

Approach to indicator selection and lessons learnt from the work on the UNECE set of core climate change-related statistics and indicators

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UNECE

UNECE and Conference of European Statisticians (CES)



United Nations Economic Commission for Europe (UNECE)

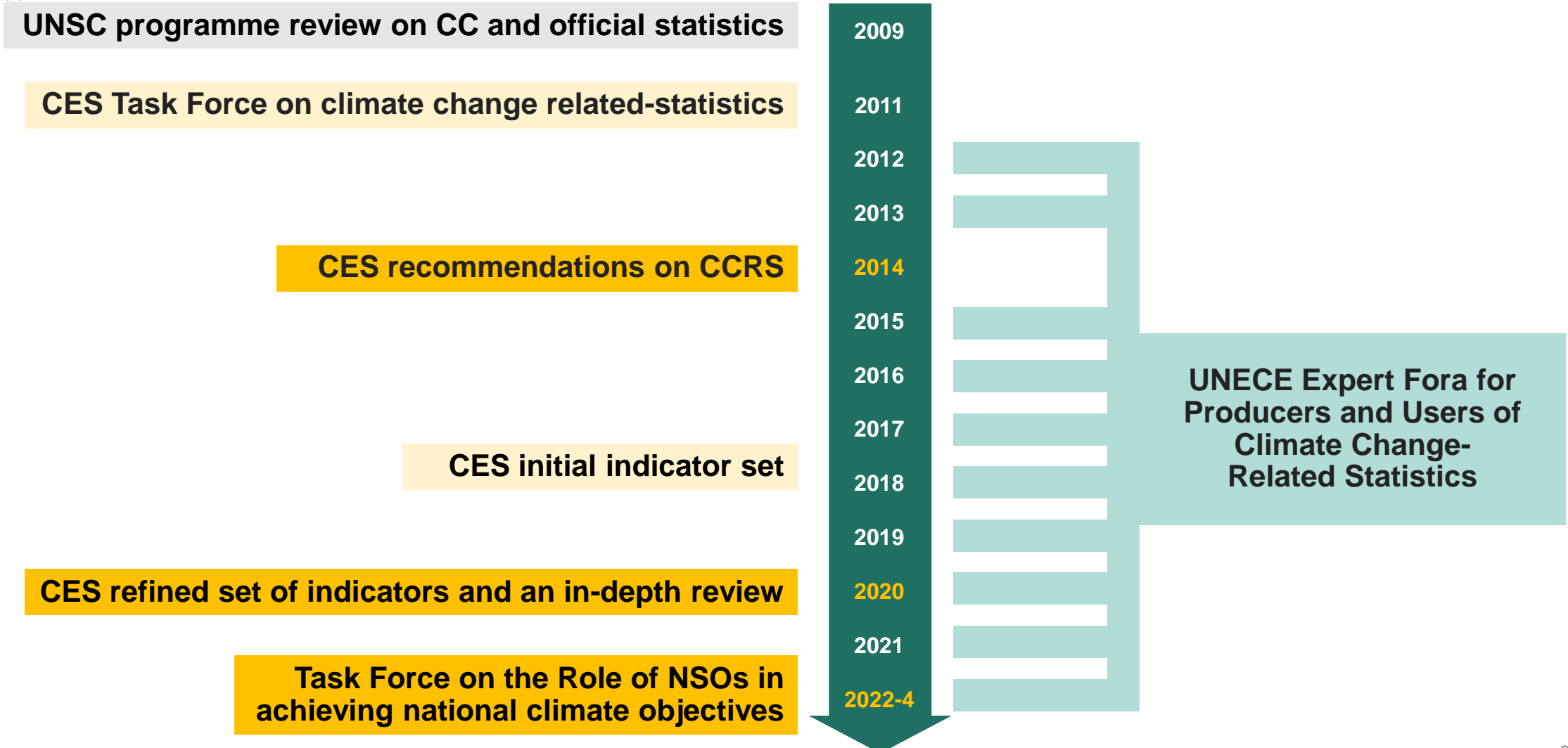
- One of five UN **regional commissions**
- Includes **56 member States** in Europe, North America and Asia
- Part of the **UN Secretariat**

Conference of European Statisticians (CES)

- The main **intergovernmental body in statistics** in the region
- Composed of **chief statisticians** of member countries
- Adopts recommendations, guidelines and standards which are implemented by **national statistical offices**
- Part of the **international statistical system** including also equivalent bodies from other regions and United Nations Statistical Commission



UNECE work on climate change-related statistics



Statistical frameworks and indicator sets and role of NSOs



UNECE

Frameworks

- Framework for Development of Environment Statistics
- System of Environmental-Economic Accounting
- Disaster-Related Statistics Framework
- ...

Indicator sets

- CES Set of Core Climate Change-Related Statistics and Indicators
- Global Set of Climate Change Statistics and Indicators
- CES Pilot Set of Core Disaster-Risk-Related Indicators
- Sendai Framework indicators
- SDG Global Indicator Framework

NSOs...

- Are the main part of **national statistical systems** and produce official statistics on **key topics for the economy and society**
- Have the mandate for and expertise on **data collection, safeguarding, processing and dissemination**
- Are professionally independent providers of **data for public good** in line with the Fundamental Principles of Official Statistics

CES Set of Core CC-Related Indicators and Statistics



- **Developed by a dedicated** Task Force, chaired by Italy, vice-chaired by Luxembourg
- Initially 39 core indicators (2017); then pilot testing, refinement and implementation guidelines
- **Final set of 44 core indicators (2020):**
 - Drivers, Emissions, Mitigation, Adaptation, Impacts
 - Out of 44: **8 SDG indicators** and **4 Sendai Framework indicators**; **34 indicators** included later in the **Global Set** Climate Change Statistics and Indicators, either verbatim or in a related form
 - Metadata sheets for each indicator, a list of core statistics and Implementation Guidelines

[Final report](#), [Implementation Guidelines](#) and [Metadata](#) available here



Indicator types and selection criteria



Core indicators

- Max. 40 indicators showing the big picture in an internationally **comparable** way
- **Stable** over time
- Based of indicators from **existing frameworks** where useful (e.g., SDG indicators, Sendai Framework)
- Not **disaggregated** (e.g., by sector)

Criteria for selection:

- ▶ **High policy relevance**
- ▶ **Methodological soundness**
 - ▶ **Data availability**

Contextual indicators

- Provide **additional information** relevant for the national context

Operational indicators/disaggregations

- Sectorial, spatial or temporal **breakdown** of a core indicator

Proxy indicators

- Temporary replacement for a core indicator

CES Indicator Set

Tier approach



Tier approach

- **Tier 1:**
 - + Indicator conceptually clear
 - + Established methodology
 - + Data regularly produced
- **Tier 2:**
 - + Indicator conceptually clear
 - + Established methodology
 - Data not regularly produced
- **Tier 3:**
 - Indicator without established/agreed methodology

Indicators per tier (SDG indicators in brackets)

Area	Tier I	Tier II	Tier III	Place-holder
Drivers	3	3	3	
Emissions	7	1	1	
Impacts	5 (2)	5 (2)	2	1
Mitigation	4 (1)	1 (1)	3	
Adaptation	1 (1)	1 (1)	2	1

Share of green spaces in the total area of cities



Presentation

Unit of measure	Percentage
Coverage	Green urban areas
Spatial aggregation	National territory
Reference period	Calendar year
Update frequency	Every 5 years
Base period	Not applicable

Disaggregation (operational indicators)

Disaggregation (operational indicators)	Comments
Land cover class	

Other related -indicators (e.g.contextual, proxy, other core indicators)

ID	Subindicator	Type
89	Accessibility of green spaces in cities	Contextual indicator
91	Share of green spaces in nationally-defined urban areas	Contextual indicator
90	Share of population living in cities	Contextual indicator
92	Share of blue spaces in the total area of cities	Contextual indicator
93	Share of agricultural and natural areas in the total area of cities	Contextual indicator

Relevance

Policy context and rationale	Green infrastructure is among the most widely applicable, economically viable and effective tools to combat the impacts of climate change and help people adapt to or mitigate the adverse effects of climate change. It is particularly important in cities and towns, where more than a half of world's
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Methodology

Methodology for indicator calculation	This indicator is calculated as the total area of green urban areas divided by total area of cities. Green urban areas are defined as in the CORINE land cover classification. City is defined as a local administrative unit where at least 50% of the population lives in one or more urban centres (definition of a city based on the degree of urbanization). A spatial analysis tool is required for calculating the indicator. For more details on the classification of land cover and definition of a city, refer to the methodology references.
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Methodology references

Document title	Link
IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and	https://www.ipcc.ch/site/assets/uploads/2019/08/4.-SPM_Approved_Microsite_FINAL.pdf

And:

- Relation to any SDG or Sendai indicators
- Data sources
- Classifications
- International databases
- And more...

Considerations about using the **SDG** indicators



- Many **SDG indicators** are in some way **related** to climate change but:
 - By design they focus on **specific themes** (such as poverty or health) *(NB: issue for the CES Set but not in the context of the new GGA thematic targets)*
 - **Attribution to climate change** is often challenging; e.g., impacts of climate change cannot be differentiated from impact of other phenomena
- Including all the climate-related SDG indicators in the set of core indicators would lead to a **much bigger set**; the larger the set, the more time it will take to get to a minimum internationally comparable dataset
- Some SDG indicators cannot be applied or compiled **at the national level**, which was the main objective of the CES Indicator Set

Special case of adaptation indicators



- Reviewed **resources** from the UNFCCC Adaptation Committee, UNEP Adaptation Gap reports, EEA analysis, information collected by UNSD
- Challenging to identify adaptation indicators that were internationally comparable **and** policy relevant
- Important conceptual distinction by EEA between **process-based** and **outcome-based** indicators; the indicators measuring impacts of climate change will also be useful to measure adaptation outcomes.
- To show the big picture of climate change adaptation, **more indicators** would be needed to cover the relevant dimensions than foreseen in the CES Set – focus on a few core indicators with recommendation to be accompanied by contextual and operational indicators

Special case of adaptation indicators – continued



- **Dimensions:**
 - **Thematic area** (elements at risk, e.g., infrastructure, poverty, water)
 - **Type of reference area** (e.g., urban/rural, coastal, mountains)
 - **Concepts measured: Hazard exposure, Vulnerability, Adaptation processes, measures and expenditure, Improved adaptive capacity, Reduced impacts** (outcome)
 - **Hazard type** (e.g. following relevant categories from [UNDRR/ISC Sendai Hazard Definition and Classification Review Technical Report](#).)
- There is **a lot of interest in the statistical community**, but also appreciation for the difficulty of the task ahead – combining various areas of expertise and capacity development is crucial to make progress.
- Development of all data is a process

Key resources



- [Guidance on the role of national statistical offices in achieving national climate objectives \(2024\)](#)
- [CES Set of Core Climate Change-Related Indicators and Statistics, its implementation guidelines and indicator metadata sheets \(August 2021\)](#)
- [Pages of the past Expert Fora 2012-2023](#)
- [Climate Change-Related Statistics in Practice 2023 \(August 2023\), 2022 \(September 2022\) and 2021 \(August 2021\)](#)
- [In-depth review on the role of the statistical community in climate action \(February 2020\)](#)
- [Road maps to improve climate change-related statistics Word Russian \(March 2017\)](#)
- [Leaflet summarizing the CES Recommendations also in Russian \(October 2016\)](#)
- [CES Recommendations on Climate Change-related Statistics \(December 2014\)](#)

All the resources available [on the web](#)

Thank you!

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