Building capacities for greater impact on climate change reporting, disaster management, and decision-making

Strengthening Environment, Climate Change and Disaster Information in the Caribbean

(Santiago and Hybrid event, 23-24 August 2022)

Outline

1. Introduction
2. Framework for the Development of Environment Statistics (FDES)
3. Overview of the FDES and its tools
4. Environment Statistics as a foundation for Climate Change Statistics
5. Overview of the Global Set of Climate Change Statistics and Indicators
6. Implementation support
7. Current and future work

FDES, Basic Set, Manual on the Basic Set and ESSAT

Adoption of the FDES 2013

- The UN Statistical Commission endorsed the revised **FDES 2013** at its 44th session in 2013 as the framework for strengthening environment statistics programmes in countries.

- The Statistical Commission also recognized the FDES 2013 as a useful tool in the context of sustainable development goals (SDGs) and the post-2015 development agenda.

- The objectives are:
  - Help international and regional institutions to support strengthening capacity in countries to develop environment statistics
  - Enhance comparability and availability of environment statistics using a common framework
  - Better inform policy making decisions

Download FDES 2013 at https://unstats.un.org/unsd/envstats/fdes.cshtml in English, Spanish, Arabic, Portuguese, Russian and forthcoming French.

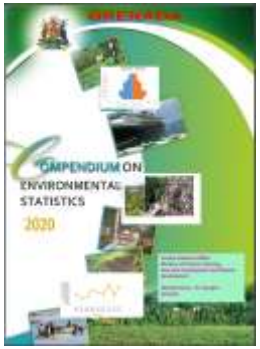
Application of the FDES

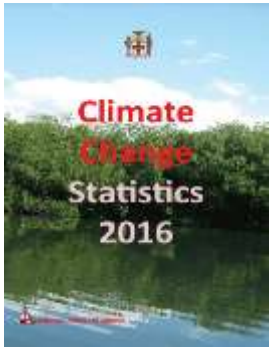
FDES offers guidance to countries to develop standalone environment statistics, which

- apply to support national policies on environmental management,
- assist international reporting requirements (MEA, SDGs, Sendai Framework).

Countries have developed their own frameworks based on the FDES and are encouraged to publish compendia and dissemination outputs according to the FDES to help policy makers address policy questions.

- In the region: Suriname, Curaçao, Grenada, Jamaica, Montserrat, etc.





Several themes, such as climate change (in chapter 5 of the FDES), biodiversity, disasters are particularly dynamic, with new terminology and classifications.

Basic Set of Environment Statistics (1)

- BSES is available in all UN official languages: https://unstats.un.org/unsd/envstats/fdes/basicset.cshtml

- All statistical tables from chapter 3 included, on 44 pages document

- From Basic Set to Core Set in chapter 4

Number of Statistics	Component 1	Component 2	Component 3	Component 4	Component 5	Component 6	Total
Tier 1	32	30	19	4	12	3	100
Tier 2	58	51	34	11	22	24	200
Tier 3	51	43	5	16	20	23	158
Total	**141**	**124**	**58**	**31**	**54**	**50**	**458**

Basic Set of Environment Statistics (2)

- generating national sets or databases of environment statistics.
- reporting on environment (MEAs) or sustainable development (SDGs).
- calculating environmental indicators.
- generating environmental-economic accounts.

Basic Set of Environment Statistics 28 August 2018

Component 1: Environmental Conditions and Quality					
Sub-component 1.1: Physical Conditions					
Topic	**Statistics and Related Information** (**Bold Text - Core Set/Tier 1**; Regular Text - Tier 2; *Italicized Text - Tier 3*)		**Category of Measurement**	**Potential Aggregations and Scales**	**Methodological Guidance**
Topic 1.1.1: Atmosphere, climate and weather	a.	Temperature		• National • Sub-national	• World Meteorological Organization (WMO) • Intergovernmental Panel on Climate Change (IPCC) • National Oceanic and Atmospheric Administration (NOAA)/National Aeronautics and Space Administration (NASA)
		1. **Monthly average**	Degrees		
		2. **Minimum monthly average**	Degrees		
		3. **Maximum monthly average**	Degrees		
	b.	Precipitation (also in 2.6.1.a)			
		1. **Annual average**	Height		
		2. **Long-term annual average**	Height		
		3. Monthly average	Height		
		4. Minimum monthly value	Height		
		5. Maximum monthly value	Height		
	c.	Relative humidity			
		1. Minimum monthly value	Number		
		2. Maximum monthly value	Number		
	d.	Pressure		• National • Sub-national • By station	
		1. *Minimum monthly value*	Pressure unit		
		2. *Maximum monthly value*	Pressure unit		
	e.	Wind speed		• National • Sub-national	
		1. *Minimum monthly value*	Speed		
		2. *Maximum monthly value*	Speed		
	f.	Solar radiation			• WMO • IPCC • NOAA/NASA
		1. *Average daily value*	Area, Energy unit		
		2. *Average monthly value*	Area, Energy		

Manual on the Basic Set of Environment Statistics

https://unstats.un.org/unsd/envstats/fdes/manual_bses.cshtml

- MS 1.1.4 Soils
- MS 1.2.2 Ecosystems and Biodiversity Statistics
- MS 1.2.1 & 2.3.1 Land Cover and Land Use
- MS 1.2.3, 2.3.2, 2.5.1 & 2.5.5 Forests
- MS 1.3.1 Air Quality
- MS 1.3.1 and 3.1.1 GHG Statistics
- MS 1.3.3 Marine Water Quality Statistics
- MS 2.1 Mineral Resources
- MS 2.2 Energy Resources
- MS 2.5 Crops and Livestock Statistics
- MS 2.6 Water Resources
- MS 3.2 Wastewater new
- MS 3.3.1 & 3.3.2 Generation and Management of Waste
- MS 5.1 Human Settlements
- MS 6.1.1 Environmental Protection Expenditures

Includes: definitions, classifications, statistical methods for collection and/or compilation, dissemination and main uses of the sets of the respective environment statistics.

Forthcoming: *Freshwater quality, Environmental Health, Disasters*

Environment Statistics Self-Assessment Tool

Introduction: (English, Arabic, Chinese, French, Portuguese, Russian, Spanish)

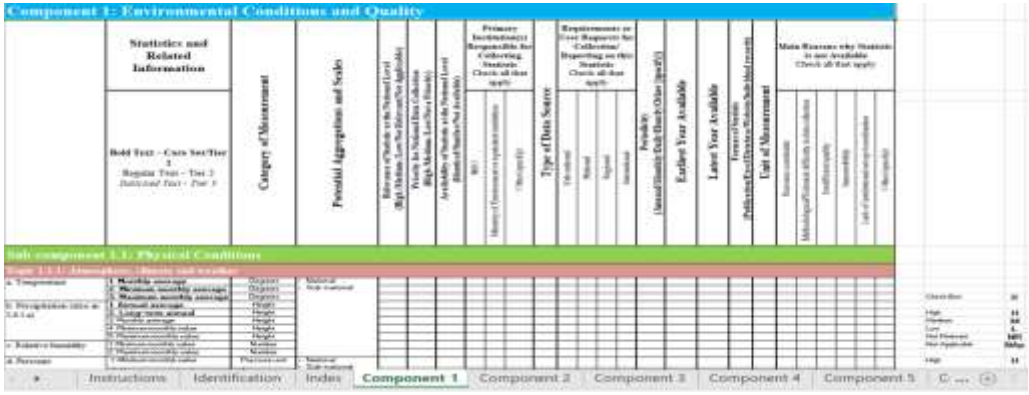
- **Part I: Institutional Dimension of Environment Statistics**

  English, Arabic, Chinese, French, Portuguese, Russian, Spanish

A. Identification of institutions
B. Existing national policies relevant to the environment
C. Mandate and organization of national statistics
D. Mandate and organization of environment statistics
E. Production of environment statistics
F. Uses of environment statistics
G. Inter-institutional collaboration for the production of environment statistics
H. Existing and required resources for environment statistics
I. International and regional network
J. Technical assistance and training
K. The way forward in environment statistics

- **Part II: Statistics Level Assessment**

  English, Arabic, Chinese, French, Portuguese, Russian, Spanish



SDG indicators + Basic Set (FDES) matrix

https://unstats.un.org/unsd/envstats/fdes/SDG_FDES%20matrix.pdf

SDGs		FDES			
Target	**SDG Indicators**	**Location in the FDES: Component Sub-Component and Topic**	**Statistics used in the SDG Indicator corresponding to BSES (SDG Indicator can be compiled either fully or partially from BSES statistics)**	**Statistics related to but not directly used in SDG Indicators OR Statistics related to Tier III indicators (either fully or partially linked to BSES)**	**Supporting Information**
15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	15.3.1 Proportion of land that is degraded over total land area (Tier I)	Component 1: Environmental Conditions and Quality, Sub-component 1.1: Physical Conditions, Topic 1.1.4: Soil characteristics	1.1.4.a. Soil characterization **1.1.4.a.1. Area by soil types** 1.1.4.b. Soil degradation **1.1.4.b.1. Area affected by soil erosion** **1.1.4.b.2. Area affected by desertification** 1.1.4.b.3. Area affected by salinization 1.1.4.b.4. Area affected by waterlogging *1.1.4.b.5. Area affected by acidification* *1.1.4.b.6. Area affected by compaction* 1.1.4.c. Nutrient content of soil, measured in levels of: 1.1.4.c.1. Nitrogen (N) 1.1.4.c.2. Phosphorous (P) *1.1.4.c.3. Calcium (Ca)* *1.1.4.c.4. Magnesium (Mg)* *1.1.4.c.5. Potassium (K)* *1.1.4.c.6. Zinc (Zn)* *1.1.4.c.7. Other*		The indicator proposes sub-indicators of land cover and land cover change; land productivity and carbon stocks above and below ground.
		Component 1: Environmental Conditions and Quality, Sub-component 1.2: Land Cover, Ecosystems and Biodiversity, Topic 1.2.1: Land cover	1.2.1.a. **Area under land cover categories**		

FDES and the Global Set of Climate Change Statistics and Indicators

Main decisions of the UN Statistical Commission, 47th session, March 2016:

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.

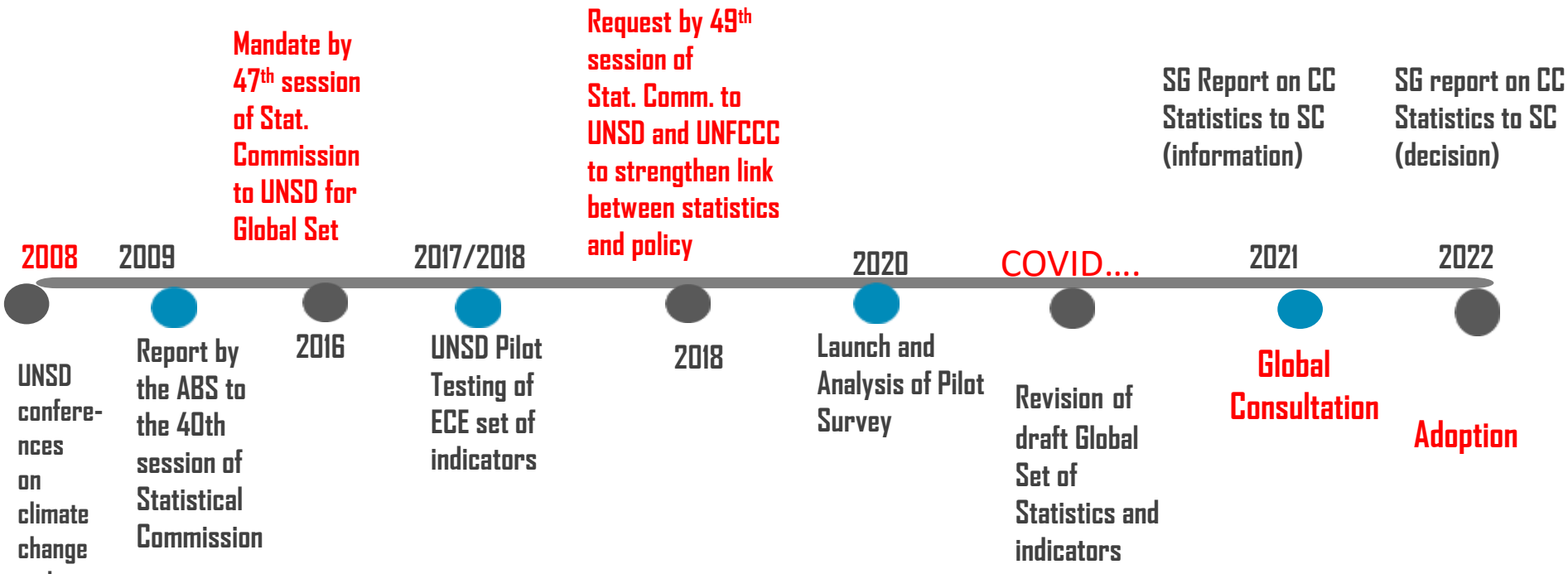
The FDES contains a selection of climate change statistics as a cross-cutting theme in chapter 5.

The recently adopted Global Set links indicators and statistics, most of which are from the Basic Set of Environment Statistics and are explicitly referenced, for example:

1. Total greenhouse gas emissions per year

Field	Description			
Code	1020	1021	1022	1023
Indicator	Total greenhouse gas emissions per year (SDG 13.2.2)			
Statistics		Total emissions of direct greenhouse gases (GHGs, excluding LULUCF) (FDES 3.1.1.a)	Total emissions of indirect greenhouse gases (GHGs) (FDES 3.1.1.b)	Greenhouse gas emissions from land use, land use change and forestry (LULUCF) (UN-ECE 11)
FDES		3.1.1.a	3.1.1.b	

More than a decade long process: 2008 – present



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

Process and approach

UNSD prepared a draft Global Set, based on:

- Bottom up approach which started with 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 several countries; and
- inputs from an extensive Pilot Survey that took place in 2020 and a Global Consultation in 2021.

More information:
https://unstats.un.org/unsd/envstats/climatechange.cshtml and
https://unstats.un.org/unsd/envstats/ClimateChange_StatAndInd_global.cshtml

Global Set of Climate Change Statistics and Indicators

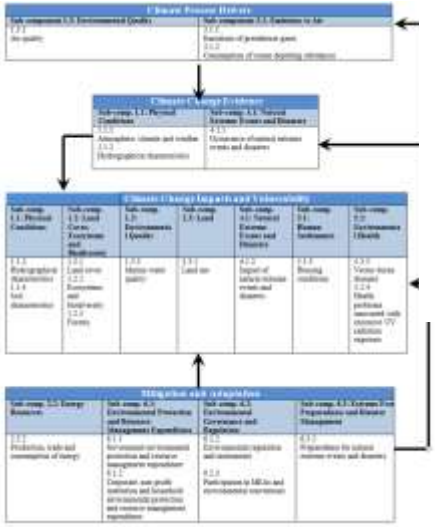
Methodological foundation

- 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.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

Main structure (1)

- 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 to initiate climate monitoring through official statistics;

  (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.

Statistics were not introduced for the indicators for which:

(i) indicator and statistic are identical (9 cases, denoted with 'Equivalent to the indicator' in the metadata sheets); and

(ii) indicators for which the statistics and their metadata are fully described within the cited methodology source, e.g. often from SDG and Sendai Framework indicators (21 cases, denoted with 'Refer to original source in metadata' in the metadata sheets).

Main structure (2)

- Five areas: drivers, impacts, vulnerability, mitigation and adaptation. These events are applied as five top-level areas in the Global Set. Each indicator is assigned to one of the five IPCC areas as a primary belonging, while some indicators were also assigned as applicable in one or more additional areas;

- 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

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

Tiers

Defined by considering the relevance (to climate change), methodological soundness and data availability. The relevance or connection to climate change varies per indicator, however a certain relation to climate change has been identified for all the indicators included in the Global Set:

- Tier 1 are relevant, methodologically sound, and for which more than 50 per cent of the countries that responded to the Global Consultation indicated that data are available. However, this rule was not applied for the SDG indicators included in the Global Set and the original SDG indicator Tiers are used;
- Tier 2 are relevant, methodologically sound, and for which less than 50 per cent of the countries that responded to the Global Consultation indicated that country data are available. Again, the rule was not applied for the SDG indicators;
- Tier 3 are relevant, but not methodologically sound, and country data may not be available.

Indicators and statistics side-by-side

AREA/ TOPIC	Indicator	Statistic	Tier	Paris Agreement	PAWP-Katowice	Method
DRIVERS						
TOTAL GREENHOUSE GAS EMISSIONS						
	1. **Total greenhouse gas emissions per year**		1	13.7a	Decision 18/CMA.1, chapter II, para. 47-49	IPCC; SDG; UN-ECE
		Total emissions of direct greenhouse gases (excluding LULUCF)	1			IPCC; FDES
	2. **Total emissions of indirect greenhouse gases**		1			IPCC; FDES
	3. **Greenhouse gas emissions from land use, land use change and forestry**		1			IPCC; FDES; UN-ECE
	4. Total greenhouse gas emissions from the national economy		2			SEEA-CF; UN-ECE
	5. **Greenhouse gas emissions per capita**		1			IPCC; FDES
		Total emissions of direct greenhouse gases (excluding LULUCF)	1	13.7a	Decision 18/CMA.1, chapter II, para. 47-49	IPCC; FDES
	6. *Greenhouse gas emissions in gross fixed capital formation of direct investment*		3			SEEA-CF
	7. *Greenhouse gas emissions in value added of foreign controlled multinational enterprises*		3			SEEA-CF
		GHG emissions in output of foreign-controlled multinational enterprises	3			SEEA-CF
		GHG emissions in exports of foreign-controlled multinational enterprises	3			SEEA-CF
	8. Carbon footprint		2			SEEA-CF; UN-ECE
ATMOSPHERIC CONCENTRATION OF GREENHOUSE GASES						
	9. Global concentration of greenhouse gases		2			FDES
ENERGY PRODUCTION, SUPPLY AND CONSUMPTION						
	10. **Total primary energy production from fossil fuels**		1	4.8; 4.13; 13.7b	Decision 18/CMA.1, chapter III; Decision 4/CMA.1	IRES
		Total energy production	1			IRES; FDES
	11. **Total energy supply from fossil fuels**		1			IRES

Global set, metadata

36. Renewable freshwater resources per capita

Field	Description			
Indicator	Renewable freshwater resources per capita			
Statistics		Precipitation	Evapotranspiration	Inflow
Area	Impacts			
Topic	Freshwater resources			
Themes	Water resources			
Paris Agreement article	7; 13.8	7; 13.8	7; 13.8	7; 13.8
PAWP-Katowice	Decision 18/CMA.1, chapter IV; Decision 9/CMA.1	Decision 18/CMA.1, chapter IV; Decision 9/CMA.1	Decision 18/CMA.1, chapter IV; Decision 9/CMA.1	Decision 18/CMA.1, chapter IV; Decision 9/CMA.1
FDES		1.1.1.b	2.6.1.b.1	2.6.1.a.2 [similar to]
SDG				
Sendai Framework				
Tier	2	1	2	2
Definition	The indicator measures the renewable freshwater resources divided by the population of the country. Renewable freshwater resources = Internal flow + Inflow of surface and groundwaters from neighbouring countries. Renewable freshwater (surface and groundwater) resources are replenished by precipitation (less evapotranspiration) falling over the territory of the country that ends up as runoff to rivers and recharge to aquifers (internal flow), and by surface waters and groundwater flowing in from	Total volume of atmospheric wet precipitation (rain, snow, hail, dew, etc.) falling on the territory of the country over one year, in millions of cubic metres. [UNSD/UNEP Questionnaire, https://unstats.un.org/unsd/envstats/Questionnaires/2020/q2020_Water_English.pdf] [FDES BSES manual, Water resources, p.11, https://unstats.un.org/unsd/environment/FDES/MS%202.6%20Water%20Resources.pdf]	Actual evapotranspiration: Total actual volume of evaporation from the ground, wetlands and natural water bodies and transpiration of plants. According to the definition of this concept in Hydrology, the evapotranspiration generated by all human interventions is excluded, except unirrigated agriculture and forestry. The 'actual evapotranspiration' is calculated using different types of mathematical models, ranging from very simple algorithms (Budyko, Turn Pyke, etc.) to schemes that represent the hydrological cycle in detail.	Total volume of river run-off and groundwater generated over the period of a year, in natural conditions, exclusively by precipitation into a country. The internal flow is equal to precipitation less actual evapotranspiration and can be calculated or measured. If the river and groundwater generation are measured separately, transfers between surface and groundwater should be

	neighbouring countries (inflow). [UNSD/UNEP Questionnaire, https://unstats.un.org/unsd/envstats/Questionnaires/2020/q2020_Water_English.pdf] [FDES BSES manual, Water resources, p.7, p.48, https://unstats.un.org/unsd/environment/FDES/MS%202.6%20Water%20Resources.pdf]		[UNSD/UNEP Questionnaire, https://unstats.un.org/unsd/envstats/Questionnaires/2020/q2020_Water_English.pdf] [FDES BSES manual, Water resources, p.13, https://unstats.un.org/unsd/environment/FDES/MS%202.6%20Water%20Resources.pdf]	netted out to avoid double counting. [UNSD/UNEP Questionnaire, https://unstats.un.org/unsd/envstats/Questionnaires/2020/q2020_Water_English.pdf] [FDES BSES manual, Water resources, p.12, https://unstats.un.org/unsd/environment/FDES/MS%202.6%20Water%20Resources.pdf]
Relevance	Freshwater-related risks of climate change increase significantly with increasing greenhouse gas (GHG) concentrations. Modelling studies since AR4, with large but better quantified uncertainties, have demonstrated clear differences between global futures with higher emissions, which have stronger adverse impacts, and those with lower emissions, which cause less damage and cost less to adapt to. For each degree of global warming, approximately 7% of the global population is projected to be exposed to a decrease of renewable water resources of at least 20% (multi-model mean). [IPCC AR5, p 232, https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap3_FINAL.pdf]			
National data sources	Meteorological office/Ministry of natural resources/Water and related agencies	Meteorological office/Ministry of natural resources/Water and related agencies	Meteorological office/Ministry of natural resources/Water and related agencies	Meteorological office/Ministry of natural resources/Water and related agencies
Data collection methods		Monitoring systems	Monitoring systems	Monitoring systems
Update frequency		Monthly, annual	Annual	Annual
Category of measurement	Volume	Volume	Volume	Volume
Computation/compilation methods	Precipitation plus inflows minus evapotranspiration divided by the population	Interpolation of point measurements over a geographic area (GCWAS pg. 71). GIS modelling of precipitation.	Residual of precipitation less surface and sub-surface run-off (GCWAS pg. 71).	Sum of inflows from other territories
International primary data reference	UNSD Environmental Indicators (Inland water resources); FAO	UNSD Environmental Indicators (Inland water resources); AQUASTAT (FAO's Global Information System on Water and Agriculture), https://www.fao.org/aquastat/en/;	UNSD Environmental Indicators (Inland water resources); AQUASTAT (FAO's Global Information System on Water and	UNSD Environmental Indicators (Inland water resources); AQUASTAT (FAO's Global Information System on Water and

		FAO	Agriculture), http://www.fao.org/aquastat/en/; FAO	Agriculture), http://www.fao.org/aquastat/en/; FAO
International primary data reference, description	Renewable freshwater resources per capita; AQUASTAT (FAO's Global Information System on Water and Agriculture)	Precipitation; AQUASTAT (FAO's Global Information System on Water and Agriculture)	Actual evapotranspiration; AQUASTAT (FAO's Global Information System on Water and Agriculture)	Inflow of surface and groundwaters from neighbouring countries; AQUASTAT (FAO's Global Information System on Water and Agriculture)
International primary data reference, URL	https://unstats.un.org/unsd/envstats/qindicators; http://www.fao.org/aquastat/en/			
Type	C	C	C	C
International secondary data references				
Other data references				
Potential aggregations and scales	National Regional	National	National	National
Methodological guidance	UNSD/UNEP Questionnaire, https://unstats.un.org/unsd/envstats/Questionnaires/2020/q2020_Water_English.pdf; FDES BSES manual, Water resources, https://unstats.un.org/unsd/environment/FDES/MS%202.6%20Water%20Resources.pdf; International Recommendations for Water Statistics, http://unstats.un.org/unsd/EconStatKB/Attachment491.aspx?AttachmentType=1; Draft Guidelines for the Compilation of Water Accounts and Statistics, https://seea.un.org/sites/seea.un.org/files/guidelines_comp_water_stats_en.pdf; Renewable Water Resources Assessment 2015 AQUASTAT methodology review, http://www.fao.org/3/bc818e/bc818e.pdf; Key water statistics in AQUASTAT, http://www.fao.org/3/I9241EN/i9241en.pdf; Review of world water resources by country, http://www.fao.org/3/Y4473E/y4473e.pdf			

The Global Set, concluding remarks

- The Global Set of Climate Change Statistics and Indicators is 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;

- It will assist countries embarking on the development of climate change statistics programmes by providing the scope and coverage as to what may be considered relevant to climate change;

- It can also assist countries already involved in this area of statistics by providing a reference list;

- It will help to streamline the supply of data for national policies and international reporting by mapping the commonalities, overlaps and gaps under multiple policy demands and statistical methods/guidelines.

Implementation support

Access and implementation support for the Global Set

- The Global Set is introduced and briefly described in the Report of the Secretary-General on Climate Change Statistics to the Statistical Commission (E/CN.3/2022/17) available in the six UN languages: https://unstats.un.org/unsd/envstats/climatechange_docs_conf.cshtml

- The full description of the Global Set and its metadata is included in the Background document to the Report of the Secretary-General on Climate Change Statistics, entitled Global Set and metadata.

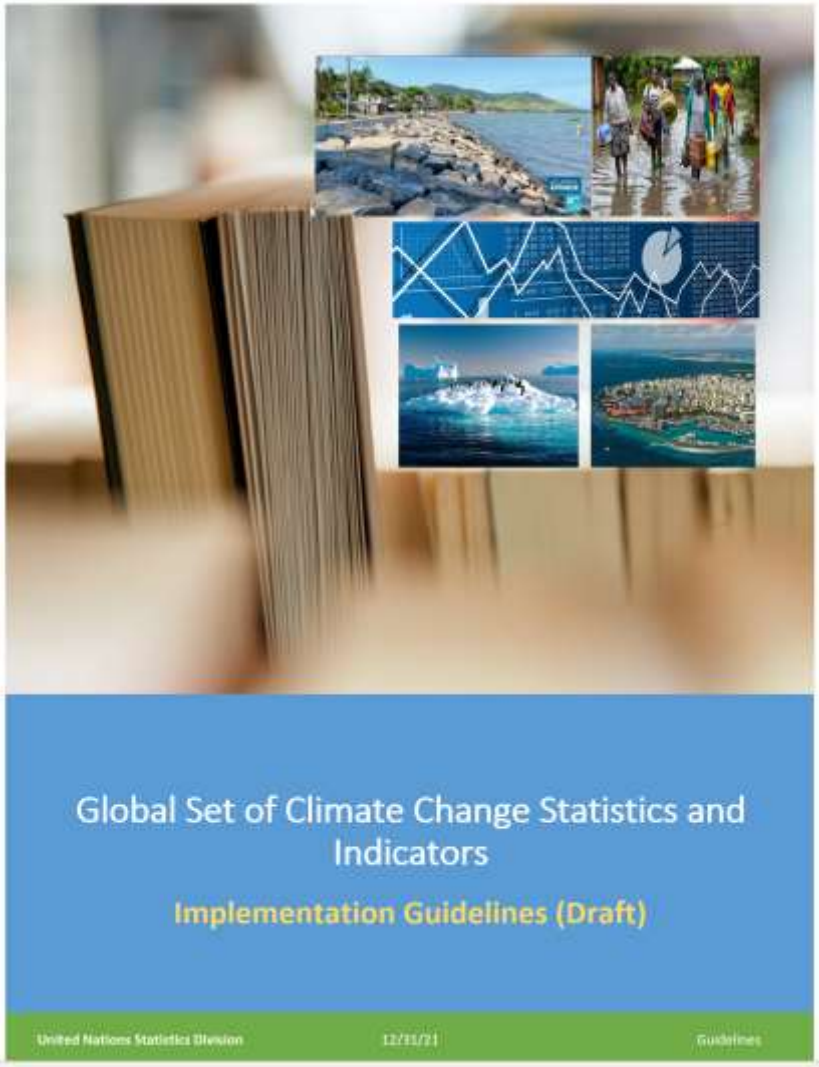
- Implementation support materials including a self-assessment tool and e-learning materials will be disseminated via UNSD website: https://unstats.un.org/unsd/envstats/climatechange.cshtml

- In addition, if implementation advice and support are required (including the indicators and statistics in a spreadsheet form – Excel file) please contact UNSD at: envstats@un.org

Implementation steps

1. NSOs in collaboration with climate reporting authorities to conduct a self-assessment which will prioritize the nationally relevant indicators and statistics;
2. Establish a committee/working group with relevant stakeholders;
3. Map sources of available indicators/statistics and assess them in terms of quality and utility;
4. Define and prioritize gaps in data and methods;
5. Collect data and compile statistics and indicators;
6. Contribute to national policy demands and international reporting requirements;
7. Disseminate national climate change statistics and indicators.

Draft Implementation Guidelines
(under development)



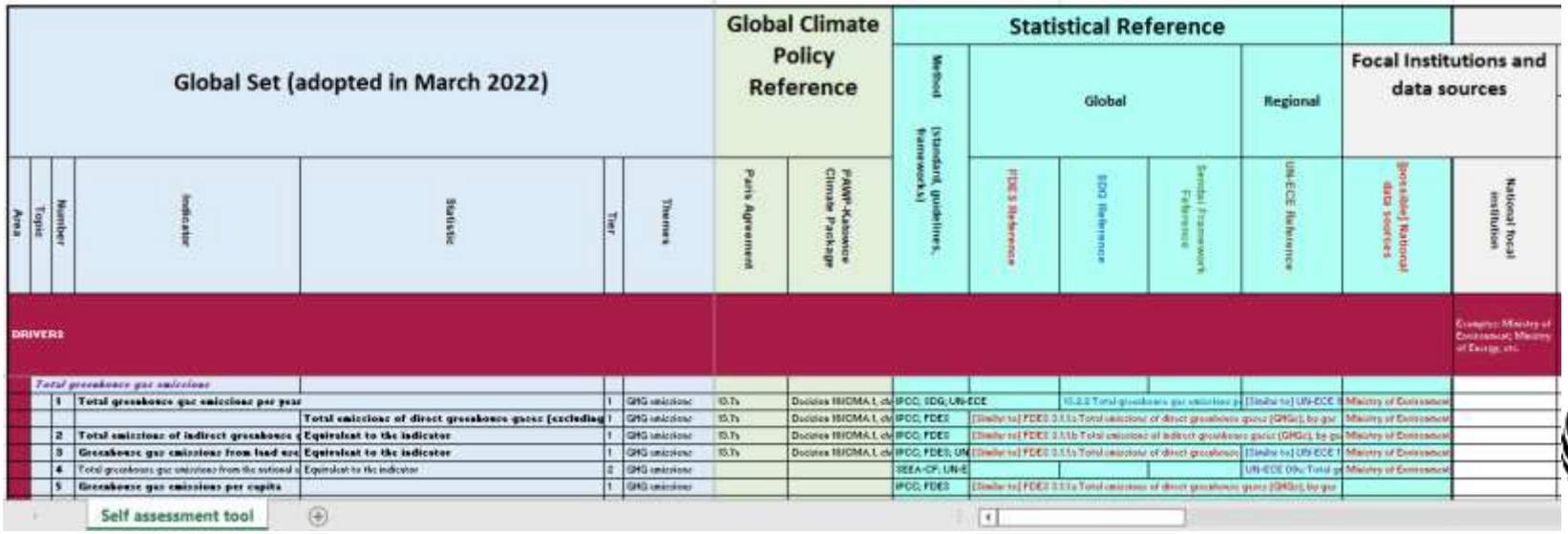
- Description of the Global Set
- Key issues of climate change
- Self-assessment
- Institutional set-up
- Key stakeholders
- Technical committees
- Existing toolkits and templates
- Data sources
- Data collection and exchange
- Database building
- Dissemination and publication guidelines
- Capacity building and resource mobilization

Draft Self-Assessment Tool

(based on the Global Consultation, under development)

- **Assessment guidance**: short introduction and guidance for completing the self-assessment;
- **Part I: Institutional Dimension of Climate Change Statistics and Indicators**: aims at collecting general information on the institutional dimensions of climate change statistics;
- **Part II: Assessment of Climate Change Statistics and Indicators:** each individual indicator and statistic can be assessed in terms of relevance, methodological soundness and data availability.

Part II template:



Draft Self Assessment Tool: Part II template

Self-Assessment																																
Relevance								Methodological Soundness (tools, technology, etc.)								Data / statistic / indicator Characteristics																
Relevance/priority for climate change – related policies				Requirements or user requests for collection / reporting on this Statistic /												Data / statistic / indicator availability								Primary Institution(s) collecting this Statistic / Indicator			Main Reasons why Statistic / Indicator is not available or not updated					
Yes/No	Reference/ Link	Relevance of Statistic / Indicator at the National Level	Priority for National Data Collection (High /Medium	Sub-national	National	Regional	International	Yes/No/ Partially	Reference/ Link	Explanation	Type of Data Source	Category of Measurement	Unit of Measurement	Potential Aggregations and Scales	Classifications	Yes/Partially/No	Reference/ Link	Data type	Similarity of Statistic / Indicator at the National Level with the	Periodicity (Annual/Monthly/ Daily/Hourly/Other (specify))	Earliest Year Available	Latest Year Available	Format of Statistic / Indicator (Publication/Excel/Database/Website/Individual records/Other (specify))	NSO	Ministry of Environment or equivalent Institution	Other (specify):	Resource constraints	Methodological/ Technical difficulty in data	Insufficient quality	Inaccessibility	Lack of institutional set-up /coordination	Other (specify):
Means relevance to national climate-related policies	Examples: Law; Strategy; Regulation; etc.	High / Medium / Low / Not Relevant / Not Applicable	High (H) Medium (M) Low (L) Not a Priority (NP)	Examples: Municipal strategies, regulations, etc.	Examples: Insurance policies; Forest protection; National development...	Examples: CARICOM; COMESA; ECOWAS; ECLAC; ESCAP; ECE; ECA; ESCWA	Examples: UNFCCC, Sendai Framework, SDG, CBD, etc	Do you use the methodology suggested in the metadata?	Examples: Household survey; National Forest Inventory; etc.	Example: not used because of insufficient samples	(SS) Statistical surveys (e.g., censuses or sample surveys of population, housing, agriculture...	Broad categories suggested in metadata, (e.g., volume, mass...	Examples: m3, tonnes, mm	2.Spatial Aggregations (administrative (e.g., national/sub-national/basins)) 3.Temporal Aggregations...	Relevant classifications (e.g., ISIC; ...	(means official, either from national or international sources)	For example: Statistical Yearbook of Forestry	(produced by countries (C), country-adjusted data (CA), estimated data (E), global monitoring data...	Identical Similar Not Available	Annual (A) Monthly (M) Daily (D) Hourly (H) Other (specify)			Publication or report (P) Excel files (E) Database (D) Website (W) Individual records not readily useable (I) Other (specify)			Ministry of economy, energy, private sector etc	Financial and/or staff resource constraints		Insufficient or non-existent metadata - does not allow for the assessment of the quality and comparability of the data collected			

Instructions for Part II

The Self-Assessment Tool lists all the 158 indicators and 190 statistics included in the Global Set, followed by main Global Climate Policy References, Statistical References and Self-Assessment Questions structured in separate blocks in an Excel spreadsheet.

The first three blocks, i.e. the Global Set, the Global Climate Policy References and Statistical References, present the information and references also contained in the metadata (https://unstats.un.org/unsd/statcom/53rd-session/documents/BG-3m-Globalsetandmetadata-E.pdf) therefore these are not meant for users to fill in. The users should fill in the cells in the block called Self-Assessment. The following definitions apply:

Global Set

[column B] **Area:** A schematic framework developed by the IPCC summarises the complexity of climate change as a sequence of events: drivers, impacts, vulnerability, mitigation and adaptation. These events are applied as five top-level areas in the Global Set. Each indicator is assigned to one of the five IPCC areas as a primary belonging, while some indicators were also assigned as applicable in one or more additional areas.

[column C] **Topic:** As in the FDES (p. 3), the statistical topics represent the quantifiable aspects of the areas taking into account the types and sources of the statistics needed to describe them.

[column D] **Number:** Each indicator is numbered from 1 to 158.

[column E] **Indicator:** As in the FDES (p. 7), environmental indicators are used to synthesize and present

Relevant examples and resources

- **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

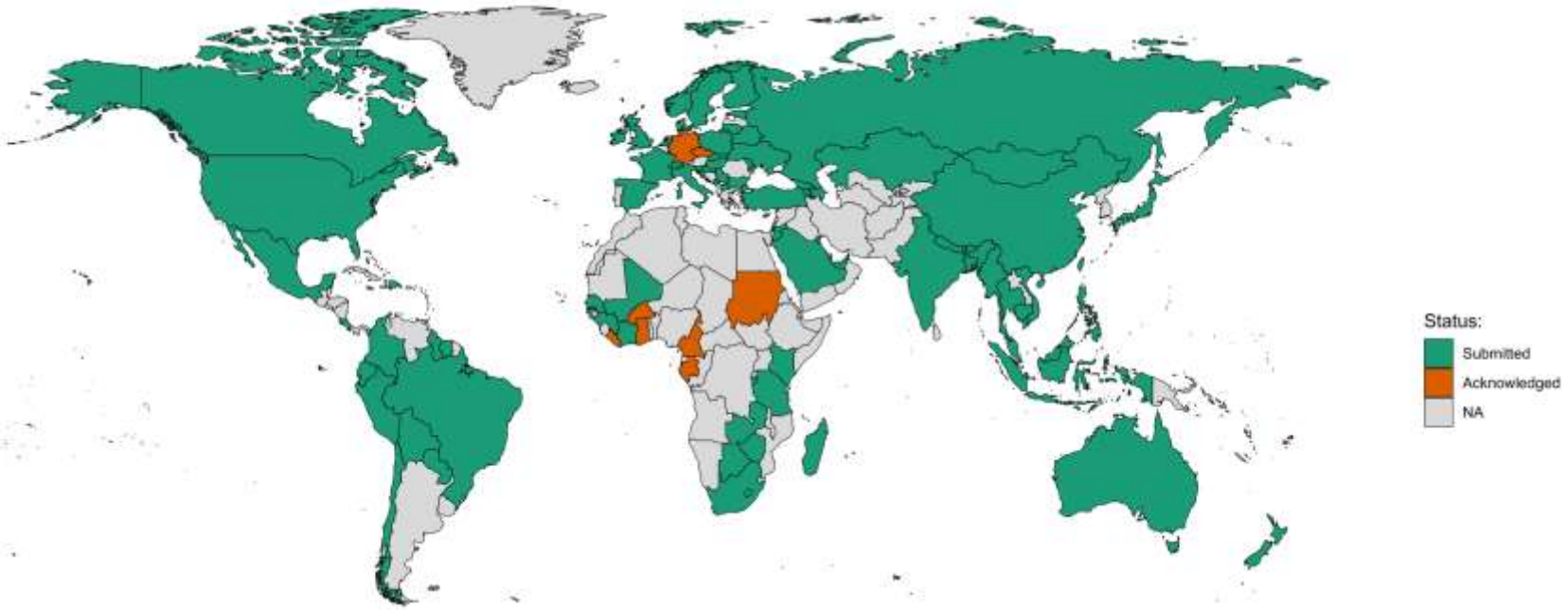
- **Outcomes of the Global Consultation**, responses and feedback were received from 86 States and areas and 26 agencies (see annex I in the Report of the Secretary-General on Climate Change Statistics to the Statistical Commission (E/CN.3/2022/17)). Detailed summaries and geographical analysis are presented 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

Growing engagement of countries

Global Consultation (May- Sept 2021) – 86 countries (68 on part 1 and 75 part 2) and 26 organizations



- The engagement is wider than that, e.g. 14 member states **acknowledged**.
- UNSD funded consultancies helped 2 more countries to do the assessment, another 9 countries to improve their earlier assessments in Africa
- Ongoing regional initiatives are also strengthening climate change statistics in countries

"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.

Current and future work

Capacity development activities

UNSD, in collaboration with UNFCCC and other relevant bodies, would carry out capacity development activities with support from regional and other development partners by:

a) Offering continuous (remote, online) support to countries in their efforts to set up national processes in environment and climate change statistics;

b) Organizing regional workshops based on the findings of the global consultation on the draft Global Set and on regional needs for environment and climate change statistics;

c) Leading or supporting advisory missions in countries based on raised demands and requests for support.

Further development of the methodology on climate change statistics

UNSD, in collaboration with UNFCCC and other relevant bodies, would further develop the methodology for climate change statistics and indicators by:

a) Reviewing and updating the tier 3 indicators and completing their metadata. Consultations will be organized to advance towards internationally agreed methods;

b) Following up ongoing statistical processes to ensure that latest guidance is reflected for the indicators at all tiers. Additional fields in the metadata, such as rationale and limitations, will also be considered for inclusion;

c) Continuing to improve the attribution to climate change or the relevance of the indicators to climate change by narrowing the scope and definition of several indicators or introducing new disaggregation items;

d) Following up policy and science to identify new indicators to be included in the global set of climate change statistics and indicators in future revisions, and also to possibly remove certain indicators from the list.

Development of training materials and strategies for capacity development and resource mobilization

UNSD, in collaboration with UNFCCC and other relevant bodies, would develop training materials and strategies for capacity development and resource mobilization by:

a) Developing a strategy with key partners to promote bridging the gap between policy and statistics and between national statistical offices and climate change reporting agencies at the national level;

b) Developing implementation guidelines for national consultations and data-sharing processes on climate change statistics;

c) Developing training materials, including e-learning modules, organized according to thematic areas, along with guidance and best practices, on addressing climate change issues by including climate change-related questions in national censuses and surveys, and best practices on the dissemination of climate statistics;

d) Mobilizing resources to facilitate the training of trainers, based on the assessment of the capacity development needs in the countries revealed by the global consultation;

e) Developing a climate change assessment tool similar to the Environment Statistics Self-Assessment Tool.

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