Climate Change

Accessing GLOFAS data using the Climate Data Store

Eddy Comyn-Platt e.comyn-platt@ecmwf.int

European Commission | Copernicus Europe's eyes on Earth ECMWF

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The Climate Data Store Objectives

The **Copernicus Climate Change Service (C3S)** provides information to support **adaptation** and **mitigation** policies

- Make data discovery and access simple and relevant
- Provide online capabilities to process the data and develop easy-to-use applications
- Enable reproducible research
- Spend less time handling the data

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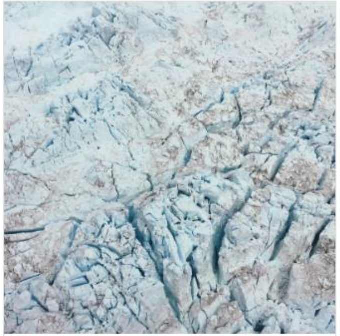
What kind of data?

Observations

Observations are key to understanding the climate system. C3S users can access a vast variety of instrumental data records, ranging from historic weather observations to the latest measurements from space.

Read more >



Climate reanalyses

Climate reanalyses combine past observations with models to generate consistent time series for a large set of climate variables. Reanalyses are among the most-used datasets in the geophysical sciences.

Read more >

Reanalysis data on the CDS >

Seasonal forecasts

C3S seasonal forecasts combine outputs from several state-of-the-art seasonal prediction systems from providers in Europe and elsewhere. The latest data and products are published monthly on the Climate Data Store.

Read more >

Seasonal forecast data on the CDS >

Climate projections

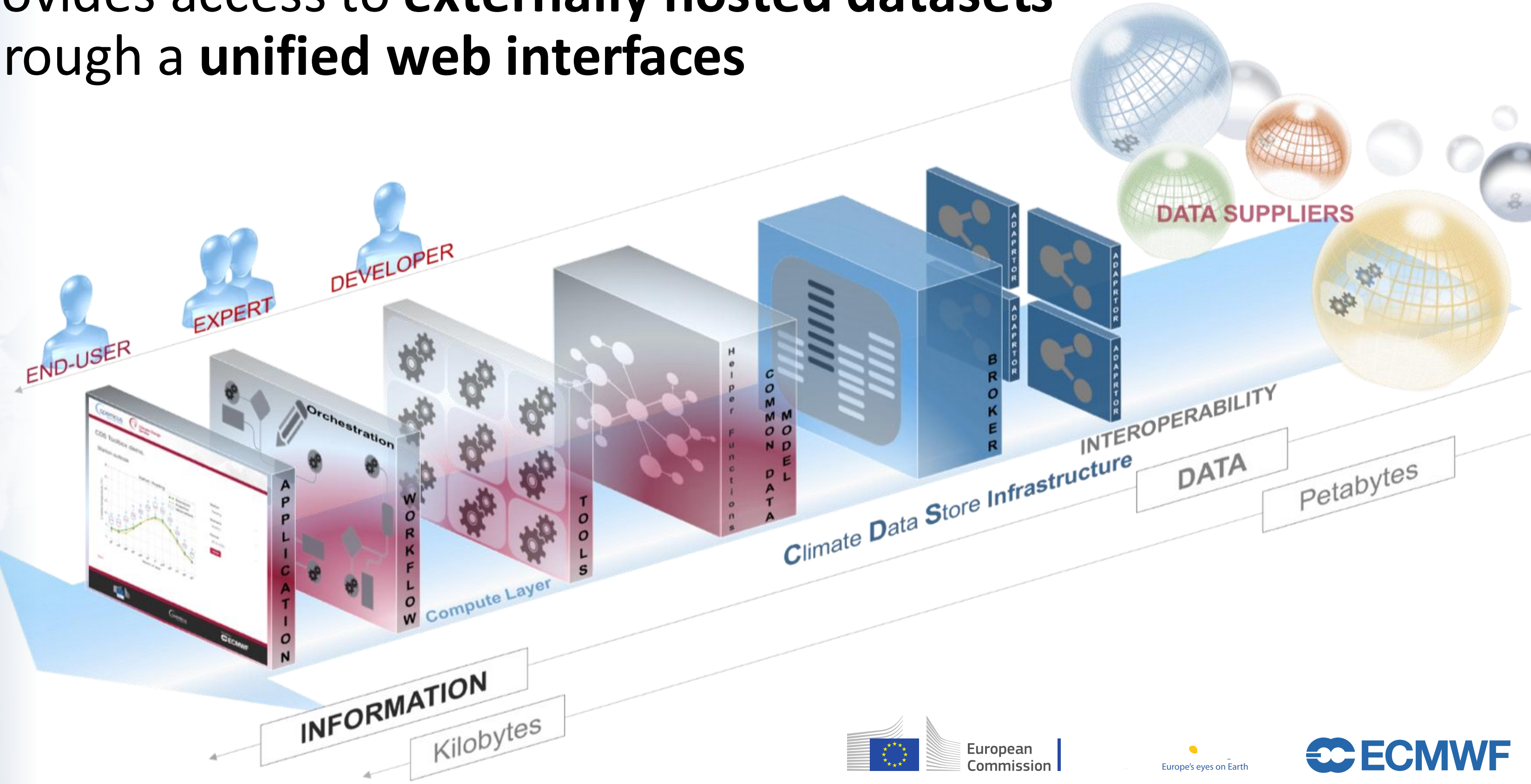
Projections of future climate change are available for different scenarios for concentrations of greenhouse gases and aerosols, based on outputs from multiple global and regional climate models.

Read more >

Climate projection data on the CDS >

Concept

The CDS is a **distributed system** which provides access to **externally hosted datasets** through a **unified web interfaces**



Example catalogue entries

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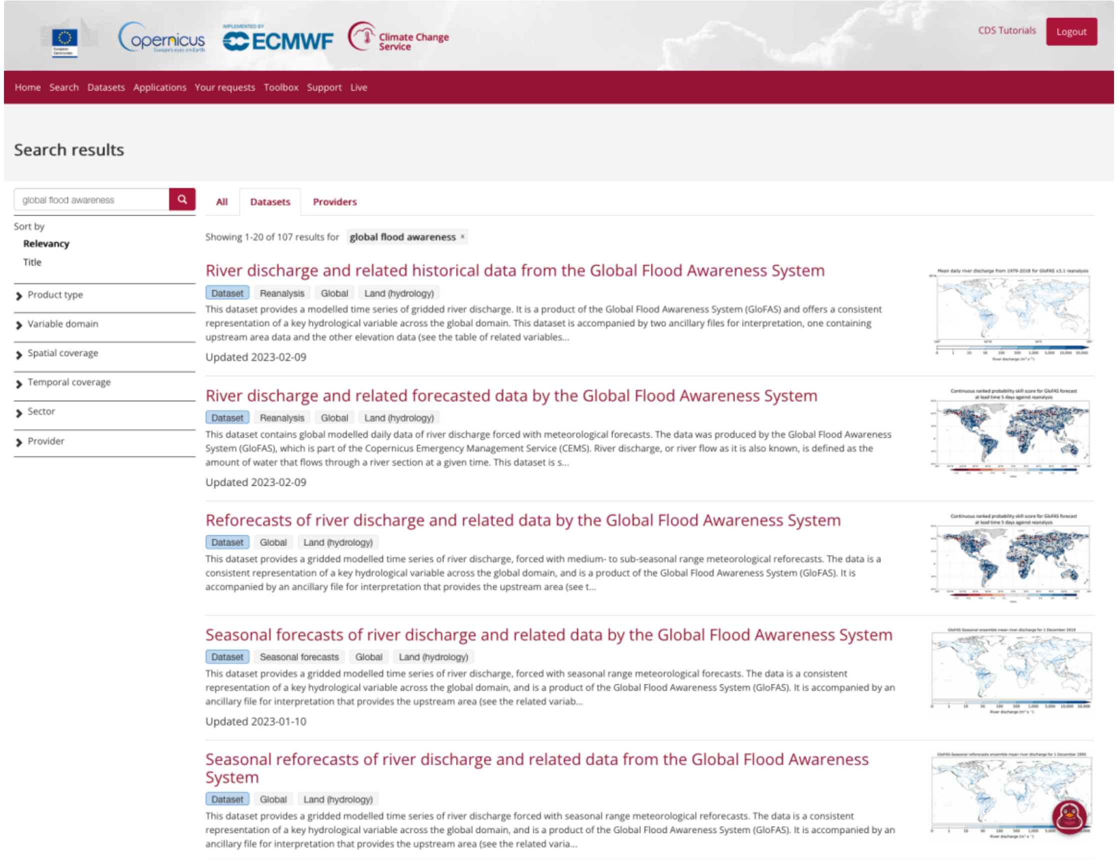

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Search results

global flood awareness

Sort by
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Title

- Product type
- Variable domain
- Spatial coverage
- Temporal coverage
- Sector
- Provider

All Datasets Providers

Showing 1-20 of 107 results for **global flood awareness** ×

River discharge and related historical data from the Global Flood Awareness System
Dataset Reanalysis Global Land (hydrology)
This dataset provides a modelled time series of gridded river discharge. It is a product of the Global Flood Awareness System (GloFAS) and offers a consistent representation of a key hydrological variable across the global domain. This dataset is accompanied by two ancillary files for interpretation, one containing upstream area data and the other elevation data (see the table of related variables...
Updated 2023-02-09

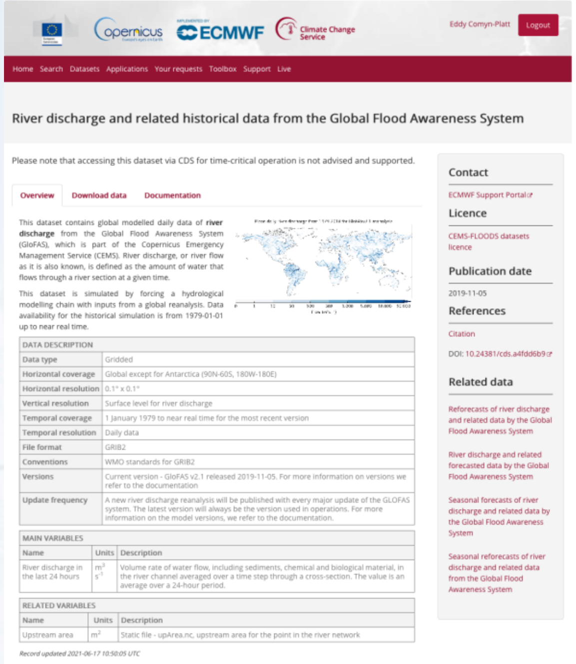
River discharge and related forecasted data by the Global Flood Awareness System
Dataset Reanalysis Global Land (hydrology)
This dataset contains global modelled daily data of river discharge forced with meteorological forecasts. The data was produced by the Global Flood Awareness System (GloFAS), which is part of the Copernicus Emergency Management Service (CEMS). River discharge, or river flow as it is also known, is defined as the amount of water that flows through a river section at a given time. This dataset is s...
Updated 2023-02-09

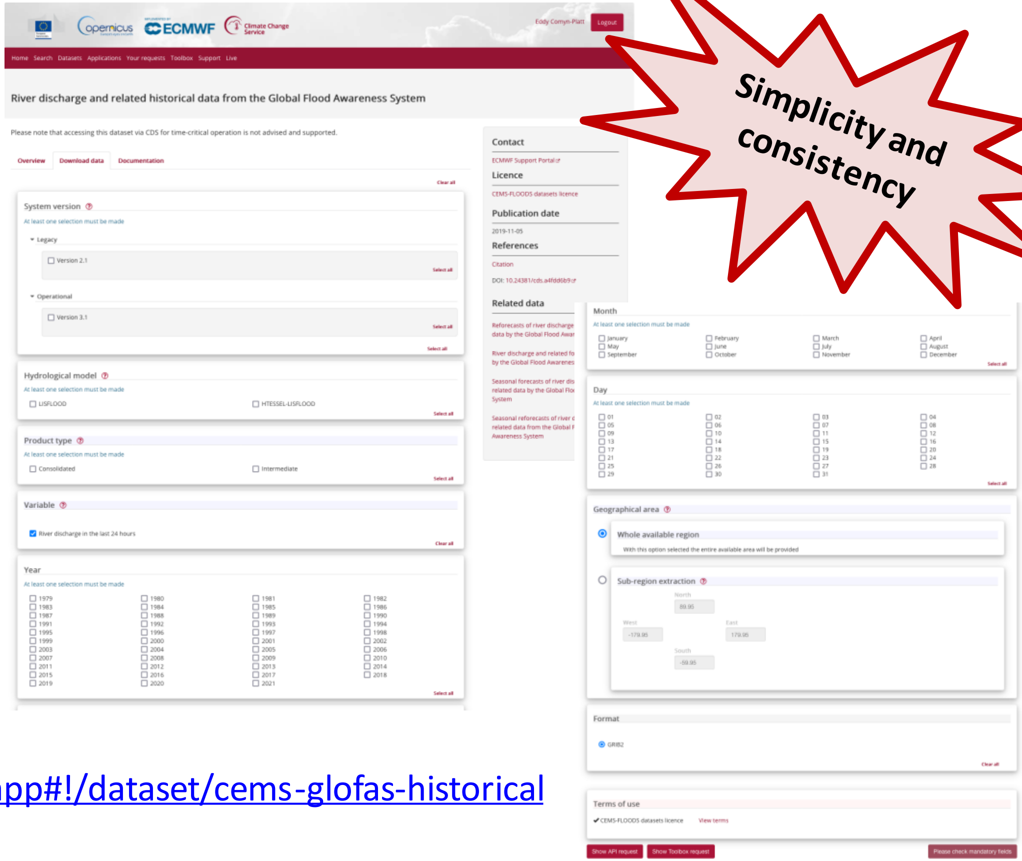
Reforecasts of river discharge and related data by the Global Flood Awareness System
Dataset Global Land (hydrology)
This dataset provides a gridded modelled time series of river discharge, forced with medium- to sub-seasonal range meteorological reforecasts. The data is a consistent representation of a key hydrological variable across the global domain, and is a product of the Global Flood Awareness System (GloFAS). It is accompanied by an ancillary file for interpretation that provides the upstream area (see t...

Seasonal forecasts of river discharge and related data by the Global Flood Awareness System
Dataset Seasonal forecasts Global Land (hydrology)
This dataset provides a gridded modelled time series of river discharge, forced with seasonal range meteorological forecasts. The data is a consistent representation of a key hydrological variable across the global domain, and is a product of the Global Flood Awareness System (GloFAS). It is accompanied by an ancillary file for interpretation that provides the upstream area (see the related variab...
Updated 2023-01-10

Seasonal reforecasts of river discharge and related data from the Global Flood Awareness System
Dataset Global Land (hydrology)
This dataset provides a gridded modelled time series of river discharge forced with seasonal range meteorological reforecasts. The data is a consistent representation of a key hydrological variable across the global domain, and is a product of the Global Flood Awareness System (GloFAS). It is accompanied by an ancillary file for interpretation that provides the upstream area (see the related varia...

Example catalogue entry (GLOFAS Historical)





Simplicity and consistency

https://cds.climate.copernicus.eu/cdsapp#!/dataset/cems-glofas-historical

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Example catalogue entry (GLOFAS Historical)

☐ 07	☐ 08	☑ 09	☐ 10
☐ 13	☐ 14	☐ 15	☐ 16
☐ 19	☐ 20	☐ 21	☐ 22
☐ 25	☐ 26	☐ 27	☐ 28
☐ 31			

Format ?

◉ Zip file (.zip) ○ Compressed

Terms of use

✔ GHG-CCI Licence View terms

Hide API request | Show Toolbox request

Please go to the documentation page for information as to how to use the CDS API.

```
import cdsapi

c = cdsapi.Client()

c.retrieve(
    'satellite-methane',
    {
        'format':'zip',
        'processing_level':'level_2',
        'variable':'xch4',
        'sensor_and_algorithm':'sciamachy_wfmd',
        'year':'2004',
        'month':'03',
        'day':'09'
    },
    'download.zip')
```


```
import cdsapi

c = cdsapi.Client()

c.retrieve(
    'satellite-methane',
    {
        'format': 'zip',
        'processing_level': 'level_2',
        'variable': 'xch4',
        'sensor_and_algorithm': 'sciamachy_wfmd',
        'year': '2004',
        'month': '03',
        'day': '09'
    },
    'download.zip')
```


https://cds.climate.copernicus.eu/api-how-to

pip install cdsapi

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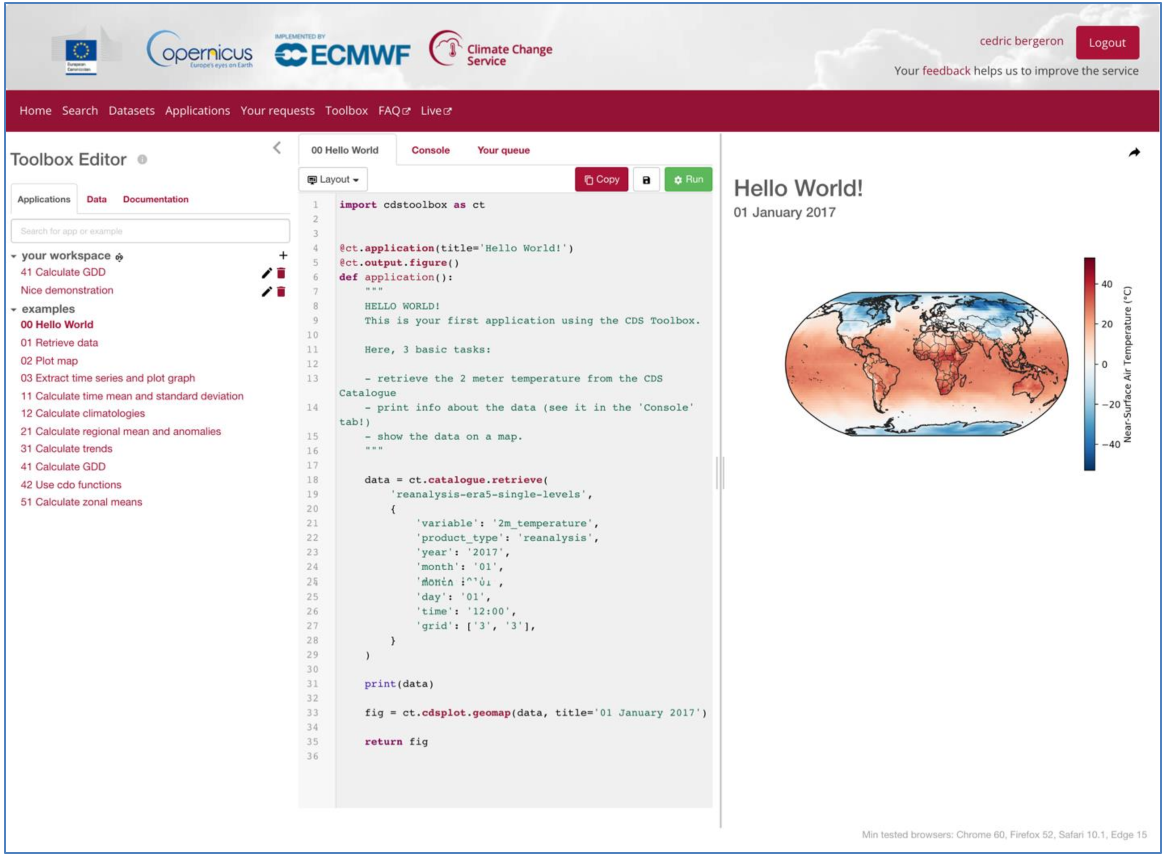
Online processing



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Training Material

https://ecmwf-projects.github.io/copernicus-training-c3s/intro.html

European Commission

Europe's eyes on Earth

ECMWF

Summery Summary

The CDS provides access to over 180 dataset using a simple consistent interface. This Includes the GLOFAS and EFAS datasets, and several hydrology dataset derived from climate model output

The CDS provides an online processing facility (CDS Toolbox) to help you reduce the data to what you need prior to download

Copernicus provide a suite of training material to help you start working with the data

Please visit me at the CDS stand in Gathertown for some hands on demonstrations