous waste recycled (12.4.2)	25	24	25	27	29	27	21	23	17	17
Hazardous waste incinerated (12.4.2)	26	23	25	24	24	24	20	25	16	17

Note: Years indicated refer to the year for which the data were provided. Goals, targets and indicators appear in parentheses.

<sup>a</sup> The lower values for these wastewater treatment variables are mainly attributable to the fact that these data have only been collected in the data collections of 2013, 2016, 2018 and 2020.

31. The Statistics Division, in collaboration with the Intersecretariat Working Group on Environment Statistics, has compiled an 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.<sup>11</sup> 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 among organizations involved in this subject. The inventory serves as a useful resource to assist in alleviating the reporting burden on countries. For the current period, the inventory was partially addressed through the global consultation on the draft global set of climate change statistics and indicators to which some 26 agencies contributed. The outcomes are presented in the background document to the report of the Secretary-General on climate change statistics (E/CN.3/2022/17).

32. The Statistics Division compiles and disseminates environmental indicators and global environment statistics on the basis of the data received from countries. The themes and indicator tables are selected in response to needs set out in the 2030 Agenda as well as other policy needs. 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 Division. Ideally and wherever possible, the Division compiles indicator tables of individual variables for all Member States where data provision makes it possible. References to OECD and Eurostat as sources are provided for data obtained from their member States through the OECD and Eurostat data collection exercises. However, since data availability is not necessarily high for some variables in high demand, the Division also publishes indicator tables with the latest year available of an individual variable (either with the same latest year for all countries in a table, or different latest years, specified for each country in an individual table). In all scenarios, the number of countries with available data for the Division may vary considerably. In addition, the Division provides country snapshots on a selection of national environment statistics, complemented by key economic and social indicators.

33. With regard to the number of responses to individual variables, as shown in table 3 above, it is important to note that a tapering of numbers did occur in previous cycles, especially in the final two years. The prime reason for this is that the final two years of data have only been collected in one data collection cycle (e.g. only data collected during the 2020 cycle is contributing to numbers for the years 2018 and 2019 in table 3). Data for 2016 and 2017 in table 3 were gathered over two data collection cycles (2018 and 2020). However, the tapering effect in table 3 appears somewhat more

<sup>11</sup> See [https://unstats.un.org/unsd/envstats/Inventory\\_datacollection\\_dissemination](https://unstats.un.org/unsd/envstats/Inventory_datacollection_dissemination).

pronounced than the one observed for the final two years of data following the completion of the 2018 data collection cycle. This suggests that, for the 2020 data collection cycle, in addition to the overall response rate falling slightly (from 52 per cent in the 2018 data collection cycle to 45 per cent in the 2020 cycle), the overall volume of data provided by countries also decreased slightly. Whether or not this may be due to the pandemic can only be speculated, but data for 2018 and 2019 are again being collected from countries during the current (2022) data collection cycle. With the pandemic influencing this collection cycle less considerably, the Statistics Division hypothesizes that response numbers for these years should increase significantly.

34. Notwithstanding the slight fall in response rates and overall data volume collected in the 2020 cycle, following the completion of 10 data collection cycles (from 1999 to 2020), the immense database housed by the Statistics Division continues to grow with every cycle. For the over 160 member States participating in data collection, this is undoubtedly the largest database in the world that houses country-owned official data having a focus on water and waste statistics. Despite adversities presented by the pandemic, the sheer size of the database means that the Division is well placed to further its close collaboration with countries and international agencies on water and waste statistics. When a policy framework of global significance is developed, such as the 2030 Agenda in 2015, the database will be of great value, with many variables necessary for the compilation of Sustainable Development Goal indicators (such as for some of those in Goals 6, 11 and 12) suddenly being in great demand.

#### **D. Coordination**

35. Given the numerous international and regional organizations engaged in the collection and compilation of environment statistics, the Statistical Commission, at its thirty-fourth session, agreed that the Statistics Division should set up an intersecretariat working group on environment statistics, with a special focus on the development and harmonization of methods, concepts and standards, coordination of data collection, and training. The permanent members of the resulting Intersecretariat Working Group are organizations and agencies that have well-established international programmes on environment statistics, including direct and regular collection of comprehensive environment statistics from countries. Other organizations, agencies and countries with experience in specific areas of environment statistics are invited to participate in specific Intersecretariat Working Group activities. The Intersecretariat Working Group currently meets on an ad hoc basis, primarily via teleconferences and email communication.

36. Through the Intersecretariat Working Group, the Statistics Division also collaborates on questionnaires submitted by international agencies on the issues of water and waste. The objective of this harmonized data collection is to provide internationally comparable statistics on environmental issues based on standard questionnaires and methodology. The Division, along with Eurostat and OECD, has been collecting data on water and waste from national statistical offices and/or ministries of environment in a harmonized manner since 1999. Data validation for European and OECD countries is done jointly by Eurostat and OECD, while the Division validates the data of all other Member States within its scope of collection. The Division is aware of a global data collection process undertaken by FAO which commenced in 2018. As such, and in the interest of reducing the burden that falls mainly upon member States, but also upon international agencies, FAO contributes to the ongoing discussion among the agencies to identify the best way forward in terms of coordinating efforts. Data collected by FAO populates its Information System on

Water and Agriculture (AQUASTAT database) and supports the calculation of two water-related Sustainable Development Goal indicators for which it is the custodian agency.

37. The four international institutions concerned have held ongoing teleconferences since August 2018. Agenda items have included cross-comparisons of individual countries' data sets; comparison of the metadata and terminology used in questionnaires, bearing in mind how these may apply to multiple mandates, such as that of the Statistical Commission and the Inter-Agency and Expert Group on Sustainable Development Goal Indicators; sharing of questionnaires with in-country focal points; written consultations provided by international agencies for particular countries to help clarify any discrepancies in data; frequency of data collection; and regular exchanges of information among the four institutions' methodological research, meetings, workshops and capacity-development activities. The World Health Organization and UN-Habitat have also actively participated, in particular in the discussions on Sustainable Development Goal indicator 6.3.1, which concerns wastewater treatment. Since those two organizations possess expertise in wastewater, their involvement in validating wastewater data provided to the Statistics Division by countries has been welcomed.

38. The Statistics Division, in collaboration with the Intersecretariat Working Group, previously compiled an inventory of capacity-development activities of agencies in environment statistics, available on the Division website. The Division also compiled an inventory of capacity-development and data collection activities of agencies in climate change statistics that was reported in part I of the global consultation of the draft global set of climate change indicators and statistics in 2021. The overview of activities in climate change statistics undertaken by the United Nations, its specialized agencies and intergovernmental organizations can be accessed in the background document to the report of the Secretary-General on climate change statistics ([E/CN.3/2022/17](#)). Following the adoption of the global set of climate change indicators and statistics, the Statistics Division has stepped up its efforts to collaborate, support and enhance consistency among several international initiatives, including the new Economic Commission for Europe Task Force on the role of national statistical offices in achieving national climate objectives; efforts to develop, in the context of the Partnership in Statistics for Development in the 21st Century, a climate change data ecosystem; and the four-year project of the Office for National Statistics of the United Kingdom of Great Britain and Northern Ireland, which is aimed at developing standards for official statistics on climate and health interactions.

39. The fifteenth Conference of Parties to the Convention on Biological Diversity is scheduled to be held in December 2022 and is expected to adopt the post-2020 global biodiversity framework and its monitoring framework. The draft decision on the monitoring framework includes recognition of the need for alignment between monitoring biodiversity under the Convention on Biological Diversity and statistical frameworks developed under the Statistical Commission, including the Sustainable Development Goals, the Framework for the Development of Environment Statistics and the System of Environmental-Economic Accounting. In the draft decision on the monitoring framework, the need for additional capacity-building and financial resources for biodiversity monitoring is noted. An ad hoc technical expert group will be established to guide the further development of the monitoring framework.

## **E. Advocacy**

40. Given that climate change statistics is one of the key areas of the Statistics Division, the Environment Statistics Section organized side events at the following sessions of the Statistical Commission: fifty-first session, on the theme "Global set

of climate change statistics and indicators”; fifty-second session, on the theme “Towards the global set of climate change statistics and indicators”; and fifty-third session, on the theme “Environment statistics and climate change statistics: the nexus”. At the events presentations were given on the development of the global set of climate change statistics and indicators, national policies and reporting requirements under the Paris Agreement and several country examples illustrating national advances in the area of climate change statistics. More detailed information on the events can be accessed on the Statistical Commission page of the Division website. The three side events drew large audiences of statisticians and experts, and support was expressed for the work of the Division in environment statistics and climate change statistics in countries worldwide.

### **Twenty-sixth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change**

41. At the twenty-sixth Conference of the Parties, the secretariat of the United Nations Framework Convention on Climate Change organized a side event in collaboration with the Consultative Group of Experts of the Conference on the theme “United Nations Framework Convention on Climate Change: Consultative Group of Experts achievements in 2020 and 2021 and engagement with national experts”. The event showcased opportunities for technical support and advice available with the Consultative Group of Experts to developing country Parties to implement the existing measurement, reporting and verification arrangements under the Convention and transition to the enhanced transparency framework under the Paris Agreement. The Statistics Division focused its presentation on the role and strength of national statistical offices in climate reporting, in particular on activity data for national inventories, the innovative new surveys being designed by national statistical offices to compile climate change statistics and highlighted some national statistical offices and regional statistical institutions that have produced climate change statistics reports. A recording of the event is available online.

### **Third workshop under the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation**

42. The secretariat of the United Nations Framework Convention on Climate Change organized the third workshop as one of a series of workshops of the Glasgow–Sharm el-Sheikh work programme on the global goal on adaptation, which will contribute to outcomes at the twenty-seventh Conference of the Parties to the United Nations Framework Convention on Climate Change to be held in Sharm el-Sheikh, Egypt, from 6 to 18 November 2022. At the workshop, the Statistics Division was invited to introduce the global set of climate change statistics and indicators and recent methodological developments in measuring climate change vulnerability and adaptation. Stakeholders posed questions in follow-up to the global consultation conducted by the Division in 2021 on the draft global set of climate change statistics and indicators and expressed the need for greater capacity development and strengthening of institutional arrangements to improve climate change statistics, in particular in the African region. A recording of the event is available online.

### **Newsletter on environment statistics: ENVSTATS**

43. The Statistics Division publishes ENVSTATS, a biannual newsletter on environment statistics. Countries and institutions working on environment statistics and climate change statistics are invited to contribute articles to the newsletter describing relevant activities.

### **III. Plans for the biennium 2023–2024**

44. In the biennium 2023–2024, the work of the Statistics Division will focus on the following activities in collaboration with the Expert Group on Environment Statistics:

- (a) Further implementation of the Framework for the Development of Environment Statistics, including completing its translation into French;
- (b) Completion of the Manual on the Basic Set of Environment Statistics and developing updates in view of future revisions to the Framework for the Development of Environment Statistics;
- (c) Encouragement and facilitation of the use of the Environment Statistics Self-Assessment Tool in countries;
- (d) Continued development and updates of training material, including e-learning and platforms in support of the implementation of the Framework in countries worldwide;
- (e) Participation in tranches 12 and 14 of the Development Account and support to other training and capacity-building activities in all regions through its regular programme of technical cooperation;
- (f) Supporting the implementation of the global set of climate change statistics and indicators;
- (g) Reviewing and developing the methodologies for the tier 3 indicators in the global set of climate change statistics and indicators;
- (h) Completing the eleventh round of the Statistics Division/UNEP questionnaire on environment statistics;
- (i) Updating the inventory of capacity development activities in environment statistics and climate change statistics, and expanding it to include country to country technical assistance;
- (j) Updating of the inventory of regular, international primary environmental and climate data collection, reporting and dissemination from countries;
- (k) Continuation of the development of the repository of environmental surveys and censuses.

### **IV. Action to be taken by the Statistical Commission**

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

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