

CCI KNOWLEDGE EXCHANGE

Paul Fisher & Sophie Hebden

10/09/2020



CCI Knowledge Exchange

Objectives based on CCI+ Statement of Work:

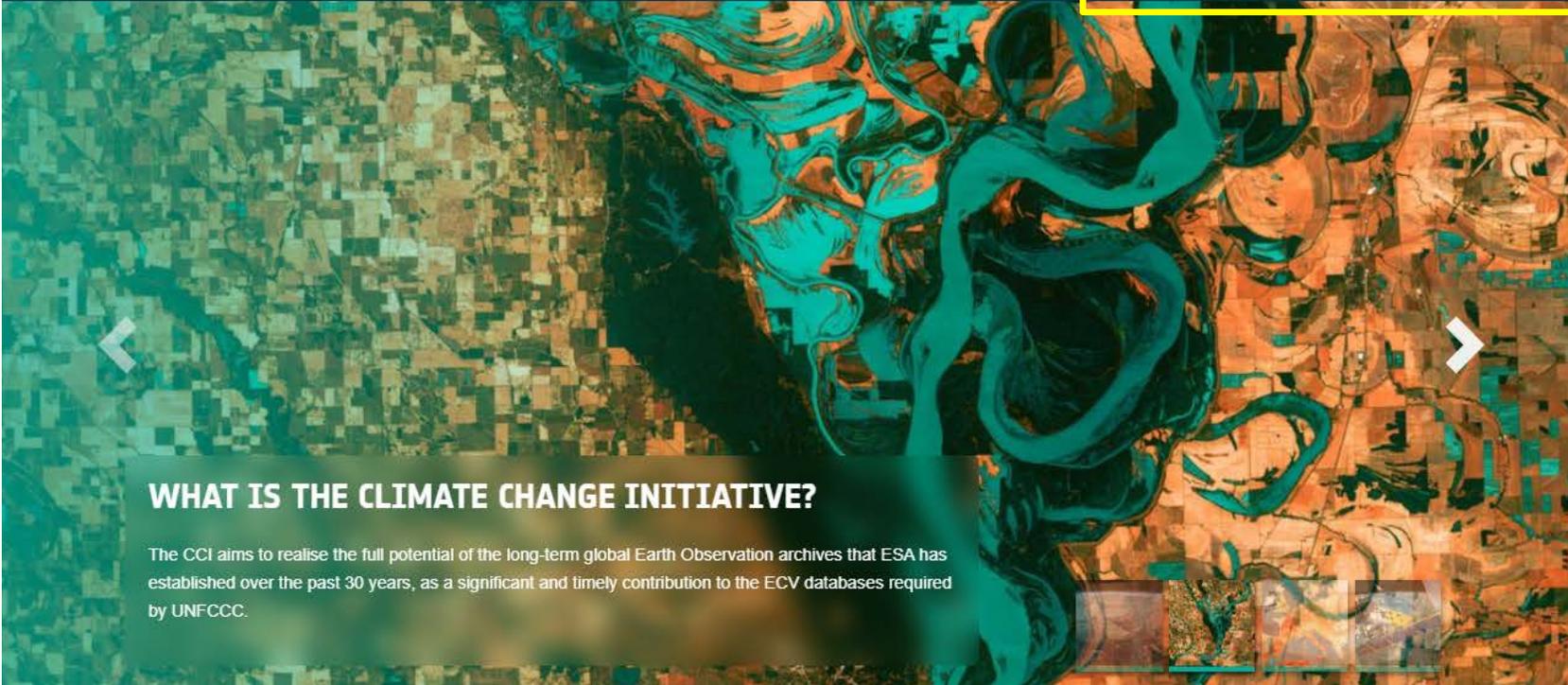
- Increase **visibility** of the CCI programme
- **Address new audiences:** the general public and educational audience
- **Showcase** role of ESA satellite data in **climate science**
- Increase **access** and use of CCI ECV data
 - Website
 - Climate from Space app
 - Open Data Portal
 - CCI Toolbox (Cate)
 - Education



Objectives based on CCI+ Statement of Work:

- Increase **visibility of the CCI programme**
- **Address new audiences:** the general public and educational audience
- **Showcase** role of ESA satellite data in **climate science**
- Increase **access and use of CCI ECV data**
 - Website – **just launched**
 - Climate from Space app – **Q4**
 - Open Data Portal – **just launched**
 - CCI Toolbox (Cate) – **Q4**
 - Education – **Q4 first school packs; 2021 mooc & summer school**





WHAT IS THE CLIMATE CHANGE INITIATIVE?

The CCI aims to realise the full potential of the long-term global Earth Observation archives that ESA has established over the past 30 years, as a significant and timely contribution to the ECV databases required by UNFCCC.

Monitoring and Tracking Climate Change

“ Satellites observing Earth provide a clear picture of changes across the entire planet, measuring and monitoring our vast oceans, land, atmosphere and areas that are

What is climate change? →

Climate from space: the evidence →

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What is Climate Change?

Putting current climate change into context and how society is responding

[Learn More](#)



Climate change: the evidence from space

Satellites provide crucial lines of evidence for climate change

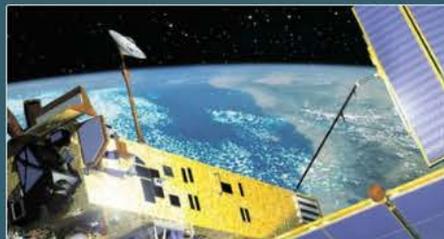
[Learn More](#)



Role of EO in Understanding Climate Change

Satellites have a unique vantage point for capturing change across the Earth system

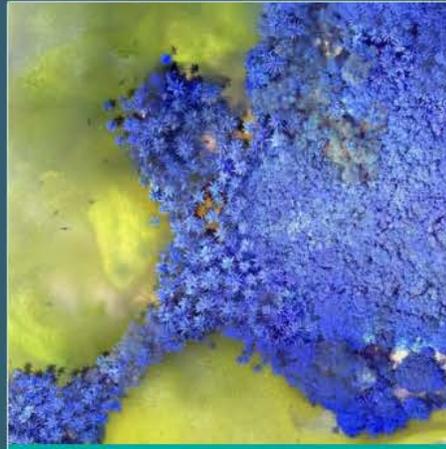
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Explore Climate Data

Explore how our climate has evolved through 40 years of research-quality satellite data

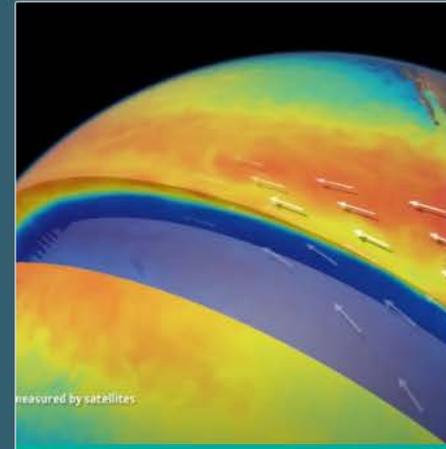
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Access Climate Data

The Open Data Portal provides free and open access to all CCI Essential Climate Variables

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Climate from Space App: Visualisations

Climate from Space: discover more than 40 years of climate data with hands-on storytelling

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Learn about Climate

ESA learning resources for students on climate and environmental change

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Climate for Schools

Teaching resource packs from the Climate Change Initiative

[Learn More](#)



Climate Training for Science Excellence

Massive Online Open Courses and summer schools for learners at MSc & BSc levels

[Learn More](#)



climate change initiative

education resource pack

IS OZONE GOOD OR BAD?

Discovery of the Antarctic Ozone Hole



climate change initiative

education resource pack

A PASSAGE OPENS

Arctic Sea Ice and Climate Change

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Understanding the Earth's climate from space

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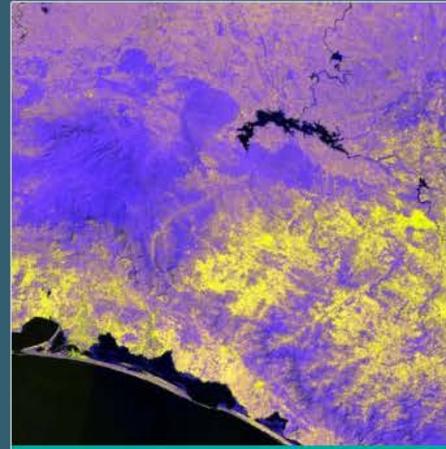
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Aerosol

The Aerosol project provides independently validated, high quality algorithms for processing long-term records of global aerosol properties from European satellite instruments.

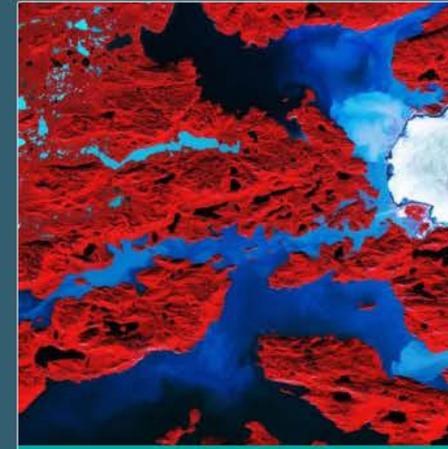
[Visit Project](#)



Biomass

The Biomass project provides global maps of above-ground biomass for four epochs (mid 1990s, 2010, 2017 and 2018), with these being capable of supporting quantification of biomass change.

[Visit Project](#)



Climate Modelling User Group (CMUG)

Linking the climate modelling community and satellite Earth observation experts across the CCI programme.

[Visit Project](#)



Aerosol

The Aerosol project provides independently validated, high quality algorithms for processing long-term records of global aerosol properties from European satellite instruments.

- ABOUT
- NEWS
- DATA
- KEY DOCUMENTS
- TEAM
- PUBLICATIONS
- LINKS

About Project

The driving objective of the CCI Aerosol project is to provide independently validated, high quality algorithms for processing long-term records of global aerosol properties from European satellite instruments.

The current Aerosol project focuses on algorithm improvements for the dual view sensor line, in particular the Sentinel-3 SLSTR instrument. It includes two user case studies (data assimilation for climate services, and science modelling in radiative forcing) and community support (AEROSAT experiments, GEWEX assessment).

[Learn more about the Aerosol project](#)

Aerosol news

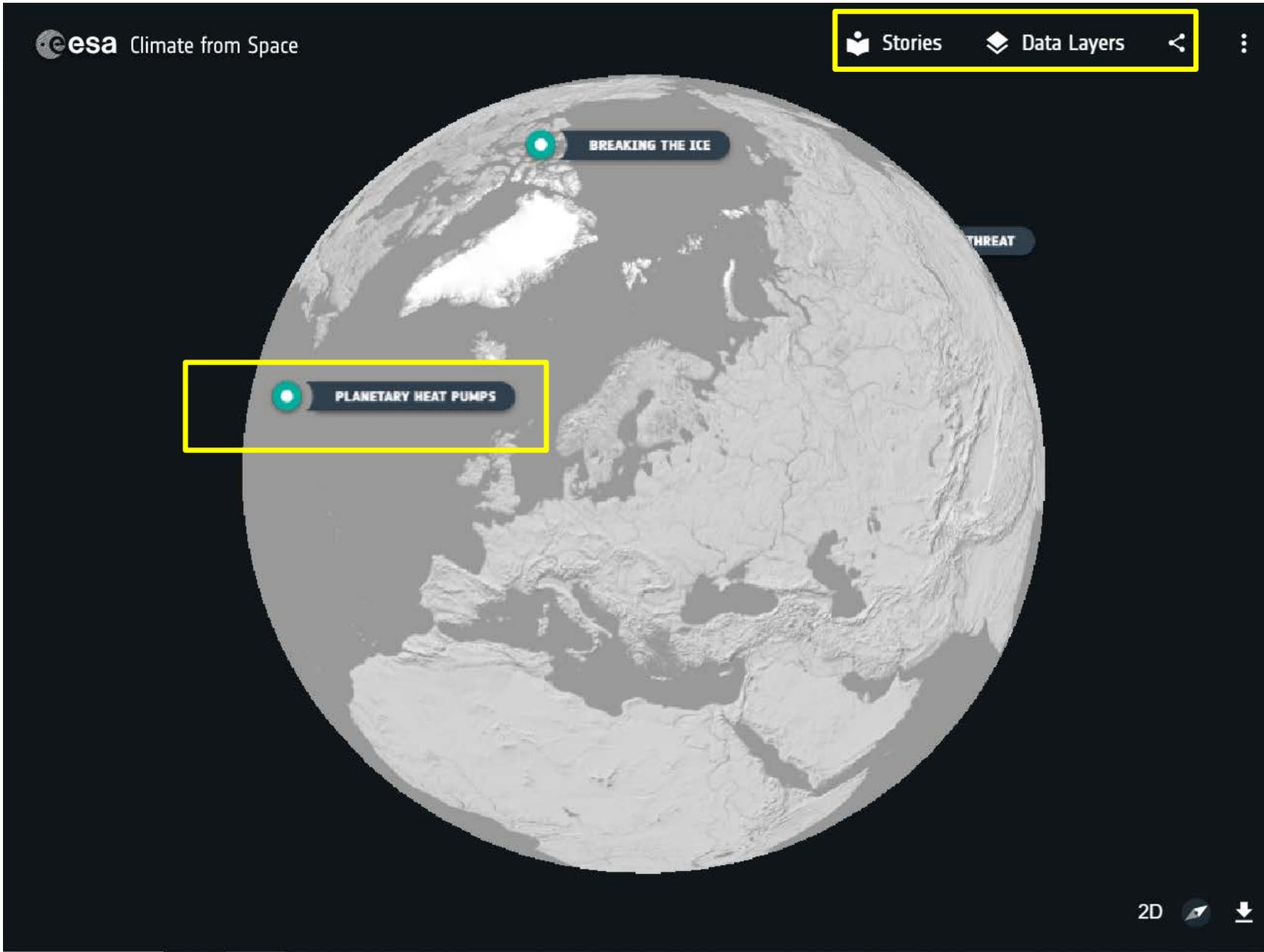


New Climate from Space Application

<https://cfs.climate.esa.int/>

CfS Application objectives:

- Addresses the general public and education audiences
- Increases visibility of the CCI programme
- Showcases role of ESA satellite data in climate science
- Appealing and engaging content presentation
- Modern and fast, easy to access interface
- Runs in an internet browser and as an offline app
- Mobile device-compatible



← Back to Data Mode

STORIES

< SEA SURFACE TEMPERATURE OCEAN COLOUR SEA SURFACE SALINITY WATER VAPOUR CLOUDS OZONE AEROSOL SEA ICE PERMAFROST > Reset



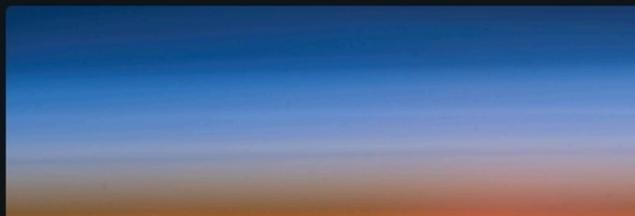
Planetary Heat Pumps

SEA SURFACE TEMPERATURE

OCEAN COLOUR

SEA SURFACE SALINITY

+2



Is Ozone Good or Bad?

OZONE

AEROSOL



Breaking the Ice

SEA ICE

SEA SURFACE TEMPERATURE

SEA SURFACE SALINITY

+1



A Country Under Threat



Biodiversity and Habitat Loss



Taking the Pulse of the Planet

← Back to Stories

PLANETARY HEAT PUMPS

The ocean and the atmosphere both redistribute heat energy around the planet, but the oceans have a much higher capacity to store heat, making them a more stable indicator of climate trends.

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← Back to Stories

PLANETARY HEAT PUMPS

High Capacity

Go for a swim in the sea on midsummers day and the water may be surprisingly chilly. Although the sun is at its highest point in the sky and there are more hours of sunlight than on any other day of the year, the sea does not reach its maximum temperature until two or three months later. This lag shows that the sea has a high heat capacity – it takes a lot of energy to change its temperature, so it is slow to heat up and slow to cool down.

This makes the sea incredibly good at storing heat. So good, that just the top three metres of the ocean contains as much heat as the entire atmosphere. The ocean's capacity to accumulate, transport and slowly release the energy it receives from the Sun is one of the key regulators of weather and climate on our planet.

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← Back to Stories

PLANETARY HEAT PUMPS

Earth's Heat Pumps

The Equator receives much more energy from the Sun than the polar regions. This energy is then redistributed around the world by circulation patterns in the oceans and atmosphere. Ocean currents are driven by the rotation of the Earth, surface winds and differences in water density due to salinity and temperature variation. Warm currents such as the Gulf Stream bring heat from the Equator and the tropics to higher latitudes. This poleward transport of heat is responsible for the mild climate of western Europe.

The interactive globe on the left shows the Gulf Stream carrying warm water up the east coast of North America and across the Atlantic. In the Pacific, the Kuroshio Current warms the eastern shore of Japan, while a cold Equatorial current can usually be seen extending westwards from South America. Ocean circulation is generally clockwise in the northern hemisphere and anti-clockwise in the southern hemisphere.

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← Back to Stories

PLANETARY HEAT PUMPS

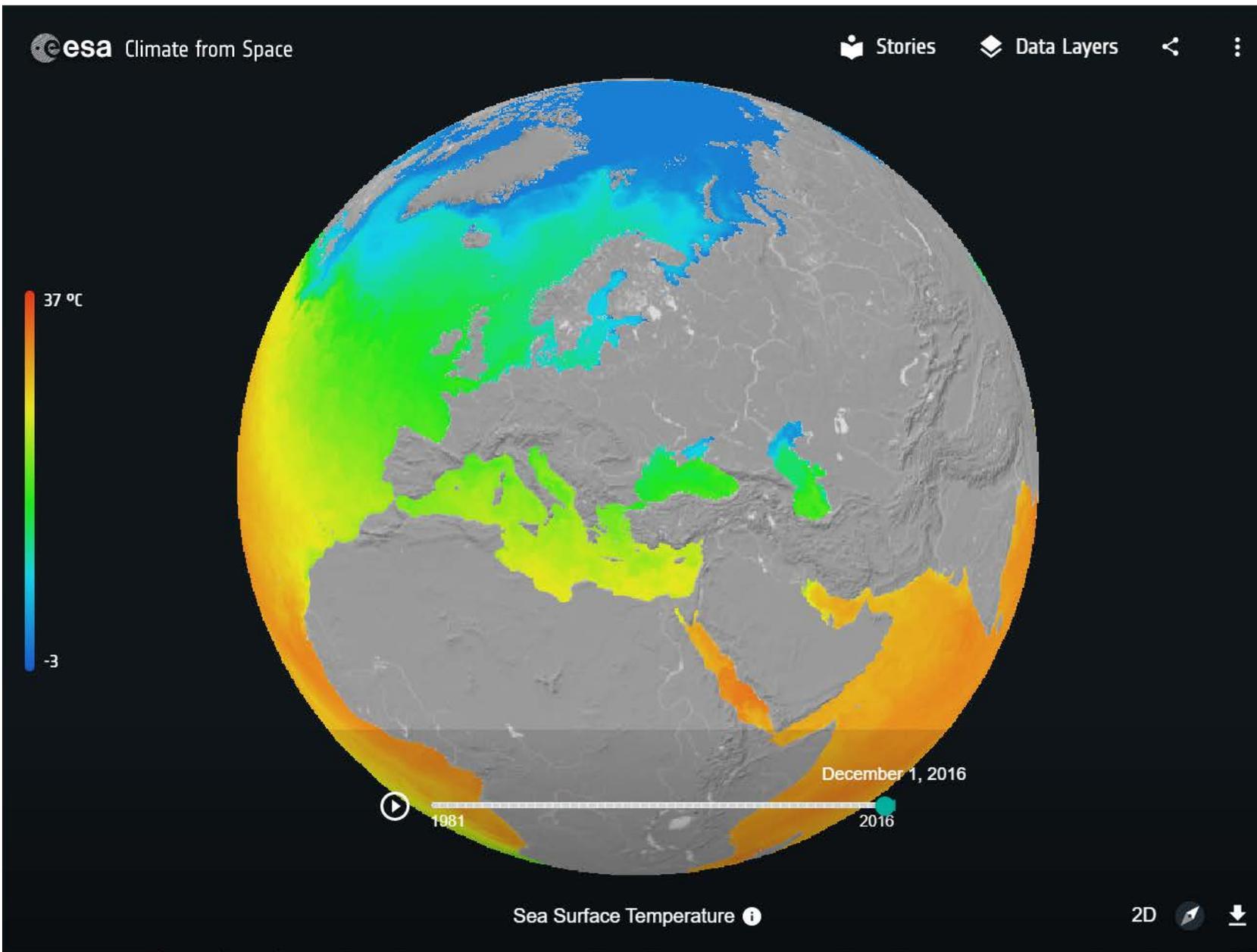
Ocean-Atmosphere Interactions

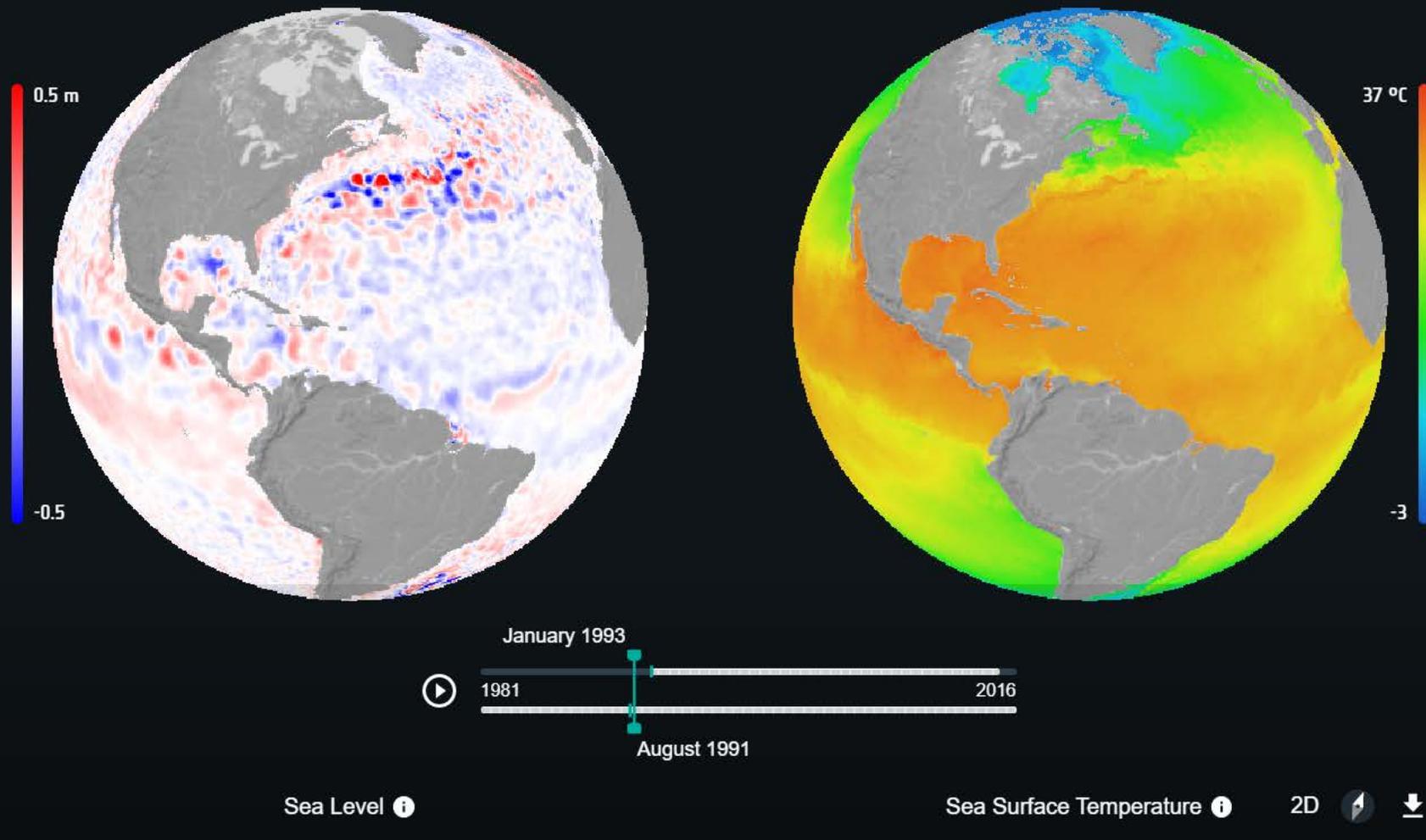
The oceans and the atmosphere transport about the same amount of heat towards the poles, but the atmospheric circulation is itself partly driven by the energy exchanged during the evaporation of ocean water and its precipitation as rain. This makes the sea an important regulator of the climate and the temperature of its surface a key measurement for climate scientists.

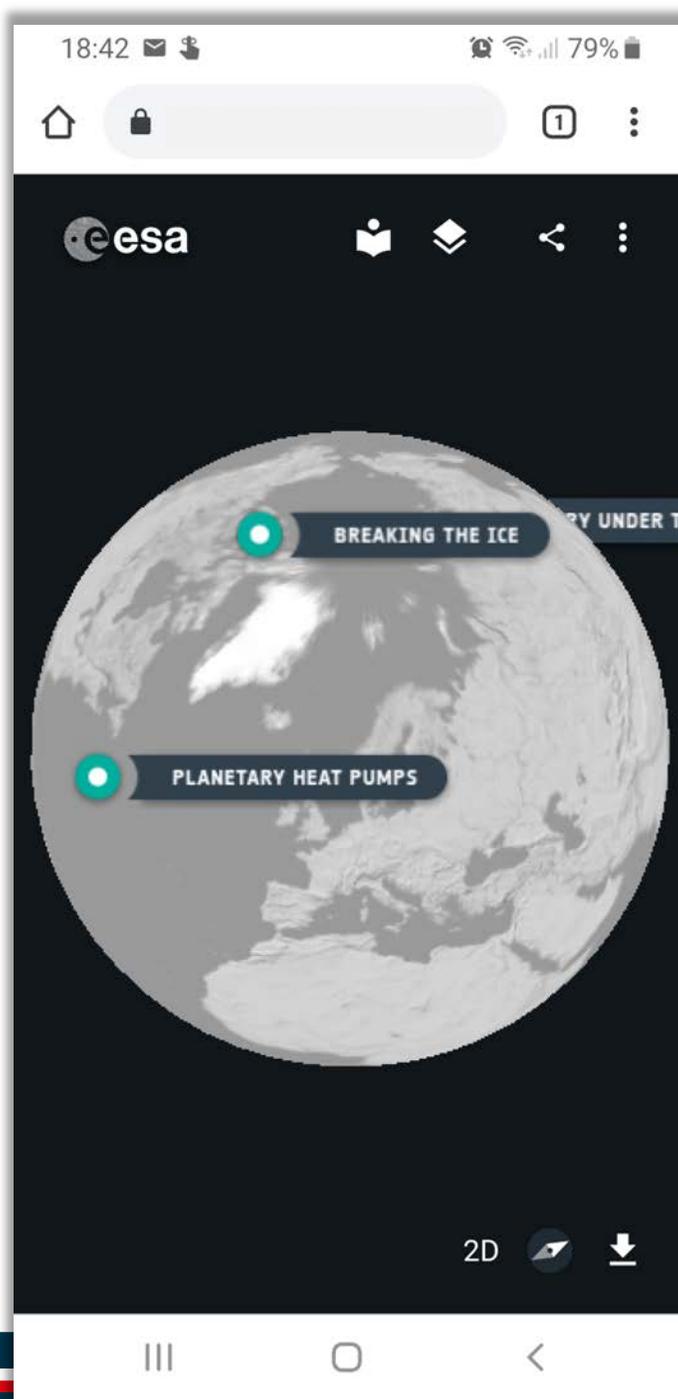
Higher sea surface temperatures allow more evaporation, giving more atmospheric water vapour, with the potential for more clouds and more rain. In the western Mediterranean, warmer sea water is a key factor in the sudden rainstorms and flash floods that afflict the coasts of France, Italy and Spain in late summer.

On a larger scale, high water temperatures in tropical oceans power extreme weather events such as hurricanes. The energy exchange between ocean and atmosphere during these events is revealed by a dip in the sea surface temperature in the wake of large hurricanes.

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Fit for mobile devices

New Open Data Portal user interface (UI)

<https://climate.esa.int/en/odp/#/dashboard/>

<https://climate.esa.int/en/odp/#/search/>

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Home - Open Data Portal

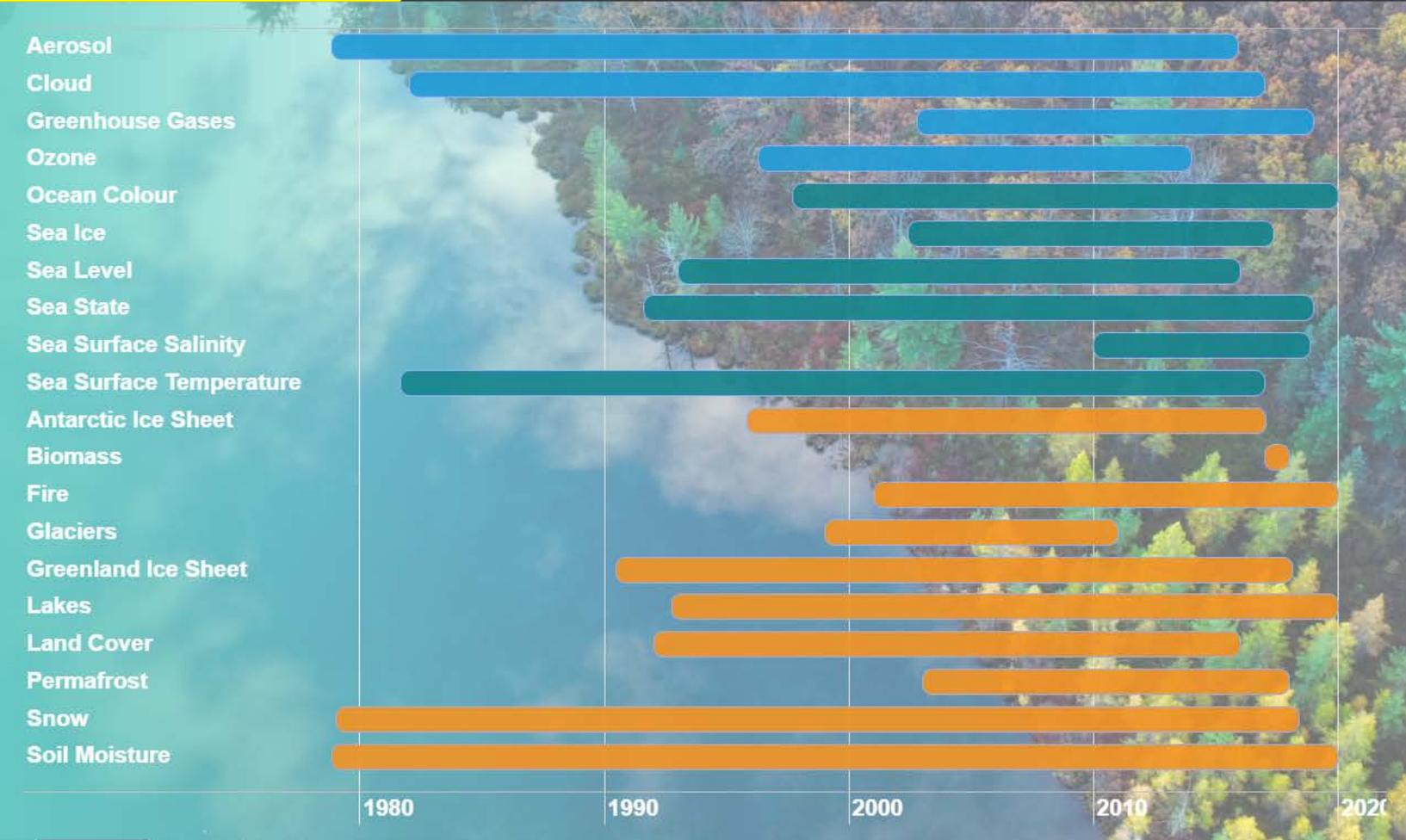
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Climate Data Dashboard

of the ESA Climate Change Initiative

→ Climate Data Search interface

for the ESA Climate Change Initiative



United space in Europe esa

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→ Climate Data Dashboard
of the ESA Climate Change Initiative

Climate Data Search interface
for the ESA Climate Change Initiative

ECV | Data type | Sensor | Platform | Processing level | Frequency | Institute | Product

Product version

Search text (optional)

Search results: 161

ESA Ocean Colour Climate Change Initiative (Ocean_Colour_cci): Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

Catalogue size: 15.5 TB Number of files: 10801

- [Dataset Information](#)
- [Product Guide](#)
- [Start date: 1997-09-03](#)
- [End date: 2019-12-31](#)
- [FTP Download](#)
- [Additional Download Options](#)

The ESA Ocean Colour CCI project has produced global level 3 binned multi-sensor time-series of satellite ocean-colour data with a particular focus for use in climate studies. This dataset contains all their Version 4.2 generated ocean colour products on a geographic projection at 4 km spatial resolution and at a number of time resolutions (daily, 5-day, 8-day and monthly composites). Data are also available as monthly climatologies. Data products being produced include: phytoplankton chlorophyll-a concentration, remote-sensing reflectance at six wavelengths, total absorption and backscattering coefficients, phytoplankton absorption coefficient and absorption coefficients for dissolved and detrital material, and the diffuse attenuation coefficient for downwelling irradiance for light of wavelength 490nm. Information on uncertainties is also provided. This data product is on a geographic grid projection, which is a direct conversion of latitude and longitude coordinates to a rectangular grid, typically a fixed multiplier of 360x180. The netCDF files follow the CF convention for this projection with a resolution of 8640x4320. (A separate dataset is also available for data on a sinusoidal projection.)

These data were produced by the ESA Ocean Colour CCI project and provided to CEDA in the context of the ESA CCI Open Data Portal project. This dataset forms part of the v4.2 ocean colour dataset collection that can be cited with the following DOI: to be added

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Climate Data Dashboard

of the ESA Climate Change Initiative

Climate Data Search interface

for the ESA Climate Change Initiative

ECV Data type Sensor Platform Processing level Frequency Institute Product

- None
- Ice Sheets (47)
- Ocean Colour (21)
- Aerosol (17)
- Greenhouse Gases (14)
- Ozone (11)
- Sea Ice (10)
- Sea Surface Temperature (10)
- Cloud (6)
- Fire (4)
- Permafrost (3)
- Sea Level (3)
- Sea State (3)
- Soil Moisture (3)
- Land Cover (2)
- Sea Surface Salinity (2)
- Above-Ground Biomass (1)
- Glaciers (1)
- Lakes (1)
- Snow (1)

End date: 2019-12-31
[FTP Download](#)
[Additional Download Options](#)

Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

Files: 10801

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ECV | Data type | Sensor | Platform | Processing level | Frequency | Institute | Product

Product version

Search text (optional)

Search results: 161

- Ice Sheet Velocity (35)
- Multiple Aerosol Products (12)
- Ozone Limb Profile (9)
- Column-Averaged Dry Air Mole Fraction Of Ch4 (8)
- Sea Ice Thickness (8)
- Sea Surface Skin Temperature (7)
- Multiple Cloud Products (6)
- Column-Averaged Dry Air Mole Fraction Of Co2 (6)
- Gravimetric Mass Balance (6)
- Multiple Products (Chla, Nlw, Iops, Etc) (5)
- Condition Fire (Burned Area) (4)
- Phytoplankton Chlorophyll-A Concentration (4)
- Inherent Optical Properties (4)
- Spectral Attenuation Coefficient For Downwelling Irradiance (4)
- Remote Sensing Reflectance (4)
- Ice Sheet Surface Elevation Change (3)
- Sea Water Temperature (3)
- Significant Wave Height (3)
- Absorbing Aerosol Index (2)
- Aerosol Optical Depth (2)
- Glacier Grounding Line Location (2)
- Sea Ice Concentration (2)
- Surface Soil Moisture Volumetric Absolutes (2)

ESA Ocean Colour Climate Catalogue size: 15.5 TB

Dataset Information | Product Guide | Start date: 1997-09-01 | End date: 2019-12-31 | FTP Download | Additional Download

ocean colour data products gridded on a geographic projection (All Products), Version 4.2

...ect has produced global level 3 binned multi-sensor time-series of satellite ocean-colour data with a particular focus for use in climate studies. This dataset contains ocean colour products on a geographic projection at 4 km spatial resolution and at a number of time resolutions (daily, 5-day, 8-day and monthly composites). Data catalogues. Data products being produced include: phytoplankton chlorophyll-a concentration; remote-sensing reflectance at six wavelengths; total absorption and plankton absorption coefficient and absorption coefficients for dissolved and detrital material; and the diffuse attenuation coefficient for downwelling irradiance for nation on uncertainties is also provided. This data product is on a geographic grid projection, which is a direct conversion of latitude and longitude coordinates to a multiplier of 360x180. The netCDF files follow the CF convention for this projection with a resolution of 8640x4320. (A separate dataset is also available for data on

...the ESA Ocean Colour CCI project and provided to CEDA in the context of the ESA CCI Open Data Portal project. This dataset forms part of the v4.2 that can be cited with the following DOI: to be added

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Climate Data Search interface

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ESA Ocean Colour Climate Change Initiative (Ocean_Co...
Catalogue size: 15.5 TB | Number of files: 10801

- Dataset Information
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- Start date: 1997-09-03
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- Additional Download Options

The ESA Ocean... all their Version... are also availabl... backscattering c... light of waveleng... rectangular grid... a sinusoidal proj...

These data wer... ocean colour da...

- MERIS (29)
- MODIS (29)
- VIIRS (22)
- SeaWiFS (21)
- AATSR (15)
- ATSR-2 (15)
- AVHRR-3 (12)
- RA-2 (12)
- SIRAL (9)
- AVHRR-2 (8)
- RA (8)
- SCIAMACHY (8)
- TANSO-FTS (8)
- AltiKa (7)
- Poseidon-2 (7)
- Poseidon-3 (7)
- ATSR (6)
- GFO-RA (6)
- ASAR (5)
- AMSR2 (4)
- AMSR (4)
- SSALT (4)
- VEGETATION (4)
- MIRAS (3)
- NRA (3)
- Poseidon-3B (3)
- SAR-C (Sentinel-1) (3)
- SAR-X (3)

...itted on a geographic projection (All Products), Version 4.2

...binned multi-sensor time-series of satellite ocean-colour data with a particular focus for use in climate studies. This dataset contains... raphic projection at 4 km spatial resolution and at a number of time resolutions (daily, 5-day, 8-day and monthly composites). Data... g produced include: phytoplankton chlorophyll-a concentration; remote-sensing reflectance at six wavelengths; total absorption and... and absorption coefficients for dissolved and detrital material; and the diffuse attenuation coefficient for downwelling irradiance for... provided. This data product is on a geographic grid projection, which is a direct conversion of latitude and longitude coordinates to a... DF files follow the CF convention for this projection with a resolution of 8640x4320. (A separate dataset is also available for data on... project and provided to CEDA in the context of the ESA CCI Open Data Portal project. This dataset forms part of the v4.2... following DOI: to be added

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ECV | Data type | Sensor | Platform | Processing level | Frequency | Institute | Product

Product version

Search text (optional)

Search results: 161

ESA Ocean Colour Climate Change Initiative (Ocean_Colour_cci): Global ocean colour
 Catalogue size: 15.5 TB Number of files: 10801

Dataset Information | Product Guide | Start date: 1997-09-03 | End date: 2019-12-31 | FTP Download | Additional Download Options

The ESA Ocean Colour CCI project has produced all their Version 4.2 generated ocean colour products are also available as monthly climatologies. Data backscattering coefficients; phytoplankton absorption light of wavelength 490nm. Information on once rectangular grid, typically a fixed multiplier of 36 a sinusoidal projection.)

These data were produced by the ESA Ocean colour dataset collection that can be

- Envisat (66)
- Aqua (29)
- ERS-2 (27)
- Orbview-2 (22)
- SNPP (21)
- ERS-1 (17)
- CryoSat-2 (12)
- Metop-A (12)
- NOAA-15 (10)
- NOAA-16 (10)
- NOAA-17 (10)
- GOSAT (8)
- GFO (7)
- Jason-1 (7)
- Jason-2 (7)
- NOAA-12 (7)
- NOAA-14 (7)
- NOAA-18 (7)
- SARAL (7)
- Topex/Poseidon (7)
- GRACE (6)
- NOAA-11 (6)
- NOAA-19 (6)
- NOAA-7 (6)
- NOAA-9 (6)
- Terra (6)
- GCOM-W1 (4)
- Jason-3 (4)

on (All Products), Version 4.2

is of satellite ocean-colour data with a particular focus for use in climate studies. This dataset contains al resolution and at a number of time resolutions (daily, 5-day, 8-day and monthly composites). Data tion chlorophyll-a concentration; remote-sensing reflectance at six wavelengths; total absorption and r dissolved and detrital material; and the diffuse attenuation coefficient for downwelling irradiance for on a geographic grid projection, which is a direct conversion of latitude and longitude coordinates to a ion for this projection with a resolution of 8640x4320. (A separate dataset is also available for data on

in the context of the ESA CCI Open Data Portal project. This dataset forms part of the v4.2

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Search text (optional)

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Level 3S (27)
 Level 3C (21)
 Level 4 (21)
 Level 2 (14)
 Level 2 Pre-Processing (14)
 Level 3 (14)
 Indicator (2)
 Level 3U (2)
 Level 1 (1)

ESA Ocean Colour Climate Change Initiative (Ocean_Colour_cci): Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

Catalogue size: 15.5 TB Number of files: 10801

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Climate Data Search interface

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ECV | Data type | Sensor | Platform | Processing level | **Frequency** | InSTITUTE | Product

Product version

Search text (optional)

Search results: 161

Frequency dropdown menu:

- month (55)
- day (42)
- satellite orbit frequency (34)
- 5 days (21)
- 8 days (20)
- year (9)
- climatology (3)
- 13 years (1)
- 15 days (1)

ESA Ocean Colour Climate Change Initiative (Ocean_Colour_cci): Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

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United space in Europe

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Climate Data Dashboard

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Climate Data Search interface

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ECV Data type Sensor Platform Processing level Frequency Institute Product

Product version

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ESA Ocean Colour Climate Change Initiative (Ocean_Colour_cci): Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

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- Dataset Information
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- Additional Download Options

The ESA Ocean Colour CCI project has produced global level 3 binned multi-sensor time-series of satellite ocean-colour data with a particular all their Version 4.2 generated ocean colour products on a geographic projection at 4 km spatial resolution and at a number of time resolutions. Data products being produced include: phytoplankton chlorophyll-a concentration; remote-sensing backscattering coefficients; phytoplankton absorption coefficient and absorption coefficients for dissolved and detrital material; and the diffuse light of wavelength 490nm. Information on uncertainties is also provided. This data product is on a geographic grid projection, which is a direct rectangular grid, typically a fixed multiplier of 360x180. The netCDF files follow the CF convention for this projection with a resolution of 864x432 (a sinusoidal projection.)

These data were produced by the ESA Ocean Colour CCI project and provided to CEDA in the context of the ESA CCI Open Data Portal ocean colour dataset collection that can be cited with the following DOI: to be added

- Plymouth Marine Laboratory (22)
- ESACCI_SST (9)
- Science & Technology AS (9)
- Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (8)
- ENVironmental Earth Observation IT GmbH (8)
- DTU Space (6)
- European Space Agency (5)
- Deutscher Wetterdienst (4)
- Institute of Environmental Physics (4)
- Netherlands Institute for Space Research (4)
- Technische Universität Dresden (4)
- University of Alcalá (4)
- Collecte Localisation Satellites (3)
- Department of Geosciences, University of Oslo (3)
- Finnish Meteorological Institute (3)
- Rutherford Appleton Laboratory (3)
- University of Bremen (3)
- University of Leicester (3)
- Vienna University of Technology (3)
- ACRI-ST (2)
- Centre National d'Etudes Spatiales (2)
- HYGEOS (2)
- ICARE (2)
- LOCEAN (2)

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Climate Data Dashboard

Climate Data Search interface

of the ESA Climate Change Initiative

for the ESA Climate Change Initiative

ECV Data type Sensor Platform Processing level Frequency Institute Product

Product version

Search text (optional)

Search results: 161

ESA Ocean Colour Climate Change Initiative (Ocean_Colour_cci): Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

Catalogue size: 15.5 TB Number of files: 10801

- Dataset Information
- Product Guide
- Start date: 1997-09-03
- End date: 2019-12-31
- FTP Download
- Additional Download Options

The ESA Ocean Colour CCI project has produced global level 3 binned multi-sensor time-series of satellite ocean-colour data with a particular focus for use in climate studies. All their Version 4.2 generated ocean colour products on a geographic projection at 4 km spatial resolution and at a number of time resolutions (daily, 5-day, 8-day and monthly) are also available as monthly climatologies. Data products being produced include: phytoplankton chlorophyll-a concentration, remote-sensing reflectance at six wavelengths, backscattering coefficients, phytoplankton absorption coefficient and absorption coefficients for dissolved and detrital material, and the diffuse attenuation coefficient for light of wavelength 490nm. Information on uncertainties is also provided. This data product is on a geographic grid projection, which is a direct conversion of latitude and longitude to a rectangular grid, typically a fixed multiplier of 360x180. The netCDF files follow the CF convention for this projection with a resolution of 8640x4320. (A separate dataset is available for a sinusoidal projection.)

These data were produced by the ESA Ocean Colour CCI project and provided to CEDA in the context of the ESA CCI Open Data Portal project. This dataset forms part of the CEDA ocean colour dataset collection that can be cited with the following DOI: to be added

- MERGED (29)
- ADV (4)
- ORAC (4)
- SU (4)
- AATSR (3)
- ATSR1 (3)
- ATSR2 (3)
- AVHRR07_G (3)
- AVHRR09_G (3)
- AVHRR11_G (3)
- AVHRR12_G (3)
- AVHRR14_G (3)
- AVHRR15_G (3)
- AVHRR16_G (3)
- AVHRR17_G (3)
- AVHRR18_G (3)
- AVHRR19_G (3)
- AVHRRMTA_G (3)
- MODIS (3)
- MODIS_TERRA (3)
- Map (3)
- OSTIA (3)
- UNSPECIFIED (3)
- VARIOUS (3)
- WFMD (3)
- EMMA (2)
- MERIS_ENVISAT (2)
- MSI (2)

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→ Climate Data Dashboard

of the ESA Climate Change Initiative

Climate Data Search interface

for the ESA Climate Change Initiative

ECV | Data type | Sensor | Platform | Processing level | Frequency | Institute | Product

Product version

- 1.1 (17)
- 2.0 (14)
- 4.2 (11)
- 2.1 (10)
- 3.1 (10)
- v0001 (7)
- 1.0 (6)
- v1.0 (6)
- 1.2 (5)
- 03.02 (4)
- 2.30 (4)
- 4.21 (4)
- v1.1 (4)
- 01.0 (3)
- 04.7 (3)
- 2.2 (3)
- 3.0 (3)
- v1.2 (3)
- v2.3.8 (3)
- 01.08 (2)
- v0002 (2)
- v1.3 (2)
- v2.0 (2)
- v4.0 (2)
- v5.1 (2)
- 0.1 (1)
- 1.3 (1)
- 1.5.7 (1)

1 2 3 4 ... >

ive (Ocean_Colour_cci): Global ocean colour data products gridded on a geographic projection (All Products), Version 4.2

les: 10801

he ESA Ocean Colour CCI project has produced global level 3 binned multi-sensor time-series of satellite ocean-colour data with a particular focus for use in climate studies. This dataset contains their Version 4.2 generated ocean colour products on a geographic projection at 4 km spatial resolution and at a number of time resolutions (daily, 5-day, 8-day and monthly composites). Data e also available as monthly climatologies. Data products being produced include: phytoplankton chlorophyll-a concentration, remote-sensing reflectance at six wavelengths, total absorption and cksattering coefficients; phytoplankton absorption coefficient and absorption coefficients for dissolved and detrital material; and the diffuse attenuation coefficient for downwelling irradiance for ht of wavelength 490nm. Information on uncertainties is also provided. This data product is on a geographic grid projection, which is a direct conversion of latitude and longitude coordinates to a ctangular grid, typically a fixed multiplier of 360x180. The netCDF files follow the CF convention for this projection with a resolution of 8640x4320. (A separate dataset is also available for data on sinusoidal projection.)

hese data were produced by the ESA Ocean Colour CCI project and provided to CEDA in the context of the ESA CCI Open Data Portal project. This dataset forms part of the v4.2 ean colour dataset collection that can be cited with the following DOI: to be added

New CCI Toolbox (Cate) modes

<https://cate.climate.esa.int/>

Cate can be run in two modes

Cloud: Software-as-a-Service (SaaS) using the JASMIN cloud.

Will provide user access to the Cate software without any installation and configuration: to be recommended way to use Cate for most users.

Local: Stand-Alone mode, you run it on your own computer

**In a shell type `$ cate-webapi-start`
... then open Cate App in a browser**

For users who wish to use Cate with their own local data sources.

Select Cate Service



Please select a Cate service provision mode

Cate Software-as-a-Service

Cate Stand-Alone Mode

http://localhost:9090



[How do I run the stand-alone mode?](#)

Cate Software-as-a-Service Login

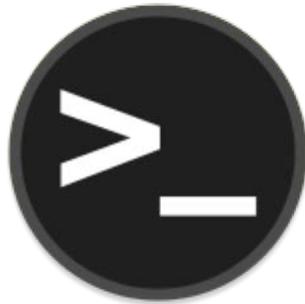


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Cate's various user interfaces



Cate App	Cate command-line tool	Cate Python API
<p>... is Cate's graphical user interface that runs in all modern internet browsers.</p>	<p>...is used to access and process ESA climate data through a command shell. Use it to write your own batch scripts.</p>	<p>...allows you to use Cate in your own Python programmes and make up new functions for the toolbox too.</p>

Example functionality: Using split window to display SST and SST analysis error (top panel) and associated time series graph (bottom panel)

The screenshot shows the Cate - ESA CCI Toolbox interface. The top panel displays a map of the Mediterranean region with a color-coded overlay representing SST and SST analysis error. The bottom panel shows a time series graph for the selected location (lon=52.65289012092996, lat=38.58203924682735). The graph plots 'analysed_sst (kelvin)' on the left y-axis (ranging from 284 to 292) and 'analysis_error (kelvin)' on the right y-axis (ranging from 0.6 to 1.2) against an x-axis representing time (0 to 5). Two lines are plotted: a red line for 'analysed_sst' and a green line for 'analysis_error'. The 'analysed_sst' line starts at approximately 285.5, dips to 283.5, and then rises to 291.5. The 'analysis_error' line starts at approximately 0.6, rises to 0.9, and then rises to 1.2.

Workspace Details:

Name	Value
ds_id	local.ESACCI-L4_GHRS...
time_range	null (default value)
region	null (default value)
var_names	null (default value)
normalize	true (default value)

Variables:

Name	Value
analysed_sst float32	NaN
analysis_error float32	NaN
mask float32	2
sea_ice_fraction float32	NaN
sea_ice_fraction_error float32	NaN

plot_line Details:

Name	Value
Data type	float32
Units	kelvin
Valid minimum	270
Valid maximum	310
Dimension names	time, lat, lon
Array shape	6, 3600, 7200
Chunk sizes	1, 1196, 2393
units	kelvin
long_name	analysed sea surface t...

Cate Toolbox
Documentation:

<https://cate.readthedocs.io>

Questions?



www.esa.int

