# Eleventh Meeting of the Expert Group on Environment and Climate Change Statistics (Virtual)

## 14-17 October 2024

Final Report

1. The Eleventh Meeting of the Expert Group on Environment and Climate Change Statistics (EG-ECCS), organized by the United Nations Statistics Division (UNSD), was held virtually on 14-17 October 2024 during approximately three and a half-hour sessions for each of the days. Approximately 122 experts from 32 countries[1] and 24 agencies[2] and four independent experts attended the meeting.

2. The meeting was organized into six sessions as follows:
   Opening Session
   Session 1: Streamlining Environment and Climate Change Statistics
   Session 2: Climate Change Statistics and Indicators
   Session 3: Environment Statistics Data Collection
   Session 4: Environment Statistics Toolbox
   Session 5: Capacity Development in Environment Statistics and Climate Change Statistics
   Session 6: Discussion of Priorities and Conclusions

3. The discussions were based on the agenda with corresponding presentations prepared by the EG-ECCS and UNSD. Short descriptions of the presentations and the main discussion points are summarized below. The meeting conclusions and recommended actions are contained in Session 6. The agenda of the meeting appears as Annex I, and the list of participants appears as Annex II.

4. Ms. Reena Shah, Chief, Environment Statistics Section, UNSD, expressed her appreciation to all experts who have contributed to the work of the EG-ECCS and welcomed new experts to the meeting.

[1] Armenia, Australia, Bangladesh, Botswana, Brazil, Cabo Verde, Canada, Colombia, Czech Republic, Finland, Grenada, Hungary, India, Ireland, Italy, Jamaica, Jordan, Luxembourg, Mexico, Nepal, Netherlands, New Zealand, Philippines, Slovenia, Spain, State of Palestine, Sweden, Uganda, United Arab Emirates, United Kingdom, United Republic of Tanzania, and Zimbabwe.

[2] African Development Bank (AfDB), Caribbean Community (CARICOM) Secretariat, Common Market for Eastern and Southern Africa (COMESA), Eurostat, European Environment Agency (EEA), Food and Agriculture Organization of the United Nations (FAO), Gulf Cooperation Council (GCC-Stat) Statistical Center, Organisation for Economic Co-operation and Development (OECD), Pacific Community (SPC), Partnership in Statistics for Development in the 21st Century (PARIS21), United Nations Environment Programme (UNEP), United Nations Office for Disaster Risk Reduction (UNDRR), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Human Settlements Programme (UN-Habitat), United Nations Institute for Training and Research (UNITAR), World Health Organization (WHO), World Meteorological Organization (WMO), Economic Commission for Africa (ECA), Economic Commission for Europe (UNECE), Economic Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Asia and the Pacific (ESCAP), Economic and Social Commission for Western Asia (ESCWA), UN Women and the United Nations Statistics Division (UNSD).

5. Mr. Stefan Schweinfest, Director, UNSD, opened the EG-ECCS, warmly welcomed everyone and expressed his gratitude to countries and agencies that have collaborated with UNSD on the development and implementation of the Global Set of Climate Change Statistics and Indicators (Global Set)[3]. He stated that since the Global Set had been adopted at the United Nations Statistical Commission (Statistical Commission) in 2022, countries are better prepared to develop statistical frameworks on climate change to contribute to informed-policy decision-making. In addition, he extended appreciation to the United Nations Framework Convention on Climate Change (UNFCCC) and other international partners for their continued close and excellent collaboration affirming that this was especially valued since it ensures that the work of the statistical community was closely aligned with reporting requirements for the Enhanced Transparency Framework and the Global Stocktake of the Paris Agreement. Appreciation was also expressed to the Chairperson of the EG-ECCS, Ms. Ruth Minja of the National Bureau of Statistics of the United Republic of Tanzania, and the Vice-Chairperson, Ms. Anjali Kisoensingh of the General Bureau of Statistics of Suriname, for their dedication and commitment to the work.

6. Mr. Schweinfest informed the meeting that the Statistical Commission, at its fifty-fifth session in March 2024, approved the renaming of the Expert Group on Environment Statistics to be the Expert Group on Environment and Climate Change Statistics to cover both topics, given their close interrelationship. He also noted that the Statistical Commission requested the amendment of the work programme of the Statistical Commission to combine environment and climate change statistics into a single agenda item, with one joint report, to facilitate streamlining of these two areas.

7. Stressing that the present time was for continuation of the implementation of the work following the adoption of the Global Set by the Statistical Commission in 2022 as the framework for climate change statistics and indicators to be used by countries[4], he noted that implementation, as well as the review process, naturally follow the adoption of any norm such as the Global Set. From the survey of environment and climate change statistics carried out by UNSD prior to the EG-ECCS for which UNSD expressed its appreciation to the responding countries and agencies, he highlighted that there was already evidence in several countries that showcase good practices, with units, staff, national programmes and publications dedicated to environment and climate change statistics which demonstrated the progress in these statistical areas.

8. Mr. Schweinfest emphasized that while there have been very positive methodological developments in various areas such as health, gender and disasters, a complete review of the Global Set was a complex process that requires resources including financial and human. Experts were encouraged to bear this in mind throughout their participation at the EG-ECCS. The value of the contributions of experts as part of the EG-ECCS in contributing to the advancement of this work was underscored.

[3] UNSD, Report of the Secretary-General on Climate Change Statistics, Fifty-third session of the Statistical Commission (28 February to 2 March and 4 March 2022). Available at: https://unstats.un.org/unsd/statcom/53rd-session/documents/2022-17-ClimateChangeStats-E.pdf (for the Global Set of Climate Change Statistics and Indicators, refer to Annex II, p. 15/21).
[4] UNSD, Report on the fifty-third session of the Statistical Commission (28 February to 2 March and 4 March 2022). Available at: https://unstats.un.org/unsd/statcom/53rd-session/documents/2022-41-FinalReport-E.pdf

9. Finally, Mr. Schweinfest communicated the importance of the work of the EG-ECCS by elaborating that two important summits were held this year, namely the SIDS Summit and the Summit of the Future, both of which would place more demand for information on the environment and climate change. He further stressed that those were also opportunities that the EG-ECCS, as a technical community, needed to take advantage of to bring their work to the attention of the highest political level and make sure it gets the support needed in terms of investments that would allow the production of data.

10. Ms. Ruth Minja, Chair of the EG-ECCS, introduced the agenda for discussion and it was adopted by the Expert Group.

# I. Session One: Streamlining Environment and Climate Change Statistics

11. The session was initiated with a presentation by UNSD entitled, "New Expert Group on Environment and Climate Change Statistics". This presentation detailed the background, scope, participation, functions, and expanded mandate of the EG-ECCS. Reference was made to decisions of the Statistical Commission in prior years, such as the endorsement of the Framework for the Development of Environment Statistics (FDES) and the establishment of the Expert Group on Environment Statistics (EGES), (both in 2013), the expansion of the mandate of the EGES to cover more aspects of climate change statistics and indicators (2018), and the renaming of the EGES to the EG-ECCS (2024). Further, the structure of its Steering Group was described, as well as its operationalisation and future work which may involve UNSD's assistance toward countries to: implement the FDES and Environment Statistics Self-Assessment Tool (ESSAT); and: implement the Global Set of Climate Change Statistics and Indicators (Global Set), through the use of its accompanying Implementation Guidelines and the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT). Further methodological developments, data collection plans and capacity development plans were also mentioned.

12. UNSD delivered a second presentation titled "Highlights from the written statements to the Statistical Commission." This presentation provided a brief introduction to the Statistical Commission, a review of a selection of countries' written statements to the 55th session (March 2024) of the Statistical Commission, the value and impact of countries' contributions to the Statistical Commission, and highlighted ties between the EG-ECCS and the Statistical Commission. Countries' written statements to the 55th session of the Statistical Commission showed, inter alia, strong support for renaming of the Expert Group, appreciation for methodological work concerning the Global Set and its associated supporting tools, and the value of multi-stakeholder collaboration within Member States.

**Discussion**

13. Following the two presentations, discussions addressed the need to further define structuring of the Expert Group given its enlarged scope and participation; the need to have a stronger connection between policy applications and statistical data requirements; and also to ensure that statistical definitions, methods and classifications are applied in the relevant policy reporting as appropriate, for example financial definitions according to the System of National Accounts (SNA), and the System of Environmental-Economic Accounting (SEEA) where details on financial support (provided and received) are required.

# II. Session Two: Climate Change Statistics and Indicators

14. This session included the following parts: (i) Updates on Reporting to the Paris Agreement and development of climate change statistics; (ii) Related inter-governmental and regional initiatives on climate change statistics; (iii) National experiences on climate change statistics; and (iv) Development of methodology and implementation support for the Global Set (which included group work).

## Updates on Reporting to the Paris Agreement and development of climate change statistics

15. The session was initiated with a presentation by UNSD entitled, "Uses of the Global Set of Climate Change Statistics and Indicators". This presentation contextualized as its background the mandate requiring UNSD and the EG-ECCS to monitor the implementation of the Global Set and its uses both by countries and international agencies. It focused on the dedicated pilot survey circulated within this Expert Group to countries, and drew highlights from the 24 responses, shared key messages, and probed experts for comments on the direction of future-related work. The Global Set was adopted at the 53rd session (2022) of the Statistical Commission and closely links to policy targets in the Paris Agreement, the Sendai Framework and the Sustainable Development Goals (SDGs). An analysis of substantive questions answered by countries prior to this EG-ECCS meeting revealed certain key messages, such as the importance of National Statistical Offices (NSOs) to ensure that statistical quality was maintained and that application of self-assessment tools such as the ESSAT and CISAT should serve the needs of both NSOs and national focal points, etc. It was also recognised that the questions in the pilot survey need to be reformulated to address more challenging issues, such as sorting out institutional responsibilities, methodology solutions, policy effectiveness, etc., so that progress in resolving such issues within the countries' National Statistical Systems (NSSs) could be tracked.

16. UNFCCC delivered a presentation entitled "New requirements for transparency and overview of Biennial Transparency Report (BTR) submissions." This offered details of the Paris Agreement, key elements of the BTR, common reporting tables (CRTs), common tabular formats (CTFs), reporting processes (Panama, Andorra and Guyana already submitted BTRs), user interfaces for Greenhouse Gas (GHG) inventories, and the enhanced cooperation between UNFCCC and UNSD. A chapter-by-chapter breakdown of key elements of the BTR was shared, and CRTs and CTFs were elaborated upon. Collaboration among UNFCCC and UNSD has played a tremendous role in achieving endorsements from the Statistical Commission in 2018 and 2022 for a strengthened link

between statistics and policy concerning climate change, and for the adoption of the Global Set. It was emphasised that official statistics are needed in the preparation of the BTRs, for example, data on energy balances, agriculture, livestock and waste statistics, which are all critical activity data in estimations of GHG inventories. It was also acknowledged that the Global Set could support countries in reporting their BTRs.

**Discussion**

17. The Expert Group re-emphasized the important role of the Global Set serving as a framework for countries in preparing their own sets of climate change statistics and indicators to inform both national and international data demands, including the preparations of the BTRs and to support reporting for the implementation of the Paris Agreement. The need for stronger collaboration at the national level between the NSOs and the authorities responsible for reporting climate change information to UNFCCC (e.g. National Focal Points) was also emphasized, with a key objective to ensure there was a sustainable data quality assurance practice in line with the Fundamental Principles of Official Statistics.

## Related inter-governmental and regional initiatives on climate change statistics

18. The session took the format of a panel discussion, moderated by the Partnership in Statistics for Development in the 21st Century (PARIS21), and commenced with a presentation by the Food and Agriculture Organization of the United Nations (FAO) titled, "Data Collection, Analysis and Dissemination at FAO – Environment and Climate Change Statistics." The main highlights of the presentation included the demonstration of data needed for monitoring sustainable food and agriculture, a mapping of the Inter-governmental Panel on Climate Change (IPCC) categories to the agrifood system, the impact of temperature change, and a close analysis of the SDG indicator 2.4.1 (Proportion of agricultural area under productive and sustainable agriculture). The value of FAOSTAT agrifood systems data and their contribution to global reporting was stressed, as was FAO's engagement with other key partners. It was noted also that further work was needed, in particular to assess temperature-related impacts on crops, etc.

19. The Organization for Economic Cooperation and Development (OECD) delivered a presentation titled "Climate change data at the OECD: IPAC and IFCMA". The presentation highlighted that the International Programme for Action on Climate (IPAC) was using foundational data with key indicators based upon a pressure-state-response framework. The Inclusive Forum on Carbon Mitigation Approaches (IFCMA) comprised analytical work for 2025-26 and would lead to a detailed policy database of 70 countries with comparable metrics for assessing policy effectiveness. Policy effectiveness may consider a common typology, a detailed granular policy database, and include data for GHG emissions, mapping, modelling, policy analysis, and asset level GHG emissions. Links with official statistics were emphasised in the context of the GHG inventories, with a key message that many data gaps persist and some of these could be filled by improved statistical inputs.

20. The World Meteorological Organization (WMO) presented on, "State of the Climate", which featured Global and Regional State of the Climate reports from recent years, and a synopsis of

their structure. The WMO Guidelines were highlighted, including their step-by-step process for the elaboration of Regional State of the Climate Reports, and their link to inform decision-making and policies, as well as the collection of national data on extreme events via a dedicated survey.

21. The United Nations Disaster Risk Reduction (UNDRR) presented on "Disaster-related statistics work at UNDRR and Climate Change Statistics", detailing the Sendai Framework Monitor, and the DesInventar database. The value of disaster data in the context of giving insight into climate impacts and intergovernmental processes was emphasised. In particular, the value of disaster risk reduction data on the adaptation theme of climate change, as well as the need to strengthen statistical aspects related to gender and disability, were stressed.

22. The United Nations Economic Commission for Europe (UNECE) presented on, "Highlights of the UNECE work programme and how international organizations could help strengthen the role of NSOs/NSSs" to facilitate improved data collection and filling existing data gaps especially in the areas of environment and climate change. This presentation demonstrated UNECE's work on climate change-related statistics, its guiding principles, how NSOs could contribute, and the role of international organisations.

**Discussion**

23. Discussions following the panel stressed the importance of enhancing the communication and collaboration among the agencies that lead programmes on climate change data and statistics. It was noted that such collaboration would contribute to filling existing data gaps, taking advantage of latest advances in technology and data, including artificial intelligence (AI) and big data, novel statistical advances such as classification of climate expenditures, data collection instruments such as WMO's survey on extreme events in countries, in order to promote complementarity of the respective programmes of work and enrich the toolbox available to support countries.

## National experiences

24. A panel discussion was moderated by UNSD, with five countries sharing the benefits received from collaboration between NSOs and National Focal Points on climate yielding good results and practices.

25. Statistics New Zealand (SNZ) provided an overview of climate change statistics in New Zealand from the perspective of the NSO. It was stated that the climate change statistics programme runs across multiple agencies and there was no overarching national plan. However, New Zealand's emissions reduction plan, national adaptation plan and local emissions reduction goal, all provide a framework for the prioritisation and development of climate change related statistics. It was emphasised that the NSO plays a strong role in producing a range of environmental statistics (including some climate change statistics), framed by the System of Environmental-Economic Accounting and New Zealand's Environmental Reporting Act. Some of these statistics align with the FDES and the Global Set, but beyond that, many environmental and climate change indicators and statistics are published by other government agencies. Commendably, SNZ has promoted awareness of both the FDES and the Global Set to government agencies and discussions around

prioritising environment and climate change statistics, however, choices and trade-offs are made between international guidance and domestic need. While recognising that new statistics and indicators are often driven by domestic need and with many agencies involved, as was the case of climate change statistics, it was stressed that coordination and system leadership are essential but could be challenging.

26. Brazilian Institute of Geography and Statistics (IBGE) provided an overview on some of the highlights of their work including institutional arrangements on climate policy in the country and use of the Global Set, CISAT and the Implementation Guidelines in Brazil. The main highlights included a preliminary evaluation using FDES tiers 1and 2 and the Global Set using the three levels to gauge data availability and existing data gaps in the country. Notably, this preliminary work was done using websites only and this has helped the intra-institutional effort between the Geo Science Directory and the Directory of Statistics. Brazil was well poised to take the next steps which require an inter-institutional working group to focus on in depth evaluation of the Global Set. The expert also confirmed that the NSO in Brazil covers between 25 and 30% of the data for the Global Set. She also highlighted that, while most of the remaining data could be sourced from administrative records, there was the usual concern about the quality of the data where the main shortcomings relate to methodological omissions and their lack of metadata as well as inconsistent historical series. Finally, she stressed that the Global Set, while acting as their starting point, would allow IBGE to launch deeper communication and engagement with other data producing institutions to collect the majority of climate change data.

27. Italian National Institute of Statistics (ISTAT) shared information on the advances of climate change statistics in Italy and elaborated on the relations between policy demands and the statistical responses to those, as well as future efforts to provide implementation support for climate change statistics. The expert acknowledged that there are several relevant indicators for climate change that are already regularly produced and disseminated in statistical reports and are also included in annual reports such as statistical yearbooks. She elaborated that several institutes belonging to the national statistical system are involved as data producers and noted that cooperation and collaboration has been and was still ongoing. It was recognised that the Global Set also served as guidance to set up priorities and define a road map with key steps and to better improve and better delineate the relevant issues and the scope. Notably, in 2022, ISTAT published its first short report dedicated to climate change statistics. The aim was to publish annually, a report on climate change, including additional elements, and to have these available in English. Also mentioned were other ongoing activities to explore collaboration with health statistics and demographic statistics to identify correlation with climate change statistics. It was articulated that a new dedicated multi-purpose service on agriculture and climate change would be launched featuring questions on the effect of climate change on farms, activities and production, and the usability of the register of places in ISTAT data that would be very important for climate change and disaster-related statistics.

28. NSO Nepal, shared insights on some highlights of their national programme on climate statistics, the relationship with the processes on climate policies in the country, as well as how the Global Set has assisted the country to start collecting data on environment and climate change. The

presentation informed that the NSO was responsible for conducting climate change surveys and compilation of environment statistics reports. It was articulated that Nepal uses data from various administrative sources and the 2022 Climate Change Statistics and Indicators Report for Nepal was based on the Global Set. At the national level it was noted that indicators have been customized based on the national context under seven themes, i.e., emission, climate-induced disasters, impact, exposure, sensitivity, adaptive capacity, and mitigation capacity. Finally, the two rounds of climate change surveys (2016 and 2022), are also based on the Global Set and IPCC guidelines, with special focus on vulnerability.

29. Uganda Bureau of Statistics (UBOS) shared the initiatives that were used for the implementation of the Global Set and specific experience on integrating questions to collect data on climate change statistics and indicators into the National Population and Housing Census of 2024. Uganda used a systematic approach to address climate change statistics, referencing the FDES and the Global Set. It was noted that key stakeholders who are also users were identified, and UBOS engaged with them in integrating climate-related models to understand the impact of climate change on the economy. From this experience, some climate change questions adapted from the United Republic of Tanzania's 2022 Population and Housing Census (PHC) were integrated in Uganda's 2024 census. Uganda has drafted a concept note on building a national framework for environment and climate change statistics but has not advanced to the development phase as yet. This framework would, inter alia, assist in the production of a compendium. Finally, it was highlighted that the Global Set has triggered further commitment from UBOS to fund more activities related to climate change and environment aimed at achieving more progress in providing data for the statistics and indicators in the Global Set and the FDES.

**Discussion**

30. Discussions following the panel highlighted that the Global Set and its tools (CISAT and Implementation Guidelines) have been used by several countries (including the United Republic of Tanzania and Nepal) in developing their own climate change statistics programmes. Conversely, there was a call for assistance from many other countries and also a need to enable the exchange of lessons and good practices (as stated by Brazil). Countries with developed NSSs could also benefit from the Global Set and its tools by offering direction and helping to draw roadmaps. The need to establish a sub-group to further develop and refine the survey on 'State of development of environment and climate change statistics' and to explore the possibilities to set up an online platform to disseminate publicly the provided information was recognised.

## Development of methodology and implementation support for the Global Set

31. UNSD presented on "Observations on methodology development." This presentation was set against a background of the Statistical Commission mandate requiring UNSD and the EG-ECCS to continuously improve the methodology of the Global Set, and the support to comprehensively review the Global Set. The focus was on methodological developments, including developments of indicator sets by international organisations and their related processes. Some of the forthcoming challenges that these methodological developments may pose, and how they may influence a review of indicators and statistics in the Global Set, were described, highlighting the value of the EG-ECCS work to help address these challenges.

32. The Economic and Social Commission for Asia and the Pacific (ESCAP) presented on, “Shaping the future of Disaster-related Statistics: Towards a Common Statistical Framework.” The presentation demonstrated the need for improved disaster information and a common statistical framework. In this regard, progress and work of the Inter-Agency Expert Group on Disaster-related Statistics were shared, as was an example of an application of the Global Set to disaster impacts, disaster risk assessment and disaster risk reduction expenditure accounts.

33. The United Kingdom, Office for National Statistics (UK-ONS) presented on, “The Standards for Official Statistics on Climate-Health Interactions (SOSCHI) project on the development of indicators of climate-related health impacts.” Motivation for and an overview and details of the project were provided, data methodologies and challenges were shared, and health-related indicators were proposed, with a key motivation being to address a shortage of measures and tools to monitor the impact of climate change on health. Of significance, the objective was to develop a statistical framework and tools to enable NSOs to produce comparable and reliable evidence. It was noted that progress so far included the development of indicators for three of the 10 topic areas, namely mortality from heat/cold related deaths, extreme weather (wildfire smoke $PM_{2.5}$) and mental health (suicides associated with excess heat). A list of proposed health-related indicators for inclusion in a future revision of the Global Set were proposed.

34. UNSD presented on, “Mainstreaming Gender in the Statistical Commission Agenda” highlighting the importance of integrating a gender perspective into statistics and in this context UNSD shared recent work on gender statistics. It was emphasised that the Statistical Commission decided to integrate a gender perspective across all its work and mandated the Inter-Agency and Expert Group (IAEG-GS) to implement and monitor this decision in collaboration with various groups working under its auspices. Notably, climate change was identified as a priority for gender mainstreaming, with the IAEG-GS working closely with the EG-ECCS in collecting country experiences via a dedicated short survey on how gender and climate change data are collected and used. Following this, Colombia on behalf of the IAEG-GS, presented on the development of a guidance note on mainstreaming gender into climate change statistics. The note underscores the significance of understanding the differentiated impacts of climate change on men and women and draws on existing frameworks, including the SDGs, Sendai Framework, Global Set and the SEEA, to guide its development.

35. UNSD and a consultant presented on, “Uses of Surveys and Censuses for Climate Change Data Collection”. Main highlights of the presentation focused on the Pacific Community (SPC)’s methodology and implementation support for the Global Set and a preliminary mapping of climate change questions from censuses and surveys to the indicators in the Global Set. The key messages demonstrated UNSD’s response to the call from countries for a core set of climate change questions which could be included in censuses and surveys, the formation of the sub-group on climate change questions in censuses and surveys following the 10th meeting of the EGES, inputs, compilation and an initial draft set of questions, and future work.

36. UNSD and another consultant presented on, “Use of alternative sources, big data and data science for climate change statistics”, which focused on the work of the United Nations Committee of

Experts on Big Data and Data Science for Official Statistics (UN-CEBD) followed by specific big data applications toward various themes of environment and climate change statistics in the Global Set. Examples of common sources for various themes were shared, as were software tools known to be useful for handling big data sets.

37. Following the above presentations, group work sessions took place on the four subjects described below.

## Group Work

38. The group work session commenced with introductory comments made by UNSD. Per materials circulated prior to the meeting and following experts expressing their preference to participate in a particular group, the meeting was divided into the following four groups: (i) climate and health; (ii) climate change statistics and gender; (iii) climate change questions for censuses and surveys; and (iv) big data for climate change statistics.

### Group 1: Climate and health

39. A group led by UK-ONS was joined by nine experts, representing Finland, Hungary, Italy, Netherlands, New Zealand, the United Republic of Tanzania and UNSD.

40. UK-ONS gave a global overview of the topic, Climate and Health and the specific pathways that they are focusing on for the underling statistical framework, and also explained the relevance and scope of the work.

41. There was focus on the heat and cold topic, looking at the specific methods and results within that topic. The platform demo also focused on the heat and cold topic, giving an overview of the three types of documents that would be produced for each of the topics within the framework and platform, and a demo of the indicator calculator was shown. The expert also stated that this framework was related to other available frameworks, including the Global Set which currently has indicators on heat and cold, climate-induced air pollution and ozone-related pollution.

42. Links were shared with the group to two surveys to collect feedback on the heat and cold indicator and the wildfire-related $PM_{2.5}$ indicator and how they relate to all-cause mortality.

43. The UK-ONS expert acknowledged the limitation on the indicators because of the complexity between climate and health and the crosscutting range of disciplines involved, including not only the NSOs but also the Ministries of Health. The close working relationship with the Ministry of Health, as well as with the World Health Organization (WHO), and alignment of the ongoing work and discussions with the latter regarding alignment of their framework with UK-ONS indicators was highlighted. The expert acknowledged that this platform was being developed in collaboration with the UN Global Platform team to promote data security.

**Discussion within group:**

44. There were questions related to:
    i) data access and the challenges with regards to institutional responsibility for producing and reporting indicators on this topic;
    ii) the generalizability of methods globally, and applying these in countries where there isn't much variation in temperature using the example of the heat and cold topic; and
    iii) attribution of outcomes to climate change specifically.

45. The expert stated that given the challenges of attributing health outcomes to climate change, the scope of this project was focused on attributing to climate events more generally.

Group 2: Climate change statistics and gender

46. The groupwork led by UN Women and UNSD, collected inputs from 14 colleagues in a small group setting with country representatives from Brazil, Colombia, Finland, State of Palestine and the United Republic of Tanzania. The seven other colleagues were representatives of the following international organizations: the Economic Commission for Latin America and the Caribbean (ECLAC), ESCAP, the United Nations Environment Programme (UNEP) and the Social and Gender Statistics Section, UNSD.

47. Colleagues in the gender group appreciated the presentation delivered by UN Women on Mainstreaming Gender into Climate Change Statistics. Opinion was sought on the substantive work presented by UN Women, as well as consideration of questions UN Women posed about the future of this work. The metadata of four selected indicators on climate and gender were considered[5], with the potential for each indicator to be incorporated in some manner into a future revision of the Global Set. Colleagues mentioned varied experiences in their own countries where gender-specific units are now promoting gender among various other themes, and the value of household budget surveys which could be used for many cross-cutting issues, including the intersection of environment and gender. Sampling issues may be overcome to help detect intra-household inequalities. For instance, the metadata emphasizes the need to go beyond simple gender disaggregation to include indicators such as decreases in food intake among single-parent households during significant climate events, time spent on unpaid care work, and time spent on unpaid domestic work.

Group 3: Climate Change Questions for Censuses and Surveys

48. The group work on climate change questions for censuses and surveys was attended by representatives from the following nine countries - Botswana, Brazil, Grenada, Italy, Philippines, Luxembourg, Mexico, Sweden and the United Arab Emirates (UAE); and four agencies: the African Development Bank (AfDB), the Caribbean Community (CARICOM) Secretariat, ECLAC and the SPC. The draft compilation of climate change questions which could be included in censuses and

[5] (i) Proportion of population who decreased food intake as a result of climate change, by sex and household composition; (ii) Proportion of people participating in sector-specific environmental governance bodies; (iii) Proportion of population whose time spent on domestic work increased as a result of climate change, by sex; and (iv) Proportion of population whose time spent on care work increased as a result of climate change, by sex.

surveys, and which was developed by the sub-group and shared with the EG-ECCS prior to the meeting, was introduced to this group in more detail. Several reflections from national practices were shared, including Italy's surveys on eco-behaviours and energy, and Sweden's ability to collect sufficient data via registers, thereby eliminating the need for a census. Philippines described their community-based monitoring system, and the UAE explained that their water and electricity related indicators could benefit from employment and household surveys. The SPC described the capacity development support provided to the Pacific countries including support to the NSOs to collect data via surveys. Ensuing discussions highlighted that the draft compilation of climate change questions for censuses and surveys should be further reviewed and comments should be shared with UNSD. It was also noted that indicators and statistics should be further analysed to define which of them could be informed by existing data, including from administrative sources and spatial data, to alleviate the need for and cost of developing new data collection instruments. Experts agreed to share further national examples to be made publicly available on UNSD's website. Brazil volunteered to join the sub-group on climate change questions in censuses and surveys.

Group 4: Big Data for Climate Change Statistics

49. The group work was moderated by UNSD and comprised experts from three countries: Bangladesh, Brazil, Canada; four international agencies: UNECE, PARIS21, European Environment Agency and UNSD-Environmental-Economic Accounting Section (EEAS); and two consultants. Following a round of introductory remarks, the group highlighted that there was a need to establish better understanding on the application of big data to compile basic environment and climate change statistics and coordinate its efforts with the work on ecosystem accounts in order to identify synergies and opportunities. The group also noted that while big data inputs are abundant, the statistical capacity to use this data source in climate change and disasters was lagging behind and needs to be further enhanced. Consequently, the group recommended that review of the existing guidance on using big data for official statistics with key principles and applications be carried out, followed by a review of best practices, including various types of big data such as satellite data, Automatic Identification Systems (AIS) vessel tracking data, mobile phone data and citizen generated data, and that these be presented at the next EC-ECCS meeting.

50. The ensuing discussion expressed appreciation of the work undertaken by the UK-ONS on climate and health; the IAEG-GS, UNSD and UN Women on gender and climate change; the EG-ECCS sub-group on compiling questions on climate change to be included in surveys and censuses; the advances towards a common statistical framework on disaster-related statistics; and the initiative to consider the topic of big data for climate change statistics for the first time in its work. While the discussions on new indicators for gender and health were well appreciated, experts indicated that these indicators and their methodologies require further testing and review by the EG-ECCS before being considered for inclusion in a future revision of the Global Set.

# III. Session Three: Environment Statistics Data Collection

51. This session was divided into three sub-sessions: Water statistics; Waste statistics; and Other data collection and reporting requirements (data collection instruments). For both the water and waste sub-sessions, a panel approach was used.

52. Prior to the first sub-session, UNSD presented on, "The UNSD/UNEP Questionnaire on Environment Statistics (water and waste sections)." This gave the history and context of the Questionnaire, an ex-post analysis of the 2022 data collection cycle, a demonstration of user attention toward the Questionnaire and the changes in the current 2024 data collection cycle. The forthcoming changes for countries to expect pertain to subtle edits in the definitions of some terms related to water (with no anticipated impact upon existing time series), and the addition of a table on food waste (per SDG 12.3.1(b) demand).[6]

53. WHO and United Nations Human Settlements Programme (UN-HABITAT) delivered a joint presentation entitled, "SDG indicator 6.3.1. – Progress on Wastewater Treatment", which showed the importance of wastewater treatment, data monitoring arrangements at international level, use of the UNSD/UNEP Questionnaire on Environment Statistics, the breakdowns in analysis of total, industrial and domestic wastewater, the shortcomings where data availability was an issue, and the variability in household wastewater collection. Links to the SDG 6.3.1 Report[7] and the Domestic Wastewater Treatment Methodology 2024[8] were provided.

## Water Statistics

54. The EG-ECCS Chair handed the Water Statistics Panel to the colleague from WHO who moderated this panel.

55. Within the panel context, OECD presented on, "Changes made to the Joint OECD/Eurostat Questionnaire." This focused upon adjustments being made on inland waters definitions to better measure water-related targets of the SDGs and to align with the SEEA, but it was noted that some differences with SEEA would remain. A new flow scheme on water resources which supports SEEA analysis was shared.

56. UN-HABITAT shared comments in response to issues regarding challenges in reporting for SDG indicator 6.3.1, and what improvements are most sought after from countries regarding this work. Optimism was expressed about the possibility to make a global estimate for SDG 6.3.1 though remaining challenges include measuring wastewater volumes of smaller businesses, how to confront issues related to water scarcity such as re-use, and the heightened attention needed upon wastewater treatment in such a scenario. There was a strong tone of appreciation toward countries providing data.

[6] https://unstats.un.org/sdgs/metadata/files/Metadata-12-03-01B.pdf
[7] https://www.unwater.org/publications/progress-wastewater-treatment-2024-update
[8] https://www.unwater.org/publications/domestic-wastewater-treatment-methodology-2024

57. FAO answered questions concerning the progress in monitoring SDG indicator 6.4.2 (level of water stress), and its efforts to provide capacity development to countries. The methodology for calculating 6.4.2 was shared, as was a time series of global water stress during the SDG period, and cross-country comparisons. Efforts to disaggregate beyond the national level and apply mapping techniques were also shown. FAO informed about recent capacity development activities that helped to increase the response rate and data quality.

58. Jordan shared experiences in challenges to provide water statistics, and how those challenges are overcome. Scarcity of water and energy, and rapid increase in population within Jordan were detailed, and the high percentage use of water by agriculture was mentioned. Challenges with respect to implementing surveys, and the need to emphasise coordination were shared. By applying the FDES which was initiated via a UNSD/ Economic and Social Commission for Western Asia (ESCWA) workshop in 2018, Jordan has been better able to maintain statistical quality standards, apply classifications, integrate environment statistics with both economic and social statistics, and identity preferred data sources. The way Jordan applies the FDES when disseminating data on its website was also shared.

59. Slovenia provided a general context of the extent to which the country was endowed with natural water resources, followed by information about how data on water are managed. The roles of key stakeholders (Statistical Office of the Republic of Slovenia, Slovenian Environment Agency, Ministry of Natural Resources and Spatial Planning) and international reporting obligations were shared, and details about legal bases for water statistics surveys were given. Further detail was provided concerning surveys on public water supply, sewerage, irrigation systems, and exploitation of water in surveys.

60. During open question and answer time, experts discussed recharge and artificial recharge, and their impact upon water stress (with particular reference to SDG 6.4.2), and the need to be mindful of evolving methodologies. Further comment was made by the moderator about successes made to date in advancing reporting on water statistics, but that there remains ample opportunity for further improvement in data availability and data quality. At national level this requires improvement of coordination among the various stakeholders and capacity development to address specific technical and human resource limitations to produce the required data and improve its quality. To this end, UNSD and key partners informed the EG-ECCS about the various manuals, webinars and workshops to assist countries to improve their data. The value of the link between water statistics and policy and other demands such as those pertaining to the SDGs, FDES, the Global Set of Climate Change Statistics and Indicators, and the SEEA was emphasized.

61. Given that existing alignments help to minimise reporting burden at the country level, the effort of further updating the questionaries and the related data collection methodologies (with updated terms, definitions and classifications) as policies and demand evolve, would continue to require contributions of expertise from several international organisations on themes such as wastewater.

## Waste Statistics

62. The EG-ECCS Chair handed the Waste Statistics Panel to the colleague from UNEP who moderated this panel.

63. A colleague from the United Nations Institute for Training and Research (UNITAR) offered answers to questions about how the UNSD/UNEP Questionnaire on Environment Statistics was applied toward the compilation of the Global E-waste Monitor[9] and other E-waste Monitor publications. The E-waste Statistics Framework and the UNU-KEYS were shared as resources to help countries compile e-waste statistics, and breakdowns of ever-increasing e-waste by type (e.g., small equipment, large equipment, temperature exchange equipment, etc.) and region were presented. The need to work toward recovering rather than disposing of e-waste was stressed.

64. Questions were put toward another colleague from UNEP concerning country data use in the "Think, Eat, Save" publication, outcomes of the UNEP pilot exercise on food waste, and anticipated results of food waste statistics to be collected from countries via the UNSD/UNEP Questionnaire 2024 on Environment Statistics. UNEP demonstrated the value of country efforts in providing data for SDG indicator 12.3.1(b) (food waste index). Work already undertaken with some countries has significantly helped to improve estimations, but country-owned data to be reported via the UNSD/UNEP Questionnaire 2024 on Environment Statistics are eagerly awaited and would help to give a much clearer and policy-informative picture on this important issue.

65. When asked about how its waste data are presented to appeal toward policy makers, OECD shared information about its data collections, and about the, "OECD Environment at a Glance"[10] indicators. A demonstration of the country-level, "OECD Environmental Performance Reviews (EPR)" was shown, which could include analysis on particular themes such as marine litter, waste materials management, and circular economy. Enhancing the quality of country data to feed into publications such as the OECD "Global Plastic Outlook" was also mentioned.

66. Eurostat answered questions related to the characterisation of waste. Emphasis was stressed upon policy needs related to the circular economy and how analysis of the characterisation of waste could help inform understanding of waste flows. Further, this could help improve identification of points where opportunity for waste circularity could apply. At the same time, such an analysis helps to satisfy demands related to the Waste Framework Directive of the European Commission.[11]

67. Hungary, in response to being asked what challenges it faces and how it overcomes them, told of the shared responsibility among institutional stakeholders such as the Central Statistical Office (for various fields such as municipal solid waste by municipalities, quality control of waste statistics, etc.) and the Ministry of Energy (for various waste streams such as food waste, batteries, e-waste, etc.). The challenge of aggregating data from 700 enterprises all of which deal

[9] https://ewastemonitor.info/the-global-e-waste-monitor-2024/
[10] https://www.oecd.org/en/publications/environment-at-a-glance-indicators_ac4b8b89-en.html
[11] https://ec.europa.eu/eurostat/web/waste/methodology

with waste management was mentioned, as was the biggest challenge of 2023: a changing legal environment. In overcoming challenges presented by a changing legal environment, updates had to be made to data sharing agreements to collaborate with new data suppliers, to address under-coverage and to avoid double-counting.

68. The United Republic of Tanzania also answered questions about how it resolves challenges concerning waste statistics. Presented with challenges such as a lack of infrastructure, limitation of resources, insufficient training and issues concerning public awareness, the United Republic of Tanzania invested in new waste management infrastructure and in rehabilitating existing infrastructure. The government also involves the private sector in such efforts. Via a National Technical Working Group for Environment Statisticians (NTWG), the National Bureau of Statistics collaborates with other stakeholders to fill data gaps and update environmentally-related indicators.

**Discussion**

69. Questions were raised among plenary concerning the value of using PHCs and big data for waste statistics. The value of international organisations' publicly disseminated outputs as a potential source of validation or use for other purposes by countries was also raised. Further questions were raised concerning GHG emissions from waste, cross-country comparisons, and waste associated with the proliferated use of e-vehicles (e.g., a marked increase in lithium batteries as waste).

70. Experts on the Panel confirmed that PHCs and big data are being used in the compilation of waste statistics. Panellists mentioned that a traditional focus of waste statistics was transitioning from waste management) towards circular economy. The value of big data, for instance, in the analysis of registry of shipments crossing national borders may be of some use in measuring movement of e-vehicles and batteries, but as a stand-alone source, this may be insufficient to answer all questions. Satellite data and mapping may be of great use, for instance, when monitoring the size of landfills. Where data for countries are being publicly disseminated already, for instance via Eurostat and OECD platforms, mention was made that other countries may be able to observe and apply the same metadata to their own waste statistical compilations and gain a better understanding of expected waste generated per capita. Especially, once a given country has identified another country with a similar development profile to its own, it may then hypothesise similar volumes of waste generation per capita and by composition when it compiles its own waste statistics.

71. Methodology for estimating recycling rates was also shared. By applying average loss rates, one such approach was to consider what fraction of total collected waste was finally recycled, and to use this fraction as a coefficient to estimate percentage of total waste which was recycled. Further, the SDG 12.5.1 (national recycling rate) metadata sheet could also be referred to by countries.[12]

[12] https://unstats.un.org/sdgs/metadata/files/Metadata-12-05-01.pdf

72. Closing comments on the waste statistics panel mentioned the value of sharing international and national experiences, and that by doing so, prioritisation of effort and resources at both levels could be established. Also mentioned was the value of the periodic modification of the UNSD/UNEP Questionnaire on Environment Statistics and other (aligned) international questionnaires to meet evolving demands such as food waste and e-waste. It was clear that collaboration at national level was required among a variety of stakeholders for certain waste streams (e.g., e-waste and food waste) and for a variety of issues (e.g., recycling rate, measuring GHG emissions from waste, etc.). Capacity development on the subject of waste management, circular economy, etc., would help minimise data gaps and allow better capability for countries to measure and manage waste.

### Other data collection and reporting requirements (data collection instruments)

73. UNSD presented on, "Results of the 2024 survey: International Agencies' Activities on environment and climate change statistics". The results of those 17 international agencies that offered a response to UNSD since this survey was sent out in August 2024 were shared. Results confirmed via the survey showed that the themes with greatest prioritisation for data collection are land and agriculture, water, and energy, and that some agencies collect via an e-reporting platform while others collect via an Excel-based collection instrument such as a questionnaire. The focal point within a country varied though this was most commonly the NSO or a line ministry such as the Ministry of Environment. International agencies also play a key role in methodological research, coordination and capacity development.

74. UNSD delivered a further presentation on, "Data sources used in environment and climate change statistics." This presentation focused on a variety of sources such as statistical surveys (including censuses and specialised surveys) and PHCs. Various country efforts to embed environment questions into PHCs were shared, as was a selection of statistics and indicators from the Global Set for which sourcing data from PHCs was possible. Examples from countries (Bangladesh[13], Nepal[14]) where specialized surveys have been conducted specifically to collect data on the impact of climate change were also shared.

75. The SPC delivered a presentation on, "Advancements and developments in the survey module on climate change". This presentation detailed the project background which includes developments to address data gaps related to natural disasters and climate change at the household level. Support materials are being provided toward Member States and field tests are ongoing. Future work shall involve updates to surveys based upon field tests, the production of indicators and methodology, and implementation in Member States.

76. The Netherlands presented on an "Annual population survey on Perceptions in the Netherlands," which has had a focus on the Climate Change and Energy transition in 2020 and 2023. From households, data was collected on issues such as the reason for a person to deliberately leave the

[13] https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/096977ca_4741_4b33_8214_7b994b64205c/2022-03-31-06-03-ac568722a963626ccfd77d872857f66b.pdf
[14] https://unstats.un.org/unsd/envstats/censuses/?selectName=&selectCountry=Nepal&selectYear=

car at home, degree to which one was concerned about climate change impacts on future generations, and decisions to reduce holiday travel by air due to climate change. Stress was made upon the value of face-to-face testing of questions within surveys to evaluate the appropriateness of the wording and question flow.

**Discussion**

77. The Chair shared closing comments on the value of experts considering enhancing relationships among institutional stakeholders, and the importance of applying key methodological advancements to a localised context within a country. There are a range of sources (e.g., earth observation data, administrative data, remote sensing, surveys and censuses) that countries use to collect data on climate change and the environment, based on their level of maturity and appropriateness of each data source which varies depending on the context of what was being collected. However, there are clearly cases where environment and climate change data have to be collected via surveys and censuses because such data are not available from other sources. It was noted also, that both innovative and traditional data collection methods and sources have a role in data collection. The experts reaffirmed that given the multifaceted nature of environment and climate change, partnership and multistakeholder engagement was very important and countries are encouraged to include questions from the core set, being developed by the sub-group under the EG-ECCS, into the traditional surveys and censuses, as well as specialized surveys, to fill existing data gaps.

# IV. Session Four: Environment Statistics Toolbox

### FDES and the Basic Set of Environment Statistics

78. UNSD presented on, “Implementation of the FDES and production of environment compendia” which gave a background and the key uses of the FDES. It also included the responses to the survey on ‘State of development of environment and climate change statistics’ and its key messages, updates on environment statistics compendia and other dissemination tools, and streamlining the FDES with other frameworks. It was recognized that several frameworks have been used by countries to produce environment statistics at varying stages of development, including the FDES 2013, SEEA, the SDG indicators, and the Sendai Framework. It was reiterated that the FDES helps NSOs to get prepared for work in the environment domain and provide specific applications such as the construction of environment information systems, databases, reports and compendia. Finally, it was stressed that more of these applications need to be explored and promoted.

79. Botswana presented on, “Botswana Environmental Statistics Self-Assessment Tool (ESSAT) Results” where the Part II of the ESSAT (Statistical Level Assessment) was used as the foundation for the development of an Environment Information System (EIS) through a collaboration between the Ministry of Environment and Tourism of Botswana (MET) and the UNEP’s Early Warning and Assessment Division, with funding from the Global Environment Facility (GEF). Botswana mentioned a few of their deliverables, namely, the development of an indicator-based

system and training on data collection and management methods. A committee set up to coordinate this work was trained in the application of the FDES.

80. UNEP presented on, "Framework for the Development of Environment Statistics (FDES 2013) - New applications of the FDES and ESSAT". The expert shared their experience in using both the FDES and ESSAT in two national workshops, one in Indonesia[15] and the other in South Sudan[16]. In Indonesia, the focus was on enhancing the technical capacity of the NSS and other key stakeholders from different ministries and different national institutions to determine the scope of environment statistics in the country. Six components of the FDES were covered and statistics and the data gaps were identified in the country using the ESSAT. Indonesia translated the ESSAT into their national language which made it easier for the stakeholders to use. In South Sudan, UNEP shared the ESSAT with the stakeholders in order to pre-fill the information needed for the workshop. Using the FDES 2013 framework, the main objectives were to ensure that South Sudan's environment statistics align with global standards and best practices, build capacity for integrated assessments, promote the development of robust operational frameworks and guidelines for data governance, sharing, and usability, and support national environmental initiatives. In so doing, this was expected to contribute to the ongoing preparation of South Sudan's first Voluntary National Review (VNR) by enhancing skills for the compilation of comprehensive data on the environmental dimension of the SDGs.

81. Luxembourg presented on, "Same tools but different uses". The expert showed the comparison of contexts between an advanced country and a country that's just starting work on environment statistics. It was emphasised that the FDES was helpful for all countries and needs to be promoted on all occasions, while the ESSAT was most helpful for a country that was just starting to develop environment statistics. Also highlighted as a best practice was that other tools like the Manual on the Basic Set of Environment Statistics are used to ensure that the definitions of national statistics or indicators are aligned with international recommendations and to verify the comparability of the definitions. The expert articulated the need to train national experts in statistics using the FDES since it gave a holistic view of the environmental field and showed how it helped encourage the NSO to improve data collection and compilation in Laos. He further articulated the need to develop guidelines to identify environment priorities by country.

**Discussion**

82. The EG-ECCS noted that the FDES and its tools (ESSAT, Manual on the Basic Set of Environment Statistics (BSES), SDG-BSES matrix) have been used extensively by countries to produce environment statistics at varying stages of development. Countries also used complementary frameworks and indicator sets, including the SEEA, and environmentally related SDGs and UNECE environment indicators. It was acknowledged from the national examples of Botswana and Luxembourg that training on the FDES across the relevant national institutions facilitates, inter alia, the establishment of national networks of experts needed for the production and dissemination of environment statistics.

[15] https://sdgs.unep.org/national-workshop-fdes-indonesia
[16] https://sdgs.unep.org/node/154

83. Discussion highlighted that projects led by international agencies involve the NSO in the prioritisation of the national topics to be covered, where resident coordinators could also contribute to ensure that there was a coordinated and sustained approach and that this was included in the NSS. The experts requested that there be more focus on new statistical requirements, for example, ecosystem conditions and other biodiversity indicators needed for the Convention on Biological Diversity (CBD) monitoring framework, e.g., richness and abundance of species. They also stressed the need for continuous training in the area of environment and climate change statistics to include experts from the wider NSS (beyond the NSO), at the national level and recommended that the training of trainers be continuously supported.

# V. Session Five: Capacity Development in Environment Statistics and Climate Change Statistics

## Capacity development by UNSD, Regional Commissions and other agencies

84. UNSD presented on capacity development for environment and climate change statistics, including recent efforts on promotion and translation of the Implementation Guidelines for the Global Set and capacity development efforts by UNSD and key partners, e.g., the DA14 project Workstream 2.1 – Climate Change and Disaster-related statistics (led by UNEP and ESCAP), with workshops in Dominican Republic, Ecuador, Fiji and Jordan; the 'Data for Now' project, supporting Tunisia with three prioritized environmental indicators (coastal artificialization, wetlands and air pollution) and the 'Data for Nature' project 'Fostering Caribbean SIDS-SIDS Peer-Learning and Cooperation' being led by the Department of Economic and Social Affairs (DESA)'s Division for Sustainable Development Goals and UNSD. Key findings from the survey on the International Agencies' Activities on environment and climate change statistics, which covers data collection, methodology development and capacity development in the areas and topics defined by the Global Set and the FDES, were also presented.

85. Updates on the work of PARIS21 were presented under the title 'Improving Climate Change Data Ecosystems or Better Climate Action'. PARIS21 promotes better usage and production of statistics in low- and middle-income countries. In the area of climate, this was guided via the Climate Change Data Ecosystem (CCDE) framework. It was highlighted that in the past three years, PARIS21 has collaborated with the national statistical offices and ministries of environment in seven countries around the world to mobilize their CCDEs. As a result, these countries have either developed or are in the process of developing a detailed action plan to strengthen climate change data ecosystem in the medium term, as part of their strategic planning for statistics (e.g., NSDS). It was mentioned that the CCDE also helps to engage key actors for the data ecosystem including academics, complementing NSOs not only to contribute with data provision but also to quality and high-level buy-in.

**Panel discussion on capacity development activities led by regional institutions**

86. The panel was moderated by UNEP with the objective of exploring and defining options for enhancing collaboration between the key institutions leading capacity development activities on environment and climate change statistics.

87. Good practices and key challenges were shared by:
    - ESCAP, in collaboration with other agencies (including UN Women), carried out capacity development activities, including on the Global Set, which required carefully developed collaboration between the NSO and environmental, climate and geospatial agencies in the country. ESCAP highlighted the importance of collaboration at different levels and different angles (between producers and users; between departments and disciplines) through mix-modality coordinated efforts in capacity development, guided by countries' needs.
    - Advances on producing integrated environmental and climate change indicators were highlighted by ECLAC and it was emphasised that more efforts are needed to publish and share the advances among countries in the region. Advances on collaboration among national institutions such as NSOs, disaster authorities and line ministries were noted. The need for further synergies in capacity development with SEEA and biodiversity statistics was underscored.
    - The Economic Commission for Africa (ECA) shared on statistical capacity support provided to countries, including the establishment of a regional centre of excellence which has boosted environment and climate change capacity through mobilisation of scientific inputs; the African regional school created by ECA for the training of postgraduate students; and Digital Earth Africa. The ECA noted that the main challenge was to define how to integrate environment and geospatial data as capacity in this area was currently lacking. It was highlighted that although work has been initiated in environment and climate, these statistical areas still require efforts to be addressed sufficiently. Further, the need for the complementarity between traditional and novel sources of data to be reviewed and strengthened was underscored.
    - CARICOM highlighted the support of international development partners, including UNSD, ECLAC, PARIS21 and the European Union (EU) to apply the FDES/ESSAT, Global Set/CISAT, for which the establishment of a technical workgroup has been instrumental. It was emphasised that sustained production was achieved both at the Secretariat and Member States level using the FDES and the Global Set. It was also recognised that assistance provided through South-South cooperation, as well as through the Electronic Caribbean Institute for Statistical Training (E-CISTAR) launched earlier this year have contributed to this achievement.[17]
    - COMESA highlighted that due to a lack of funding, continuation of planned capacity development was prevented. Staff turn-over was also mentioned as another challenge. The expert recalled that the ESSAT and CISAT were utilized by Member States at a regional workshop held in Nairobi in 2022[18] to, inter alia, establish data availability and

[17] https://ecistar.org/

[18] https://www.comesa.int/workshop-on-environment-and-climate-change-statistics-for-the-african-development-fund-countries/

existing data gaps which led to the creation of road maps for climate change and environment statistics in several countries.

88. UNECE highlighted the use of dedicated guidelines for compilation of environmental indicators, capacity building covering climate connection with SEEA, disasters, waste and circular economy. It was acknowledged that sectoral reviews help to identify where FDES and SEEA could contribute to set up priorities and the dedicated guidance on the above-mentioned subjects provides more details. Resource constraints and institutional coordination were listed as the main challenges.

89. Following the panel discussion, UNEP presented an update of its experience on collaboration on 'Strengthening Climate Change and Disaster-Related Statistics'. It was noted that UNEP's Medium-Term Strategy addresses climate change, biodiversity and nature loss, and pollution and waste. Partnerships with UNSD, UNDRR, Regional Commissions and Resident Coordinators Offices (RCOs) and other UN agencies in the countries, as well as the leading role of NSOs and national disaster management authorities, were also highlighted. The expert informed that completed activities include national workshops in Lesotho, Cameroon and Bhutan and upcoming ones in Jordan, Kenya, Burundi, Cameroon, Ethiopia and Togo. The planned DA17 project 'Measuring Climate Change with a gender dimension for better adaptation and mitigation policies (2025-2028)' was also introduced. Highlighted were the following conclusions: collaboration with various international organizations at global and regional level brings together unique expertise, demonstrating the ONE UN approach; collaboration with international and national organizations creates synergies among different projects; clear coordination from the lead entity was needed; and transparency of the process through publication of materials on relevant platforms should be provided.

90. Concluding remarks from the session on capacity development gave rise to the points that UNSD has to further explore how to support on a more regular basis dialogue on capacity development being conducted by many agencies, and also that high level coordination was needed to seek complementarity between UN-led activities and those led by bilateral donors, as well as other international funds and multilateral development banks.

# VI. Session Six: Discussion of Priorities and Conclusions

A series of proposed priorities and conclusions were shared by UNSD with the EG-ECCS. They were:

## Session One: Streamlining environment and climate change statistics

1. The EG-ECCS noted the need that, given the expanded scope of the Group to cover both environment and climate change statistics, the participation in the Group be expanded and could take a tiered approach, organized by sub-groups following specific thematic and policy needs. The structuring of this expansion would be managed by the Steering Group and the Secretariat and the draft Terms of Reference (ToR), would be shared with the Expert Group in due course.

2. The EG-ECCS noted that the connection between policy applications and statistical data requirements need to be made more explicit (e.g., climate, disasters, biodiversity, gender, water resources, etc.) meaning that further statistical efforts should follow specific policy demands.

3. The EG-ECCS noted that the Paris Agreement was central to the work on climate change statistics and therefore the appropriate statistics need to be applied to the relevant policy processes as could be illustrated in the case where details on financial support (provided and received) was required (for example – definitions, methods and classifications on expenditures and finance according to the SNA and the SEEA).

## Session Two: Climate Change Statistics and Indicators

### Updates on Reporting to the Paris Agreement and development of climate change statistics

4. The EG-ECCS noted the important role of official statistics in the preparation of the BTRs, for example, data on energy balances, agriculture, livestock and waste statistics, which are all critical in estimations of Greenhouse Gas inventories.

5. The EG-ECCS reiterated that the Global Set of Climate Change Statistics and Indicators was an important framework which supports countries in the preparation of their own sets of climate change statistics and indicators to inform both national and international data demand, including preparations of the BTRs and to support reporting for the implementation of the Paris Agreement.

6. The EG-ECCS noted the need to improve collaboration between the NSOs and National Focal Points to UNFCCC in the respective institutions in countries to accelerate the speed of data production to fill the existing data gaps and to ensure data availability, and that there was a sustainable data quality assurance and assessment framework which was in line with the Fundamental Principles of Official Statistics.

7. The EG-ECCS recommended that a sub-group be established to further develop and refine the survey on 'State of development of environment and climate change statistics' and to explore the possibilities to set up an online platform to publicly disseminate the provided information on a continuous basis.

### Related inter-governmental and regional initiatives on climate change statistics

8. The EG-ECCS noted the interest to collaborate among international organizations and recommended that the agencies which took part in the panel, FAO, UNDRR, OECD, WMO and UNECE, initiate collaboration following the lead of UNFCCC and UNSD to help countries develop climate change statistics.

9. The EG-ECCS noted that this collaboration would contribute to filling existing data gaps, taking advantage of latest advances in technology and data (including AI and big data), novel statistical advances such as climate expenditures, data collection instruments such as WMO's survey on extreme events in countries, and dissemination portals and dashboards in order to promote

complementarity of the respective programmes of work and enrich the toolbox available to support countries.

**National experiences on climate change statistics**

10. The EG-ECCS recognized that the Global Set and its tools (CISAT and Implementation Guidelines) have been used by a number of countries in developing their own climate change statistics programmes and, inter alia, to facilitate reporting to UNFCCC, support the implementation of Paris Agreement and the SDGs and others and would increasingly be used by other countries to increase data production.

11. The EG-ECCS noted that some countries were requesting assistance to implement the Global Set and the CISAT, e.g., State of Palestine and Uganda, and in this regard, they were interested to learn from the advances achieved so far.

12. The EG-ECCS noted that the Global Set, along with participation in related international meetings, provides direction and helps to define the scope of climate change statistics for countries with developed national statistical systems.

13. The EG-ECCS encouraged countries to apply the Global Set, and its implementation support tools (CISAT and Implementation Guidelines) to assist in establishing national programmes of climate change statistics, publish climate change statistics reports, and contribute to reporting under the Paris Agreement.

14. The EG-ECCS recommended that international organizations, in particular UNSD and UNFCCC and partner organizations, continue to support countries, both the NSOs and National Focal Points to UNFCCC (in respective institutions), in the production of climate change statistics for effective preparations of their first BTRs and related processes.

15. The EG-ECCS also highlighted that National Focal Points to UNFCCC are not sufficiently informed and trained to apply the Global Set and its implementation support tools as a means of ensuring that the BTRs and related reports are well informed by and aligned with the official statistical system in the country, and therefore the EG-ECCS encouraged UNSD and UNFCCC to prioritise efforts to inform and train the National Focal Points as appropriate.

16. The EG-ECCS recommended further exchange of experience among countries in terms of which domains/topics would be best informed by surveys/censuses; administrative sources; scientific studies; and big data.

**Development of methodology and implementation support for the Global Set**
**Overall:**

17. The EG-ECCS expressed appreciation for the work undertaken by the UK-ONS on climate and health; the IAEG-GS, UNSD and UN Women on gender and climate; the EG-ECCS sub-group on

climate change questions in censuses and surveys; the advances towards a common statistical framework on disaster-related statistics; and the initiative to consider the topic of big data for climate change statistics for the first time in its work.

18. The EG-ECCS while expressing appreciation for the new indicators on gender, health and biodiversity and their methodologies, recommended that these methodologies be further tested and reviewed by the EG-ECCS at its next meeting and be considered when introducing updates in the Global Set.

19. The EG-ECCS recommended that sub-groups be established, in particular on health and gender to thoroughly review the indicators developed along with corresponding metadata and ensure their global relevance.

**Health and climate:**

20. The EG-ECCS noted that there was a need to develop standards and tools for official statistics to monitor the impacts of climate change on health, an important area where indicators are currently Tier 3 in the Global Set.

21. The EG-ECCS was supportive of the proposed health indicators and recommended further testing of the methodologies and data availability by countries within the revision process of the Global Set and noted that another cohort of indicator proposals would be presented to the next annual meeting of the EG-ECCS.

22. The EG-ECCS noted that NSOs in European countries are well-placed to test these health indicators and recommended that there be more involvement of the African region and of countries in other regions to ensure generalisability.

**Gender and climate:**

23. The EG-ECCS appreciated the presentations delivered by the IAEG-GS and by UN Women on mainstreaming gender into climate change statistics.

24. The EG-ECCS agreed that countries may consider mobilization of gender-specific units in their national statistical offices or line ministries, with a view to collaborate with experts in other themes such as environment and share expertise.

25. The EG-ECCS noted the need to be mindful of competing priorities and that gender statistics and their tie to climate change statistics would need to consider sampling issues and inequalities within households.

26. The EG-ECCS proposed establishing a sub-group on gender and climate to work closely with the IAEG-GS. The sub-group, among other things would further test and refine indicators that require gender and climate change statistics, as outlined in metadata provided by UN Women. This sub-group would also review and provide input on the guidance note being developed by the IAEG-GS, at a later stage.

27. The EG-ECCS suggested that consideration be given to household budget surveys and labour force surveys as key sources for collecting data on gender and climate, and highlighted the need to avoiding gender biases throughout the process including when identifying the respondent.

**Questions for censuses and surveys:**

28. The EG-ECCS agreed to review the draft compilation of climate change questions for censuses and surveys and send their comments directly to UNSD as well as to communicate their interest in participating in the existing sub-group.

29. The EG-ECCS recommended that climate change as a topic be included more broadly in handbooks/guidelines on household surveys and censuses and concurred that there was a need to capture good practices on integrating climate change questions/modules and have these reflected in international manuals/guidelines.

30. The EG-ECCS agreed that it was a good step to investigate what indicators could be derived from the statistics and data that are already being collected.

31. The EG-ECCS noted that it was important to have guidelines on the use of administrative data for climate change indicators and statistics, including on the appropriate use of survey data instead of administrative data.

32. The EG-ECCS agreed to share survey and census questionnaires that include environment and climate change questions with UNSD to be made available in the public domain via its website.

**Big data:**

33. The EG-ECCS highlighted that there was a need to establish better understanding on the application of big data to compile basic environment and climate change statistics from which indicators and accounts, including ecosystem accounts for SEEA, could be developed.

34. The EG-ECCS noted that while big data inputs are abundant, the statistical capacity to use this data source in climate change and disasters was lagging behind and needs to be further enhanced.

35. The EG-ECCS recommended that a review of the existing guidance on using big data for official statistics with key principles and applications be carried out, followed by a review of best practices, including various types of big data such as satellite data, AIS vessel tracking data, mobile phone data and citizen-generated data, and these be presented at the next EG-ECCS meeting.

36. The EG-ECCS encouraged the promotion of linkages between interested NSOs and the global and regional hubs under the UN-CEBD (in Brazil, China, Indonesia, Rwanda, Spain and the United Arab Emirates) and the preparation of specific guidance on applying big data for climate change and disaster statistics.

## Session Three: Environment Statistics Data Collection

### UNSD/UNEP Questionnaire on Environment Statistics (water and waste sections)
### SDG 6.3.1 Progress on wastewater treatment – contributions to global water security

37. The EG-ECCS noted the very low response rate to international questionnaires on water and waste statistics that hinders the monitoring of the related SDG indicators.

38. The EG-ECCS appreciated that several international organizations offer different types of technical assistance including training manuals and webinars, as well as regional and national workshops.

39. The EG-ECCS noted that at the international level continued attempt was being made to harmonize efforts in data collection which in turn meant that those efforts being made at national level were captured once and used for multiple policy purposes.

### Water Statistics

40. The EG-ECCS agreed that international organisations involved in data collection for water statistics consider evolving policy and other demands such as those pertaining to the SDGs, FDES, the Global Set of Climate Change Statistics and Indicators, and the SEEA.

41. The EG-ECCS noted the periodic modification of the UNSD/UNEP Questionnaire on Environment Statistics and other (aligned) international questionnaires to meet evolving demands, bearing in mind the need to maintain consistent time series.

42. The EG-ECCS urged countries to strengthen data collection and compilation in water statistics at the national level to better inform national policy demands, and to facilitate single reporting for international data reporting requirements or requests.

43. The EG-ECCS agreed that countries continue to improve the quality of water statistics to meet policy demands while continuing to prioritise country-owned data.

44. The EG-ECCS supported countries in having a coordinated approach among stakeholders which include the NSO and line ministries and depending on the nature of the theme (be it water statistics or otherwise), using methodological guidelines such as the FDES, to help assign responsibilities among stakeholders.

45. The EG-ECCS agreed that since water scarcity was such a pre-eminent issue, statistics concerning aquifer recharge, reuse of water, and treatment of water should continue to be prioritised, especially in countries where water scarcity was already an issue, and where rapid population growth due to displacement of persons or otherwise, was a reality.

46. The EG-ECCS acknowledged the work done to date as reflected in an increasing number of reports and research articles which cite country-owned data collected via international questionnaires as a key input.

47. The EG-ECCS noted that as policies and demand evolve over time, alignment in international questionnaires continue to be a priority given that existing alignments help to minimise reporting burden at country level.

48. The EG-ECCS noted that countries welcomed capacity development efforts to address data collection at international level and requested further assistance.

### Waste Statistics

49. The EG-ECCS agreed that countries shall exert best effort in providing food waste data to the current round of the UNSD/UNEP Questionnaire 2024 on Environment Statistics, which was in line with the rapidly evolving demand related to SDG 12.3.1(b).

50. The EC-ECCS noted the periodic modification of the UNSD/UNEP Questionnaire on Environment Statistics and other (aligned) international questionnaires to meet evolving demands, bearing in mind the need to maintain consistent time series.

51. The EG-ECCS agreed that effort shall be made in provision of data by countries toward international organisations on themes such as e-waste where international organisations continue to publish The Global E-Waste Monitor which relies upon country data and was the premier report worldwide for informing on the issue of e-waste.

52. The EG-ECCS acknowledged that there was significant value to the traditional compilation of waste management statistics, and that, amid an evolving policy landscape, this theme of statistics was now well situated to better inform circular economy analysis.

53. The EG-ECCS acknowledged how big data may serve as a valuable input into measuring e-waste, for instance, via registries of shipping, transboundary movements of ships containing imports and exports, etc. It was also acknowledged that big data alone may not resolve every question and that traditional data sources (such as surveys) are continually needed.

54. The EG-ECCS acknowledged scenarios within countries whereby an informal approach to multistakeholder liaisons may be satisfactory for achieving data sharing at a very aggregated level. However, typically, it may be upon countries to formalise approaches toward multistakeholder liaisons, especially where disaggregated data sets are beneficial in informing policy.
55. The EG-ECCS acknowledged the value of using international organisations' (e.g., the OECD's, Eurostat's) disseminated outputs to, at minimum, help other countries with expectation and validation of their own data sets.

56. The EG-ECCS agreed that continued close liaisons among multiple stakeholders was paramount; that applies at both national and international level, and which may help mitigate data gaps and identify where capacity development was most needed.

### Other data collection and reporting requirements

57. The EG-ECCS expressed appreciation for the presentation on the highlights of the survey on International Agencies' Activities on Environment and Climate Change Statistics and recognised that many of the respondent agencies are involved in the collection of data on environment and climate change, and that partnerships among these should be strengthened to complement existing expertise.

58. The EG-ECCS acknowledged there are a range of sources (e.g., earth observation data, administrative data, remote sensing, surveys and censuses) that countries use to collect data on climate change and the environment. The appropriateness of each data source varies depending on the level of maturity of the NSS and the context of what was being collected.

59. The EG-ECCS acknowledged that there was a need to have a balance of the qualitative and quantitative approaches towards the collection of data. Both innovative and traditional data collection methods and sources have a role in data collection.

60. The EG-ECCS noted that a mixed method approach, using the most appropriate data sources, was best practice for NSOs to comprehensively inform on issues and policies for robust decision making. Which data collection methods are utilised depends on the needs of the country and the level of maturity of its NSS.

61. The EG-ECCS appreciated that for the Pacific region, which was particularly vulnerable to climate change, a survey module on natural disasters and climate change was developed by the SPC to collect data not available from other sources, which could also be applied to similar countries.

62. The EG-ECCS reaffirmed that given the multifaceted nature of environment and climate change, partnership and multistakeholder engagement are very important and countries are encouraged to include questions from the core set, being developed by the sub-group under the EG-ECCS, into the traditional surveys and censuses, as well as specialized surveys, to fill existing data gaps.

63. The EG-ECCS agreed that perception surveys, or the inclusion of perception-based questions in censuses, were very useful in providing qualitative information that may not otherwise be captured.

64. The EG-ECCS noted that it was very useful to learn about the methodology used behind the surveys and localize them to suit the needs of other countries according to their level of maturity and issues.

## Session Four: Environment Statistics Toolbox

### FDES and the Basic Set of Environment Statistics

65. The EG-ECCS noted that the FDES and its tools have been used extensively by countries to produce environment statistics at varying stages of development, e.g., for establishing or strengthening environment statistics programmes and publishing environment statistics compendia, as well as prioritize statistics and ensure alignment with international definitions for the more advanced

NSS. Countries also used complementary frameworks and indicator sets, including the SEEA, and environmentally-related SDGs and UNECE environment indicators.

66. The EG-ECCS recommended that the combined survey should be further elaborated to adequately address the challenging steps of national advances so that countries could track progress and exchange lessons.

67. The EG-ECCS recommended the development of guidelines to identify statistical priorities based on the FDES.

68. The EG-ECCS noted from the national examples that training on the FDES across the relevant national institutions facilitates the establishment of national networks of experts needed for the production and dissemination of environment statistics.

69. The EG-ECCS recommended that countries and international agencies intensify the use of the FDES and ESSAT, including via national translations and capacity development, and share their experience/outcomes with the EG-ECCS, in particular contributions to specific MEAs as well as general/comprehensive application.

70. The EG-ECCS noted that there was need for more focus on new statistical requirements, for example, ecosystem conditions and other biodiversity indicators needed for the CBD monitoring framework, e.g., species richness and species abundance.

71. The EG-ECCS recommended that projects led by international agencies involve the NSO in the prioritisation of the national topics to be covered, where resident coordinators could also contribute, to ensure that there was a coordinated and sustained approach and that this was included in the NSS.

72. The EG-ECCS acknowledged the need for continuous training in the area of environment and climate change statistics to include experts from the wider National Statistical System (outside of the NSO), at the national level and recommended that “train the trainers” training be continuously supported.

## Session Five: Capacity development in environment statistics and climate change statistics

### Capacity development by UNSD, Regional Commissions and other agencies

73. The EG-ECCS recommended that the capacity in countries be strengthened through facilitating translations of the implementation tools of the Global Set (CISAT), preparation of training materials, and providing more online and in-person capacity development.

74. The EG-ECCS noted the increasing collaboration among international agencies leading capacity development but requested that this be improved further.

75. The EG-ECCS noted the advances of PARIS21 to facilitate national prioritisation of climate change data to respond to national policy requirements in a number of countries which reinforces related United Nations efforts.

76. The EG-ECCS recommended that specific policy actions informed by specific statistical outputs be compiled and presented at the next EG-ECCS meeting while reflecting best practices at the national level.

77. The EG-ECCS recommended that stronger collaboration among international agencies was required to support countries with more synergetic capacity development activities which would help countries to be more confident to identify and follow the methodological guidance being provided by the agencies.

78. The EG-ECCS noted that collaborative capacity development would also need financial considerations so that the statistical advancements would be more sustained and permanent, based on a careful assessment of work already done. The EG-ECCS noted that attention was also needed for the innovative tools that could help countries.

79. The EG-ECCS noted that a persistent challenge was to define how to integrate environment and geospatial data as capacity was lacking and the geospatial data needed to compile environment and climate change indicators are not yet addressed sufficiently. The complementarity between traditional and novel sources of data has to be reviewed and strengthened.

80. The EG-ECCS recommended that South-South cooperation and assistance be strengthened and promoted further for climate change and environment statistics.

81. The EG-ECCS recommended that international collaboration and support be increased as there was still a great need for this in countries.

82. The EG-ECCS noted that there was a strong plea for assistance in resource mobilization to ensure continuity in capacity support to countries via the provision of shared and complementary support.

83. The EG-ECCS noted the need to address emerging areas also in countries with developed NSS, whereby such areas include sustainable infrastructure and circular economy, and this should be addressed via knowledge exchange rather than capacity development.

84. The EG-ECCS noted that combining capacity development with expert group meetings, as well as south-south knowledge and capacity exchange mechanisms, have been shown to be very effective and rich approaches.

85. The EG-ECCS noted that more emphasis on translations for enhancing international collaboration was needed.

86. The EG-ECCS recommended that high level coordination be explored to seek complementarity between UN-led activities and those led by bilateral donors as well as other international funds and multilateral development banks.

87. The EG-ECCS noted that transparency of plans on capacity building activities was needed to avoid duplication of efforts and to find synergies among various relevant national activities. The survey to international organizations could be a suitable vehicle to compile the information on capacity development plans and activities in countries and international/regional organizations, with the results then published on a single platform.

Annex I

**Eleventh Meeting of the Expert Group on Environment and Climate Change Statistics (EG-ECCS)**

**(Virtual)**

**New York, 14-17 October 2024**

**Final Agenda**

# Monday, 14 October 2024

## Opening session

08:00 – 08:30 Opening and objectives of the meeting

Welcome speech by Director, UNSD

Logistical matters

Adoption of the agenda

## Session 1: Streamlining environment and climate change statistics

08:30 – 8:50 **Updates on integration and communication**

a) New Expert Group on Environment and Climate Change Statistics (UNSD, 5 min)
b) Highlights from the written statements to the Statistical Commission (UNSD, 5 min)
c) Discussion on enhancing communication and coordination (plenary, 10 min)

## Session 2: Climate Change Statistics and Indicators

09:00 – 9:40 **Updates on Reporting to the Paris Agreement and development of climate change statistics**

a) Uses of the Global Set of Climate Change Statistics and Indicators (UNSD, 10 min)
b) New requirements for transparency and overview of submission of Biennial Transparency Reports (BTRs) (UNFCCC, 15 min)
c) Discussion (plenary, 15 min)

***Coffee break 10 mins***

09:50 – 10:40 **Related inter-governmental and regional initiatives on climate change statistics**

- Updates on international climate change programmes and panel discussion on options for synergies and cooperation between the main institutions leading these programmes, moderated by Karina Cázarez
- Panellists
  - FAO
  - OECD
  - WMO
  - UNDRR
  - UNECE

10:40 – 11:30 **National experiences on climate change statistics**

- Panel discussion moderated by UNSD
- Panellists
  - New Zealand
  - Brazil
  - Italy
  - Nepal
  - Uganda

## Tuesday, 15 October 2024

08:00 – 09:10 **Development of methodology and implementation support for the Global Set**

a) Observations on methodology development by international agencies (UNSD, 5 min)
b) Shaping the Future of Disaster-Related Statistics: Towards a Common Statistical Framework (ESCAP, 7 min)
c) Climate and health (UK ONS, 10 min)
d) Climate and gender
   (UNSD, 10 min)
   (Columbia, 10 min)
e) Use of surveys and censuses for climate change data collection (Monica Madrid and UNSD, 10 min)
f) Use of alternative sources, big data and data science for climate change statistics (UNSD and Anand Sookun, 10 min)
g) Discussion and Introduction to group work (UNSD, 15 min)

09:10 – 10:20 **Group work gender, health, questions for surveys and big data**

- Introduction to key issues and options in each group (10 min)

- Review and discussion (40 min)
- Preparation of reporting to plenary (20 min)

***Coffee break 10 min***

10:30 – 11:20 **Plenary conclusions and prioritising future work**

a) Group work conclusions (5 min each)
b) Discussion (plenary, 30 min)

# Wednesday, 16 October 2024

## Session 3: Environment Statistics Data Collection

08:00 – 08:30 **Environment Statistics Data Collection**

a) UNSD/UNEP Questionnaire on Environment Statistics (water and waste sections) (UNSD, 15 min)
b) SDG 6.3.1 Progress on wastewater treatment – contributions to global water security (UN-HABITAT and WHO, 10 min)
c) Discussion (5 min)

08:30 - 9:30 **Water Statistics**

- Water Statistics Panel and Discussion on advancing harmonization of international data collection processes, following evolving policy demands, moderated by WHO
- Panellists
  - OECD
  - UN-HABITAT
  - FAO
  - Jordan
  - Slovenia

***Coffee Break 10 mins***

09:40 – 10:40 **Waste Statistics**

- Waste Statistics Panel and Discussion on emerging waste topics, use and analysis of national data, moderated by UNEP
- Panellists
  - UNITAR
  - UNEP
  - OECD

- Eurostat
- Hungary
- The United Republic of Tanzania

10:40 – 11:20 **Other data collection and reporting requirements**

a) Observations on data collection by international agencies (UNSD, 8 min)
b) Data sources used in environment and climate change statistics (UNSD, 5 min)
c) Advancements and developments in survey module on climate change (Pacific Community, 7 min)
d) Annual population survey on Perceptions in the Netherlands (Netherlands, 5 min)
e) Discussion on international reporting and national user requirements (10 min)

# Thursday, 17 October 2024

## Session 4: Environment Statistics Toolbox

08:00 – 08:40 **FDES and the Basic Set of Environment Statistics**

a) Implementation of the FDES and production of environment compendia (UNSD, 7 min)
b) National application of FDES and ESSAT (Botswana, 7 min)
c) New applications of the FDES and ESSAT (UNEP, 7 min)
d) Same tools but different uses (Luxembourg, 7 min)
e) Discussion on implementation of the FDES and synergies with other frameworks (plenary, 12 min)

## Session 5: Capacity Development in Environment Statistics and Climate Change Statistics

08:40 – 10:30 **Capacity development by UNSD, Regional Commissions and other agencies**

a) Observations on capacity development by international agencies (UNSD, 7 min)
b) Improving Climate Change Data Ecosystems for Better Climate Action (PARIS21, 7 min)
c) Discussion (5 min)
d) Panel on capacity development activities led by regional institutions, moderated by UNEP
   - Panellists
     - ECA
     - UNECE
     - ECLAC

- ESCAP
- CARICOM
- COMESA

e) Discussion on capacity development activities led by regional institutions (10 min)

f) UNEP's experience on collaboration on Strengthening Climate Change and Disaster-Related Statistics (UNEP, 10 min)

g) Discussion on enhancing collaboration and building a capacity development strategy (10 min)

***Coffee break 10 mins***

## Session 6: Discussion of Priorities and Conclusions

10:40 – 11:20 **Review and decisions on future actions**

# Annex II

## List of Participants

| Name | Title | Organization / Office | Country |
|---|---|---|---|
| **Country** | | | |
| Nelli Baghdasaryan | Member of State Council on Statistics | Statistical Committee | Armenia |
| Luisa Ryan | Director, Centre for Environmental and Satellite Accounts | Australian Bureau of Statistics | Australia |
| Steven May | Director(a/g), Centre for Environmental and Satellite Accounts section, Economy and Environment Division | Australian Bureau of Statistics, Canberra | Australia |
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| Kakanyo Fani Dintwa | | Statistics Botswana | Botswana |
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| Nonofo Mlandu | | Statistics Botswana | Botswana |
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| Cherice Bryan | Environment Statistician, Environment Statistics Unit | Statistical Institute of Jamaica | Jamaica |
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| | | | |
| **Agency** | | | |
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| Name | Title | Organization / Office | Country |
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| Gerard Barutwanayo | Consultant | Independent consultancy | Burundi |
| Monica Madrid Arroyo | Consultant | Independent consultancy | Colombia |