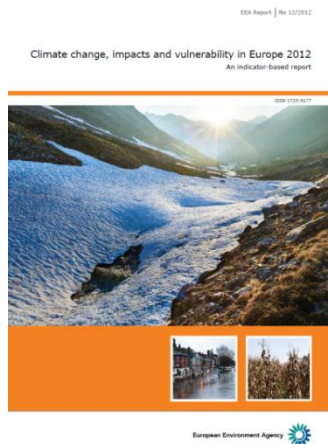


EEA assessments and use of climate data

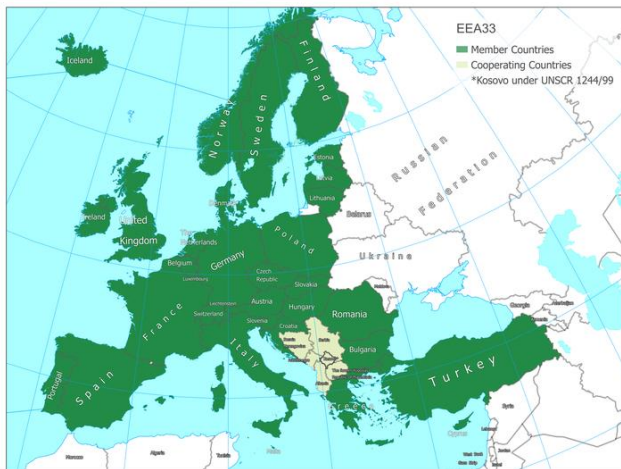
Blaz Kurnik Climate change impacts and adaptations (EEA)



1. EEA and EEA climate change assessments

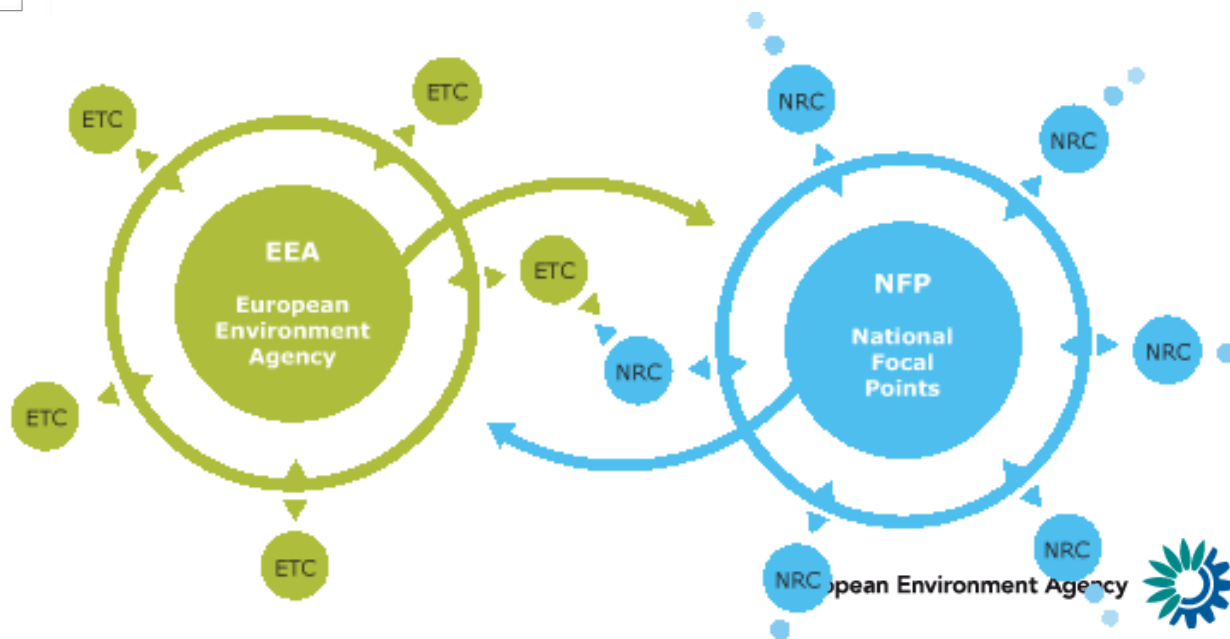
2. Links to UERRA (e.g. user friendly data services) and C3S (e.g. SIS)

EEA structure



About 300 national institutions

- National focal points (management)
- European topic centres (science)
- National reference centres (data)
- Other networks (projects, services, ...)



Main EEA products and tasks

- To maintain regular **flow** of environmental data and data **collection** through the EIONET
- To regularly update environmental **indicators**
- To publish environmental (including climate change) **assessments**
- To maintain environmental **information platforms** (BISE, WISE, Climate-ADAPT)
- To coordinate implementation of two components of **Copernicus land monitoring service** and **Copernicus In-situ** component

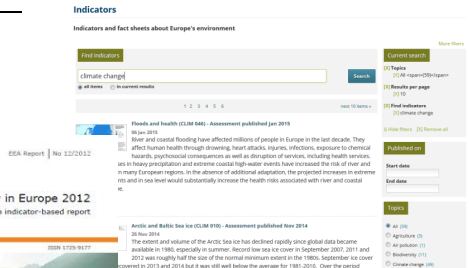
Climate change information

Climate change impacts indicators
(updated “annually”)

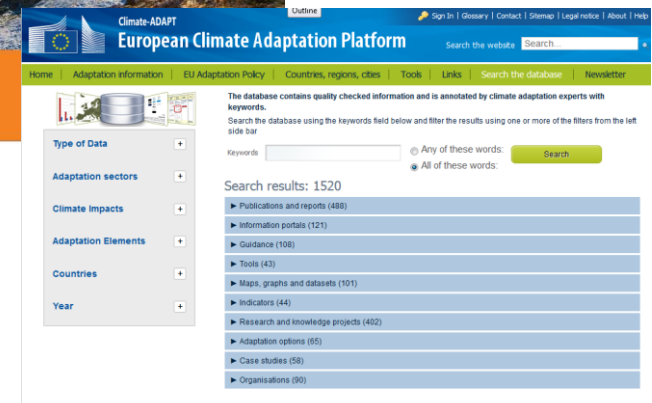
Climate change impact report
(next update in 2016)

Climate-ADAPT
(updated “daily”)

Technical paper in 2015
“Weather and climate related extreme events
in Europe”



Climate change, impacts and vulnerability in Europe 2012
An indicator-based report



Weather and
Climate
Related
extreme
events in
Europe



EEA Climate change impact indicators

A typical EEA climate change impact indicator:

- is a measure that can be used to illustrate and communicate complex environmental phenomena (e.g. climate change) simply
- comprises specification and assessment(s) including key messages
- uses quantitative data on observed changes and projections
- includes information on uncertainties
- has policy defined purposes
- uses well defined criteria
- is published on EEA web pages and in Climate-ADAPT
- supports development of adaptation policies

The screenshot displays the EEA website's 'Indicators' section. At the top, there's a navigation bar with 'Topics', 'Data and maps', 'Indicators', and 'Publications'. Below this, a search bar contains the text 'climate change'. The results show two indicators: 'Floods and health (CLIM 046)' and 'Arctic and Baltic Sea ice (CLIM 010)'. Each indicator entry includes a small map or chart, a title, a date, and a brief description. On the right side, there are filters for 'Current search', 'Published on', and 'Topics'.

European Environment Agency

Search Europe's environment... Search

Advanced search A-Z Glossary

Topics Data and maps Indicators Publications Media About EEA

You are here: Home / Data and maps / Indicators

Indicators

Indicators and fact sheets about Europe's environment

Find indicators

climate change

all items In current results

1 2 3 4 5 6 next 10 items >

Floods and health (CLIM 046) - Assessment published Jan 2015

06 Jan 2015

River and coastal flooding have affected millions of people in Europe in the last decade. They affect human health through drowning, heart attacks, injuries, infections, exposure to chemical hazards, psychosocial consequences as well as disruption of services, including health services. Observed increases in heavy precipitation and extreme coastal high-water events have increased the risk of river and coastal flooding in many European regions. In the absence of additional adaptation, the projected increases in extreme precipitation events and in sea level would substantially increase the health risks associated with river and coastal flooding in Europe.

[Read more](#)

Arctic and Baltic Sea ice (CLIM 010) - Assessment published Nov 2014

26 Nov 2014

The extent and volume of the Arctic Sea ice has declined rapidly since global data became available in 1980, especially in summer. Record low sea ice cover in September 2007, 2011 and 2012 was roughly half the size of the normal minimum extent in the 1980s. September ice cover has somewhat recovered in 2013 and 2014 but it was still well below the average for 1981-2010. Over the period

Current search

[X] Topics [X] All (59)

[X] Results per page [X] 10

[X] Find indicators [X] climate change

Hide filters Remove all

Published on

Start date

End date

Topics

All (59)

Agriculture (3)

Air pollution (1)

Biodiversity (11)

Climate change (49)

Underpinning datasets

Type:

- Climate variables (daily min, max, mean air temperature, total precipitation amount, ...)
- Climate indices (drought index, cold spell index, soil moisture index, ...)

Sources:

- Research projects and programmes (EURO4M, ERA-CLIM2, UERRA,...)
- Met offices and Climate Services (ECMWF, UK MO, KNMI, ...)
- Global and European organisations (WHO, ECDC, CRED, JRC, ...)
- Academia, through scientific literature databases
- EIONET and ETC

Criteria:

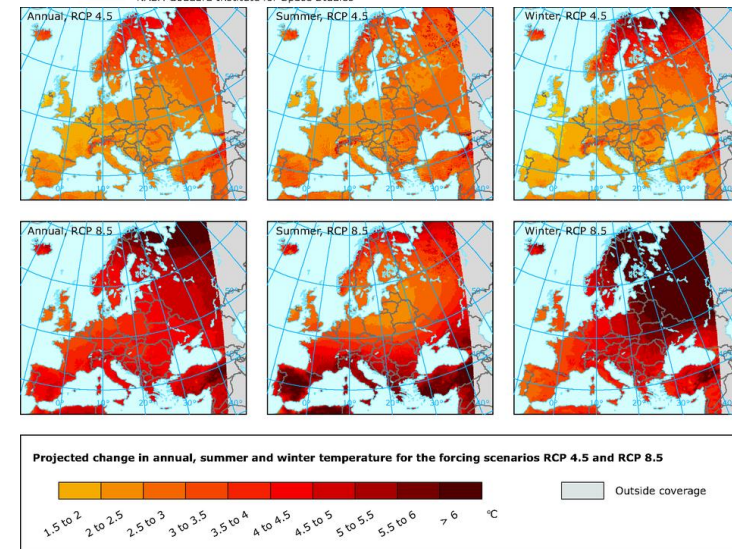
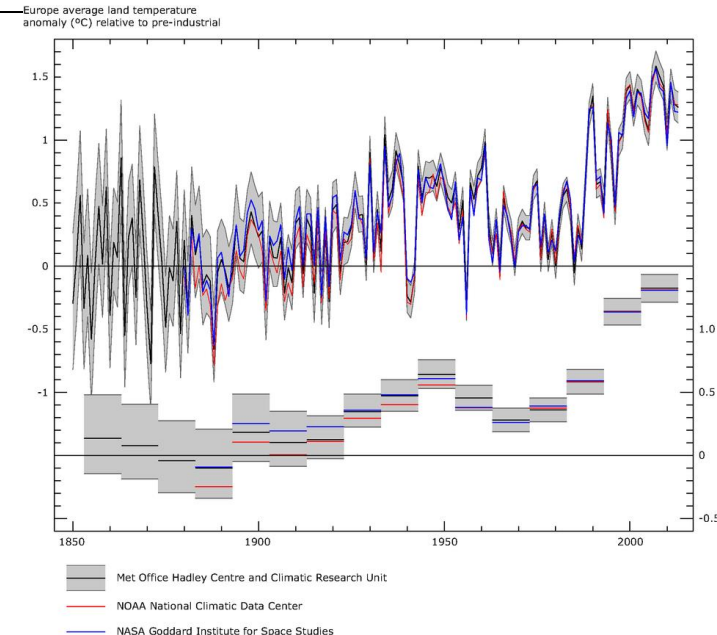
- Thematic and policy relevance
- Scientific soundness
- Geographical coverage
- Appropriate geographical characterization
- Long time series
- Reliable data supply
- Clear methodology



Example: Global and European temperature (CSI012)

Key messages

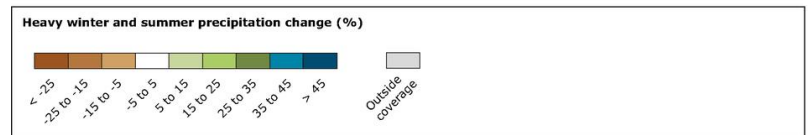
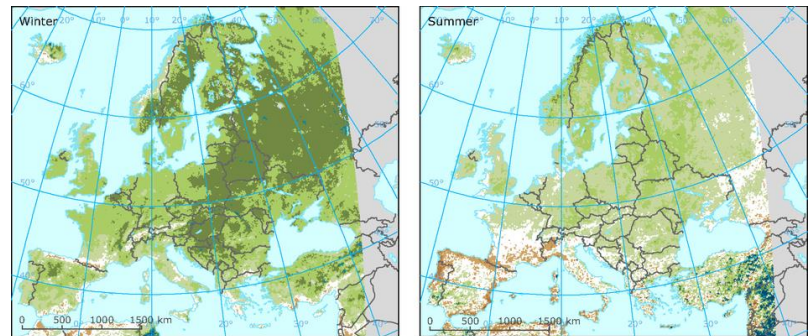
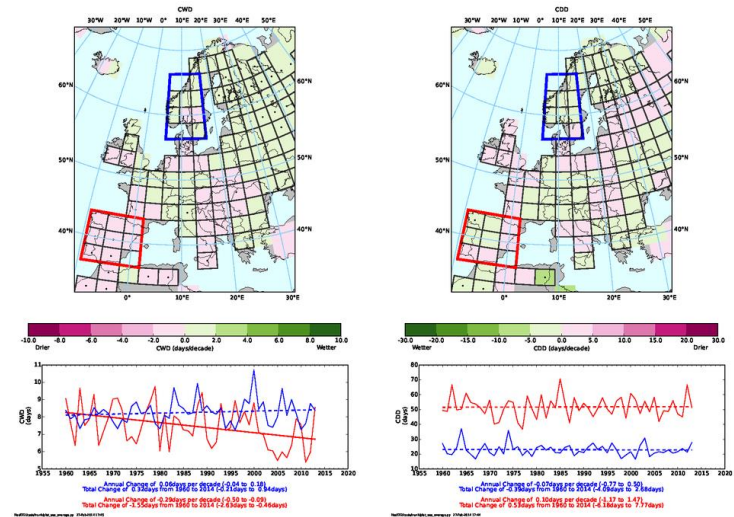
- The average temperature for the European land area for the last decade (2004–2013) is 1.3°C above the pre-industrial level, which makes it the warmest decade on record.
- Annual average land temperature over Europe is projected to continue increasing by more than global average temperature over the rest of this century, by around 2.4 °C and 4.1 °C under RCP4.5 and RCP8.5 respectively.
- Extremes of cold have become less frequent in Europe while warm extremes have become more frequent.



Example: Extreme precipitation CLIM004

Key messages

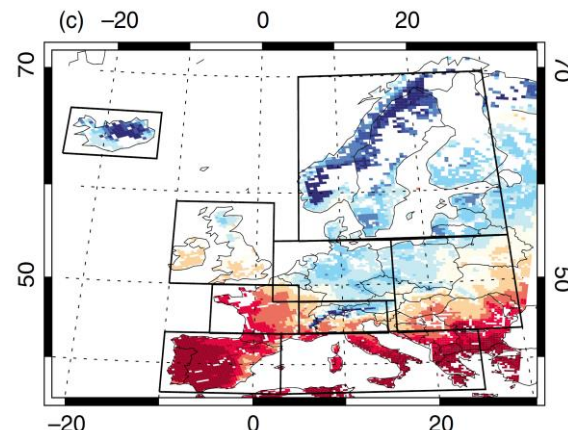
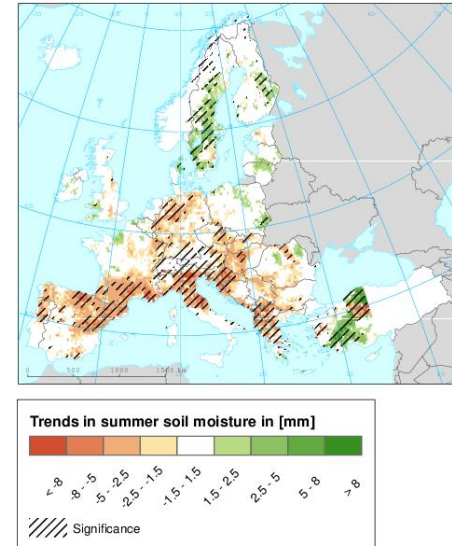
- The length of the wet period has significantly increased in north-eastern Europe and decreased in south-western Europe.
- Data availability is insufficient for assessing trends of extreme daily precipitation across Europe.
- Increasing summer dryness has been observed in central and southern Europe since the 1950s.
- Heavy precipitation events are likely to increase in most parts of Europe, especially in central and eastern Europe in winter.
- The length of dry spells is projected to increase significantly in southern and central Europe, in particular in summer, and to decrease in northern Europe.



Example: Soil moisture CLIM029

Key messages

- Soil moisture capacity and soil moisture content will be affected by rising temperatures and by a decline in soil organic matter due to both changes in climate and land management.
- Soil moisture in summer has significantly decreased in parts of southern Europe and increased in the North.
- Projections (for 2071–2100) show a general reduction in summer soil moisture over most of Europe, significant reductions in the Mediterranean region, and increases in the north-eastern part of Europe.



Source: Henrich et al, 2011



Climate change impact report

Changes in the climate system

Climate variables

Cryosphere (glaciers, snow and ice)

Climate impacts on environmental systems

Marine environment and biodiversity

Coastal zones

Inland waters (quantity and quality, biodiversity)

Terrestrial ecosystems and biodiversity

Soil

Climate impacts on socio-economic systems and health

Agriculture

Forestry/forests

Energy

Transport, fisheries (no indicators)

Human health

Vulnerability indices

Contributors: European Topic Centres (ETCs), WHO, ECDC, JRC (about 90 experts), data from research projects and international databases

New report under preparations, to be published in 2016

EEA Report | No 12/2012

Climate change, impacts and vulnerability in Europe 2012
An indicator-based report

ISSN 1725-9177



Paper on weather and climate related extreme events

- Scientific/Expert meeting in 18-19 March in EEA (up to 20 participants)
- Technical paper on Weather and Climate Related Extreme event
- Update of indicators on Extreme temperature and Extreme precipitation
- Development of new indicators on Drought and (potentially) Hail

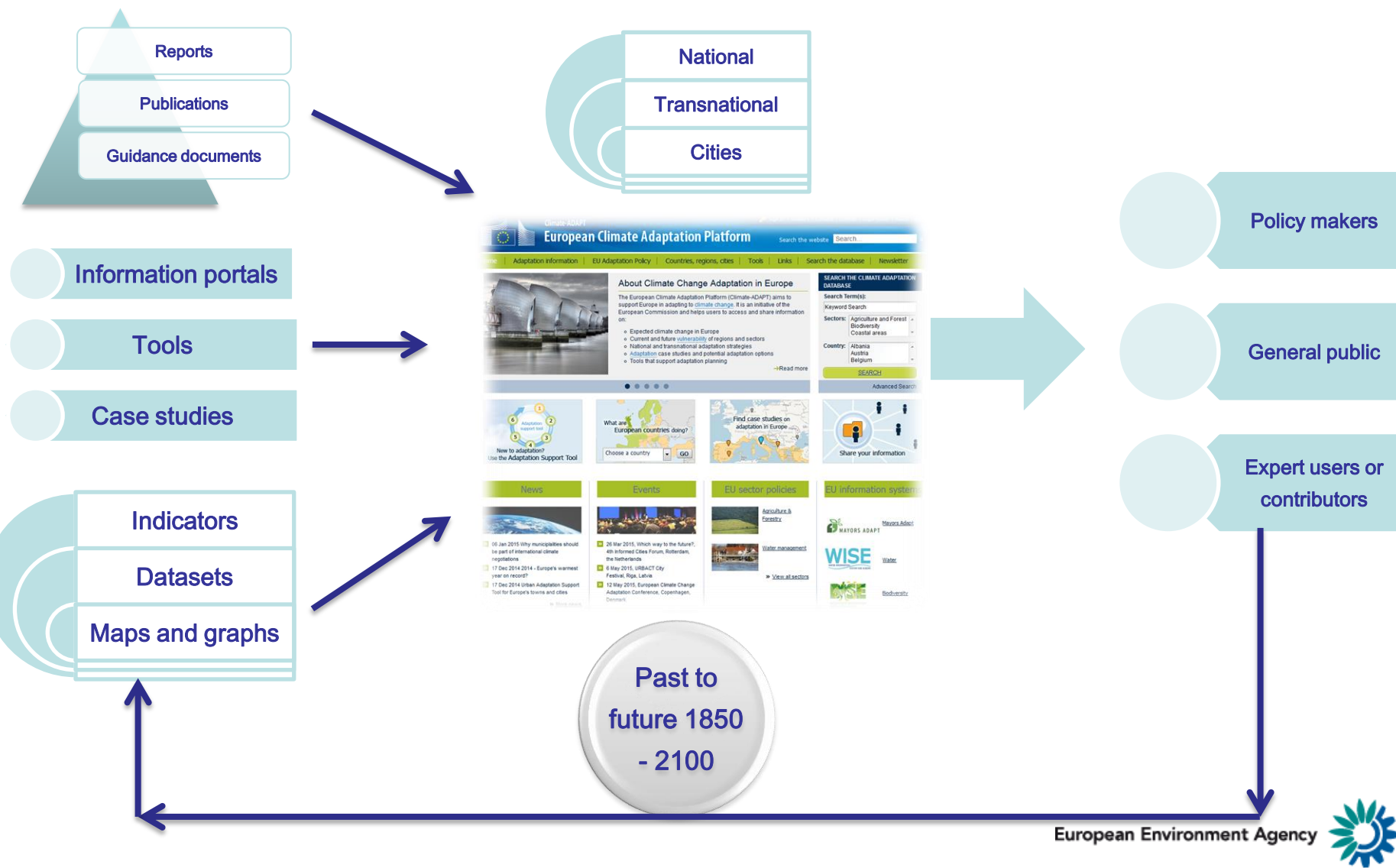
Climate-ADAPT

Climate-ADAPT is a partnership between the EC and the EEA with information on:

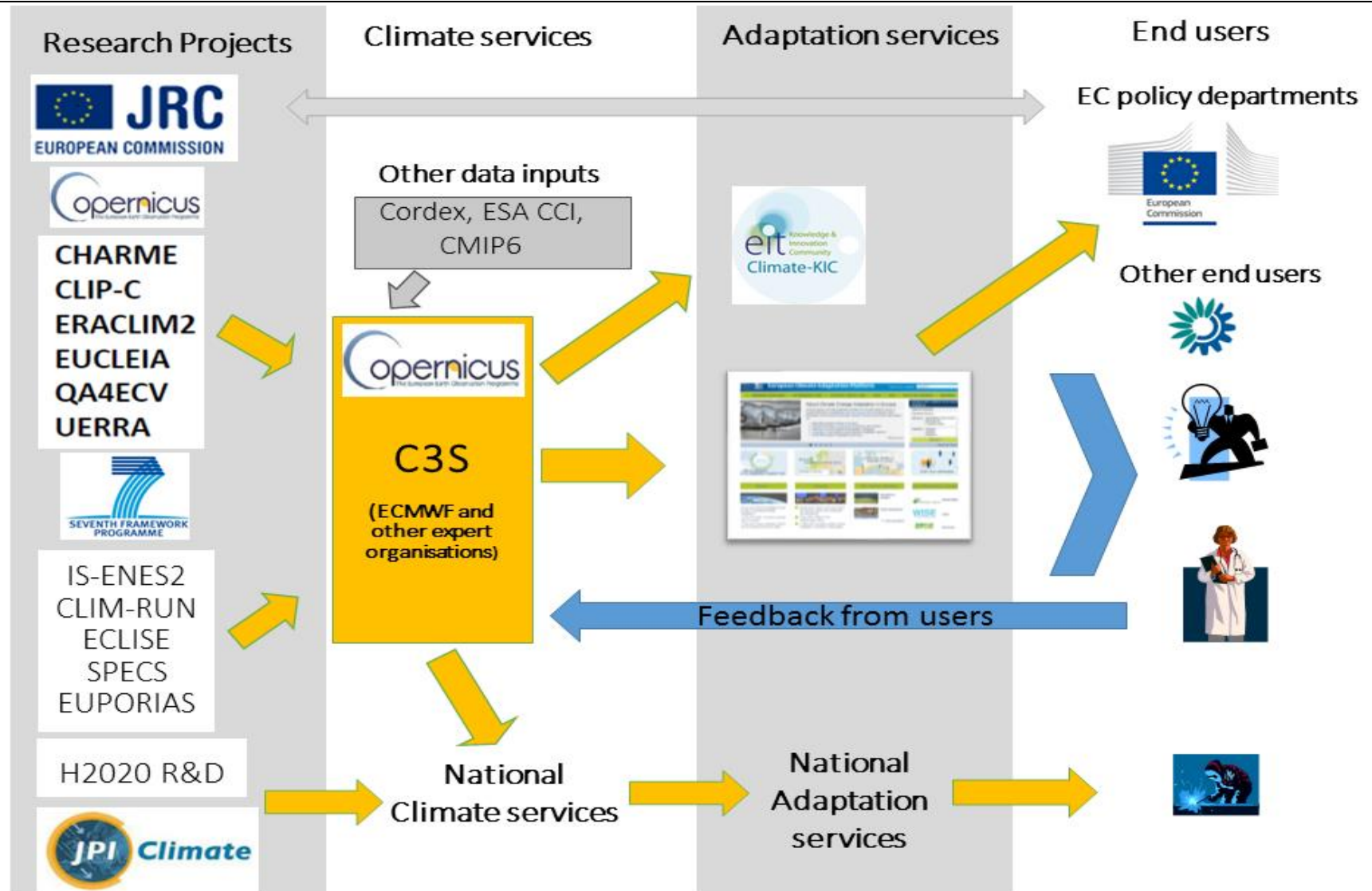
- observed and projected climate change
- current and future vulnerability of regions and sectors,
- national, sub-national (cities) and trans-national adaptation strategies,
- adaptation case studies and potential adaptation options,
- tools that support adaptation planning,
- overview of relevant EU policy frameworks and processes.



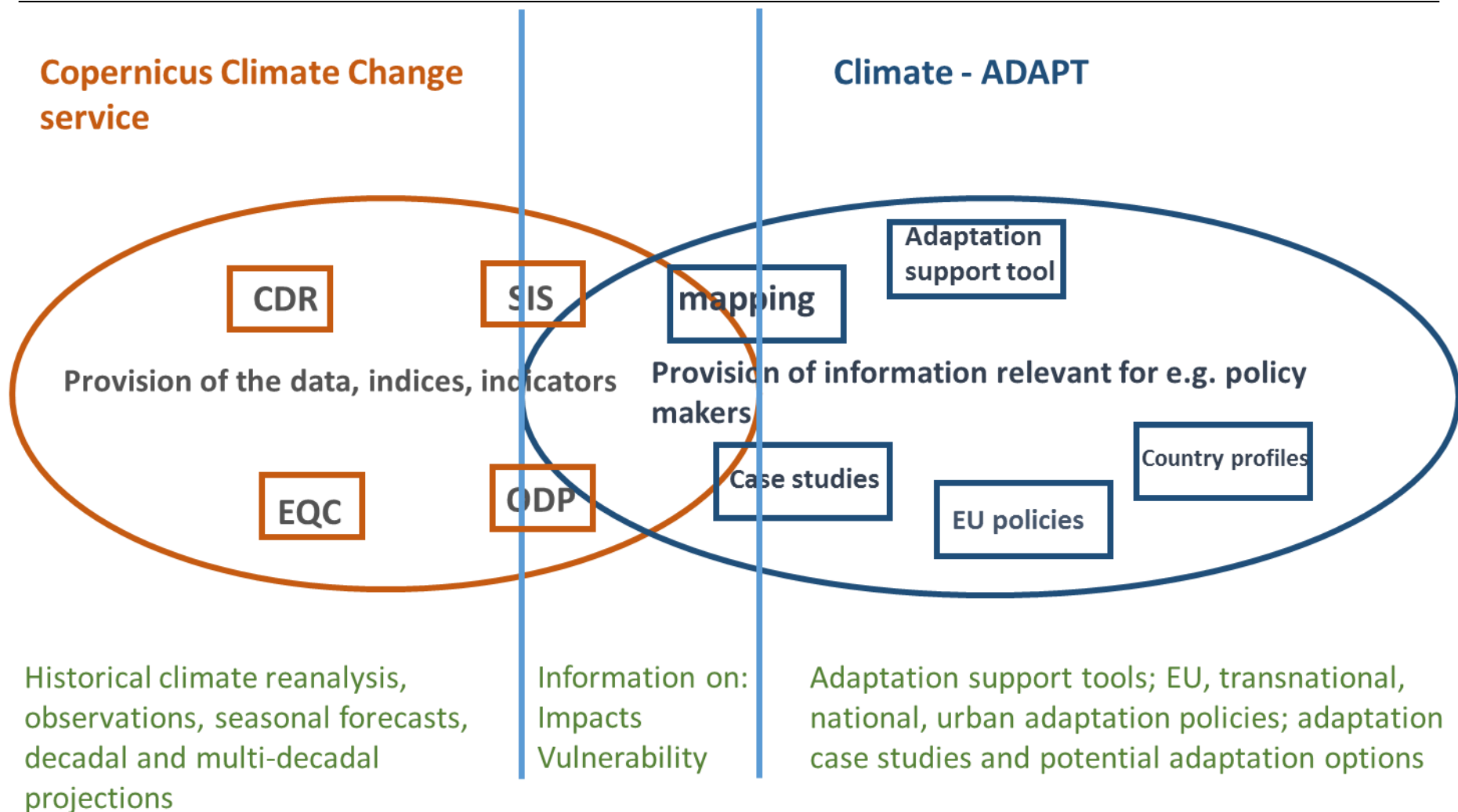
Climate-ADAPT: collecting and disseminating information on adaptation



The concept of information flow and links to C3S



C3S and Climate-ADAPT “working” areas



Potential future links between C3S and EEA

Indicators and assessments

- selected climate variables (from the CDS) or indicators from the SIS could be used as a data source for a subset of the EEA climate change and CC impact indicators,
- C3S and EEA prepare joint assessment reports (for example annual climate change reports).

Climate-ADAPT

- Inclusion of the C3S pre-operational project reports as a new section (searchable through the database),
- presentation of C3S outputs to the section on (climate change) observations and scenarios or including a new section describing and showing C3S,
- map viewer (for climate change impacts, vulnerability and risks) could be extended or replaced by outputs from C3S including pre-operational projects).





Thank you for your attention

**<http://www.eea.europa.eu/themes/climate>
<http://climate-adapt.eea.europa.eu>**