

Conference of European Statisticians' Set of Core Climate Change-related Indicators and Statistics Using the System of Environmental-Economic Accounting



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PREFACE

Climate change is an existential threat and provides an immense challenge for humanity. A better understanding of all its aspects, through monitoring, modelling, analysis and reporting, is crucial to decide on the best course of action.

This document presents a set of core internationally comparable climate change-related indicators and statistics, developed by a dedicated UNECE Task Force established by the Conference of European Statisticians (CES). This indicator set (the CES Indicator Set) was endorsed in 2020 by the Heads of national statistical offices of more than 60 CES member countries.

The CES Indicator Set provides the foundation for developing national sets of climate change-related indicators intended to show the big picture of climate change-related issues, address the most relevant current policy questions and help meet upcoming information needs. It includes 44 indicators covering climate change drivers, emissions, climate change impacts, mitigation and adaptation. It also proposes corresponding contextual and operational indicators, helping interpret the core set in the national and global context, and provide more details according to national circumstances and priorities. The selection of indicators followed a careful vetting process based on the criteria of policy relevance, methodological soundness and data availability described in the present document. The CES Indicator Set is the recommended set of climate change-related indicators to be compiled and published in the CES member countries.

This document is accompanied by “Implementation Guidelines for the CES Set of Core Climate Change-Related Indicators and Statistics” and detailed information on individual indicators in the metadata sheets.

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The Task Force worked under the guidance of the Steering Group on Climate Change-Related Statistics.

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LIST OF ABBREVIATIONS

CES	Conference of European Statisticians
COP	Conference of the Parties
EEA	European Environment Agency
Eurostat	Statistical Office of the European Union
FAO	Food and Agriculture Organization of the United Nations
FDES	United Nations Framework for the Development of Environment Statistics
GHG	Greenhouse gas
HFA	Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters
IAEG-SDGs	Inter-agency and Expert Group on SDG Indicators
IPCC	Intergovernmental Panel on Climate Change
LULUCF	Land use, land-use change, and forestry
NDCs	Nationally determined contributions (Paris Agreement)
NSO	National statistical office
OECD	Organisation for Economic Co-operation and Development
OIEWG	Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction
SDGs	United Nations Sustainable Development Goals
SEEA	United Nations System of Environmental-Economic Accounting
SEEA-EA	United Nations System of Environmental-Economic – Ecosystem Accounting
SEEA-CF	United Nations System of Environmental-Economic Accounting – Central Framework
SNA	System of National Accounts
ToR	Terms of reference
TPES	Total primary energy supply
UNCEEA	United Nations Committee of Experts on Environmental-Economic Accounting
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNSC	United Nations Statistical Commission
UNSD	United Nations Statistics Division
WMO	World Meteorological Organization
WHO	World Health Organization

EXECUTIVE SUMMARY

This document presents an internationally comparable set of **core climate change-related indicators** as well as a set of **climate change-related statistics** needed to produce greenhouse gas inventories and to compile the set of core climate change-related indicators.

The set of core climate change-related indicators serves multiple purposes:

- Painting the picture of the most relevant climate change-related issues
- Addressing most relevant current policy questions
- Helping to meet upcoming information needs

The set includes 44 indicators, which are grouped according to the structure recommended in the *CES Recommendations on Climate Change-related Statistics* (UNECE, 2014):

- **Drivers:** 9 indicators
- **Emissions:** 9 indicators
- **Impacts:** 13 indicators
- **Mitigation:** 8 indicators
- **Adaptation:** 5 indicators

Figure 1 at the end of the Executive Summary presents the list of indicators and their grouping.

Eight of the proposed indicators are SDG indicators (or conceptually identical), and four are global indicators for measuring the targets of the Sendai Framework on Disaster Risk Reduction. Twenty-seven of the proposed indicators can be produced from the SEEA-Central Framework (SEEA-CF) accounts or are related to SEEA Ecosystem Accounting (SEEA-EA).

Placeholders had to be included for an indicator measuring the contribution of forestry to climate change adaptation and for an indicator measuring the impact of climate change on biodiversity. Both areas are highly relevant, but the Task Force could not identify appropriate indicators after consulting with international subject matter experts. The two placeholders need further work.

Following a recommendation of UNCEEA and the UNECE Steering Group on Climate Change-related Statistics, the set of core climate change-related indicators currently includes both residence-based indicators that can be derived from SEEA and traditional territory-based indicators. This approach takes into account that several of the territory-based indicators (e.g. related to energy use and greenhouse gas emissions) are widely used for defining policy targets, so data and methodologies exist, and the indicators are internationally comparable. Currently, the production of SEEA-based indicators is not

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