

Global Set of Climate Change Statistics and Indicators



19th IAOS Conference, 15-17 May 2024, Mexico City
Session: The Challenges Of Statistical Production For Climate Change (16 May 2024)

United Nations Statistics Division

United Nations Statistics Division

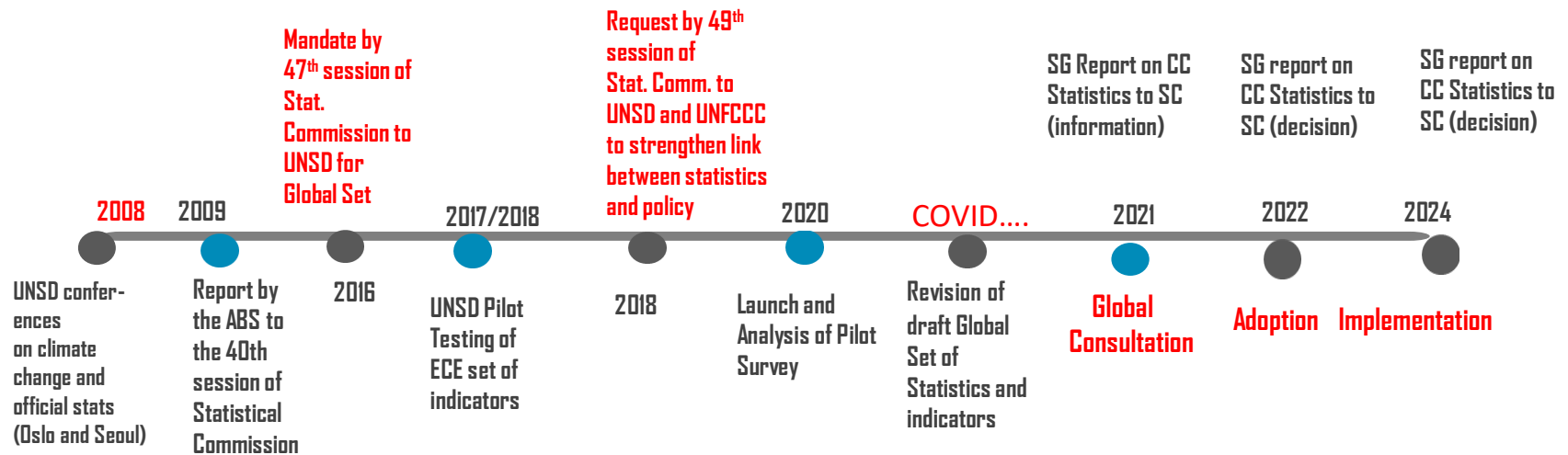


Key points

1. Global Set
2. Capacity Development
3. Implementation Guidelines
4. CISAT
5. Data sources and methodological development
6. Way forward



Background and process



Decisions of the Statistical Commission:

- **Decision 47/112 (2016)**, UNSD requested to develop a global set of climate change statistics and indicators, applicable to countries at various stages of development:
<http://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf>
- **Decision: 49/113 (2018)**, UNSD and UNFCCC to strengthen the link between statistics and policy:
<https://unstats.un.org/unsd/statcom/49th-session/documents/Report-on-the-49th-session-E.pdf>
- **Decision 53/116 (2022)**, the Global Set was adopted at the 53rd session of the Statistical Commission:
<https://unstats.un.org/unsd/statcom/53rd-session/documents/2022-41-FinalReport-E.pdf>
- **Decision 55/118 (2024)** focuses on implementation of the Global Set including investment in climate change statistics, use of administrative data, and including climate change questions in relevant censuses and surveys: https://unstats.un.org/UNSDWebsite/statcom/session_55/documents/2024-36-FinalReport-E.pdf

Global Set of Climate Change Statistics and Indicators



The Global Set was adopted as the framework guiding countries to develop **their own national sets** of climate statistics and indicators at the fifty-third session of the Statistical Commission.

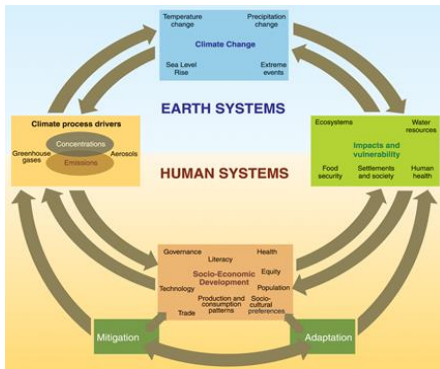
- It links the reporting requirements under the Paris agreement with the needed indicators and statistics from the relevant frameworks and guidance.
- It contains 158 indicators and 190 statistics (for which metadata is available for each) structured in five areas defined by IPCC, these are drivers, impacts, vulnerability, mitigation and adaptation.
- It consists of a tiering system as in the FDES and the SDG indicators.

<https://unstats.un.org/unsd/envstats/climatechange.cshtml>



Methodological foundation

- Given that there was no underlying framework linking the reporting requirements stemming from the Paris Agreement and the necessary statistics or indicators to support climate policy action, UNSD worked closely with UNFCCC to develop such a framework explicitly for climate change.
- The Global Set, developed in close collaboration with UNFCCC, is structured according to the IPCC framework and FDES, with a tiering system as in the FDES and the SDG indicators.

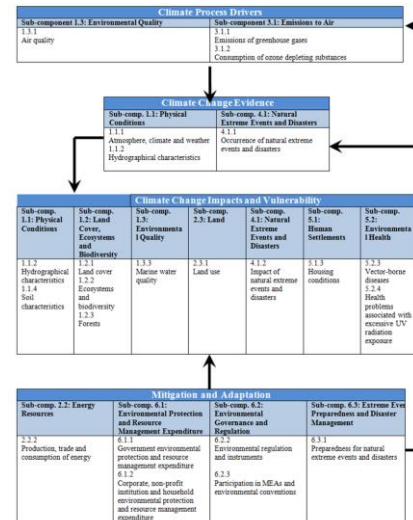


IPCC, 2007, Fourth Assessment Report



Framework for the Development of Environment Statistics (FDES 2013)

Relevant chapters of the Manual of the BSES
https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshml



FDES cross-cutting application (Chapter 5) links climate change and environment statistics based on the IPCC Framework



Goal 13

SENDAI FRAMEWORK
 FOR DISASTER RISK REDUCTION 2015-2030



Connections with indicators from:

The Sendai Framework 2030 Agenda for Sustainable Development

- A** Mortality
- B** People affected
- C** Economic loss
- D** Critical infrastructure & services
- E** Disaster risk reduction strategies
- F** International cooperation
- G** Early warning and risk information



Main structure

- **158 indicators**, which serve to support developing and monitoring of national climate policies and international reporting requirements, in particular those under the Paris Agreement.
- **190 statistics**, which serve three main purposes:
 - (i) to provide less complex options for countries with less developed statistical systems;
 - (ii) to provide statistics needed to compile the indicators (for Tier 1 and 2); and
 - (iii) to provide inputs to further define and develop the Tier 3 indicators.
- **Five areas**: drivers, impacts, vulnerability, mitigation and adaptation.
- **34 topics**, represent the quantifiable aspects of the areas taking into account the types and sources of the statistics needed to describe them;
- **Paris Agreement article**: Correspondence between the indicator/statistic and the articles in the Paris Agreement specifying the reporting requirements;
- **PAWP-Katowice**: Correspondence between the indicator/statistic and the decisions from the Paris Agreement Work Programme (PAWP), adopted in Katowice, specifying the reporting requirements;
- **Statistical references** (next slide).



Statistical references (1)

The main statistical references including the internationally accepted frameworks, standards and guidelines, are presented in abbreviated form in the last column (entitled Method):

- **IPCC:** the Intergovernmental Panel on Climate Change 2006 guidelines;
- **FDES:** the Framework for the Development of Environment Statistics and its Manual on the Basic Set of Environment Statistics (BSES);
- **SDG:** Sustainable Development Goal indicators metadata;
- **Sendai:** Sendai Framework for Disaster Risk Reduction 2015-2030;
- **UN-ECE:** the Conference of European Statisticians set of core climate change-related indicators metadata;
- **IRES:** the International Recommendations for Energy Statistics

continued on next slide



Statistical references (2)

- **SEEA-CF**: the System of Environmental-Economic Accounting Central Framework;
- **SEEA-EA**: the System of Environmental-Economic Accounting-Ecosystem Accounting.

Various climate related policies can be informed by various types of SEEA accounts:

- Informing **mitigation and adaptation strategies**
- Providing a comprehensive overview of how much **carbon is stored per ecosystem type** and how this develops over time
- Assessing how **climate change impacts** economic activities and households



Capacity development activities



Examples of UNSD involvement in Capacity development activities

- National mission and workshop on Environment and Climate Change Statistics in Peru, Lima (Dec 2022)
- CISAT pilot-testing in Caribbean SIDS (RPTC funded activity): Antigua and Barbuda, Belize, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname
- ECLAC DA12 project 'Climate Change and Disaster Statistics in the Caribbean' - completed
- DA14 Workstream 2.1 – Climate Change and Disaster-related Statistics (led by UNEP and ESCAP) – several activities commencing soon
- Fostering Caribbean SIDS-SIDS Peer-Learning And Cooperation (workshop in Belize in April/May 2024)
- COMESA project on Environment and Climate Change Statistics for the African Development Fund Countries (workshop in Nairobi, Nov 2022)
- UNEP & DRR missions in Lesotho and Cameroon with a 'National Workshop on Climate Change and Disaster-related Statistics' (2023)



Global Set of Climate Change Statistics and Indicators: Implementation Guidelines

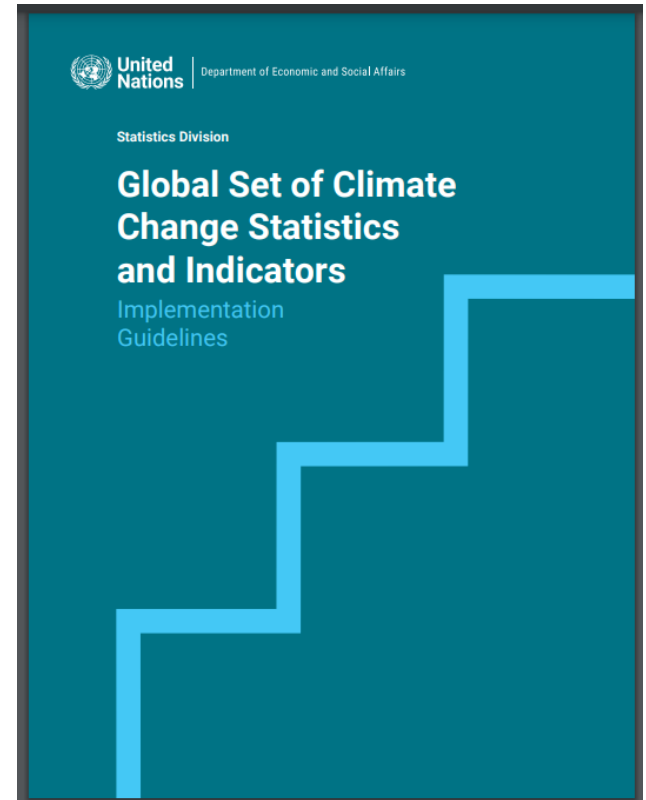


Implementation Guidelines

The Guidelines aim to help countries improve the monitoring of climate change, its impacts and response actions by better informing the UNFCCC-NFPs about the benefits of official statistics and by guiding the NSOs to increase their engagement in the area of climate change. The overall objectives of the Guidelines are to:

- help countries to set up the national consultation processes which can embrace this multidisciplinary statistical work in a way complementary to the ongoing and future reporting to UNFCCC;
- deepen countries' self-assessment activities using the Global Set; and
- provide the basis for countries to initiate the development of a national programme for sustained production of climate change statistics within the national statistical system (NSS).

https://unstats.un.org/unsd/envstats/Climate%20Change/Implementation_Guidelines.pdf



Climate Change Statistics and Indicators Self-Assessment Tool (CISAT)



Data sources and methodological development



Defining climate change questions for surveys and censuses

A sub-group of experts of the Expert Group on Environment and Climate Change Statistics (EG-ECCS) is working to develop a core set of climate change questions which can be included in censuses and surveys to inform a number of indicators and statistics in the Global Set as well as the 2030 Sustainable Development Agenda and Beyond.

Members of the sub-group

Country/Organization	Title/Designation
Cabo Verde, INE	Official Environmental Statistics Technician
Italy, ISTAT	Head of Division of Environmental Statistics
Italy, ISTAT	Senior Researcher (Climate and Gender)
Mexico, INEGI	Director
Nepal, NSO	Director, Environment Statistics Section
Suriname, GBS	Statistician at the Scientific Research and Development
Tanzania, NBS	Director of Population Census and Social Statistics & Chairperson of the EGES
Uganda, UBoS	Senior Statistician (Environment)
ECLAC	Chief Environment and Climate Change Statistics Unit, Statistics Division
SPC	Statistics Advisor (SDGs)
UNFCCC	Manager, Transparency Division
UN Women	Regional Advisor on Gender Statistics (Climate and Gender)
Burundi	Independent Expert on Environment Statistics
Jamaica	Independent Consultancy
Mauritius	Consultant

Deliverables and outputs

- Compilation of existing questions from censuses and surveys
- Compilation of new questions
- Building a core set



Integrating gender and climate change statistics

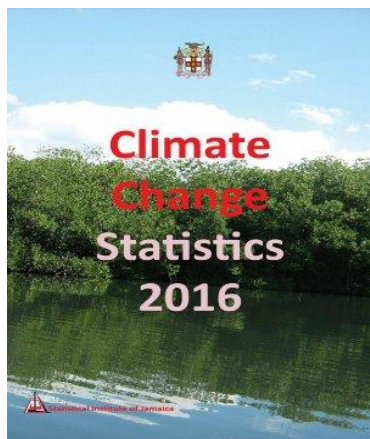
- Mandate from the Statistical Commission requesting that a gender perspective be adopted and integrated into all the agenda items of the Commission
- The Expert Group has been addressing the subject since 2022. At the 10th meeting in 2023 group work session allowed for peer review of latest advancements on the nexus between climate change and gender statistics
- Gender Statistics is also on the agenda of the Commission and the respective report of the Secretary General (https://unstats.un.org/UNSDWebsite/statcom/session_55/documents/2024-14-GenderStats-E.pdf) mentions the collaboration between the Inter-Agency and Expert Group on Gender Statistics (IAEG-GS) and EG-ECCS.
- The EG-ECCS and UNSD plan to continue collaboration with AEG-GS and UN Women-Asia Pacific taking into account the important methodological developments in the areas of climate and gender led by these agencies.
- The Global Set (especially, for Tier 3 indicators) can benefit from the methodological work on gender and climate change statistics, in particular the work carried out by the Asia-Pacific region. The methodological advances will be incorporated in the corresponding updates in the Global Set as appropriate.
- A template on country experiences for mainstreaming gender into climate is being discussed and revised and will be sent to members of the EG-ECCS. The results of this climate-gender work will feature in a guidance note being developed by the IAEG-GS and will help to develop the gender-climate nexus by improving communication between climate change statisticians and gender statisticians.



Some successes in the Region

- Jamaica – STATIN was the first NSO in the world to produce a climate change statistics report in 2016
- CARICOM – first regional climate change statistics report in 2020
- Suriname – NSO published its first climate change statistics report in 2023 using the Global Set
- Suriname planning to include climate change questions in its Population and Housing Census in 2024

Jamaica



CARICOM



Suriname



The way forward

- UNSD is committed to assist countries in developing environment and climate change statistics programmes.
- With the adoption of the Global Set and the development of the Guidelines and the CISAT, UNSD envisages that countries will be equipped to establish and strengthen their national programmes.
- UNSD, in collaboration with UNFCCC and the Expert Group on Environment and Climate Change Statistics, will continue to refine the methodologies unpinning the indicators and further develop the climate and gender nexus and climate related questions for censuses and surveys.
- Countries are encouraged to implement the Global set, develop national programmes on climate change statistics and publish climate change reports.
- UNSD, UNFCCC and partner agencies stand ready to support countries in the process of improving climate change statistics for monitoring related policies at national, regional and global levels.



~~Questions to panelist~~ Key Questions

The Global Set was adopted as the framework guiding countries to develop their own national sets of climate statistics and indicators.

~~1. Researchers would like to know of our needs with respect to our work on climate change statistics.~~ What is the key role of official statistics in climate action and policies at national level?

~~2. Can you nominate 3 top priorities for How can the research community to help support the development of climate change statistics, both nationally and internationally organisations in promoting the work?~~

~~3. Can you suggest 3 top issues for the international organizations to address?~~

Or

~~Any last words/takeaways~~

- ~~• conduct research on specialized aspects of climate change issues, collect and analyze data from earth observations that underline climate change statistics~~
- ~~• assist in the development of specialised surveys for climate change statistics~~



Thank you for your attention!

For more information please contact the Environment Statistics Section
at the United Nations Statistics Division:

E-mail: envstats@un.org

Website: <https://unstats.un.org/unsd/envstats/>



Additional resources

- **FDES:**
- **ESSAT:**
- **Data collection:**
- **EGES:**
- **Reports and compendia on:**
 - environment statistics: <https://unstats.un.org/unsd/envstats/fdescompendia.cshtml> and
 - climate change statistics: https://unstats.un.org/unsd/envstats/climatechange_reports.cshtml
- ~~**Outcomes of the Global Consultation**, responses and feedback were received from 86 States and areas and 26 agencies (see annex I in the [Report of the Secretary General on Climate Change Statistics to the Statistical Commission](#) (E/CN.3/2022/17)).~~
- ~~Detailed summaries and geographical analysis are presented in the background document entitled ["Global Consultation on the Global Set"](#).~~
- ~~Other relevant resources are comprehensively reviewed in the above background report~~
- **UNFCCC Operationalization of the Enhanced Transparency Framework:** <https://unfccc.int/enhanced-transparency-framework>

