

Copernicus Activities @ ECMWF

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Funded by the European Union



Implemented
by



- ECMWF: entrusted entity for **C3S** and **CAMS**
- ECMWF: Contractor to JRC for operating:
 - **CEMS-EWS** (Flood)
 - **CEMS-EWS** (Fire)

This overview will focus on **C3S** and **CAMS**

ECMWF: Entrusted By the European Commission to implement the Copernicus Atmosphere monitoring (CAMS) and Climate Change (C3S) Services

- Delegation agreement signed on 11th November 2014

“The development of our **global weather model** has provided the opportunity for ECMWF to **analyse and predict** other aspects of the **natural environment**. Combined with being an **international organisation**, this **modelling capability** has led to ECMWF becoming involved with the EU Copernicus programme. Taking on the implementation of two of the Services and contributing to a third one is a privilege and a challenge that we aim to meet through enhanced collaboration with our **international partners**, and also through a very close working relationship with the European Commission”. *Alan Thorpe, Director-General, ECMWF, November 2015*

The EU financial envelope for implementation of the Copernicus programme is set for the period from 1 January 2015 to 31 December 2020, with 2021 being a transition year.



Alan Thorpe, Director General, signing on behalf of ECMWF (left) and Daniel Calleja, Director General, DG Enterprise, EC





Atmosphere
Monitoring Service

atmosphere.copernicus.eu



Climate
Change Service

climate.copernicus.eu

The **Copernicus Climate Change Service (C3S)** supports society by providing authoritative information about the past, present and future climate in Europe and the rest of the World.

The **Copernicus Atmosphere Monitoring Service (CAMS)** provides consistent and quality-controlled information related to air pollution and health, solar energy, greenhouse gases and climate forcing, everywhere in the world.

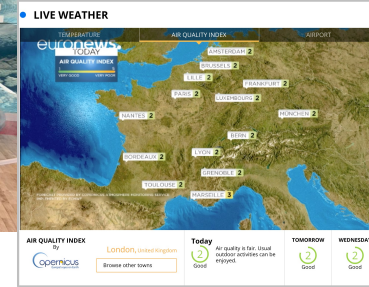
Copernicus@ECMWF: Building on synergies and combining efforts to provide two world class operational Services.



Copernicus@ECMWF

A single team for communication and outreach

- Press tours*
- Social media, campaigns*
- partnerships*



A common approach towards user engagement:

- User days*
- Use Cases and Demo Cases*

Copernicus ECMWF
@CopernicusECMWF

It's the second day of the virtual Copernicus #EoERoadshow, and our own @StijnVermooten is showing participants how #Copernicus data can be used to look at urban heat islands, #AirQuality and #COVID19.

Register and join the conversation bit.ly/2ZXwLo2

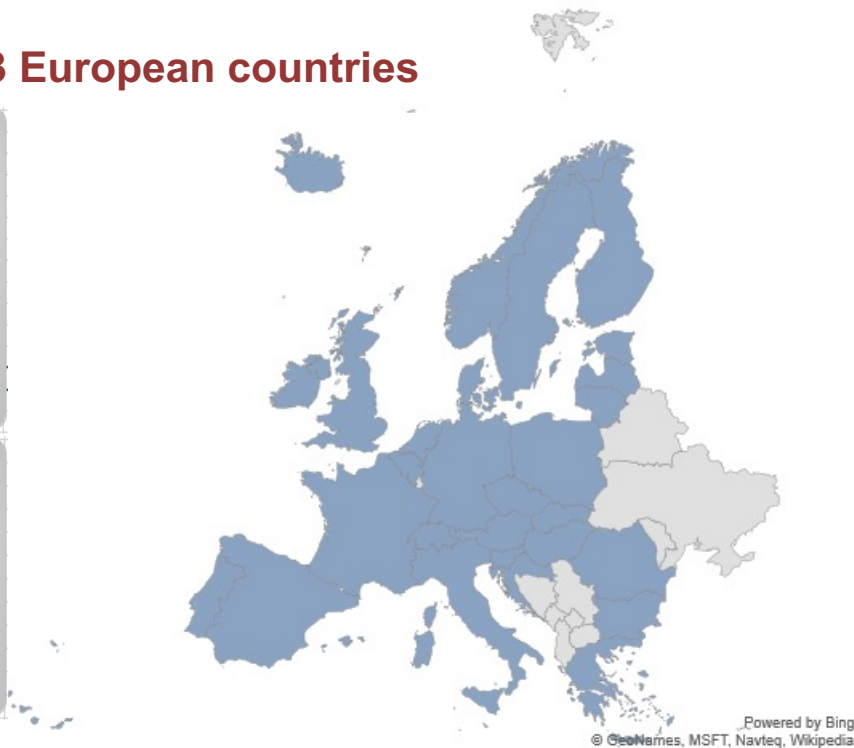
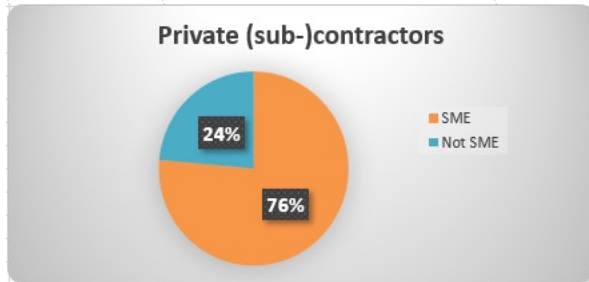
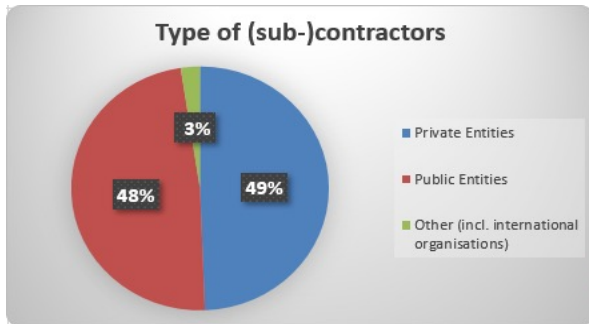


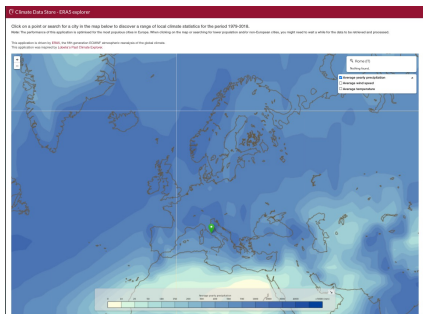
Common Procurement & Contract management teams



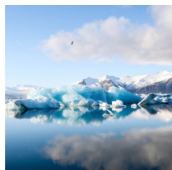
Copernicus@ECMWF: A Truly European Effort

- 156 ITTs carried out
- 420 different entities from **33 European countries**

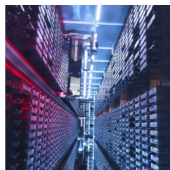




Key products and services



Climate bulletins



Climate Data Store



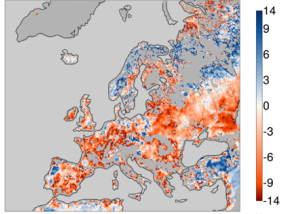
Data in action



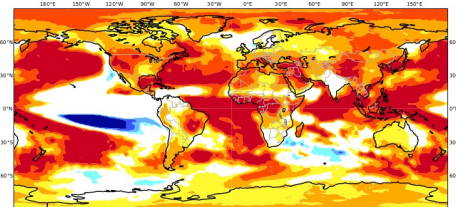
In focus

The European State of the Climate 2020, an essential snapshot of the region and a useful benchmark for future assessments of the environment.

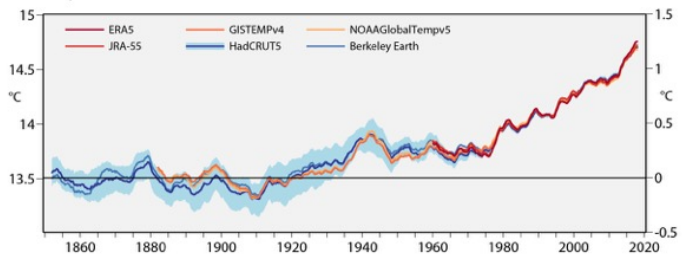
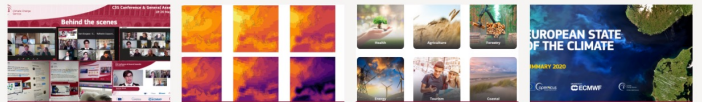
May 2018 soil moisture anomaly



C3S multi-system seasonal forecast
ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECMWF
Prob(most likely category of 2m temperature)
Nominal forecast start: 01/05/21
Unweighted mean



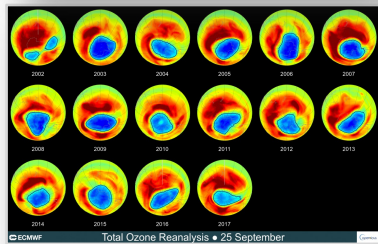
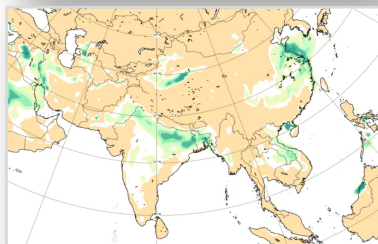
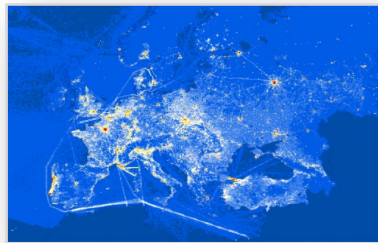
News



C3S provides:

- authoritative quality information based on Earth Observation about the past, present and future climate
- tools to inform climate change mitigation and adaptation strategies by policy makers and businesses
- examples of best practice in the use of climate information

<http://atmosphere.copernicus.eu>



A screenshot of the Copernicus Atmosphere Monitoring Service website. The header includes the logo, navigation links (DATA, ABOUT US, WHAT WE DO, SEARCH), and logos for the European Commission and ECMWF. A central banner features a dandelion and the text: "We provide consistent and quality-controlled information related to air pollution and health, solar energy, greenhouse gases and climate forcing, everywhere in the world." Below the banner, there are three image thumbnails: "Today's air quality forecasts" (showing the Eiffel Tower in a hazy atmosphere), a view of Earth from space, and a video player with a play button and the "euronews" logo. At the bottom, there are two maps: one showing a red-shaded area over Europe and another showing a color-coded map of Africa and Europe.

CAMS provides information products based on Earth Observation about:

- past, current and near-future (forecasts) global atmospheric composition;
- the ozone layer;
- European air quality;
- emissions and surface fluxes of key pollutants and greenhouse gases;
- solar radiation;
- climate radiative forcing.





What next?

ECMWF
Copernicus 2.0

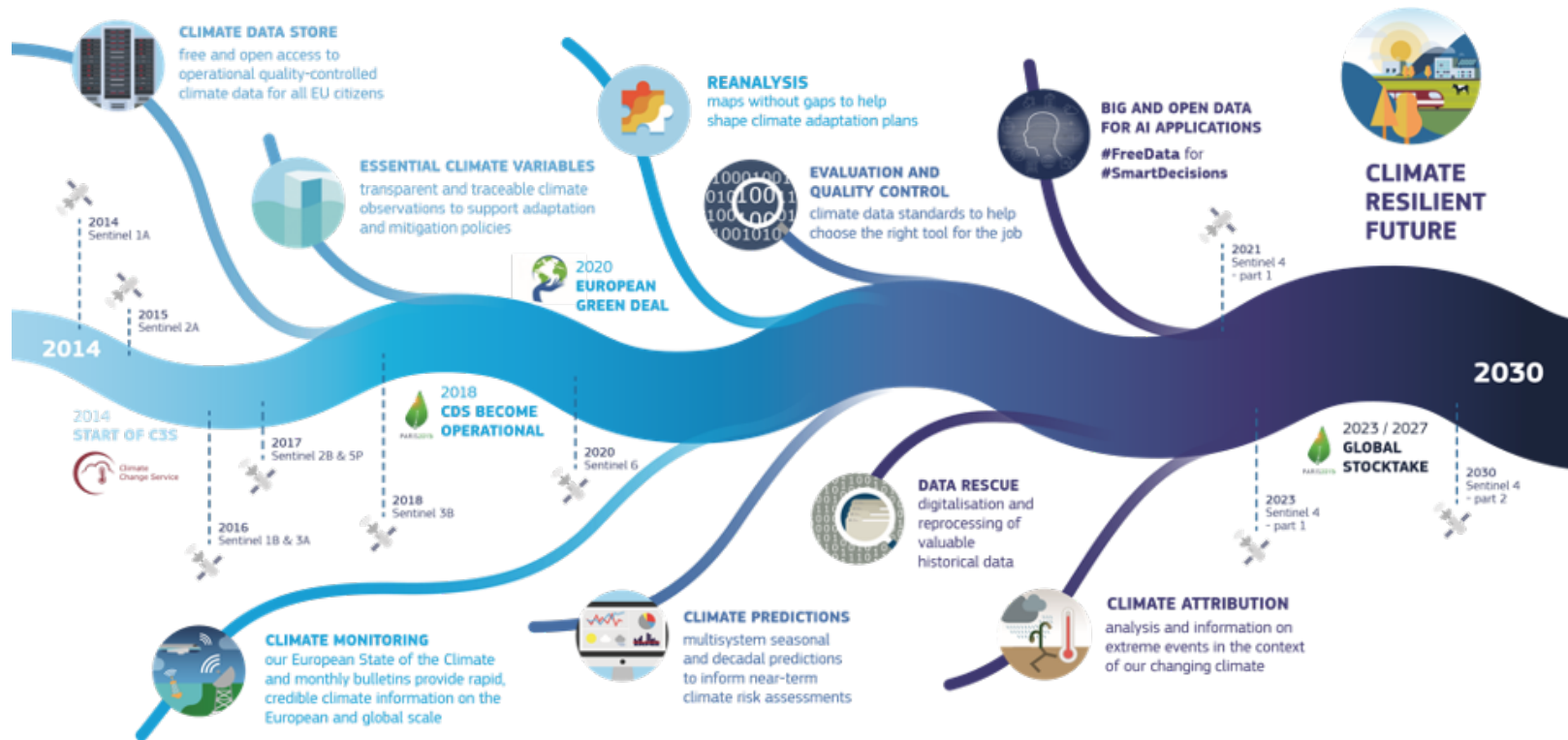
Context for Copernicus@ECMWF post-2021

- New Multi-Financial Framework 2021 - 2027
- A new Space Regulation entered into force on 12 May 2021
- New contribution agreements between the EU and Entrusted Entities are being finalised.
- New user requirements have been accumulated through:
 - Copernicus User Forum
 - User Requirement Data Bases and Analyses (URDB – URAD)
 - Workshops, user days, etc.

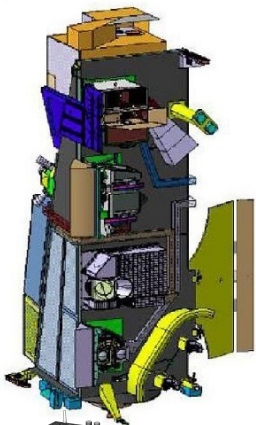
Budget reality: ‘Do more with same ... or less’



Enhanced Continuity for C3S



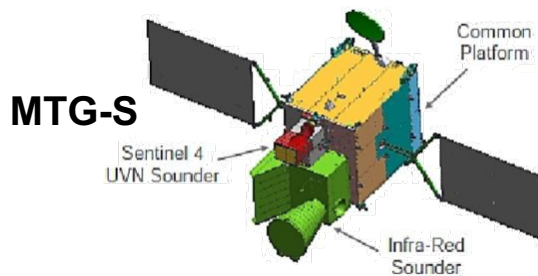
MetOp-SG-A



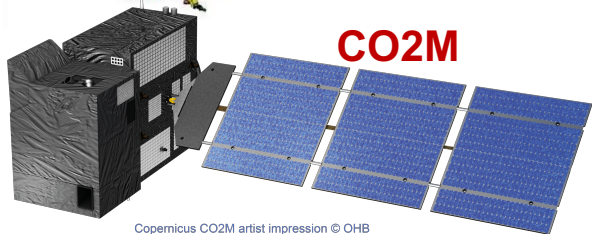
- Sentinel-5
- IASI-NG
- 3MI



Exciting times ahead for CAMS



- Sentinel-4
- IRS

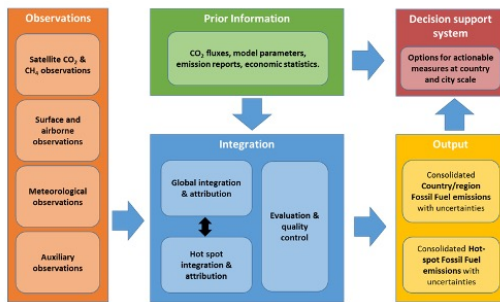


Copernicus CO2M artist impression © OHB



Global GEO constellation

Anthropogenic CO2 Monitoring and Verification Service



But challenging budget



Enhanced synergies



Atmosphere
Monitoring Service

atmosphere.copernicus.eu



Climate
Change Service

climate.copernicus.eu

Data stores (operating, maintaining and developing the facility to serve the CAMS and C3S products), **user support and web-based visualisation/charts**

Contribution to **WEkEO**

Communications (including web content provision and management, media public outreach and events)

User engagement and training including contribution to Thematic Hubs, interactions with the Copernicus Knowledge Centre for Earth Observation, etc.



Thank You!




Europe's eyes on Earth



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