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Climate change statistics

Report of the Secretary-General

Summary

The present report was prepared in accordance with Economic and Social Council decision 2023/325 and past practices by the Statistics Division of the Department of Economic and Social Affairs of the Secretariat, in collaboration with the secretariat of the United Nations Framework Convention on Climate Change. The report contains an update on the work of the Division with regard to climate change statistics, in particular the development of implementation support tools for the Global Set of Climate Change Statistics and Indicators, which was adopted by the Statistical Commission at its fifty-third session. The report also presents updates on collaboration with key partner institutions and presents advances towards the coordination of activities on climate change statistics. Updates on the implementation of the Global Set include the outcomes of a pilot survey with several national responses that illustrate the development of national programmes of climate change statistics. Work in progress on methodology development is also presented, including on the prioritized topics of the integration of climate change and health statistics and the integration of climate change and gender statistics. As set out in paragraph 48 of the present report, the Commission is invited to take actions that focus on, inter alia, streamlining its work on environment and climate change statistics, encouraging the use of the Global Set, increasing collaboration between national statistical offices and national authorities responsible for reporting climate change to the secretariat of the Framework Convention, and advocating for greater investment in climate change statistics.

* E/CN.3/2024/1.

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I. Introduction

1. At its fifty-third session, held from 28 February to 2 March and on 4 March 2022, the Statistical Commission adopted decision 53/116 (see E/2022/24-E/CN.3/2022/41), in which it:

(a) Welcomed the report of the Secretary-General (E/CN.3/2022/17), which presents the Global Set of Climate Change Statistics and Indicators;

(b) Adopted the Global Set as the framework for climate change statistics and indicators to be used by countries when preparing their own sets of climate change statistics and indicators according to their individual concerns, priorities and resources, while noting the need for further methodological development for selected indicators, taking into account the 2030 Agenda for Sustainable Development;

(c) Recognized that, while the Global Set was designed to meet the needs of all countries following a global consultation, it remained complementary to the Conference of European Statisticians' set of core climate change-related indicators and to other regional sets, that may include more region-specific indicators, to encourage harmonization across all levels;

(d) Expressed its support for comprehensively reviewing the Global Set in five years from its adoption as was done in the Sustainable Development Goal indicators process, and encouraged more regular reviews by the Expert Group on Environment Statistics in view of continuous harmonization with the ongoing development of related statistical areas, such as biodiversity, disasters, environmental-economic accounting and ecosystem accounting, gender equality and the empowerment of women and girls, and related regional sets such as the Conference of European Statisticians' set or thematic sets of climate change indicators. At the same time, it can also be considered to prioritize and explain the relationships between different indicators and develop a short list with recommended indicators out of the large number of 158 indicators;

(e) Urged the international statistical community to expand its capacity development efforts with regard to climate change statistics by fostering closer collaboration and coordination among the multiple agencies involved in the process;

(f) Encouraged national statistical systems to invest in the development of climate change statistics, and strengthen environment statistics and accounts, using the Framework for the Development of Environment Statistics and the System of Environmental-Economic Accounting, as a complementary basis for developing climate change information, given their close interrelationship;

(g) Encouraged the enhancement of collaboration between national statistical offices and national authorities responsible for reporting climate change-related information to the secretariat of the United Nations Framework Convention on Climate Change, given the increased and more diverse data requirements for the implementation of the Paris Agreement, as well as climate-related Goal indicators;

(h) Expressed its support for the continuation of activities undertaken by the Statistics Division and the secretariat of the United Nations Framework Convention on Climate Change and other key partners to strengthen the link between statistics and policy, such as joint capacity-building efforts and training with other partners;

(i) Urged the donor community to mobilize resources to enable capacity-building in environment and climate change statistics in developing countries;

(j) Approved the proposed workplan, and requested the Statistics Division to update the Commission in two to three years.

II. Recent activities

2. The triple planetary crisis[1] of climate change, pollution and biodiversity loss is threatening the well-being and survival of millions of people around the world. Nonetheless, as highlighted at the 2023 Sustainable Development Goals Summit,[2] the information and data on climate change needed to inform policy decision-making are still not readily available.

3. The Statistics Division of the Department of Economic and Social Affairs of the Secretariat, in collaboration with the secretariat of the United Nations Framework Convention on Climate Change, developed the Global Set of Climate Change Statistics and Indicators,[3] which was adopted at the fifty-third session of the Statistical Commission, in March 2022. The Global Set serves as the statistical framework for monitoring and reporting climate action with suitable indicators to be used by countries when preparing their own sets according to their individual concerns, priorities and resources. The role of official statistics in developing climate change policies and reporting under the Framework Convention and the Paris Agreement is expected to boost the quality assurance and comparability of reported data, the political buy-in and the dissemination and use of official statistics to inform policy decisions and assess the efficiency of those policies.[4] It is also expected to contribute to stronger accountability, transparency and preparedness of countries with less developed statistical systems to benefit from climate funds and resources. Further to the adoption, the Statistics Division, in collaboration with the Expert Group on Environment Statistics,[5] the secretariat of the Framework Convention and key partners, aims to: (a) explore ways to coordinate activities on climate change statistics and to provide support for the reporting of climate change information; (b) encourage and support countries in the implementation of the Global Set by means of implementation support materials, capacity development activities and advocacy; and (c) refine the methodology of selected topics and contribute towards enhanced complementarity between global, regional and national initiatives.

4. The Expert Group on Environment Statistics met online in early October 2023 for its tenth meeting,[6] which focused on the following topics: (a) climate change statistics and indicators; (b) environment statistics data collection; (c) environment statistics toolbox; (d) capacity development in environment statistics and climate change statistics; and (e) discussion of priorities and conclusions. Among the conclusions, the Expert Group recommended the renaming of the Expert Group on Environment Statistics to the Expert Group on Environment and Climate Change Statistics and therefore proposed that the Statistical Commission at its fifty-fifth session approve the renaming. The proposal is based on a decision of the Commission at its forty-ninth session that the mandate of the Expert Group be expanded to cover more aspects of climate change statistics and indicators, on the Expert Group meetings increasingly addressing climate change statistics over recent years and on the close interrelationship between the two areas.

[1] Secretariat of the United Nations Framework Convention on Climate Change, “What is the triple planetary crisis?”, blog, 13 April 2022.

[2] See https://www.un.org/en/conferences/SDGSummit2023.

[3] See https://unstats.un.org/unsd/envstats/climatechange.cshtml.

[4] Partnership on Transparency in the Paris Agreement, “Technical paper: benefits of climate transparency”, October 2023.

[5] Approximately 131 experts from 34 countries and 22 international agencies took part in the tenth meeting of the Expert Group. The final report of the meeting is available at https://unstats.un.org/unsd/envstats/fdes/EGES10/Final%20Report.pdf.

[6] See https://unstats.un.org/unsd/envstats/fdes/fdes_eges10.cshtml.

A. Towards the coordination of activities on climate change statistics

5. To support the coordination of its work programme on environment and climate change statistics, the Statistics Division liaises closely with Member States and numerous stakeholders at the international and regional levels. This consultative approach seeks to align efforts on environment and climate change statistics with other related initiatives across the statistical community, while supporting Member States to collect and compile statistics that are relevant to common policy initiatives, internationally comparable, and applicable to international data collection efforts.

6. For example, the adoption in 2015 of the 2030 Agenda for Sustainable Development, the Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015–2030 placed a strong demand for Member State-owned statistics on the environment, climate change and disasters, and statistics across these thematic areas tend to overlap. Links between climate action and sustainable development are drawn in the Paris Agreement and the 2030 Agenda, and emphasize how climate change undeniably has an impact on sustainable development, while unsustainable development is unequivocally understood to cause further climate change. The Sendai Framework and the Paris Agreement have a nexus with respect to loss and damages as a consequence of climate change and disasters. Climate change considered as a driver of disaster risk is highlighted in the Sendai Framework, and its impact on sustainable development is also well documented. The Statistics Division supports Member States to leverage the relationships across these data by advocating for multiple uses of the same source data and helping national experts to identify and address the overlaps systematically.

7. The United Nations system continues to leverage the Expert Group on Environment Statistics as a forum for peer review and alignment of its programme of work on climate change statistics, along with other international and regional entities. The main methodological advances and capacity development led by those entities were reviewed at the tenth meeting of the Expert Group. The Statistics Division, the Food and Agriculture Organization of the United Nations (FAO), the Organisation for Economic Co-operation and Development (OECD), the secretariat of the United Nations Framework Convention on Climate Change, the United Nations Office for Disaster Risk Reduction, the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Economic Commission for Europe (ECE) all presented their respective programmes of work on climate change or related statistics with substantive and methodological advances, and proposed ways forward for collaboration as follows (capacity development activities are discussed in section B below):

- The Statistics Division described the state of implementation of the Global Set of Climate Change Statistics and Indicators, as well as the development of climate change statistics through other national efforts. It was noted that, since the adoption of the Global Set by the Statistical Commission in 2022, several countries had made good progress based upon it and some countries had progressed because of other initiatives and projects.
- The secretariat of the Framework Convention introduced the overall requirements for reporting by all parties under the Paris Agreement, the enhanced transparency framework for action and support and its new reporting tools, and a tracking of countries' implementation of nationally determined contributions. The key and increasing role of official statistics contributing to preparedness, accountability and transparency was also highlighted. The secretariat is developing the reporting tools for the enhanced transparency framework for all parties to provide the necessary information under the Paris

Agreement, including the identification of a national set of indicators that could also be traced back from the Global Set. It further highlighted the joint work with the Statistics Division that led to the adoption of the Global Set by the Statistical Commission.

- FAO provided information on emissions from land use, land use change and forestry, which showed the relationship between FAO agrifood systems and national greenhouse gas inventories for the secretariat of the Framework Convention. Land use, land use change and forestry features as a component in the FAO Corporate Database for Substantive Statistical Data (FAOSTAT). FAO plays a leading role in greenhouse gas estimation for food and agriculture at the international level, including land use, land use change and forestry and agrifood systems more generally.[7,8] The subject requires intense alignment between statistical and academic advances, and demands for additional guidance on estimating emissions from agrifood systems are on the rise.

- The United Nations Office for Disaster Risk Reduction and ESCAP highlighted the work of the Inter-Agency and Expert Group on Disaster-related Statistics and the implementation of the Sendai Framework. Notably, several of the indicators in the Sendai Framework are replicated in the Global Set and the Sustainable Development Goal indicators. As such, a global common framework for disaster statistics could help Member States to strengthen their capacity in data collection, analysis and use, while being very applicable to the Global Set.

- OECD described its work on the International Programme for Action on Climate, which aims to support countries in their efforts to progress towards net zero and a more resilient economy by 2050, and which is a foundational component of the climate work of OECD. With an analytical approach to environmental data collection that is closely linked to policy responses and impacts, advances on key indicators of OECD work underline the alignment with the efforts led by the secretariat of the Framework Convention and the Statistics Division.

- ECE shared the work of its task force on the role of national statistical offices in achieving national climate objectives. The set-up and design of the task force was shown, and reference was made to earlier work on the creation of the Conference of European Statisticians' set of core climate change-related indicators (most of which are also included in the Global Set) as well as the development of the draft guidance on the role of national statistical offices in achieving national climate objectives, including chapters on mitigation and adaptation policies and their statistical needs.

8. Based on deliberations during the tenth meeting of the Expert Group, the Statistics Division, the secretariat of the Framework Convention and other key partners agreed to collaborate further to contribute to the secretariat's "together for transparency" approach and promote the reporting tools for the enhanced transparency framework. This will enhance understanding of the role of national statistical offices at the national level in reporting climate change information under the national statistical system, through the implementation of the Global Set, capacity development and advocacy through joint activities such as side events. Such collaboration would increase transparency at both the national and international levels; support the development of capacity within Member States; promote better-

[7] Food and Agriculture Organization of the United Nations (FAO), "Agrifood systems and land-related emissions. Global, regional and country trends, 2001–2021", 9 November 2023.

[8] One of the sources for the greenhouse gas estimates is the Energy Statistics Database of the Statistics Division, available at https://unstats.un.org/unsd/energystats/data/.

informed policy decisions sourced from Member State-owned official statistics; and benefit political acceptance, build institutional trust and support the meeting of international obligations.

9. In its efforts to promote consistency and the streamlining of climate, environment and related statistics, the Statistics Division, in collaboration with members of the Intersecretariat Working Group on Environment Statistics,[9] has compiled inventories on capacity development and data collection activities for various topics related to environment statistics that are led by international and regional organizations.[10] An inventory of country and agency responses to the global consultation on the Global Set of Climate Change Statistics and Indicators has also been compiled by the Division.[11] Part I of the global consultation for countries focused on the institutional dimension of climate change statistics and indicators and consisted of seven subparts, including production and reporting of climate change statistics; inter-institutional collaboration; and technical assistance and training. Part I for international and regional agencies focused on their activities on climate change statistics and indicators and consisted of three subparts: data collection and production; methodology; and capacity development.

10. In addition to the inventories mentioned in paragraph 9 above, the Statistics Division continually engages in outreach with key stakeholders in a consultative manner to ensure that the scope is as comprehensive as possible. It provides an overview of activities being undertaken by the multitude of international and regional organizations, which can facilitate communication, promote transparency and minimize duplication of efforts among those organizations and Member States. Given the close interrelationship between environment and climate change statistics and to promote the streamlining of both areas, it is proposed that the environment statistics and climate change statistics reports to the Statistical Commission be combined in one annual report on environment and climate change statistics under a single agenda item, as well as combining the inventories.

11. Since the Statistical Commission itself presents a great opportunity for engagement with key stakeholders, the Statistics Division holds annual side events on the margins of the sessions of the Commission. This has included a side event on the theme “Implementation of the Global Set of Climate Change Statistics and Indicators” held during the fifty-fourth session of the Commission, in March 2023.[12] This was a timely event, approximately 12 months after the adoption of the Global Set by the Commission, for the Division, the secretariat of the Framework Convention, the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women), the Pacific Community and the United Republic of Tanzania to present to Member States how the Global Set can be practically applied, in conjunction with supporting tools, the climate change statistics and indicators self-assessment tool[13] and the implementation guidelines for the Global Set.[14] The Division plans to hold a side event further advocating the Global Set and continued

[9] See https://unstats.un.org/unsd/envstats/coordination.

[10] See the background document to E/CN.3/2020/33 prepared by the Division, available at https://unstats.un.org/UNSDWebsite/statcom/session_51/documents/BG-item-4e-EnvironmentStats-E.pdf.

[11] See the background document to E/CN.3/2022/17 prepared by the Division, available at https://unstats.un.org/UNSDWebsite/statcom/session_53/documents/BG-3m-GlobalConsultationontheGlobalSet-E.pdf.

[12] See https://unstats.un.org/UNSDWebsite/events-details/un54sc-01032023-M-Implementation--of-the-Global-Set-of-Climate-Change-Statistics-and-Indicators.

[13] See https://unstats.un.org/unsd/envstats/Climate%20Change/cisat.cshtml.

[14] *Global Set of Climate Change Statistics and Indicators: Implementation Guidelines* (Statistics Division of the Department of Economic and Social Affairs, 2023).

progress on implementing it by Member States at the present session of the Commission.

B. Implementation of the Global Set

1. Implementation support materials

12. Taking into consideration the timeliness of the work programme of the Statistics Division with respect to the adoption of the Global Set (see E/2022/24-E/CN.3/2022/41), the present time is opportune to emphasize implementation. To this end, the implementation guidelines and the climate change statistics and indicators self-assessment tool, prepared by the Division in collaboration with the Expert Group on Environment Statistics, are both stressed in capacity development endeavours of the Division and other key partners. In addition, the Expert Group highlighted that other guidance and tools had also been used in countries. For example, some countries' experience in applying the Framework for the Development of Environment Statistics had contributed to their preparedness to apply the Global Set.

13. The implementation guidelines aim to help to improve the monitoring of climate change, its impacts and response actions by communicating the benefits of official statistics to national authorities responsible for reporting climate change-related information to the secretariat of the United Nations Framework Convention on Climate Change and by guiding national statistical offices to increase their engagement in the area of climate change. The guidelines refer to relevant frameworks, methods, guidelines and handbooks to facilitate closer engagement between these two types of institutions. They specify key steps needed to set up national processes to produce climate change statistics in response to national policies while striving to improve the comparability of data internationally, and thus contribute to improved climate change monitoring, as well as the way countries progress towards mitigation and adapt to adverse effects.

14. While Member States implement the Global Set at the national level, the data they are compiling will contribute to cross-country comparability on climate change statistics through data collection by international organizations. Compilation by international organizations is better informed by country efforts to apply the Global Set, which provides widely agreed definitions and methodological guidance in its metadata.[15] The main statistical methods applied to define the statistics and indicators in the Global Set refer to the following sources: the 2006 guidelines of the Intergovernmental Panel on Climate Change;[16] the Framework for the Development of Environment Statistics;[17] the Sustainable Development Goal indicators metadata;[18] the Sendai Framework; the Conference of European Statisticians' set of core climate change-related indicators metadata;[19] the International Recommendations for Energy Statistics;[20] and the System of Environmental-Economic Accounting.[21] The key use of Member States' data is to fulfil international reporting obligations, especially for the enhanced transparency framework and nationally determined contributions under the Paris Agreement.

[15] See https://unstats.un.org/unsd/envstats/Climate%20Change/cisat.cshtml.
[16] See https://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html.
[17] See https://unstats.un.org/unsd/envstats/fdes.cshtml.
[18] United Nations, Global Sustainable Development Goal Indicators Database, available at https://unstats.un.org/sdgs/metadata.
[19] See https://unece.org/statistics/publications/CES-set-of-core-climate-change-related-indicators.
[20] *International Recommendations for Energy Statistics (IRES)* (United Nations publication, 2017).
[21] See https://seea.un.org/.

15. At its tenth meeting, the Expert Group acknowledged again that close engagement with national statistical offices allowed for more successful reporting and verification of reported data, such as on greenhouse gas emissions, policies and measures, adaptation and support activities, including financial support, by the secretariat of the Framework Convention, and therefore it would be in the best interests of countries to showcase their contributions under the Paris Agreement in order to improve the quality of data reported.

16. Throughout the tenth meeting of the Expert Group, the importance of national statistical offices in coordinating or contributing to the compilation of national communications, biennial reports and especially greenhouse gas inventories was stressed, while it was recognized that the specific expertise lay in various sectors or line ministries and specialized agencies. An added value of a national statistical office being central to such a process is that the link between statistics and policy concerning climate change can be well established. Such efforts may call for Member States to invest in their national statistical systems, to increase the availability of climate change statistics through specialized surveys or other data collection tools and to integrate climate and environmentally related questions into population and housing censuses, agricultural censuses and other household or establishment-based surveys.

17. To gauge implementation of the Global Set and the development of climate change statistics in general, the Statistics Division administered a pilot survey to members of the Expert Group prior to its tenth meeting. The survey was based on questions relating to annex 1 to the implementation guidelines. Responses showed that countries' application of the Framework for the Development of Environment Statistics had contributed to positive answers concerning the Global Set. Furthermore, since the adoption of the Global Set in 2022, several countries had made good progress in its implementation and some countries had progressed because of other initiatives and projects, such as the Conference of European Statisticians' set of core climate change-related indicators, the European Green Deal,[22] Group of 20 Data Gaps Initiative of the International Monetary Fund[23] and the Partnership in Statistics for Development in the 21st Century (PARIS21) climate change data ecosystem.[24] Experts expressed appreciation for the outcome of the pilot survey, provided inputs towards its finalization and recommended that the Division consider inputs from the tenth meeting of the Expert Group in refining the survey.

18. At the tenth meeting of the Expert Group, experts met in a dedicated group work setting to review findings of the pilot survey on the status of implementation of the Global Set. The conclusions from the review provided several insights, such as that inter-institutional collaboration was important for countries to successfully report on climate change statistics; that committees were useful in creating networks to foster collaboration and discuss the statistics and indicators needed at the national level; and that high-level buy-in and/or inclusion of climate change statistics in the national strategy for the development of statistics or other national strategies was important.

19. Alongside the implementation guidelines, the climate change statistics and indicators self-assessment tool, comprising two parts, an introduction and accompanying metadata, gives Member States an opportunity to undertake a thorough and detailed assessment of the statistics and indicators in the Global Set, while allowing for the prioritization of nationally relevant indicators and statistics. Across regions, several countries have already gained experience in applying the self-assessment tool. The Statistics Division has drawn on insights shared by implementing countries that there are challenges associated with widespread volumes

[22] See https://www.consilium.europa.eu/en/policies/green-deal/.
[23] See www.imf.org/en/News/Seminars/Conferences/DGI/about.
[24] See https://www.paris21.org/search?text=ccde.

of data, the management of stakeholder consultation and the clarity of definition of policy goals, with or without legislative backing. Experts acknowledged the value and use of the self-assessment exercise and findings. Therefore, the importance of national statistical offices in the coordination of or contribution to the compilation of national communications (such as the greenhouse gas inventories) was underlined, while it was recognized that the specific expertise lay in various sectors or line ministries and specialized agencies.

20. At another group session of the tenth meeting of the Expert Group, experts reviewed country experiences with the self-assessment tool and noted that it was very useful in assessing data gaps and data quality relative to existing data sources, for example, surveys and administrative data. They also shared key points derived from its application, including exploring the use of non-traditional data to fill data gaps; details on relevant parts used by national institutions; the need for a strong national committee with adequate resources and representing the various prioritized topics; the challenge of engaging with specialized national agencies; and the need for communication to exchange lessons and expertise regionally. It was suggested that a national set of indicators be selected with the help of a strong committee representing the various nationally prioritized topics. The status of methodology and preparedness to apply these indicators should also be considered, as should the needs of the nationally determined contributions, national action plans and other national strategies. Furthermore, it was noted that self-assessment tools developed by the Statistics Division were complementary to different processes and other tools, such as the new reporting tools for the enhanced transparency framework developed by the secretariat of the United Nations Framework Convention on Climate Change, the PARIS21 climate change data ecosystem and the European Green Deal, and could be used to bring visibility to environment and climate change areas into a Member State's national strategy for the development of statistics and other planning processes.

21. Member States were encouraged to apply the implementation support tools (the self-assessment tool and the implementation guidelines) of the Global Set, to assist in establishing national programmes of climate change statistics, and to publish and disseminate climate change statistics reports. The Statistics Division continues to welcome Member States' climate change statistics reports compiled through the application of the Global Set, and shares such efforts publicly on its website.[25]

2. Capacity development

22. The Statistics Division, in collaboration with the secretariat of the United Nations Framework Convention on Climate Change and other partners, offers continuous capacity development in climate change statistics to support Member States in accordance with their needs and follow the progress made in the implementation of the Global Set and other support mechanisms and implementation support guidance, including the Framework for the Development of Environment Statistics. The Division continues to receive country requests from different regions. Responses to those requests take various forms, including bilateral and multilateral consultations, reviews and discussions, and in-country missions.

23. In order to promote effective participation by all countries in the measurement, reporting and verification arrangements under the United Nations Framework Convention on Climate Change, and in the enhanced transparency framework under the Paris Agreement, concrete and effective support to developing countries is fundamental. In this way, the secretariat of the Framework Convention provides a broad range of support opportunities to developing countries with a view to enhancing their capacities, promoted also by some of the bodies constituted under the

[25] See https://unstats.un.org/unsd/envstats/climatechange_reports.cshtml.

Framework Convention and other multilateral institutions and non-governmental organizations. These support opportunities include direct support in the preparation of national transparency reports (e.g. national communications and biennial transparency reports) and in the development of national greenhouse gas inventories, the provision of financial and technical support and assistance, the development of knowledge materials and the provision of training programmes, among others.

24. The Statistics Division and key partners continually receive feedback from countries in different regions on developments, including updates on the self-assessment, new publications, the establishment of working groups or committees, projects and new focal points or contact persons in climate change statistics, as well as requests for various kinds of support to accelerate progress. Some of the key activities that the Division has organized or contributed to with other international and regional organizations either through online or on-site support are described below.

3. Continuous online support

25. Through its Statistics Division, the Department of Economic and Social Affairs continues to provide online support to Member States, including bilateral and multilateral consultations, reviews, webinars and workshops, among other forms of online support. In the past year, the Division has supported Suriname to review its first climate change compendium; aided Grenada in the finalization of an environment compendium which includes some climate change statistics; and reviewed inputs towards the strategy of Uganda for the development of an environment and climate change statistics programme. Under the project entitled “Resilient and agile national statistical systems to meet post-COVID-19 data needs to recover better” under the fourteenth tranche of the Development Account, workstream 2.1 is being led by the United Nations Environment Programme (UNEP) and ESCAP and facilitates the integration of climate change, environment and disaster statistics in a geospatially enabled manner. Under this workstream, several organizations, including the Division, have provided support to 61 Member States through two global webinars aimed at increasing the preparedness of countries to respond to demands for statistics related to climate change and disasters. Through the project led by the Economic Commission for Latin America and the Caribbean (ECLAC) under the twelfth tranche of the Development Account, the Division has provided support to national workshops in Antigua and Barbuda, Dominica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines and Suriname, and to a regional workshop in Chile. The Division has also contributed to national workshops organized by ECLAC in Cuba, the Dominican Republic and Ecuador and a city-level workshop for Mexico City.

4. Missions and on-site support

26. In response to various requests from Member States, the Statistics Division continues to provide support through missions and other on-site interventions. During a mission to Peru organized by the Division in collaboration with ECLAC, the National Institute of Statistics and Information (INEI) and the Ministry of Environment of Peru, fundamental inputs were provided to initiate the development of a national programme on climate change statistics and indicators. Stakeholders were brought together at a workshop where hands-on training on priority topics related to climate change, using the Global Set, was provided. At a regional workshop organized by the Common Market for Eastern and Southern Africa (COMESA) for 37 African Development Fund countries, the Division provided overall substantive support. The workshop significantly referenced the implementation guidelines, the climate change statistics and indicators self-assessment tool and the Global Set to

help improve the monitoring of climate change statistics. Several other international and intergovernmental organizations, including the secretariat of the United Nations Framework Convention on Climate Change and UNEP, also participated in the workshop. Through the project under the twelfth tranche of the Development Account, the Division has worked jointly with ECLAC to support Antigua and Barbuda, Belize, Dominica and Grenada on the utilization of the Global Set. Similar efforts were also undertaken with ECLAC through regional-level workshops. Working with UNEP and the United Nations Office for Disaster Risk Reduction in Lesotho and with UNEP, the United Nations Office for Disaster Risk Reduction and the United Nations Development Programme in Cameroon, the Division has raised awareness and provided training on the effective use of the implementation guidelines, the self-assessment tool and the Global Set as well as the Sendai Framework. Through an initiative from PARIS21 on the climate change data ecosystem approach, support was provided to Belize, Grenada, the Lao People's Democratic Republic and Senegal, where complementarity and synergies with the materials developed by the Division were identified. The PARIS21 climate change data ecosystem approach initiative highlighted that good climate change statistics and information required the capacity of the national statistical system, and not only of the national statistical office or specific ministries.

27. The Statistics Division has also worked with the secretariat of the Framework Convention and other partners to carry out several country workshops on improving energy balances and energy statistics for supporting countries to report under the enhanced transparency framework of the Paris Agreement. An extensive quality assessment has been developed by the secretariat and the Division, on which these events are based. The main objective of this initiative is to improve the institutional arrangements and the technical capacity of developing countries regarding their national energy statistics and balances. A robust energy data system reinforces transparency in reporting national greenhouse gas inventories to the secretariat.

28. Presentations were given and discussions took place on capacity development at the tenth meeting of the Expert Group, which provided an overview of the various activities being undertaken in environment statistics and climate change statistics by international and regional organizations, namely ECE, ECLAC, ESCAP, the Economic and Social Commission for Western Asia, UNEP, PARIS21, the secretariat of the Caribbean Community and COMESA. Providers of capacity development appreciated sharing their capacity development experiences among each other and with Member States, which contributes towards enhanced complementarity and consistency of these activities at the global level. Regional commissions and other regional organizations highlighted scarce budgets as a key limitation to capacity development, as well as the need to enhance the role of multi-source data collection, data science, new technology, big data and spatial data (with time series) in such a novel area of statistical work. An updated inventory of capacity development activities of the organizations will be compiled to facilitate information-sharing.

29. Member States expressed their appreciation for the efforts of the United Nations in implementing Development Account projects, as well as capacity development activities carried out by other partners and projects, and encouraged the continuation of such efforts in partnership with relevant institutions.

C. Methodological development

30. Following the established sequence of events when the Statistical Commission adopts a methodology, continual review, refinement and advancement of that methodology is necessary, especially for the indicators and statistics included in the Global Set of Climate Change Statistics and Indicators at tier 3. Other methodological

and structural updates are also necessary, including new policy and reporting references, new statistical guidance and frameworks, and upgrades from tier 2 to tier 1. Continued methodological research and development in support of the Global Set builds on Member States' experiences in developing climate change statistics, aiding Member States as they consider how best to apply the Global Set to their needs. In this manner, the Expert Group on Environment Statistics has incorporated into its agenda the efforts of Member States and participating international organizations to advance research in support of the Global Set. While such efforts require significant human and financial resources, the Statistics Division continues to collaborate with key stakeholders as methodologies in support of the Global Set evolve, such as those concerning health, gender equality and disasters.

1. Climate change and gender statistics

31. A previous mandate from the Statistical Commission, in which the Commission requested that a gender perspective be adopted and integrated into all its agenda items (E/2020/24-E/CN.3/2020/37, decision 51/115), has been given due consideration in the advancement of the work concerning climate change statistics. While advancing methodologies concerning the Global Set, the Statistics Division has consulted with UN-Women and the Inter-Agency and Expert Group on Gender Statistics to identify where cross-fertilization and synergies between climate change and gender statistics can aid Member States in the advancement of both statistical fields (see E/CN.3/2024/14). Bearing this in mind, the intention is to provide an opportunity for Member States to create efficiencies in their programmes of work concerning climate change and gender statistics, taking into consideration the nexus between the two and acknowledging that both are naturally very cross-cutting.

32. During the tenth meeting of the Expert Group, experts' focus included how gender statistics could be a powerful tool to address different environmental challenges, but also enhance climate change or disaster risk reduction governance. Methodologies concerning official statistics whereby phenomena concerning change in environmental quality may affect the health of different populations are being advanced. At the meeting, a representative of the Inter-Agency and Expert Group on Gender Statistics introduced recent initiatives regarding the integration of a gender perspective into the field of environment and climate change statistics. The first agreed-upon activity by the Inter-Agency and Expert Group involved creating a guidance note highlighting the relevance of gender statistics in understanding environmental challenges for women and men and improving actions related to climate change and disaster risk. A group work session took place during the meeting, which allowed for peer review of the latest advancements on the nexus between climate change and gender statistics. In the interest of advancing the methodological research on climate and gender statistics, Member States have agreed to share experiences of household surveys used for gender and environment data collections.

33. The Global Set (especially in the case of its tier 3 indicators) can benefit from the methodological work on gender and climate change statistics, in particular the work carried out in the Asia-Pacific region. The advances should be reviewed and incorporated into the Global Set, so long as they meet the criteria of methodological soundness, data availability and policy relevance. Experts agreed that the work on indicators with detailed metadata from the Asia-Pacific region was suitable for review for updates of the Global Set, especially where similarities were identified. Experts also agreed to continue the discussion regarding the opportunity to incorporate questions on gender issues and climate change into existing household surveys or censuses (population and housing censuses, Multiple Indicator Cluster Surveys, Demographic and Health Surveys, labour force surveys or others). Specialized household surveys with a focus on the nexus between gender equality and climate

change may be considered. Other topics (which are currently not included in the set of indicators for the Asia-Pacific region) were also considered, including migration, crime and environmental concerns.

2. Climate change and health statistics

34. Climate impacts on health is a vital topic, with data deficiencies both in terms of quality and time series in most Member States. This topic therefore should be prioritized on the agenda of national Governments for the production of climate and health-related statistics. Likewise, the topic needs to be prioritized at the international level. A key stakeholder in this effort is the Office for National Statistics (ONS) of the United Kingdom of Great Britain and Northern Ireland, in collaboration with the African Institute for Mathematical Sciences Rwanda and the Regional Institute for Population Studies at the University of Ghana. Methodological research, led by ONS, on the impact on human health and health-care facilities of a range of climate-related hazards (including heatwaves) continues to advance. The level of disaggregation will be key in identifying the impact of climate change on health, and due to the nature of climate exposure and severity, this will need to be considered at the local level for certain purposes (e.g. often to measure adaptation and vulnerability) but aggregated at least to the national level for other purposes (e.g. often to measure drivers and impacts).

35. As the work concerning climate change and health statistics advances, a key consideration is the need for collaboration between national statistical offices and other key stakeholders at the national level, such as the ministry of health. Furthermore, an interaction between a national statistical office and the ministry of health may require formalization, as consideration may need to be given to the sensitivity of confidential health records, especially when the phenomenon that they are trying to measure and associate with climate change needs to be localized to inform decision-making. If climate adaptation and mitigation policies are to be well informed, access to high-quality confidentialized data which take into consideration temporal and spatial scale will be imperative. Progress on climate change and health statistics and the relationship between the two were reviewed at a group work session during the tenth meeting of the Expert Group.

3. Disaster statistics

36. In line with the progress of Member States to meet commitments related to the Sendai Framework, and bearing in mind yet again another field of statistical work that naturally overlaps with climate change statistics, work concerning disaster statistics is considered by the Statistics Division in collaboration with the United Nations Office for Disaster Risk Reduction and other partners. This topic was addressed at the tenth meeting of the Expert Group, which discussed methodological developments in disaster statistics under the auspices of the Inter-Agency and Expert Group on Disaster-related Statistics. The nexus between climate change and disaster statistics is being addressed, inter alia, in the project under the fourteenth tranche of the Development Account mentioned in paragraph 25 above and the missions in Lesotho and Cameroon mentioned in paragraph 26 above. Moreover, efforts undertaken by the Pacific Community and UN-Women to test climate and disaster surveys are feeding into the plans of the Division for continued research into best methodology for data sources.

4. Water and waste statistics

37. At the tenth meeting of the Expert Group, water and waste statistics were also extensively discussed, as was their applicability to the Global Set. Efforts have been ongoing to continuously review the methodological work underlying water statistics

through the regularly held water teleconferences between the Statistics Division, OECD, Eurostat, the World Health Organization, the United Nations Human Settlements Programme (UN-Habitat) and FAO under the auspices of the Intersecretariat Working Group on Environment Statistics, which meets on a quarterly basis. The agenda of these teleconferences is related to water statistics, and while their original intention was not to serve as input for climate change statistics, the environmental indicators, focusing on water and waste, have genuine applicability to a number of statistics and indicators in the Global Set. The Statistics Division/UNEP questionnaire on environment statistics focusing on water and waste statistics is one of many collections at the international level that can serve as an input to climate change statistics compilation.

5. Censuses and surveys

38. A relatively new source for environment and climate change statistics was discussed at the tenth meeting of the Expert Group and includes: (a) developments in survey modules on climate change; and (b) experience on climate change-related data collections by means of population and housing censuses. For example, many Member States are including a dedicated section on the environment, which may include specific questions on climate change, in their population and housing censuses and are sharing this information with the Statistics Division, which continues to maintain a centralized hub making such content available to all Member States.[26] This is revealing that the population and housing censuses can be an invaluable source for the compilation of some statistics in the Global Set. Beyond population and housing censuses, specialized surveys that capture information concerning environmentally related issues, such as on climate change and disasters, are regularly shared by Member States with the Department of Economic and Social Affairs through its Statistics Division and are also featured in the centralized hub. This body of work has been built to the point that it may be referred to for and indeed inform the revision of the Principles and Recommendations for Population and Housing Censuses for the 2030 census round.

39. In collaboration with the Pacific Community and the States Members of the United Nations which it serves, a core module of 11 questions from a total of 30, on climate change and disasters, as part of a survey designed to collect data to address climate change indicators and statistics from the Global Set, the Framework for the Development of Environment Statistics, the Sendai Framework and the Sustainable Development Goals, has been shared with the Statistics Division. The survey aims to provide data at a disaggregated level and can be applied to other Member States with similar characteristics (often small island States).

40. At the tenth meeting of the Expert Group, the United Republic of Tanzania provided an overview of its environment statistics data collection, the environment and climate change questions in the 2022 round of population and housing censuses, and its recommendations for the 2030 round of population and housing censuses. It stated that the main objective of incorporating questions related to the environment and climate change included, but were not limited to, collecting baseline data for some environment and climate change statistics; raising awareness of the environment and climate change for all persons in the country; and seeking public opinion on various aspects related to knowledge and perceptions about climate change. Several other Member States mentioned plans to include climate change-related questions in their forthcoming population and housing censuses. The inclusion of questions on specific themes within population and housing censuses is welcome, as they can serve now and in future as an invaluable source for environment and climate change statistics.

[26] See https://unstats.un.org/unsd/envstats/censuses/.

41. Taking into consideration that a number of indicators in the Global Set require data from surveys and censuses, during the tenth meeting of the Expert Group, which allowed for much consultation between Member States and the Statistics Division, the formation of a working group of experts was proposed to facilitate a general collection of climate change questions and to develop a core set that could be included in those data collection instruments. As the effort of such a working group may progress, it will endeavour to be in dialogue with the United Nations expert group responsible for the revision of the Principles and Recommendations for Population and Housing Censuses for the 2030 census round (see E/CN.3/2024/15 and E/CN.3/2024/23). Such communications among the two expert groups may take place well prior to the submission of the revised Principles and Recommendations for Population and Housing Censuses to the Statistical Commission at its fifty-sixth session, in March 2025, which would allow for that submission to consider advancements of the working group whose focus is on climate change questions.

III. Future plans

42. As the area of climate change statistics receives more funding and priority for further methodological and capacity development work, the Statistics Division, the secretariat of the United Nations Framework Convention on Climate Change and other key partners have been providing capacity development for climate change statistics, including in the general context of environment statistics. This had led to many countries initiating a national programme on environment and/or climate change statistics, participating in other projects or planning future activities.

43. The Statistics Division, the secretariat of the Framework Convention and other key partners will continue to work towards building coordination and alignment of activities on climate change and environment statistics through the Expert Group on Environment Statistics and the Intersecretariat Working Group on Environment Statistics, including by promoting the implementation of the Global Set of Climate Change Statistics and Indicators. This work requires continuous engagement and promotion of the benefits of official statistics in terms of supporting transparency and accountability, especially in mitigation, adaptation to climate change and disaster risk reduction.

44. In an effort to encourage further engagement and cooperation while minimizing duplication of effort through its Statistics Division, the Department of Economic and Social Affairs proposes to initiate work on a strategy for international and regional organizations to strengthen and collaborate in implementing capacity development activities on environment and climate change statistics in Member States. This work will build on existing references, including the International Statistical System;[27] the United Nations Statistics Quality Assurance Framework;[28] and the document entitled “Putting the Framework for the Development of Environment Statistics to work: a blueprint for action”.[29] While embracing these generic guides, such a strategy is also expected to build on specific inputs, such as the Intersecretariat Working Group on Environment Statistics inventory of capacity development activities of 2020[30] and the

[27] *The Handbook on Management and Organization of National Statistical Systems* (United Nations publication, 2022), chap. 16.

[28] Committee of the Chief Statisticians of the United Nations System, “United Nations Statistics Quality Assurance Framework: including a generic statistical quality assurance framework for a UN agency”, September 2016.

[29] Available at https://unstats.un.org/unsd/statcom/doc13/BG-FDES-Environment_Blueprint.pdf.

[30] See the background document to E/CN.3/2020/33 prepared by the Statistics Division, available at https://unstats.un.org/UNSDWebsite/statcom/session_51/documents/BG-item-4e-EnvironmentStats-E.pdf.

outcomes of the global consultation of 2022.[31] Besides the strategy, further efforts are needed on developing training materials, e-learning and the knowledge base.

45. The regional commissions, UNEP, the Statistics Division, the secretariat of the Framework Convention and other partners will continue to organize regional and national capacity development workshops, including through the project under the fourteenth tranche of the Development Account, and will be complemented by the regular programme of technical cooperation and other funds. The Global Set will be applied using the implementation guidelines and the climate change statistics and indicators self-assessment tool, along with other relevant tools. The implementation support tools will be further promoted by means of translation into the other official languages of the United Nations and the conduct of information sessions at various events.

46. The Statistics Division further plans to continue collaboration with specialized agencies and relevant institutions on prioritized topics to advance the methodology and implementation support for the Global Set of Climate Change Statistics and Indicators in a balanced way, especially bearing in mind methodological advancements concerning tier 3 indicators. Taking into account the important methodological developments in the areas of climate and health led by ONS of the United Kingdom, and climate and gender led by the Inter-Agency and Expert Group on Gender Statistics and UN-Women in the Asia-Pacific region, the Division will work with the above-mentioned partners to continue to review the methodological advances and incorporate the corresponding updates into the Global Set as appropriate. Other areas will also be prioritized on the basis of the availability of expertise and resources.

47. Furthermore, through the formation of a working group of experts within the Expert Group on Environment Statistics, partners will develop a core set of climate change questions that can be included in censuses and surveys to inform a number of indicators and statistics in the Global Set as well as the 2030 Agenda for Sustainable Development and beyond. Several Member States have already demonstrated interest in participating in this working group. Core questions and topics developed by the working group of experts may be discussed with the United Nations expert group responsible for the revision of the Principles and Recommendations for Population and Housing Censuses for the 2030 census round. Such an arrangement may allow time for consideration prior to the fifty-sixth session of the Statistical Commission, in March 2025.

IV. Action to be taken by the Statistical Commission

48. **The Commission is invited:**

(a) **To approve the renaming of the Expert Group on Environment Statistics to the Expert Group on Environment and Climate Change Statistics based on the request of the Expert Group, on the decision of the Commission at its forty-ninth session that the mandate of the Expert Group be expanded to cover more aspects of climate change statistics and indicators, on the expert group meetings increasingly addressing climate change statistics, and on the close interrelationship between the two;**

(b) **To promote the streamlining of environment and climate change statistics by amending the work programme of the Commission and combining**

[31] See the background document to E/CN.3/2022/17 prepared by the Statistics Division, available at https://unstats.un.org/UNSDWebsite/statcom/session_53/documents/BG-3m-GlobalConsultationontheGlobalSet-E.pdf.

these two areas into a single agenda item with one annual report on environment and climate change statistics;

(c) **To urge countries to apply the Global Set of Climate Change Statistics and Indicators and its implementation support tools, self-assessment tool and implementation guidelines to assist in establishing national programmes on climate change statistics;**

(d) **To encourage further collaboration between the Statistics Division of the Department of Economic and Social Affairs, the secretariat of the United Nations Framework Convention on Climate Change and other key partners to continue to strengthen the link between statistics and policy by undertaking joint initiatives, training and capacity development efforts and efforts to promote reporting tools;**

(e) **To advocate for closer engagement at the national level between the national statistical office and the national authorities responsible for reporting climate change to the secretariat of the United Nations Framework Convention on Climate Change, which will support countries in meeting their reporting obligations under the Framework Convention and improve the quality of data reported under the Paris Agreement and for other purposes;**

(f) **To take note of the work undertaken to date to develop methodologies for prioritized topics, on the understanding that all new methodological work requires collaboration among specialists, and to encourage the further integration of gender, health, disasters and other statistical areas with environment and climate change statistics;**

(g) **To urge the donor community to mobilize additional substantial resources to enable capacity development in environment and climate change statistics in countries with less developed statistical systems;**

(h) **To strongly encourage national statistical systems to invest in the development of climate change statistics, by designing special surveys or other data collection tools, and to include climate and environment-related questions in the population and housing censuses, agriculture censuses, household surveys (household income) and censuses and surveys of economic activities, among others.**