- Glossary, based on other European and IPCC glossaries
- Training videos on how to use the portal and the toolkit

User Feedback

User feedback was a key component in the development of the portal. In breakout sessions during the final dissemination and evaluation workshop, the participants discussed and tested the diverse features and functionalities of the CLIPC portal. In general, participants were impressed by the achievements realised and they appreciated the way information about the confidence users may have in the various data sets and indicators is communicated. The participants were impressed by the speed of handling big data sets. Use cases were seen as valuable for less experienced users.

CLIPC – supporting an expanding number of users in accessing and understanding climate impacts data

CLIPC offers many opportunities for further development and application of the portal as a whole, as well as selected individual components, dependent on future funding. The primary follow-up is related to the application of the portal in the Copernicus Climate Change Services (C3S), managed by ECMWF. Additional opportunities have been identified, including integrating CLIPC components such as the map viewer and impact indicator toolbox into the European Climate Adaptation Platform (Climate-ADAPT). Another interesting potential future application is the use of CLIPC and its data sources and functionalities for climate stress testing of investments in other parts of the world, including adaptation projects, such as those supported by national and multinational governments and financial institutions.

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Visit us at: www.clipc.eu

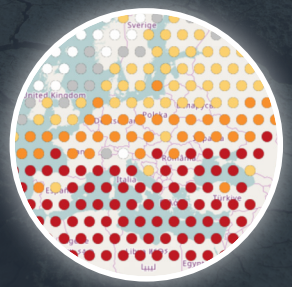
Climate Information Portal

Climate Information Platform for Copernicus (CLIPC)
Project Achievements

Providing access to climate datasets, tools and information to assess the impact of climate change

A comprehensive catalogue of climate data and impact indicators

Advanced data discovery, visualisation, transformation and delivery



Documentation on data quality and uncertainty

Visit us at: www.clipc.eu

Climate Information Portal

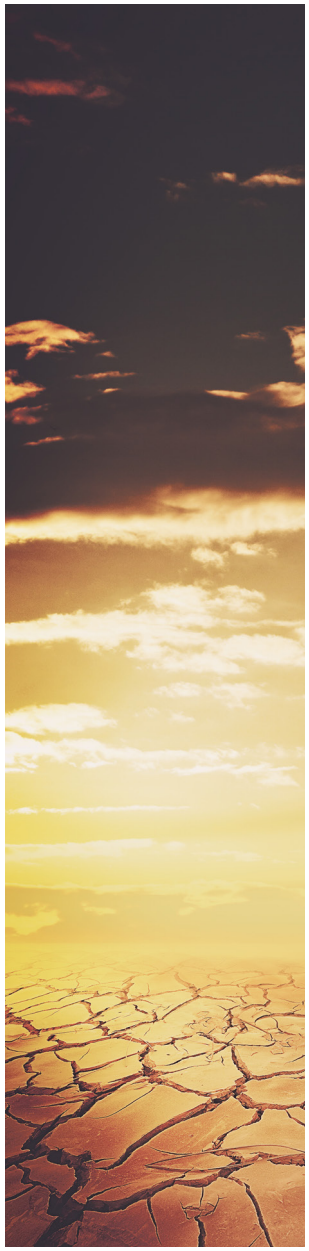
Climate change is one of the greatest issues impacting humanity's future. In order to adapt to and mitigate against its effects, trustworthy, legitimate and useful information needs to be made available to those who need them, including scientists, those responsible for planning decisions in the public and private sectors, their advisors and the public at large.

The Climate Information Platform for Copernicus (CLIPC) project has developed an integrated web- platform of Climate Data Services to provide a single point of access for authoritative scientific data and information on climate variability and change, and the impacts of these. CLIPC supports the Copernicus Climate Change Services (C3S), which will deliver the next generation of climate and climate impacts data for Europe's citizens.

The added value of the CLIPC portal

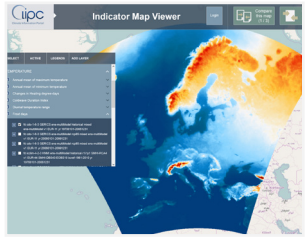
The CLIPC portal provides access to Europe-wide climate and climate impact data, from scientifically trusted sources, along with the supporting information required for its effective and meaningful use. This "one-stop-shop" portal facilitates users in their search to answer questions related to climate change impact. It has been developed to accommodate the needs and demands of diverse users across Europe to the largest extent possible. The CLIPC portal has important advantages over other European climate information portals:

- **Access to different data types.** The portal includes data from satellite and in-situ observations, climate models and data re-analyses, transformed data products enabling impact assessments, climate change impact indicators, and socio-economic data that are important to assess vulnerabilities.
- **Access to a large variety of data sources.** The climate data search service allows users to search for climate datasets in several important international infrastructures. The portal complements existing services, but focuses on datasets providing information on climate variability on decadal to centennial time scales from observed and projected climate change impacts in Europe.
- **Data provenance.** CLIPC ensures that the provenance of data products is well-documented, by providing access to intermediate data products and documentation on the technical quality of data, on metrics related to scientific quality, and on uncertainties in and limitations of the data.
- **Enhanced functionalities.** Users can store the results of their searches in their own environment (MyCLIPC) and combine the information with other data files for their specific purposes. Various post-processing options are available; for example, the novel Impact Indicator Toolbox allows users to combine, compare and rank indicators and generate new ones.

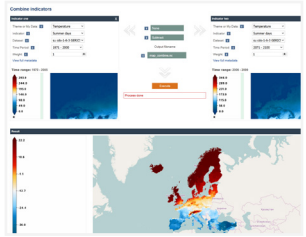


Climate Information Portal

CLIPC website portal



Indicator toolkit map viewer



Indicator toolkit combine function

Despite the value of these features, the CLIPC portal is not intended to replace expert consultancy – the CLIPC portal is a decision-support system with potential for further tailoring in order to satisfy specific user needs , e.g. at the local or sectoral level.

The CLIPC Impact Indicator toolkit

The CLIPC toolkit enables specialist and non-technical users to assess possible impacts of climate change in an effective and trustworthy way, by combining climate and climate impact indicators. The user can view and explore impact indicators calculated for different climate change and socio-economic scenarios. Available datasets for the indicators can be selected and combined with each other using built-in operators and normalization functions. In addition, the toolkit allows users to perform decadal averaging "on the fly" to time series of indicators, and spatial averaging of these results across the regions of Europe. Toolkit results can be saved and retrieved from a personal data-basket.

Users can also compare the selected datasets via a map view, compare the supporting metadata, or "combine" two datasets into a new dataset. With this functionality users can add up climate impacts, or create a difference map. This opens up many new possibilities for climate change impact and vulnerability analysis, but it has to be used with caution to avoid combinations that are technically possible, but do not provide meaningful results, the interpretation of which remains the responsibility of the user.

Guidance for different users

The CLIPC portal allows access to climate and climate impact information for a variety of users, who have different requirements, needs and skills, and usually look for more than just mere access to data – they need information that is relevant, robust and legitimate. The portal's design allows users to navigate through it in a natural way. Fictitious use cases are provided to demonstrate the chain of analytical steps leading from climate and climate impact indicators to tailored information in local workflows and, finally, to decision support in specific sector management. Initial use cases cover questions as diverse as prioritization of forest land purchase, assessment of heat stress in urban areas and comparison of the phenology of moth species under climate and seasonal changes.

In addition to these use cases, the portal has several different types of guidance, including:

- Frequently Asked Questions (FAQs)
- Traffic lights and other types of warnings and recommendations while applying the portal's functionalities