Global Set of Climate Change Statistics and Indicators

DA12 project national online workshop:

Generating climate change and disaster statistics for policy decision-making in Suriname
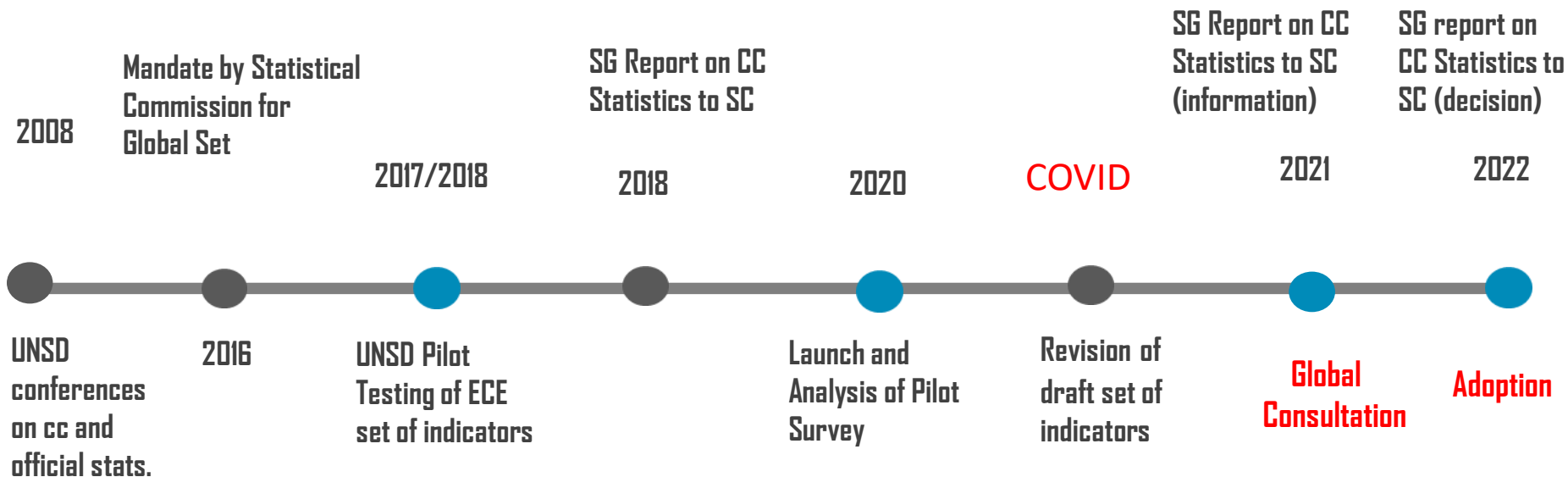
13-15 July 2021

Outline

1. Background
2. Mandate
3. Foundation
4. Methodology
5. Global Consultation
6. Draft Global Set
7. Metadata
8. Output
9. Dissemination examples
10. Recent and planned actions
11. Recommendations

Background: More than a decade long process

2008
Mandate by Statistical Commission for Global Set

2017/2018

SG Report on CC Statistics to SC

2018

2020

SG Report on CC Statistics to SC (information)

SG report on CC Statistics to SC (decision)

2021

2022

COVID

UNSD conferences on cc and official stats.

2016

UNSD Pilot Testing of ECE set of indicators

Launch and Analysis of Pilot Survey

Revision of draft set of indicators

Global Consultation

Adoption

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 47th 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

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 49th 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 52nd 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-ClimateChange-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
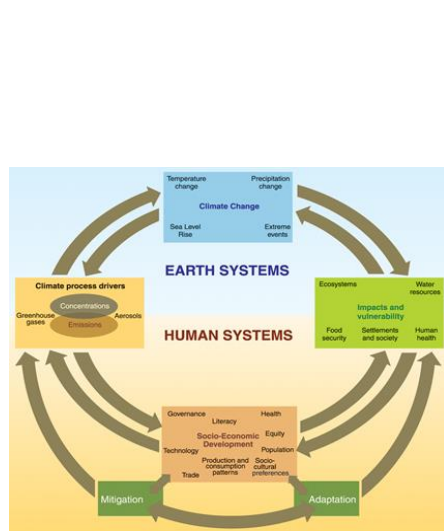
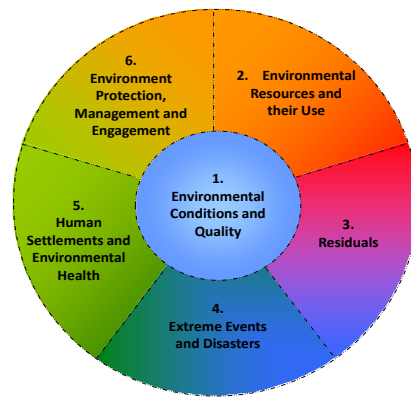| Arabic | Chinese | English | Español | Français | Russian |

Foundation

- 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.
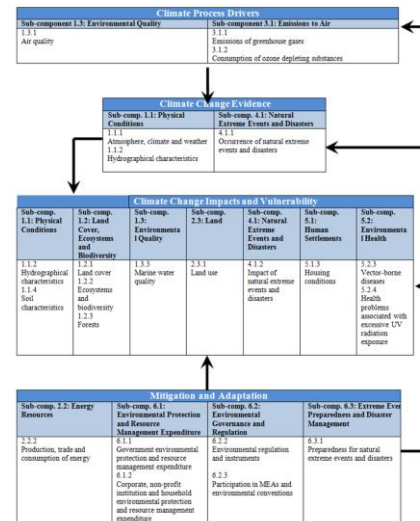

IPCC, 2007, Fourth Assessment Report

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.cshtml

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

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 Expert Group on Environment Statistics (EGES) in which Suriname is a member;

- bilateral consultations with specialized agencies and in-depth discussions with selected countries; and

- inputs from an extensive Pilot Survey (in which Suriname participated) 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

Global Consultation

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.

Draft Global Set of Climate Change Statistics and Indicators
(sent to countries)

			Indicator	Statistics	Code	Preliminary Tier	Themes	National Data Sources
A Area	**B** Topic	**C**	**D**	**E**	**F**	**G**	**H**	**I**
DRIVERS					1			
	Total greenhouse gas (GHG) emissions				101			
		1	Total greenhouse gas emissions per year (SDG 13.2.2)		1020	1	GHG emissions	Environment Agency/National climate change reporting authorities
				Total emissions of direct greenhouse gases (GHGs, excluding LULUCF) (FDES 3.1.1.a)	1021	1	GHG emissions	Environment Agency/National climate change reporting authorities
				Total emissions of indirect greenhouse gases (GHGs) (FDES 3.1.1.b)	1022	1	GHG emissions	Environment Agency/National climate change reporting authorities
				Greenhouse gas emissions from land use, land use change and forestry (LULUCF) (UN-ECE	1023	1	GHG emissions	Environment Agency/National climate change reporting authorities
		2	Total greenhouse gas emissions from the national economy (UN-ECE 09a, excluding indirect GHGs)		1030	2	GHG emissions	NSO
					1031		GHG emissions	
	Atmospheric concentration of greenhouse gases				104			
		3	Global concentration of greenhouse gases		1040	2	GHG concentration	
					1041		GHG concentration	
	Energy production and supply				105			
		4	Total primary energy production from fossil fuels		1050	1	Energy	Ministry of Energy/Oil companies
					1051		Energy	
		5	Total energy supply from fossil fuels		1060	1	Energy	Ministry of Energy/Oil companies
					1061		Energy	
	Energy consumption				107			
		6	Energy consumption by households and enterprises		1070	1	Energy	Ministry of Energy
				Final energy consumption (FDES 2.2.2.c)	1071	1	Energy	Ministry of Energy
				Households	1072	1	Energy	NSO
		7	Energy intensity measured in terms of primary energy and GDP (SDG 7.3.1)		1080	2	Energy	
				Total energy supply (FDES 2.2.2.b)	1081	1	Energy	Ministry of Energy

- The draft Global Set contains statistics for most [106 out of 134] indicators. Overall, the statistics were included to facilitate the process of compiling the proposed Tier 1 and 2 indicators.
- Three indicators are global in nature but may still be routinely produced by some countries and serve as important background indicators to monitor climate change in other countries (indicators 3, 41 and 45).

Draft Global Set of Climate Change Statistics and Indicators
(required responses from countries)

			Indicator	Statistics	Code	Preliminary Tier	Themes	National Data Sources	Relevance		Methodological Soundness		Data Availability		General Comments
Area	Topic								Yes/No	Reference/ Link	Yes/No/ Partially	Reference/ Link	Yes/No	Reference/ Link	
DRIVERS					1										
	Total greenhouse gas (GHG) emissions				101										
		1	Total greenhouse gas emissions per year (SDG 13.2.2)		1020	1	GHG emission	Environment Agency/Na							
				Total emissions of direct greenhouse gases (GHGs, excludi	1021	1	GHG emission	Environment Agency/Na							
				Total emissions of indirect greenhouse gases (GHGs) (FDE	1022	1	GHG emission	Environment Agency/Na							
				Greenhouse gas emissions from land use, land use change	1023	1	GHG emission	Environment Agency/Na							
		2	Total greenhouse gas emissions from the national economy (UN-ECE 09a, excluding		1030	2	GHG emission	NSO							
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	Atmospheric concentration of greenhouse gases				104										
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					1051		Energy								
		5	Total energy supply from fossil fuels		1060	1	Energy	Ministry of Energy/Oil c							
					1061		Energy								

Relevance - is the indicator/statistic relevant for your country? In column J: Yes/No; In column K, if yes, please provide reference/link to the national policies for which the data applies.

Methodological soundness - do you use the methodology as provided in the metadata? In column L: Yes/No/Partially; In column M, please provide reference/link to the methodology applied in your country.

Data availability - are national data/statistics/indicators available for the proposed global indicator/statistic? In column N: Yes/No; In column O: If yes, please provide reference/link to the available data.

United Nations Statistics Division

Metadata

Field	Description	
Code	1120	1121
Indicator	Population growth	
Statistics		Population
Area	Drivers	
Topic	Population	
Themes	Population	
Paris Agreement article		
PAWP-Katowice		
FDES		
SDG		
Sendai Framework		
Preliminary Tier	1	1
Definition	The average annual percentage rates of population growth are calculated using an exponential rate of increase. [UN Population Division, https://unstats.un.org/unsd/demographic-social/products/dyb/documents/dyb2019/Notes01.pdf]	Population presents estimated mid-year total population by country or area. [UNSD, https://unstats.un.org/unsd/demographic-social/products/vitstats/index.cshtml]
Relevance	Population growth aggravates worldwide growth of GHG emissions (high confidence). Global population has increased by 87% from 1970 reaching 6.9 billion in 2010. The population has increased mainly in Asia, Latin America, and Africa, but the emissions increase for an additional person varies widely, depending on geographical location, income, lifestyle, and the available energy resources and technologies. .. [IPCC, AR5, p. 355, https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter5.pdf]	
National data sources	NSO	NSO
Data collection methods	Census, survey, population register	Census, survey, population register
Update frequency		Annual
Category of measurement	Number	Number
Computation/compilation methods		
International primary data reference, institution		UNSD Demographic Yearbook – 2019
International primary data reference, description		Estimates of mid-year population: 2010-2019
International primary data reference, URL		https://unstats.un.org/unsd/demographic-social/products/dyb/documents/dyb2019/table05.pdf
Type of statistics		C
International secondary data references	OECD	
Other data references		
Potential aggregations and scales		
Methodological guidance	UNSD; https://unstats.un.org/unsd/demographic-social/products/dyb/documents/dyb2019/Notes01.pdf; UN Population Division, https://unstats.un.org/unsd/demographic-social/products/dyb/documents/dyb2019/Notes01.pdf; UNSD, https://unstats.un.org/unsd/demographic-social/products/vitstats/index.cshtml	

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; and

- 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.
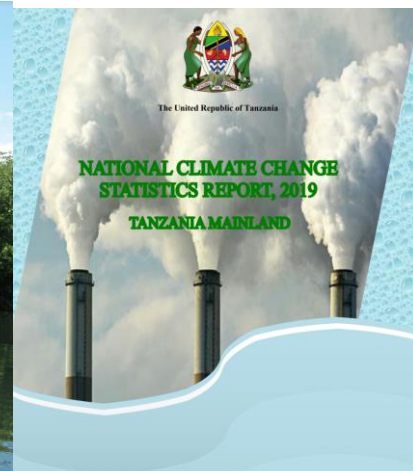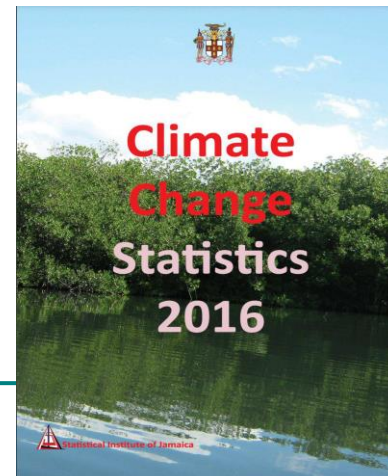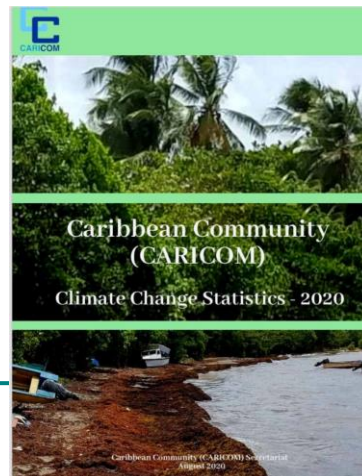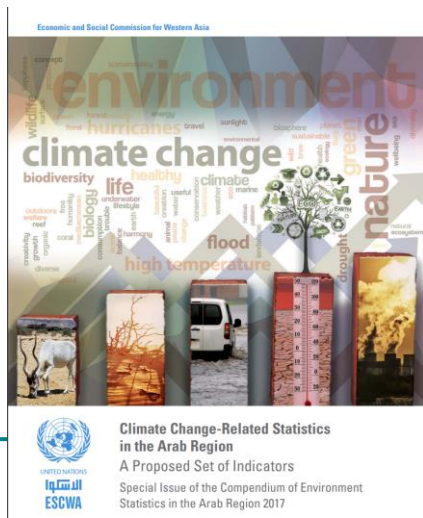
Dissemination Examples

There is a growing number of NSOs/regional institutions producing separate climate change statistics reports/conducting surveys to illustrate the importance of this topic.

National

- Jamaica – Climate Change Statistics Report (2016)
- Tanzania – National Climate Change Statistics Report (2020)
- Nepal – Climate Change Impact Survey (2016)
- Bangladesh – Climate Change/Disasters Survey (2021)
- Suriname – report being planned

Regional

- Caribbean Community (CARICOM) – Climate Change Statistics (2020)
- ESCWA – Climate change-related statistics in the Arab region (2017)

Recent and planned actions of the Statistics Division

- 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)
    - continue to collaborate with ECLAC/CARICOM on the DA12 project in the region
- Further explore ways, in collaboration with UNFCCC, to strengthen the relationship between NSOs and national authorities reporting climate change information;
- Analyze results of Global Consultation/discuss at 8th meeting of the Expert Group on Environment Statistics (Oct. 2021);
- Update Global Set and related metadata;
- Submit the Global Set to the 53rd session of the Statistical Commission, in March 2022, for adoption.

Recommendations

- Participate in the **Global Consultation on the draft Global Set of Climate Change Statistics and Indicators** (May-July 2021) and engage all stakeholders involved in climate change data reporting and policy.
- Utilize the 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

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