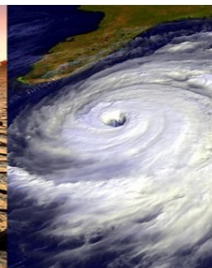


# Global Set of Climate Change Statistics and Indicators



**Statistical Conference of the Americas of ECLAC (SCA-ECLAC)**

Side Event: Caribbean activities related to measure environment, climate change and disasters indicators for policy decision-making

**24 November 2021 (virtual)**

*United Nations Statistics Division*

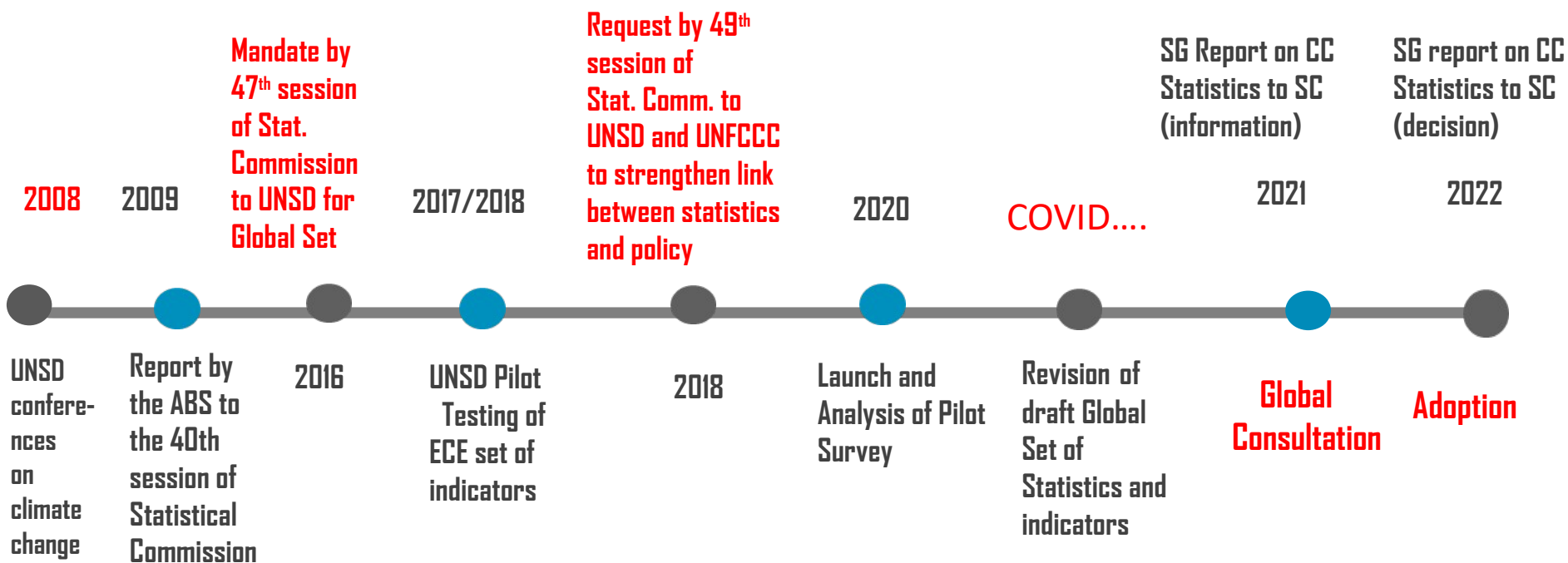


# Outline

1. Background to UNSD Global Set of Climate Change Statistics and Indicators
2. Mandates of the Statistical Commission
3. Collaboration between UNSD and UNFCCC to strengthen link between statistics and policy
4. Global Set: Foundation
5. Global Set: Methodology
6. Global Set: Output
7. Responses from Global Consultation
8. Global Set – Part I results
9. Global Set – Part II overall summary
10. Recent and planned actions of UNSD
11. Recommendations



# Background to UNSD work on development of Global Set of Climate Change Statistics and Indicators



More than a decade long process: 2008 - present



# Report of the Secretary-General on Climate Change Statistics to the 47th session of the Statistical Commission in 2016

UNSD, in collaboration with UN-ECE, prepared the Report of the Secretary-General on Climate Change Statistics to the 47<sup>th</sup> session of the Statistical Commission (E/CN.3/2016/15) (New York, 8-10 March 2016).

[http://unstats.un.org/unsd/environment/climatechange\\_docs\\_conf.html](http://unstats.un.org/unsd/environment/climatechange_docs_conf.html)

## Decision 47/112:

<http://unstats.un.org/unsd/statcom/47th-session/documents/Report-on-the-47th-session-of-the-statistical-commission-E.pdf>

## Main decisions:

For countries: Use the FDES 2013 to guide the development of climate change statistics and indicators given the close interrelationship between environment statistics and climate change statistics.

For UNSD: Review and consider UN-ECE set of climate change-related statistics and indicators as a basis for **developing a global set of climate change statistics and indicators, applicable to countries at various stages of development.**



# Report of the Secretary-General on Climate Change Statistics to the 49th session of the Statistical Commission in 2018

UNSD, in collaboration with UN-ECE and UNFCCC, prepared the Report of the Secretary-General on Climate Change Statistics to the 49<sup>th</sup> session of the Statistical Commission (E/CN.3/2018/14) (New York, 6-9 March 2018).

<https://unstats.un.org/unsd/statcom/49th-session/documents/2018-14-ClimateChange-E.pdf>

## Decision: 49/113

<https://unstats.un.org/unsd/statcom/49th-session/documents/Report-on-the-49th-session-E.pdf>

## Main decisions

For countries: (i) Participate in the Pilot Survey on Climate Change-related Statistics and Indicators currently being undertaken by UNSD, as well as in the planned Global Consultation on Climate Change Statistics and Indicators; (ii) Enhance collaboration between NSOs and national authorities responsible for reporting climate change related information to UNFCCC Secretariat;

For UNSD and UNFCCC: **Strengthen the link between statistics and policy**, for example, by: (i) undertaking joint initiatives in the development of climate change statistics and indicators; (ii) encouraging joint capacity building efforts and trainings with other partners, and exploring ways to encourage NSOs to be more involved in the preparation of data submissions to the UNFCCC secretariat, for supporting the implementation of the Paris Agreement.



# Report of the Secretary-General on Climate Change Statistics to the 52nd session of the Statistical Commission in 2021 (information)

UNSD, in collaboration with UN-ECE and UNFCCC, prepared the Report of the Secretary-General on Climate Change Statistics to the 52<sup>nd</sup> session of the Statistical Commission (E/CN.3/2021/20) (New York, 1 to 3 and 5 March 2021).  
<https://unstats.un.org/unsd/statcom/52nd-session/documents/2021-20-Climate-Change-E.pdf>

Agenda item 4(c)

## Items for information: Climate change statistics

E/CN.3/2021/20

Report of the Secretary-General on climate change statistics

Arabic

Chinese

English

Español

Français

Russian



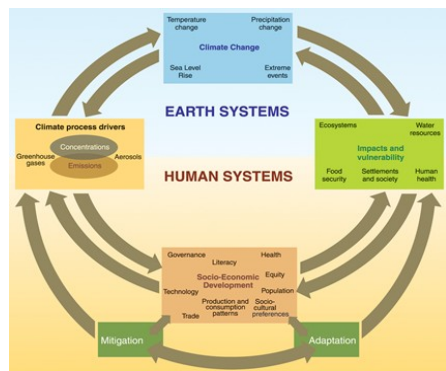
# Collaboration between UNSD and UNFCCC to strengthen link between statistics and policy

- Joint reports on Climate Change Statistics to Statistical Commission
- Joint Side Events at the Statistical Commission
- UNFCCC participation in UNSD-led Expert Group on Env. Stats.
- UNSD participation in a Side Event at the High-Level Political Forum in July 2019 organized by UNFCCC, UNSD, etc.
- UNFCCC participation in UNSD organized regional workshops on environment (including climate change statistics) statistics [e.g., Arab region in 2018, CARICOM region in 2019]
- UNSD participation in UNFCCC stakeholders' dialogues on building the Enhanced Transparency Framework (2020)
- Online information sessions by UNSD/UNFCCC for the Global Consultation - support from Regional Commissions (June/July 2021)
- UNSD participation in 3 UNFCCC organized regional webinars on "Embedding climate reporting in national statistics" (Aug-Sep 2021)

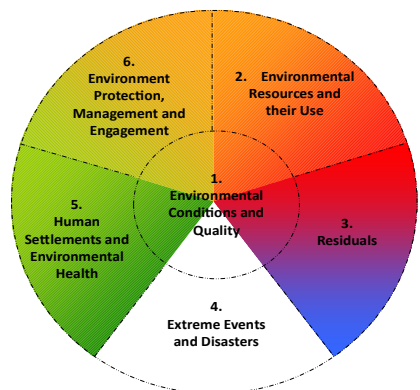


# Global Set: Foundation

- 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 has been working closely with UNFCCC to develop such a framework explicitly for climate change.
- Global Set, being developed in close collaboration with UNFCCC, is structured according to the IPCC framework and FDES.
- Relevant articles of the Paris Agreement (PA) and the decisions under the PA Work Programme adopted in Katowice, as well as related SDG and Sendai Framework indicators, are also referenced to strengthen the link between statistics and policy.



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](https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshml)

Climate Process Drivers			
Sub-component 1.3: Environmental Quality		Sub-component 3.1: Emissions to Air	
1.1.1	Air quality	3.1.1	Emissions of greenhouse gases
		3.1.2	Consumption of ozone depleting substances
Climate Change Evidence			
Sub-comp. 1.1: Physical Conditions		Sub-comp. 4.1: Natural Extreme Events and Disasters	
1.1.1		1.1.1	
Atmosphere, climate and weather		Occurrence of natural extreme events and disasters	
1.1.2		1.1.2	
Hydrological characteristics			
Climate Change Impacts and Vulnerability			
Sub-comp. 1.1: Physical Conditions	Sub-comp. 1.3: Environmental Quality	Sub-comp. 2.5: Land	Sub-comp. 4.1: Natural Extreme Events and Disasters
1.1.2	1.2.1	1.3.3	4.1.2
Hydrological characteristics	Land cover	Marine water quality	Impact of natural extreme events and disasters
1.1.4	1.2.2		
Soil characteristics	Ecosystems and biodiversity		
	1.2.3		
	Forests		
		2.5.1	4.1.3
		Land use	Impact of natural extreme events and disasters
			2.5.2
			Housing conditions
			5.1.3
			Human Settlements
			5.2.3
			Vulnerability to disasters
			5.2.4
			Health problems associated with excessive UV radiation exposure
Mitigation and Adaptation			
Sub-comp. 3.2: Energy Resources	Sub-comp. 4.2: Environmental Protection and Resource Management Expenditure	Sub-comp. 5.2: Environmental Governance and Regulation	Sub-comp. 5.3: Extreme Event Preparedness and Disaster Management
2.2.2	6.1.1	6.2.2	6.3.1
Production, trade and consumption of energy	Government environmental protection and resource management expenditure	Environmental regulation and instruments	Preparedness for natural extreme events and disasters
	6.1.2	6.2.3	
	Corporate, non-profit institutions and household environmental protection and resource management expenditure	Participation in MEAs and environmental conventions	

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



Goal 13

SENDI FRAMEWORK  
 FOR DISASTER RISK REDUCTION 2015-2030





# Global Set: Methodology

The Global Set is based on:

- systematic review of climate change statistics and indicators from 130 countries, with representative regional coverage, and identification of most commonly repeated statistics/indicators;
- discussions at several meetings of the UNSD-led Expert Group on Environment Statistics (EGES);
- bilateral consultations with specialized agencies and in-depth discussions with selected countries; and
- inputs from an extensive Pilot Survey that took place in 2020.

More information:

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

[https://unstats.un.org/unsd/envstats/ClimateChange\\_StatAndInd\\_global.cshtml](https://unstats.un.org/unsd/envstats/ClimateChange_StatAndInd_global.cshtml)



# Global Set: Output

- The Global Set:
  - will provide a **comprehensive statistical framework with statistics, indicators and metadata**, designed to support countries in preparing their own sets of climate change statistics and indicators according to their individual concerns, priorities and resources.
  - will support the reporting requirements of countries under the Enhanced Transparency Framework and the Global Stocktake of the Paris Agreement, as well as climate-related SDG indicators.
  - will assist those countries embarking on the development of climate change statistics by providing the scope and coverage as to what may be considered climate change. It can also assist countries already involved in this area of statistics by providing a check list to see what may be already covered or added to national sets.
  - is flexible enough, with a tiering system, to be applied based on regions', as well as countries', priorities and data availability. It is recommended to promote complementarity among global, regional and national sets of climate indicators, to encourage harmonization across all levels.



# Global Consultation on draft Global Set

## Part I:

- **Institutional Dimension of Climate Change Statistics and Indicators** (in countries): aims at collecting general information on the institutional dimensions of climate change statistics through an online survey.
- **International Agency's Activities on Climate Change Statistics and Indicators**: aims at collecting general information on the main activities led by international Agencies (data collection, methodology development and capacity development), through an online survey.

## Part II:

- **Draft Global Set of Climate Change Statistics and Indicators** (Excel file: *Part II\_DraftGlobalSet.xls*) which allows respondents to provide comments on each individual indicator or statistic in the Excel file;
- **Metadata** (Word file: *Part II\_Metadata.doc*) which allows respondents to provide detailed comments on the metadata in the Word file.

**35 ECE:** Armenia, Azerbaijan, Belarus, Bulgaria, Canada, Croatia, Cyprus, Denmark, Estonia, Finland, France, Georgia, Hungary, Ireland, Italy, Kazakhstan, Lithuania, Luxembourg, North Macedonia, Moldova, Montenegro, Netherlands, Norway, Poland, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, Ukraine, USA.

**15 ESCAP:** Australia, Bangladesh, Bhutan, China, India, Indonesia, Japan, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Philippines, Thailand, Vietnam.

**14 ECA:** Botswana, Burundi, Cabo Verde, Guinea, Côte d'Ivoire, Kenya, Madagascar, Mali, Mauritius, Senegal, South Africa, Tanzania, Zambia, Zimbabwe.

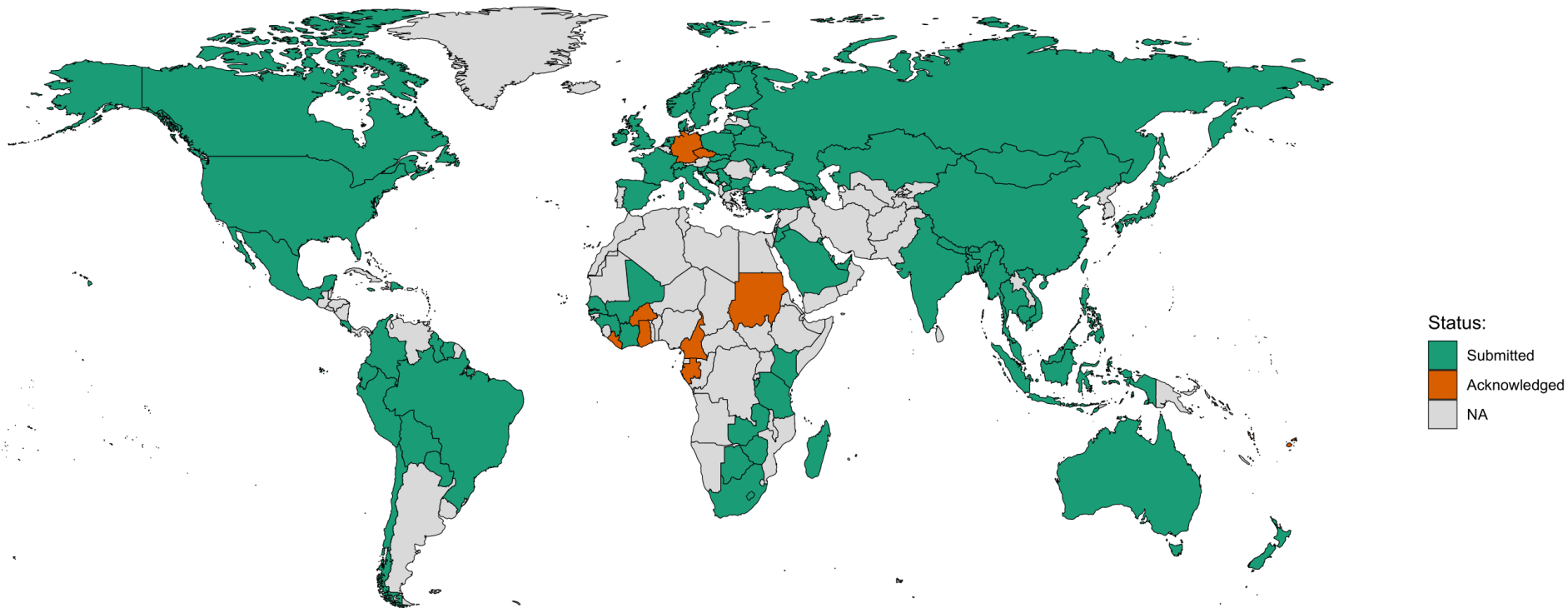
**6 ESCWA:** Jordan, Kuwait, Qatar, Saudi Arabia, State of Palestine, United Arab Emirates

**16 ECLAC:** Bermuda, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Grenada, Guyana, Jamaica, Mexico, Paraguay, Peru, Saint Lucia, Suriname.

**25 agencies:** EEA, Eurostat, CARICOM, IPCC, GCC-STAT, IEA, IMF, IOM, ESCAP, ECLAC, ECA, ECE, ESCWA, FAO, OECD, UNCTAD, UNESCO, UNEP, UNEP-WCMC, UNU, UN-HABITAT, UNFCCC, UNODC, UNSD – Energy Statistics Section, UN-Women



# Responses from the Global Consultation

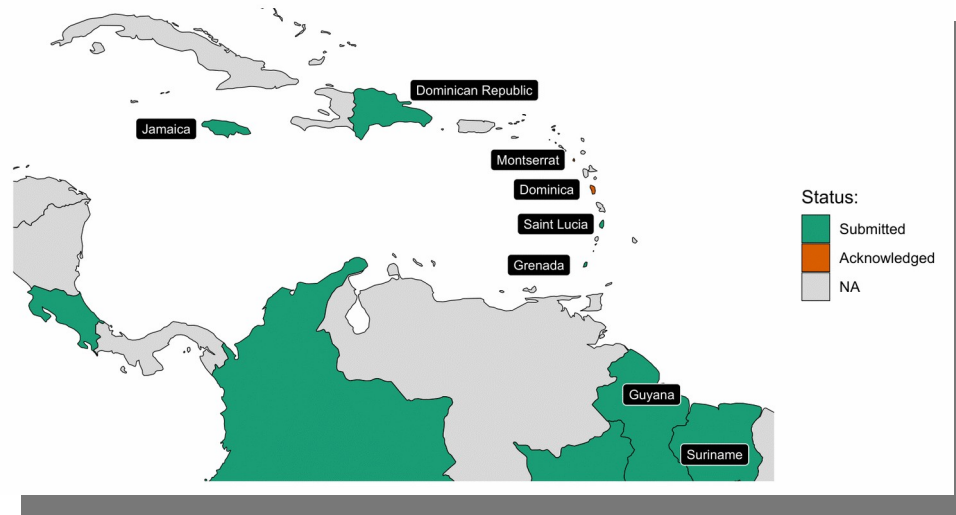


- 86 member states have **submitted** Part 1 and/or 2.
  - 72 Part 1, 75 Part 2.
- 14 member states **acknowledged**.
- 25 agencies also submitted.

"Acknowledged" means that the national statistical offices of the countries (to whom we sent out the invitations to participate) communicated with us regarding the Global Consultation after we sent out our invitation, but that they did not submit a response.



# Responses from Latin American and Caribbean Countries



Status:  
Submitted  
Acknowledged  
NA

## Latin America:

- Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay and Peru have **submitted**.

## Caribbean:

- Dominican Republic, Jamaica, Grenada, Guyana, Saint Lucia, Suriname have **submitted**.
- Montserrat and Dominica **acknowledged**.

The boundaries shown and used on this map do not imply official endorsement or acceptance by the United Nations.

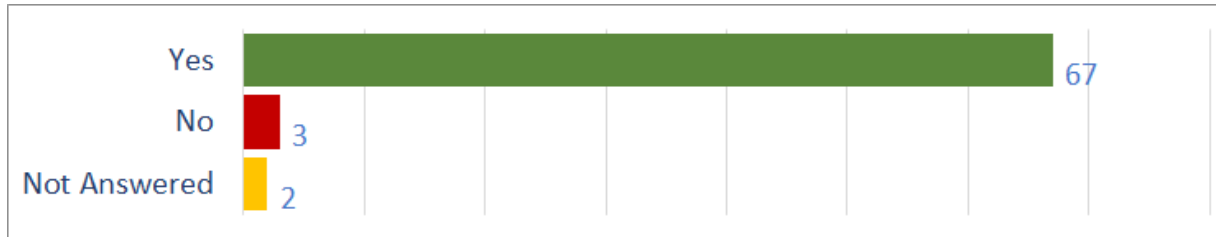


- Global Responses to Part 1 and Caribbean Region Highlights.
- **Five Caribbean countries have provided responses: Dominican Republic, Grenada, Guyana, Saint Lucia, Suriname.**



## General remarks on Part 1

B1. Are there national policies or strategies related to climate change in place?

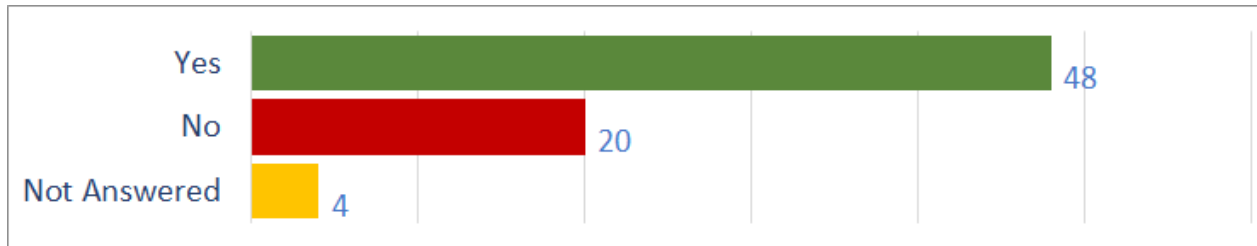


- **All five Caribbean countries have answered yes.**
  - National Climate Change Policy and Action Plan
  - The National Climate Change Policy, Strategy and Action Plan
  - National Strategy for the Development 2030; National Climate Change Policy
  - Climate Financing Strategy; Climate Change Communications Strategy
  - Low Carbon Development Strategy



## General remarks on Part 1

C2. Is there a department, division or unit responsible for climate change statistics in the National Statistical Office (NSO)?



- **Four Caribbean countries have answered yes. One answered no.**
  - There is one statistician responsible for environmental statistics and an assistant from another unit.
  - Scientific Research and Planning Division
  - Environmental Statistics Department
  - Demography, Vital & Social Statistics.





## General remarks on Part 1

D1. Is the NSO currently involved in the preparation of the country's GHG inventory, as part of the reporting obligations of the UNFCCC and/or in the preparation of national reports to UNFCCC (NC, BR for Annex I parties; and NC, BUR for non-Annex I parties)?



When Yes: Many NSOs mentioned that they provide source data, such as population, demography, GDP, energy, agriculture, waste, poverty, unemployment, Human Development Index etc., for the compilation of GHG inventories, providing data to other line ministries that act as the country focal person for GHG inventory. NSOs are also involved in the training and compilation and are involved in the preparation of the report.

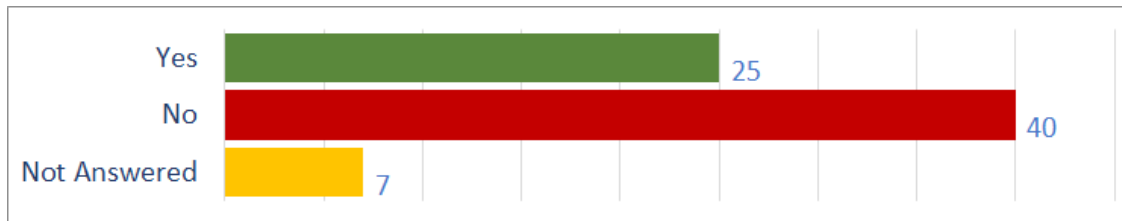
When No: Some reasons for NSO to be not directly involved in the compilation include no legal or institutional mandate to collaborate. However, even when NSO is not directly involved, some pointed out that they are still indirectly contributing, since the focal point will use the data that NSO provided through their official publication and reports.

- **Three Caribbean countries have answered yes. Two answered no.**



## General remarks on Part 1

D2. Will the NSO be involved in the preparation of the new Biennial Transparency Reports (BTR) under the Paris Agreement?



- **Two Caribbean countries have answered yes. One answered no.**



## General remarks on Part 1

D3. Has the NSO received requests from GHG inventory compilers about specific data needs for inventory compilation that could **NOT** be met?



- **Three Caribbean countries have answered yes. Two answered no.**
  - Population: Income level of the population by type of health service
  - Agricultural production
  - Population by rural and urban area



## General remarks on Part 1

D5. Has the NSO developed any specialized climate change surveys, or modules in existing censuses/surveys?



- **One Caribbean country answered yes.**

D6. If D5 is yes, list the names of these surveys.

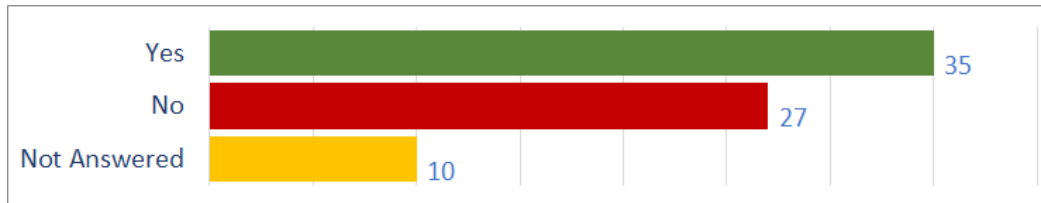
### Global responses

- Agencia Nacional de Transito
- **Climate Adaption Financing Survey**
- Climate Change and Natural Disaster Perspectives
- Environmental Expenditure Survey
- Forestry surveys
- Household Environmental Survey
- Living Standards Survey
- Low Carbon and Renewable Energy Economy Survey
- National Climate Change Impact Survey
- National Climate Statistic Report
- Pilot Survey on Sex, Age and Disability Disaggregated Data (SADDD) for Climate Change Adaptation (CCA) and Disaster Risk Reduction
- Rural, Agricultural and Fishery Census
- Omnibus Survey: Environmental Quality and Behaviour
- Waste Generation Survey



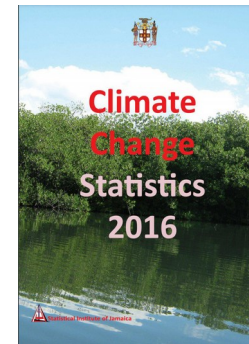
## General remarks on Part 1

D7 Has the NSO produced and disseminated climate change statistics either in hard copy, electronically or online?

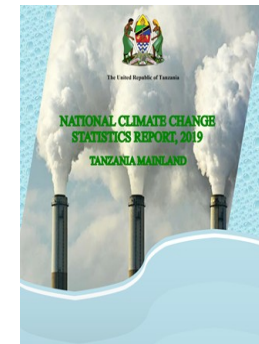


### Global

- 25 productions made available in environment statistics compendium and yearbooks.
- 12 in chapters and sections in a statistical yearbook.
- 24 in other formats.
- **Four Caribbean countries have answered yes.**
  - National compendiums
  - Environment Statistics Publication
  - Semiannual report



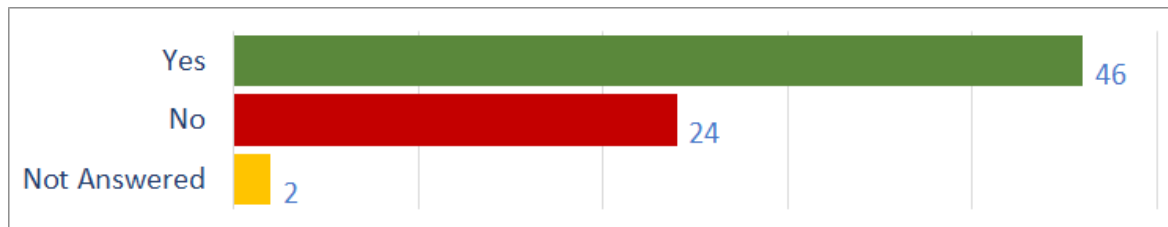
Jamaica



Tanzania



## E1. Does the NSO currently collaborate with the national focal points to the UNFCCC?



Global:

The degree and nature of these collaboration varies greatly. Twelve countries identified the collaboration as “ad-hoc.” Others indicated the relation with national focal points such as:

- Communication is upon request but no formal relationship;
- Direct or indirect Involvement;
- Participation of the meeting/technical committee;
- Legal obligation for some countries;
- Formal institutional agreement does not exist in other countries;
- Consultation of sectorial data in collaboration include:
  - Economic data;
  - Energy balance;
  - Agriculture, animal production;
  - Infrastructure, transport, housing, etc.

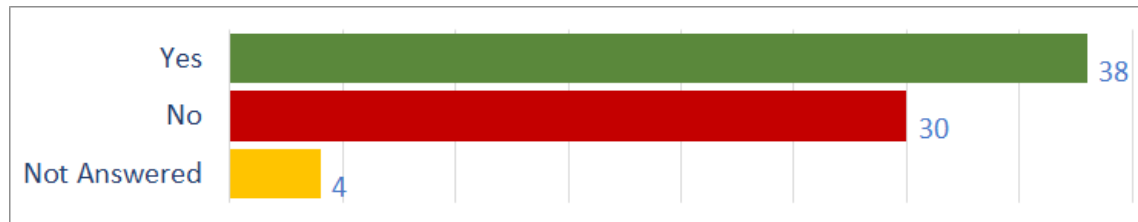
NSOs sometimes are also in charge of the quality of the data and validate data.

- **Four Caribbean countries have answered yes. One answered no.**



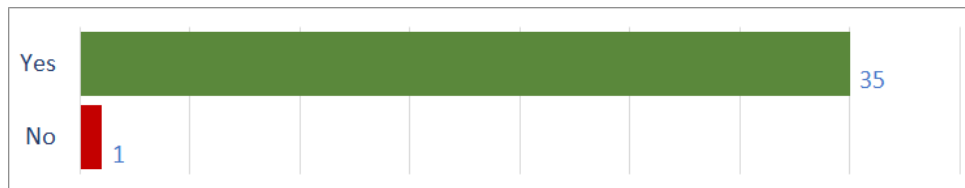
## General remarks on Part 1

E2. Is there a committee, inter-institutional working group or task force in place to coordinate the production of environment statistics?



- **One Caribbean country has answered yes. Three answered no.**

E3. If Question E2 answer is Yes, does it also include climate change statistics?



- **One Caribbean country has answered yes.**



## Global Consultation: overall summary

- Countries recognized the importance of the Global Set, its relevance to their national statistical and climate change systems, and its potential to serve as a keystone for further climate related data development.
- Invaluable inputs were received from countries with regard to assessing the relevance, methodological soundness and data availability for the 134 indicators and 194 underlying statistics contained in the Global Set.
- Based on these results all indicators and statistics are expected to remain in the list demonstrating its overall robustness.
- Countries and agencies provided comments on the indicators and the metadata, including its structure.
- Very few countries and agencies proposed new indicators, while there were some suggestions for modification of existing indicators, especially at Tier 3.
- Results were discussed at the 8<sup>th</sup> meeting of the Expert Group on Environment Statistics (EGES) (12-20 Oct 2021)

[https://unstats.un.org/unsd/envstats/fdes/fdes\\_eges8.cshtml](https://unstats.un.org/unsd/envstats/fdes/fdes_eges8.cshtml)





# Recent and planned actions of UNSD

- Capacity development:
  - latest activities in the region
    - UNSD/CARICOM Regional Workshop on Environment Statistics and Climate Change Statistics (Grenada, Nov 2019) [in which UNFCCC/ECLAC] participated (<https://unstats.un.org/unsd/envstats/meetings/2019-Caricom%20Region/CaricomRegion.cshtml>)
    - National workshop on Environment Statistics and Climate Change Statistics organized by the CSO of Grenada (Grenada, Nov 2019) (<https://unstats.un.org/unsd/envstats/meetings/2019-Grenada/Grenada.cshtml>)
  - collaborate with ECLAC/CARICOM on DA12 project in the region
- **Update Global Set and related metadata (based on Global Consultation and 8<sup>th</sup> meeting of the EGES) for submission to the 53rd session of the Statistical Commission, in March 2022, for adoption.**
- Further explore ways with UNFCCC to strengthen the relationship between NSOs and national authorities reporting climate change information.
  - Provide continuous support to countries beyond the Global Consultation, including capacity development/information sessions on climate change statistics.
  - Develop training materials and implementation guidelines/strategy for capacity development based on information received via the Global Consultation after the adoption of the Global Set.

# Recommendations

- Review the submission on the Global Set engaging all stakeholders involved in climate change data reporting and policy.
- Utilize/establish inter-agency working group on environment (climate change) statistics to facilitate data coordination and reporting.
- Promote complementarity among global, regional and national sets of climate indicators, to encourage harmonization across all levels. The Global Set is flexible enough, with a tiering system, to be applied based on regions', as well as countries', priorities and data availability.
- Seek support for capacity development through international and regional funding opportunities such as the Green Climate Fund, the Global Environment Facility, the United Nations and bilateral donors.



# 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](mailto:envstats@un.org)

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

Climate Change Statistics Website

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

and

[https://unstats.un.org/unsd/envstats/ClimateChange\\_StatAndInd\\_global.cshtml](https://unstats.un.org/unsd/envstats/ClimateChange_StatAndInd_global.cshtml)

