

## Contribution to Beyond GDP „Virtual Indicator Expo“

<http://www.beyond-gdp.eu>

Name of the indicator/method: **The EEA environmental indicators**

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The EEA aims to support the development and implementation of sound environmental policies in the EU and other EEA member countries by delivering timely, targeted, relevant and reliable information to policy-makers and the public. A significant part of the EEA activities is based on the production, use and dissemination of environmental indicators.

Environmental indicators hosted by the EEA are designed to support EU policies. The EEA uses statistics from international organisations and EU partners, and national data gathered through Eionet.

EEA indicators are developed against the DPSIR model (Driving forces, Pressures, State, Impact, Responses), which describes the state of the environment, its impact on human beings, ecosystems and materials, the pressures on the environment, the driving forces and the responses steering that system. In particular:

- Driving force indicators describe the social and economic developments in societies and the corresponding changes in lifestyles and overall levels of consumption and production patterns; primary driving forces are demographic changes and economic activities.
- Pressure indicators describe developments in the release of substances (e.g. emissions to air or water), physical and biological agents, the use of resources and use of land; the pressures exerted often manifest themselves in changes in environmental conditions.
- State indicators provide a description of the quantity and quality of physical phenomena (e.g. temperature), biological phenomena (e.g. species and habitat diversity) and chemical phenomena (e.g. nutrient critical loads) in a certain area.

- Impact indicators are used to describe the relevance of changes in the state of the environment, as well as the corresponding implications for ecosystems, the economy and human well-being and health.
- Response indicators refer to responses by society and policymakers that attempt to prevent, compensate, ameliorate, or adapt to changes in the state of the environment; examples include recycling rates of domestic waste or use of renewable energy sources.

The EEA indicators can also be classified according to their typology, i.e. depending on which environmental challenge they address and which stage of the policy cycle they aim to inform:

- Descriptive indicators (type A): ‘what is happening?’
- Performance indicators (type B): ‘are we reaching targets?’
- Efficiency indicators (type C): ‘are we improving?’
- Policy effectiveness indicators (type D): ‘are policies working?’
- Total welfare indicators (type E): ‘are we on the whole better off?’

The EEA currently hosts 225 environmental indicators<sup>1</sup>, which are divided into two main groups: the core set of indicators (CSI) and the other indicator sets.

### **EEA’s core set of indicators**

The 37 **core set of indicators (CSI)**, established in 2004 and approved by the EEA member countries, is of known quality and regularly updated. It provides a manageable and stable basis for indicator reporting by the EEA on the web and in its indicators-based reports; it also prioritises improvements in the quality and geographical coverage of data flows, especially the Eionet priority data flows. The core set streamlines EEA/Eionet contributions to other European and global indicator initiatives, e.g. structural indicators and sustainable development indicators.

The indicators in the core set were selected from a much larger set, on the basis of nine criteria<sup>2</sup> widely used elsewhere in the EU and OECD.

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<sup>1</sup> [http://www.eea.europa.eu/data-and-maps/indicators#c10=&c7=all&c5=&c0=10&b\\_start=0](http://www.eea.europa.eu/data-and-maps/indicators#c10=&c7=all&c5=&c0=10&b_start=0)

<sup>2</sup> These criteria include: policy relevance, progress towards targets, available and routinely collected data, spatial and temporal coverage, national coverage and representativeness of data, Understandability of indicators, and methodologically well founded.

The core set covers 6 environmental themes (air pollution and ozone depletion, climate change, waste, water, biodiversity and terrestrial environment) and 4 sectors (agriculture, energy, transport and fisheries); all the topics address EU policy priorities. All of the core set indicators are either descriptive or performance based and one of the challenges for the future will be to develop more and better indicators of eco-efficiency, policy effectiveness and welfare; issues like the value and degradation of natural capital, global resource flows, cost-effectiveness and the intergenerational and environmental aspects of the quality of life, will be considered in this regard.

Many of the CSI are also used in other international indicator processes being implemented elsewhere, notably at the European Commission, OECD, WHO and UNECE. The CSI is widely used outside the EEA, and often taken as a model for indicator sets at the level of member countries and cooperating countries or with ENP countries.

The current composition of the core set is described in the table below.

Theme	Code	Indicator name
Agriculture	CSI 025	Gross nutrient balance
	CSI 026	Area under organic farming
Air pollution	CSI 001	Emissions of acidifying substances
	CSI 002	Emissions of ozone precursors
	CSI 003	Emissions of primary particulate matter and secondary particulate matter precursors
	CSI 004	Exceedance of air quality limit values in urban areas
	CSI 005	Exposure of ecosystems to acidification, eutrophication and ozone
Biodiversity	CSI 007	Species of European interest
	CSI 008	Designated areas
	CSI 009	Species diversity
Climate change	CSI 006	Production and consumption of ozone depleting substances
	CSI 010	Greenhouse gas emission trends
	CSI 011	Greenhouse gas emission projections
	CSI 012	Global and European temperature
	CSI 013	Atmospheric greenhouse gas concentrations
Energy	CSI 027	Final energy consumption by sector
	CSI 028	Total primary energy intensity
	CSI 029	Primary energy consumption by fuel
	CSI 030	Renewable primary energy consumption
	CSI 031	Renewable electricity consumption
Fisheries	CSI 032	Status of marine fish stocks
	CSI 033	Aquaculture production
	CSI 034	Fishing fleet capacity
Land & soil	CSI 014	Land take
	CSI 015	Progress in management of contaminated sites
Transport	CSI 035	Passenger transport demand
	CSI 036	Freight transport demand
	CSI 037	Use of cleaner and alternative fuels
Waste	CSI 016	Municipal waste generation
	CSI 017	Generation and recycling of packaging waste
Water	CSI 018	Use of freshwater resources
	CSI 019	Oxygen consuming substances in rivers
	CSI 020	Nutrients in freshwater
	CSI 021	Nutrients in transitional, coastal and marine waters
	CSI 022	Bathing water quality
	CSI 023	Chlorophyll in transitional, coastal and marine waters
	CSI 024	Urban waste water treatment

The EEA website contains the latest information available about the CSI<sup>3</sup>. The report 'Environmental indicators: Typology and overview'<sup>4</sup> describes EEA initial indicator methodology. The guide 'EEA core set of indicators'<sup>5</sup> provides information on the quality of

<sup>3</sup> [www.eea.europa.eu/data-and-maps/indicators#?c7=all&c5=&c0=10&b\\_start=0&c10=CSI](http://www.eea.europa.eu/data-and-maps/indicators#?c7=all&c5=&c0=10&b_start=0&c10=CSI)

<sup>4</sup> [http://www.eea.europa.eu/publications/TEC25/at\\_download/file](http://www.eea.europa.eu/publications/TEC25/at_download/file)

<sup>5</sup> [http://www.eea.europa.eu/publications/technical\\_report\\_2005\\_1](http://www.eea.europa.eu/publications/technical_report_2005_1)

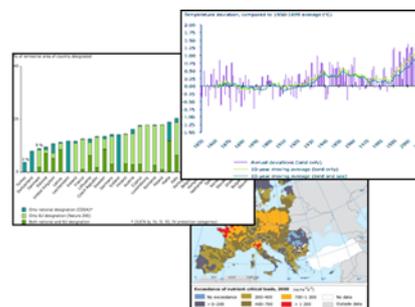
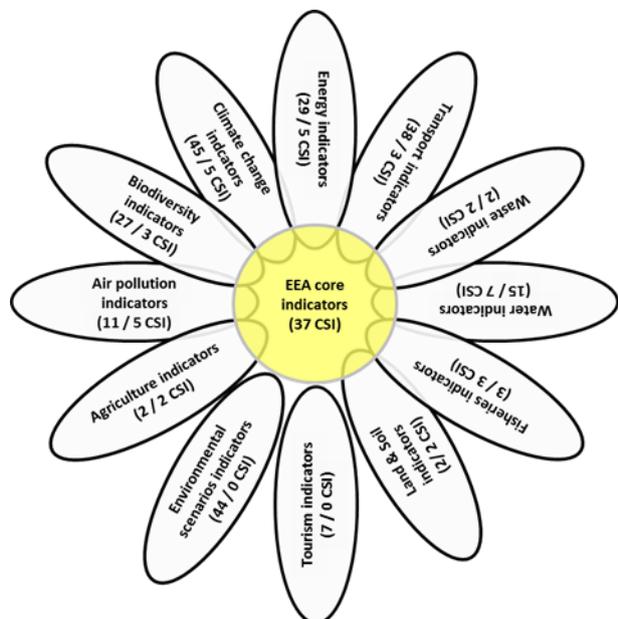
the CSI. A good example of a core set indicator is the indicator ‘Exceedance of air quality limit values in urban areas’<sup>6</sup>.

### Other indicator sets

The **other indicator sets** are organized into 12 theme-based sets. These indicators have been developed to support different assessment areas as well as specific policy processes. For example, the APE indicators underpin the respective core set indicators that address air pollutant emissions, the CLIM indicators assess the impacts of climate change in Europe, the ENER indicators help studying energy-use developments and analysing factors behind changes in energy use, the SEBI indicators are developed by a pan-European partnership to assess and inform about progress towards the European biodiversity targets, while the TERM indicators represent a long-term vision of the indicators ideally needed to measure the degree of environmental integration in the transport sector and the effectiveness of the various policy measures.

All the EEA indicators may be represented by an ‘indicator flower’, where the centre is the core set and the petals represent the other indicator sets. The core set draws its indicators by most the thematic areas.

### Overview of the EEA indicators



#### Different types of indicators:

- (Type A) Descriptive indicators
- (Type B) Performance indicators
- (Type C) Efficiency indicators
- (Type D) Policy effectiveness indicators
- (Type E) Total welfare indicators

<sup>6</sup> <http://www.eea.europa.eu/data-and-maps/indicators/exceedance-of-air-quality-limit-1/exceedance-of-air-quality-limit-3>