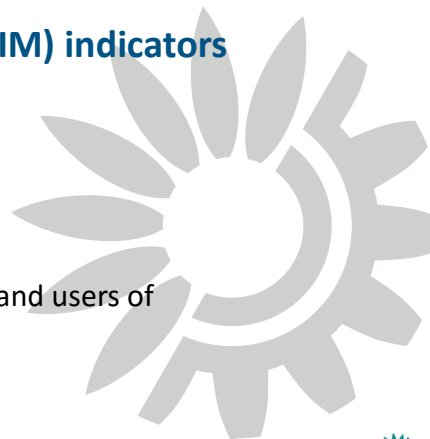


The EEA's indicators on climate change

Climate state and impact (CLIM) indicators

UNECE - Expert Forum for producers and users of climate change-related statistics

Geneva, 5-7 October 2016



European Environment Agency 

The role of EEA indicators

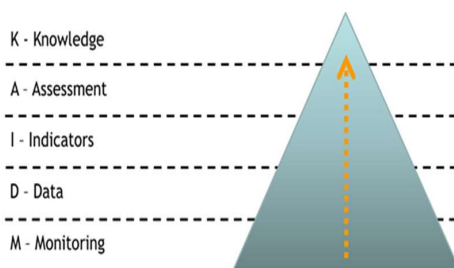
- The European Environment Agency (EEA) is an agency of the European Union and one of the decentralised Union bodies. The EEA aims to support sustainable development and to help achieve significant and measurable improvement in Europe's environment through the provision of **timely, targeted, relevant and reliable information** to policymaking agents and the public.
- *The EEA is an important source and custodian of environment-related data and **indicators**, and a key provider of environmental knowledge and information services (EEA Multiannual Work Programme 2014-2018)*

Indicators aggregate the complexity of environmental conditions into meaningful and relevant information for policy-makers and citizens, thus ensuring transparency, credibility and efficiency in decision-making processes

European Environment Agency 

MDIAK reporting chain

In the conceptual representation of environmental information given by the MDIAK reporting chain, indicators play a central role by providing an appropriate context to the data



Indicators = bridge between data and assessments

EEA indicators by theme

The EEA currently maintains 129 indicators across 14 themes

www.eea.europa.eu/data-and-maps/indicators

Theme	Indicators	Of which CSIs
Air pollution	5	3
Biodiversity	25	4
Climate change	45	9
Coasts and seas	7	4
Energy	11	7
Environmental scenarios	2	0
Fisheries	2	2
Green economy	1	0
Household consumption	1	0
Land use	2	1
Soil	1	0
Transport	17	4
Waste and material resources	2	1
Water	8	5
Total	129	41

The CLIM indicators in the EEA's website

Set	Indicators
CLIM (36)	CLIM 002 (Mean precipitation); CLIM 004 (Precipitation extremes); CLIM 005 (Storms); CLIM 006 (Effects of climate change: Air pollution due to ozone and health impacts); CLIM 007 (Glaciers); CLIM 008 (Snow cover); CLIM 009 (Greenland ice sheet); CLIM 010 (Arctic and Baltic Sea ice); CLIM 011 (Permafrost); CLIM 014 (Phenology of marine species); CLIM 015 (Distribution of marine species); CLIM 016 (River flow); CLIM 017 (River floods); CLIM 018 (River flow drought); CLIM 019 (Water temperature); CLIM 020 (Lake and river ice cover); CLIM 022 (Distribution of plant species); CLIM 023 (Plant and fungi phenology); CLIM 024 (Distribution and abundance of animal species); CLIM 025 (Animal phenology); CLIM 026 (Species interactions); CLIM 027 (Soil organic carbon); CLIM 028 (Soil erosion); CLIM 029 (Soil moisture); CLIM 030 (Growing season for agricultural crops); CLIM 031 (Agrophenology); CLIM 032 (Water-limited crop productivity); CLIM 033 (Irrigation water requirement); CLIM 034 (Forest growth); CLIM 035 (Forest fires); CLIM 036 (Extreme temperatures and health); CLIM 037 (Vector-borne diseases); CLIM 043 (Ocean acidification); CLIM 044 (Ocean heat content); CLIM 046 (Floods and health); CLIM 047 (Heating degree days)
CSI/CLIM (9)	CSI 006/CLIM 049 (Production and consumption of ozone-depleting substances); CSI 010/CLIM 050 (Total greenhouse gas emission trends and projections); CSI 011/CLIM 051 (Progress to greenhouse gas emission targets); CSI 012/CLIM 001 (Global and European temperature); CSI 013/CLIM 052 (Atmospheric greenhouse gas concentrations); CSI 042/CLIM 039 (Economic losses from climate-related events); CSI 044/CLIM 048 (Production, sales and emissions of fluorinated greenhouse gases (F-gases)); CSI 046/CLIM 013 (Sea surface temperature); CSI 047/CLIM 012 (Global and European sea-level rise)

Three other CLIM indicators are currently in production: CLIM 038 (Water – and food-borne diseases), CLIM 053 (Hail), and CLIM 054 (Ocean oxygen content).

CLIM indicators as classified in the EEA Reports on climate change, impacts and vulnerability in Europe (2012, 2016)

Theme	CLIM indicators
Climate (9)	Global and European temperature (CSI 012/CLIM 001); Mean precipitation (CLIM 002); Heavy precipitation (CLIM 004); Wind Storms (CLIM 005); Glaciers (CLIM 007); Snow cover (CLIM 008); Greenland ice sheet (CLIM 009); Arctic and Baltic Sea ice (CLIM 010); Permafrost (CLIM 011); Lake and river ice (CLIM 020)
Marine ecosystems (6)	Distribution shift of marine species (CLIM 015); Phenology of marine (CLIM 014); Ocean acidification (CLIM 043); Ocean heat content (CLIM 044); Sea surface temperature (CSI 046/CLIM 013); Global and European sea-level rise (CSI 047/CLIM 012)
Freshwater (4)	River flow (CLIM 016); River flow drought (CLIM 018); Water temperature (CLIM 019); River floods (CLIM 017)
Terrestrial ecosystems, soil and forest (10)	Distribution of plant species (CLIM 022); Distribution and abundance of animal species (CLIM 024); Species interactions (CLIM 026); Plant and fungi (CLIM 023); Animal phenology (CLIM 025); Forest growth (CLIM 034); Forest fires (CLIM 035); Soil erosion (CLIM 028); Soil organic carbon (CLIM 027); Soil moisture (CLIM 029)
Damages (1)	Economic losses from climate-related events (CSI 042/CLIM 039)
Human health (4)	Extreme temperatures and health (CLIM 036); Floods and health (CLIM 046); Vector-borne diseases (CLIM 037); Water and food-borne diseases (CLIM 038)
Agriculture (4)	Growing season for agricultural crops (CLIM 030); Agrophenology (CLIM 031); Water-limited crop productivity (CLIM 032); Irrigation water requirement (CLIM 033)
Energy, Transport, Tourism (1)	Heating and cooling degree days (CLIM 047)
Atmosphere (6)	Atmospheric greenhouse gas concentrations (CSI 013/CLIM 052); Effects of climate change: Air pollution due to ozone and health impacts (CLIM 006); Total greenhouse gas emission trends and projections (CSI 010/CLIM 050); Progress to greenhouse gas emission targets (CSI 011/CLIM 051); Production, sales and emissions of fluorinated greenhouse gases (F-gases) (CSI 044/CLIM 048); Production and consumption of ozone-depleting substances (CSI 006/CLIM 049)

The Environmental Indicator Catalogue

- Published by Eurostat in November 2015 and updated every three months
- Repository of over 200 environment-related indicators developed by European and international bodies (mainly Eurostat and EEA)
- Structured in three levels: themes, sub-themes and indicators
- Each indicator includes a hyperlink to its data and metadata
- EEA and Eurostat develop and maintain different types of indicators, depending on the purpose for which they were created:
 - Eurostat -> table with numerical data describing the evolution of a parameter over time and space;
 - EEA -> combination of multiple tables/maps/graphs from different sources, focused on the assessment of progress towards targets

<http://ec.europa.eu/eurostat/web/environment/overview/environmental-indicator-catalogue>

The CLIM indicators in the Catalogue

Theme	CLIM indicators
Climate	Global and European temperature (CSI 012/CLIM 001); Mean precipitation (CLIM 002); Heavy precipitation (CLIM 004); Wind Storms (CLIM 005); Glaciers (CLIM 007); Snow cover (CLIM 008); Greenland ice sheet (CLIM 009); Arctic and Baltic Sea ice (CLIM 010); Permafrost (CLIM 011); Lake and river ice (CLIM 020)
Marine ecosystems	Distribution shift of marine species (CLIM 015); Phenology of marine (CLIM 014); Ocean acidification (CLIM 043); Ocean heat content (CLIM 044); Sea surface temperature (CSI 046/CLIM 013); Global and European sea-level rise (CSI 047/CLIM 012)
Freshwater	River flow (CLIM 016); River flow drought (CLIM 018); Water temperature (CLIM 019); River floods (CLIM 017)
Terrestrial ecosystems, soil and forest	Distribution of plant species (CLIM 022); Distribution and abundance of animal species (CLIM 024); Species interactions (CLIM 026); Plant and fungi (CLIM 023); Animal phenology (CLIM 025); Forest growth (CLIM 034); Forest fires (CLIM 035); Soil erosion (CLIM 028); Soil organic carbon (CLIM 027); Soil moisture (CLIM 029)
Damages	Economic losses from climate-related events (CSI 042/CLIM 039)
Human health	Extreme temperatures and health (CLIM 036); Floods and health (CLIM 046); Vector-borne diseases (CLIM 037); Water and food-borne diseases (CLIM038)
Agriculture	Growing season for agricultural crops (CLIM 030); Agrophenology (CLIM 031); Water-limited crop productivity (CLIM 032); Irrigation water requirement (CLIM 033)
Energy, Transport, Tourism	Heating and cooling degree days (CLIM047)
Atmosphere	Atmospheric greenhouse gas concentrations (CSI 013/CLIM 052); Effects of climate change: Air pollution due to ozone and health impacts (CLIM 006); Total greenhouse gas emission trends and projections (CSI 010/CLIM 050); Progress to greenhouse gas emission targets (CSI 011/CLIM 051); Production, sales and emissions of fluorinated greenhouse gases (F-gases) (CSI 044/CLIM 048); Production and consumption of ozone-depleting substances (CSI 006/CLIM 049)

For further information:

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