

Global set of climate change statistics and indicators: update on the work and outcomes of the Pilot Survey



UNECE Expert Forum for Producers and Users of Climate Change-Related Statistics
28 September to 1 October 2020, Geneva, Switzerland (virtual meeting)

Session 1: Setting the scene (Monday, 28 September 2020)

United Nations Statistics Division

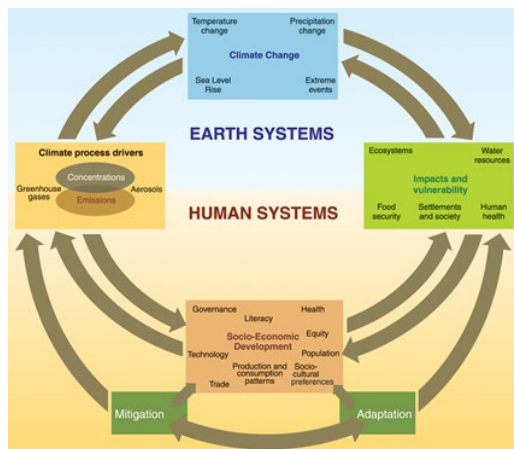


Outline

- Environment statistics (FDES 2013) and climate change statistics (IPCC)
- Statistical Commission (47th session) - relationship between FDES and climate change statistics
- Environment statistics as a basis for climate change statistics
- Statistical Commission (49th session) – linking climate change statistics and policy; and countries to contribute to Pilot Survey and Global Consultation
- UNSD: Globalizing climate change statistics and indicators
- Pilot Survey and impact of pandemic
- Pilot Survey responses
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- Pilot Survey - conclusions
- Consultations on the development of the Global Set
- Global set structure
- Global set: use of feedback from Pilot Survey
- Global set: metadata example
- UNSD: next steps
- Regional/national work on climate change statistics - examples



FDES 2013 & climate change statistics



Framework for the Development of Environment Statistics (FDES 2013)

IPCC, 2007, Fourth Assessment Report (drivers, evidence, impacts & vulnerability, mitigation and adaptation)



- FDES cross-cutting application (Chapter 5) links climate change and environment statistics based on IPCC Framework (4th report in 2007)
- Integrating official statistics for climate change monitoring

Climate Process Drivers	
Sub-component 1.3: Environmental Quality	Sub-component 3.1: Emissions to Air
1.3.1 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 Atmosphere, climate and weather 1.1.2 Hydrographical characteristics	4.1.1 Occurrence of natural extreme events and disasters

Climate Change Impacts and Vulnerability						
Sub-comp. 1.1: Physical Conditions	Sub-comp. 1.2: Land Cover, Ecosystems and Biodiversity	Sub-comp. 1.3: Environmental Quality	Sub-comp. 2.3: Land	Sub-comp. 4.1: Natural Extreme Events and Disasters	Sub-comp. 5.1: Human Settlements	Sub-comp. 5.2: Environmental Health
1.1.2 Hydrographical characteristics 1.1.4 Soil characteristics	1.2.1 Land cover 1.2.2 Ecosystems and biodiversity 1.2.3 Forests	1.3.3 Marine water quality	2.3.1 Land use	4.1.2 Impact of natural extreme events and disasters	5.1.3 Housing conditions	5.2.3 Vector-borne diseases 5.2.4 Health problems associated with excessive UV radiation exposure

Mitigation and Adaptation			
Sub-comp. 2.2: Energy Resources	Sub-comp. 6.1: Environmental Protection and Resource Management Expenditure	Sub-comp. 6.2: Environmental Governance and Regulation	Sub-comp. 6.3: Extreme Event Preparedness and Disaster Management
2.2.2 Production, trade and consumption of energy	6.1.1 Government environmental protection and resource management expenditure 6.1.2 Corporate, non-profit institution and household environmental protection and resource management expenditure	6.2.2 Environmental regulation and instruments 6.2.3 Participation in MEAs and environmental conventions	6.3.1 Preparedness for natural extreme events and disasters



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.



Environment statistics as a basis for climate change statistics

- Environment statistics – similar to climate change statistics:
 - Synthesize data originating from various types of sources, e.g. surveys or monitoring systems.
 - Involve large number of institutions or stakeholders - need collaboration.
 - Overwhelming volume of data across various institutions – challenging to translate into official statistics.
 - Environmental/climate change-related questions in censuses/surveys and/or develop specialized environmental/climate change surveys
 - Different users need environment statistics at different levels of aggregation and depths of information. They may need cross-cutting environment statistics data sets, for instance regarding climate change.
- When developing climate change statistics, as for env. stats., important to have:
 - Working group at national level – could cover both env & cc statistics.
 - Tool, e.g. ESSAT, to assess data availability, relevance, priority of statistics
 - National action plan or strategy – both environment statistics and climate change statistics can be covered or separate plans
 - National sets of environment statistics and climate change statistics – based on FDES-Basic Set of E.S. and Global Set of Climate Change Indicators



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>

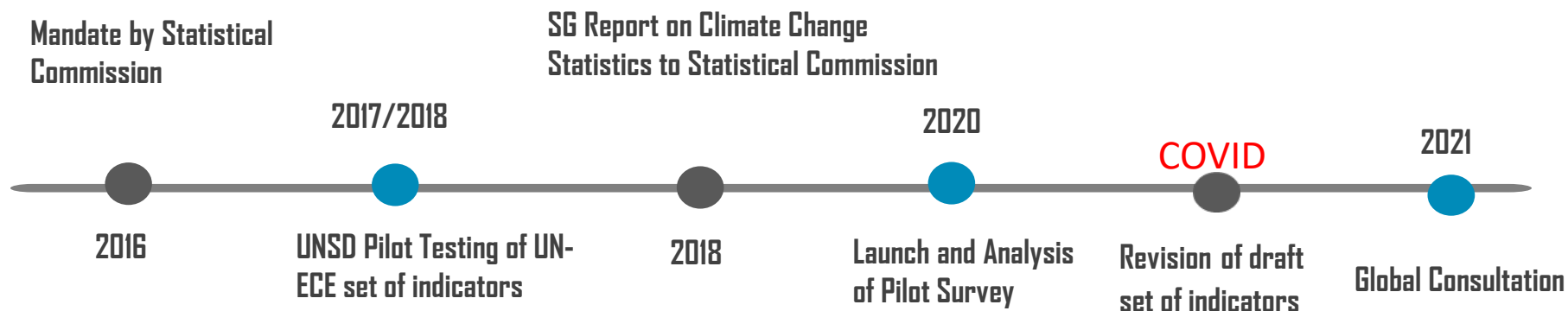
Main decisions

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.



UNSD: Globalizing climate change statistics and indicators



To strengthen link between statistics and policy, UNSD is engaging closely with UNFCCC to develop global set of climate change indicators.

- Joint report to the 49th session of the Stat. Commission
- Joint Side Events at Statistical Commission meetings
- UNFCCC participation in the Expert Group on Environment Statistics
- UNSD participation in a Side Event at the High-Level Political Forum in July 2019 organized by UNFCCC, UNSD, UNDRR, FAO, WMO)
- 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 the UNFCCC stakeholders' dialogues on building the Enhanced Transparency Framework (May and October 2020)



UNSD: Globalizing climate change statistics and indicators

Objective:

develop a global set of climate change indicators, tailored for all countries, while ensuring that the needs of countries with less developed statistical systems are taken into account.

UNSD has:

- carried out a systematic review of climate change statistics and indicators from 130 countries with representative regional coverage,
- analysed more than 7,500 individual climate change statistics and indicators, and
- has identified a draft set of the most commonly repeated indicators (approx. 133 currently) thereby promoting a bottom-up approach to their selection.

The draft set of climate change statistics and indicators has been organized according to the five areas of the IPCC framework: **drivers, impacts, vulnerability, mitigation and adaptation**, to promote linkage to both science and policy.



UNSD: Globalizing climate change statistics and indicators

(consulted 130 national sources to date)



UNSD: Globalizing climate change statistics and indicators

References to international agreements and frameworks:

- relevant articles of the [Paris Agreement](#) and the [Katowice Package](#) are mentioned for each indicator thereby clearly demonstrating the link between statistics and policy.
- SDGs, FDES and Sendai Framework, as well as UN-ECE set of indicators, have been considered to promote consistency and harmonize the wording of the indicators to the extent possible.

Criteria for selection of indicators:

- Consistency with existing thematic indicator sets and guidance, namely from UNFCCC/IPCC, FAO, SDGs, UNDRR, UNCCD, UNCBD, as well as with the FDES statistics, has been promoted.
- Complementarity with existing regional climate change indicators, e.g. EEA, UN-ECE, and Eurostat, where applicable, as well as other relevant initiatives.
- Indicators for which metadata can be developed.
- Balanced coverage of the five IPCC areas (drivers, impacts, vulnerability, adaptation and mitigation).



UNSD: Globalizing climate change statistics and indicators

The [Expert Group on Environment Statistics](#) (EGES) has been contributing to work on the draft set through review of iterative versions and discussions at Expert Group meetings.

At its [sixth meeting](#) in May 2019, it was agreed that UNSD share the draft set with interested experts of the EGES, before conducting the current Pilot Survey. This expert review was completed in January 2020 based on feedback from six countries (Jamaica, Luxembourg, Suriname, Tanzania, The Netherlands and Zimbabwe) and four international and regional organizations (UNFCCC, FAO, ECLAC, EEA).

The Pilot Survey covers selected countries and international/regional organizations that have participated through different processes such as EGES, regional or national workshops. The Global Consultation will take place in 2021 and will involve all countries.

The final number of statistics and indicators will be decided after Pilot Survey and Global Consultation but set of indicators will be comprehensive and applicable to all countries.



Pilot Survey and impact of pandemic

The Pilot Survey was launched on 23 February 2020 to test and assess the relevance, soundness and measurability of the proposed indicators in two ways:

- (1) by inviting the national statistical offices (NSOs) and/or ministries of environment from 42 countries to assess their preparedness to compile the suggested indicators in collaboration with relevant partners according to their national priorities as well as the development stage of the country;
- (2) in addition, 30 international/regional organizations were invited to assess the indicators from a thematic and methodological point of view to ensure that the selected indicators are relevant, correctly named, and supported by definitions, references and data.

Initially, given the importance of climate change monitoring and the interest it has generated among partners, responses and feedback arrived quickly from several organizations and countries.

However, the COVID-19 pandemic has delayed the process, especially in developing countries.



Pilot Survey and impact of pandemic (cont.)

- A special follow-up process with the countries (and organizations) who could not respond on time was initiated to better understand what the main impediments were given the impacts of the COVID-19 pandemic.
- For the countries, UNSD enquired whether:
 - they could work remotely,
 - they could examine the proposed indicators internally,
 - the relevant partner institutions were identified and contacted, since many of the indicators require data and information from agencies and departments outside the scope of existing official statistics,
 - feedback was obtained.
- In light of the time needs and alternative means for these consultations at national level, countries were asked to indicate how long it would take to complete the Pilot Survey.



Pilot Survey responses

- 14 key international/regional organizations responded with thematic validation on most of the proposed indicators and statistics.
- 15 countries responded including:
 - 7 developed countries, out of which 3 (who could consult stakeholders prior to lock-down) assessed all the proposed indicators.
 - 8 developing countries, of which one assessed all indicators, 5 partially, while another 2 only provided references to data available at the NSO.
- Another 12 developing countries (including 4 least developed and 4 Small Island Developing States) initiated the survey but could not complete it to date.
- The main difficulty was to collect responses from national experts and partners who the NSO could not meet during lock-down and where remote, virtual exchanges of data and information could not be done due to lack of resources and capacity.
- Another difficulty was to address indicators which were outside the national statistical system (about a third of the proposed indicators). Those indicators require further work including desk research and consultations with experts to develop proper definitions and calculation methods in the next period.



Pilot Survey responses

Agencies

1. UNFCCC
2. UN-ECE
3. IPCC
4. WCMC
5. UNEP
6. Eurostat
7. WFP
8. UNU
9. IUCN
10. WMO
11. UNFCCC – modalities from Katowice
12. FAO-Water
13. UNDRR
14. WHO

Countries

1. Sweden
2. Netherlands
3. Hungary
4. Slovenia
5. UAE
6. Brazil
7. Suriname
8. Russia
9. Mauritius
10. Palestine
11. Tanzania
12. Luxembourg
13. Finland
14. Estonia
15. Philippines



Pilot Survey responses

Country/Agency	Number of new indicators proposed
Suriname	2
Brazil	16
Luxembourg	11
Hungary	2 (Residence CO ₂)
Netherlands	1 (Living Planet Index)
Russia	Added sub-indicators
UNEP	20
IPCC	3 (within AFOLU)
WCMC	3
WMO	8 (all in climate change evidence)
WHO	1 ('access to climate finance likely covered)

Relevance assessed by countries	Yes	No	No response
Brazil (partial response)	134	8	
Hungary	125	10	
Palestine (partial response)	10	1	
Russian Federation	67	6	
Slovenia	113	10	
Suriname	121	9	
Netherlands	44	0	90
Tanzania (partial response)	32	0	
Luxembourg	81	53	
Estonia	85	31	
Sweden			No answer
UAE			No answer
Mauritius			No answer

Pilot Survey - observations

- Most of the proposed indicators are applicable, although some need further methodological work.
- Several new indicators were suggested - **most of them may be already included in either the inputs or classifications columns (as disaggregations) and it possible that these were overlooked by respondents.**
 - e. **Adaptation**
 - i. Add new topic 'Quality of life' (Brazil), indicators:
 1. 'Actions to combat undernourishment'; - addressed in vulnerability 'Prevalence of undernourishment'
 2. 'Access of health programmes' - addressed in vulnerability 'Coverage of essential public health services'
 - ii. In Topic row 147:
 1. Add 'nature-based protection from storms' (WCMC) included in adaptation
 2. Add 'number of green buildings (Brazil) included in adaptation 'Proportion of building adapted for climate change'
- For several indicators the relevance to climate change was not clear – **metadata are being prepared which will make this more evident.**
- Neutral wording should be introduced: change rather than increase or decrease

MITIGATION	Increase in forest area		FDES-BSES	By types of fore	Area
MITIGATION		Forest area			
MITIGATION		Progress towards GHG emissions reduction target			Description



Pilot Survey - observations

- The links to IPCC and to the ECE core set of indicators were appreciated.
- Several of the originally proposed indicators were considered to be overlapping – **redundancies will be removed.**

A1. Topic	Indicators	Statistics	C1. Definition reference	E1. Potential aggregate	F1. Category of Measure
IMPACTS	Loss of quality of water bodies	Water turbidity	FDES BSES	By water body;	Concentra
IMPACTS		Water pH (1.3.2.f.1)	FDES BSES	By water body	Level
IMPACTS		Water salinity (1.3.2.f.2)	FDES BSES	By water body	Concentra
IMPACTS		BOD of water resources (1.3.2.b.1) (delete- UNEP)	FDES BSES	By water body	Concentra
IMPACTS		COD of water resources (1.3.2.b.2) (delete- UNEP)		By water body	Concentra
IMPACTS	Change in the average marine acidity (pH) measured at agreed suite of r	Average marine acidity (pH) measured at agreed suite of rep	SDG 14.3.1	Global indicato	Level
IMPACTS	Proportion of population using safely managed drinking water services	Drinking water quality	SDG 6.1.1 metadata		
VULNERABILITY	Proportion of population using safely managed drinking water services		SDG 6.1.1	By type (rural, t	Percent
VULNERABILITY		Population using safely managed drinking water services			
VULNERABILITY		Population			

- There is a need to reduce the number of indicators – **entire structure is being re-organized; overlapping indicators are being addressed; tiering system will assist in prioritization.**
- There is a need to clarify between indicators and statistics – **they have now been separated to promote transparency and ensure that indicators are clear and measurable, as well as outline the underlying statistics/data that are needed to produce them, thereby clearly identifying the data gaps.**
- There is a need to simplify some of the indicators as some were considered too complex – **they are being re-examined.**



Pilot Survey - observations

- References to SESA were encouraged where applicable - several ECE indicators include such references, and references in metadata will be provided as appropriate.
- Need stronger reference to SDG 13 indicators – the newly established SDG indicators for Goal 13 have now been included.
- Time allocation not enough due to COVID – extensions were provided, follow up was carried out, bilateral discussions were conducted. Hence, the decision to delay the Global Consultation was taken.
- Data availability was a concern for some indicators, especially in adaptation – references to data availability, produced both at international and national levels, are being reviewed.
- Several indicators were outside of NSO/NSS – additional efforts to compile metadata and enough time for the Global Consultation for stakeholder discussions.
- Allocation of indicators was not always clear, e.g. impacts or adaptation – further analysis.

	A1. Topic	Indicators	Statistics	C1. Definition reference	E1. Potential aggregation	F1. Category of Measurement
IMPACTS		Proportion of land that is degraded over total land area		SDG 15.3.1 metadata		Percent
IMPACTS			Country land area			
			Land cover change resulting in land degradation (SDG 15.3.1 subindicator)			
IMPACTS			Land productivity (SDG 15.3.1 subindicator)			
IMPACTS		Proportion of fish stocks within biologically sustainable levels		SDG 14.4.1	By types of fish	Mass
IMPACTS			Available fish stocks			
IMPACTS			Fish production			
IMPACTS		Increase of area affected by coral bleaching	Area affected by coral bleaching (1.3.3.g.1)	FDES-BSES	By sea; by location	Area

Pilot Survey - conclusions

- The main conclusion is that the development of the Global Set of Climate Change Statistics and Indicators, despite the global pandemic, is of utmost importance for countries and organizations.
- It is also clear that most of the proposed indicators are applicable, although some need further methodological work.
- Despite the applicability of the indicators and the interest that the developing countries have clearly demonstrated towards this work, these countries, in particular, face enormous resource challenges and should be offered adequate support, with extended time and guidance to be able to embark on such comprehensive and interdisciplinary statistical work.
- The Global Set should be promoted by NSOs to facilitate the communication of comprehensive coverage of statistics and indicators to multiple stakeholders, especially those with narrow specialization, both in the context of national consultations and further work on international level.



Consultations on the development of the Global Set

- UNSD reached out to the countries that responded and reviewed the information provided seeking clarification and additional supporting information as necessary.
- Bilateral consultations have also been taking place with selected organizations on specific thematic areas and this will continue once additional responses have been received and enough analysis of the various themes (such as biodiversity, disasters, etc.) has taken place and deemed useful for more in-depth discussion.
- While further responses were awaited from, in particular from the developing countries, UNSD set up a small group of (developing) countries that were faced with the most challenges due to the pandemic as well as with the completion of the survey in general, along with the Chair of the EGES, to examine in detail the structure of the draft Global Set and provide inputs towards a product for the planned Global Consultation in 2021. The group:
 - held several virtual meetings during from May to September and discussed a structure linking the proposed indicators and underlying basic statistics, accompanied by short metadata, which should satisfy the needs of both developed and developing countries.
 - provided feedback to UNSD to better understand the needs of the least developed and developing countries in particular and the way NSOs interact with their national counterparts.
 - provided suggestions to UNSD on how to organize and review the feedback received to date.The processes of revising the structure of the draft set is ongoing and a revised version will be prepared for discussion at the virtual seventh meeting of the EGES planned for November 2020.



Global set structure

Indicators and statistics side-by-side, main metadata details

	A1. Topic	Indicators	Statistics	C1. Definition reference	E1. Potential aggregations	F1. Category of Measurement	G1. Data reference	H1. Data type	I1. Paris Agreement	I2. Katowice package	I2. SDG	I3. FDES	I4. Sendai Framework	J. Tier (UNSD)
IMPACTS	Freshwater resources								7; 13.8	Decision 18/CMA.1, chapter IV;	2.6.1			
IMPACTS		Renewable freshwater resources per capita		FDES-BSES manual (water	Volume	UNSD Environm	C		7; 13.8			1.1.1.b. 1. Annual average (Tier 1		1
IMPACTS			Precipitation (1.1.1.b/2.6.1.a)											
IMPACTS			Variation in rainfall volume (Brazil)											
IMPACTS			Evapotranspiration (2.6.1.6.1)											
IMPACTS			Inflow (2.6.1.b.2)											
IMPACTS			Population											
IMPACTS			freshwater extent (UNEP)											
IMPACTS			groundwater extent (UNEP)											
IMPACTS	Freshwater abstraction, supply and use								7; 13.8	Decision 18/CMA.1, chapter IV;	2.6.2			
IMPACTS		Freshwater abstracted as proportion of renewable freshwater resou		FDES-BSES manual (water	Percent	UNSD Environm	C		7; 13.8		6.4.2 Level of water stress: freshwater withdrawal as a			1
IMPACTS			Freshwater abstracted											
IMPACTS			Renewable freshwater resources											
ADAPTATION	Water management and treatment					Volume			7; 13.8					
ADAPTATION		Proportion of wastewater treated		FDES (pg 6	By types of treat	Percent	UNSD Environm	C	7; 13.8		6.3.1 Proportion of wastewater safely treated (Tier 2)			2
ADAPTATION			Total wastewater generated (3.2.1.a)		By ISIC economic activity									
ADAPTATION			Wastewater treated (3.2.2.b)		By types of plants									
ADAPTATION		Water use per capita		FDES BSES	By ISIC econom	Volume	UNSD Environm	C	7; 13.8	Decision 18/CMA.1, chapter IV;	6.4.1 Change in water use efficiency over time (Tier 2)			2
ADAPTATION			Total freshwater available for use						7; 13.8	Decision 18/CMA.1, chapter IV; Decision 9/CMA.1				
			Population			Number								



Global set: use of feedback from Pilot Survey

	A1. Topic	Freshwater resources	Freshwater abstraction, supply and use	Water management and treatment
	B1. Indicator/statistic	Renewable freshwater resources per capita	Freshwater abstracted as proportion of renewable fres	Water use per capita
National indicators correspondence	Netherlands B2	Yes	Yes	Yes
National indicators correspondence	Russia B2		The index of the water resources exploitation	Average daily water supply per resident
National indicators correspondence	Slovenia B2	YES (similar)	YES (similar)	* only data exist
National indicators correspondence	Luxembourg B2	not calculated but available	Level of water stress	same name
National indicators correspondence	Eurostat B2			
National indicators correspondence	UNFCCC B2			
National indicators correspondence	UN-ECE B2		here you could also use also SDG indicator 6.4.2 (which also takes into account environmental water requirements)	
National indicators correspondence	IPCC B2			
National indicators correspondence	UNEP B2		Suggest delete and combine with Freshwater resources	
National indicators correspondence	WFP B2			
National indicators correspondence	WCMC B2	Cordula: It would be good to use total renewable freshwater resources in addition to this, to factor out population change		
National indicators correspondence	Finland B2	exist	exist	exist
National indicators correspondence	Palestine B2			
National indicators correspondence	UAE B2	exists	exists	
National indicators correspondence	Philippines B2			
National indicators correspondence	Estonia B2	Renewable freshwater resources per capita		Data are available, indicator has not been defined and does not
National indicators correspondence	Hungary B2	No national indicator is available.	No national indicator is available.	Water use per capita
National indicators correspondence	Aquastat B2		This is the old MDG 7.5, it should be replaced by the SD	Water abstraction per capita
National indicators correspondence	IUCN B2			
National indicators correspondence	WMO B2			
National indicators correspondence	Suriname B2	Average Annual and Monthly Precipitation (proxy)	Drinking Water production (proxy)	Water Consumption (proxy)
National indicators correspondence	Tanzania B2	Available:National renewable water resources per	Available:Freshwater abstracted as proportion of rene	Not available
International indicators	Netherlands B3			



Global set: metadata example

	Indicator	Statistic 1	Statistic 2	Statistic 3
Codes and titles:	41. Renewable freshwater resources per capita	41.1 Precipitation	41.2 Evapotranspiration	41.3 Inflows
Area, topic	Impacts, Freshwater resources			
Themes	Water			
Correspondences SDGs FDES Paris Agreement articles Katowice Package decisions Sendai	Related to SDG 6.4.2 Paris agreement articles 7; 13.8 Decision 18/CMA.1, chapter IV; Decision 9/CMA.1	FDES 1.1.1.b/2.6.1.a Paris agreement articles 7; 13.8	FDES 2.6.1.b.1 Paris agreement articles 7; 13.8	FDES 2.6.1.b.2 Paris agreement articles 7; 13.8
Tier	1	1	1	1
Definitions	Renewable water resources are replenished by precipitation and are represented by the annual flow of surface water and groundwater. (BSES manual)	The volume of water that flows from the atmosphere to inland water resources via rain, snow, sleet, hail, dew, mist, etc., per year. (BSES manual)	The volume of water that enters the atmosphere by vaporization of water into a gas through evaporation from land and water surfaces and transpiration from plants, per year. (BSES manual)	The volume of surface water and groundwater that moves into a territory from other territories, during a year. (BSES manual)
Relevance	<ul style="list-style-type: none"> Water resources management International data collection (UNSD/UNEP, Eurostat/OECD, AQUASTAT, SDG) 			
Update frequency	annual	annual	annual	annual
Category of Measurement	Percent	Volume	Volume	Volume
Data collection methods	Monitoring systems	Monitoring systems	Monitoring systems	Monitoring systems
Data sources	hydro meteorological institutions			
Computation/compilation methods	Precipitation plus inflows minus evapotranspiration divided over population number	Interpolation of point measurements over a geographic area (SEEA water pg71). GIS modelling of precipitation.	Residual of precipitation less surface and sub-surface run-off (SEEA water pg71).	sum of inflows from other territories
Reference to examples of statistics / Type of statistics	UNSD Environmental Indicators (Inland water resources) / Country	UNSD Environmental Indicators (Inland water resources) / Country	UNSD Environmental Indicators (Inland water resources) / Country	UNSD Environmental Indicators (Inland water resources) / Country
Potential aggregations and scales	National; Sub-national; By territory of origin and destination			
Methodological Guidance	UNSD/UNEP Questionnaire on Environment Statistics (Water); Manual on the Basic Set of Environment Statistics (BSES) (Water Resources) ; International Recommendations for Water Statistics ; Compilation Guidelines for Water Accounts and Statistics			



UNSD: next steps

- Finalize analysis of Pilot Survey on Climate Change Indicators (Aug-Oct 2020)
- Discuss results of Pilot Survey and draft list with Expert Group on Environment Statistics (November 2020)
- Prepare for Global Consultation on Climate Change Indicators (early 2021) – *Global Consultation delayed due to pandemic to give enough time for dialogue and consultations, and to promote understanding and ownership of the indicators.*
- Organize capacity development activities in environment statistics and climate change statistics at regional/national level to encourage the two areas to develop in parallel.
- Develop an inventory of related work on climate change statistics being carried out by partner organizations.
- Continue collaboration with UNFCCC to encourage and mainstream the climate change policy and statistics interface, e.g. participate in the UNFCCC stakeholder dialogue on building the Enhanced Transparency Framework (October 2020).
- Develop, with UNFCCC, a set of guidelines/ guidance for promoting cooperation between NSOs and institutions reporting climate change info. at national level.



Regional/national work on climate change statistics - examples

- **Regional**
 - Current UN-ECE set includes 44 indicators relevant to the region and complementary to the global set
 - ECLAC – programme on climate change and disaster statistics
 - Caribbean Community (CARICOM) – Climate Change Statistics (2020)
 - ESCWA – Climate change-related statistics in the Arab region (2017)
- **National**
 - Jamaica – Climate Change Statistics Report (2016)
 - Tanzania – National Climate Change Statistics Report (2020)
 - Nepal – Climate Change Impact Survey (2016)
 - Slovenia – Statistical Day 2020: Climate Crisis – Hot Data
 - Grenada – Inter-agency Committee for Environment and 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/>

Climate Change Statistics Website

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

