

Collaborative Ground Segment Agreement

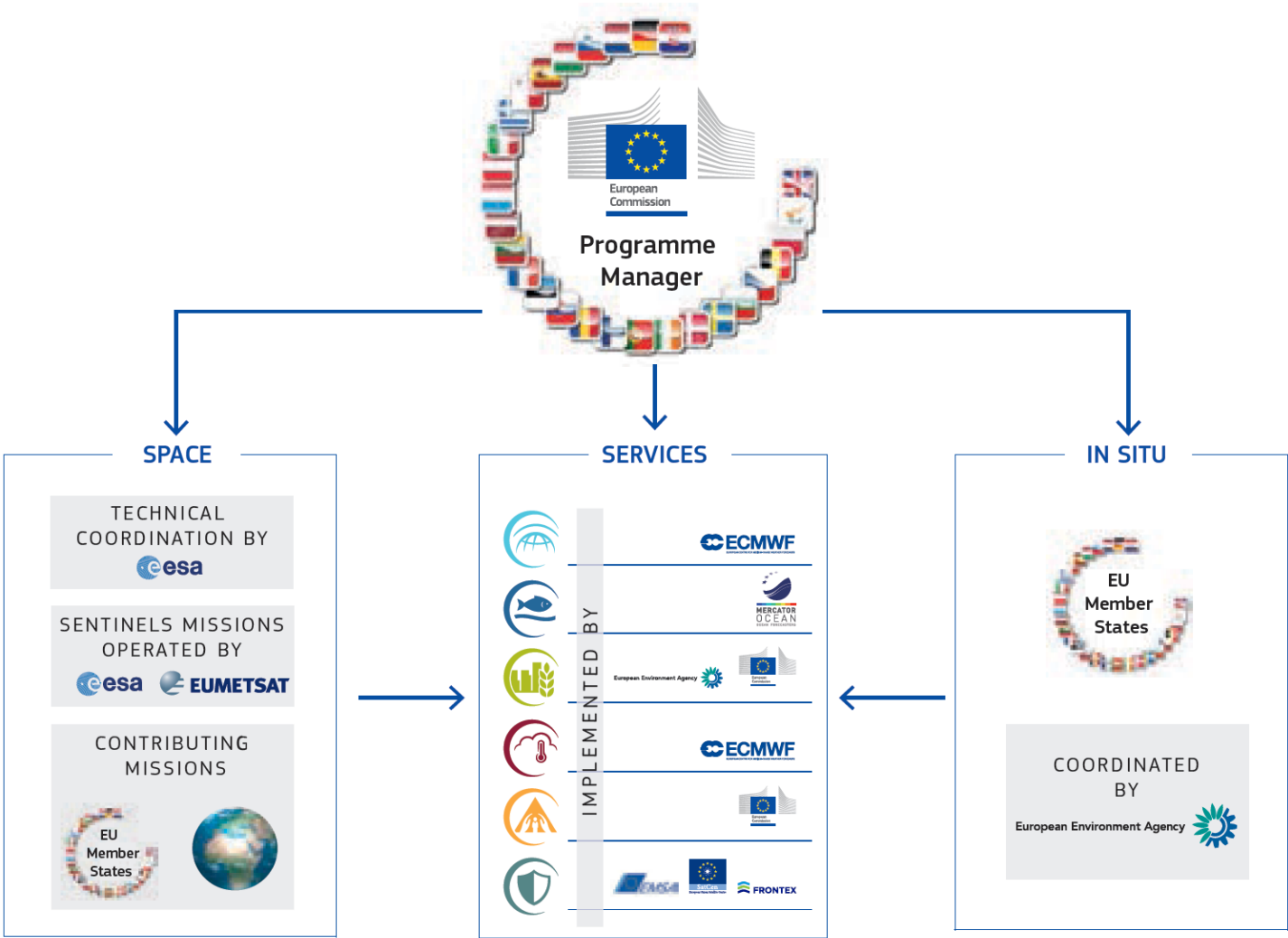
- On the 13th October Ireland became the 13th state to sign the Copernicus Space Component Collaborative Arrangement.



Collaborative Ground Segment Agreement

- the Collaborative Ground Segment Arrangement will facilitate **Sentinel data exploitation** in Ireland
- it ensures that ESA provides **technical advice on setting up data acquisition and dissemination**
- and makes **data processing and archiving software available** for national initiatives on a free and open basis

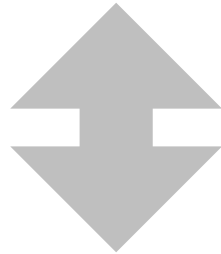
Copernicus Overview



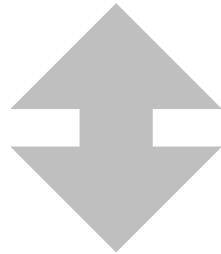
Copernicus Organisation/Structure

Space: ESA & EUMETSAT

Services: Entrusted Entities



Coordination/Management: Copernicus Committee & User Fora

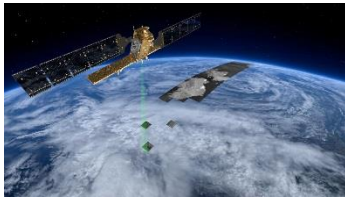


Member State Participation

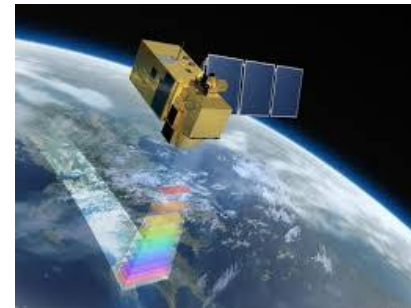
- Committee
- User Fora

Sentinel Satellites

- Sentinel-1 is a European radar imaging satellite first launched in 2014.



- Sentinel-2 is an Earth observation mission developed to perform terrestrial observations in support of services such as forest monitoring, land cover changes detection, and natural disaster management.



Sentinel Satellites

- Sentinel-3A is a European earth observation satellite dedicated to oceanography first launched on 16 February 2016.



- Sentinel-5 Precursor is an earth atmosphere observation satellite developed to close the gap in continuity of observations between Envisat and Sentinel-5



Sentinel Satellites

- EirHUB will be established soon
- Copernicus Data tap from ESA will then open
- Repository of full data sets for Ireland and a number of other locations will then be established locally
- EOEP4 – Data Mining Tools – will be made available to users to explore and use data

Copernicus Open Access Data-hubs

- Copernicus satellite image data can be accessed directly through portals such as Copernicus's Open Access hub (<https://scihub.copernicus.eu/>) which facilitates access to Sentinel-1, Sentinel-2 & Sentinel-3 data.



- The European Commission (EC) has launched an initiative to develop Copernicus **Data and Information Access Services (DIAS)** that will facilitate access to Copernicus data and information from the Copernicus services.
- Various European Member States are also active in developing their own National EO hubs.

Copernicus Services

Copernicus provides value added information outputs through six thematic services; **Land, Marine, Atmosphere, Emergency, Climate and Security**, detailed below. These services are generally **open and freely accessible** by all except for those services that may be restricted for example, security sensitive applications.

More information : <http://www.copernicus.eu/main/services>

Copernicus Services



The **Copernicus Land Monitoring Service (CLMS)** provides access to up-to-date information on **land-use and land-cover** products and on related variables, such as the vegetation state or the water cycle. It operates at global, pan-European, and local levels. CLMS is provided by the **European Environment Agency (EEA)** for the Pan-European and local components, and by the European Commission Joint Research Center (JRC) for the global land component. <http://land.copernicus.eu/>



The **Copernicus Marine Environment Monitoring Service (CMEMS)** is the one-stop-shop for marine data. It provides state-of-the-art **analyses and forecasts daily**, which offer an unprecedented capability to observe, understand and anticipate marine environment events. **CMEMS is provided by Mercator Océan** (the French centre for analysis and forecasting of the global ocean).

<http://marine.copernicus.eu/>

Copernicus Services



The **Copernicus Atmosphere Monitoring Service (CAMS)** provides continuous **data and information on atmospheric composition**. The service describes the current situation, forecasts the situation a few days ahead, and analyses consistently retrospective data records for recent years. CAMS and the Copernicus Climate Change Service (**C3S**) are provided by the **European Centre for Medium-Range Weather Forecasts (ECMWF)**.
<http://atmosphere.copernicus.eu/>



The **Emergency Management Service (EMS)** supports players in the field of **crisis management**. It addresses disasters caused by **natural hazards as well as man-made hazards and humanitarian crisis**. Only authorized users can trigger the service, but everybody can assess maps. **EMS is provided by the European Commission Joint Research Centre (JRC)**.

<http://emergency.copernicus.eu/>

Copernicus Services



The **Copernicus Climate Change Service (C3S)** provides high quality data and graphics to assist business, science and policy sectors to mitigate and adapt to the effects of climate change. C3S are provided by ECMWF.

<http://climate.copernicus.eu/>



The **Copernicus service for Security applications** aims to support European Union policies by providing information in response to Europe's security challenges. It improves crisis prevention, preparedness and response in the areas of **border surveillance, maritime surveillance** and support to EU external action. The **Copernicus Security Service** will be provided respectively by **FRONTEX** for **Border Surveillance**, by the **European Maritime Safety Agency (EMSA)** for **Maritime Security** and by the **European Satellite Center (SatCen)** for **Support to External Action**.

<http://copernicus.eu/main/security>

Copernicus Academy & Relay

There are two inter-connected initiatives in Ireland; **Copernicus Relay** and **Copernicus Academy** that will help support Copernicus related activities. These two initiatives have been merged into one structure in order to enable more effective coordination.



Clearinghouse for Copernicus and EO, **raise awareness of Copernicus, providing guidance on data-access, information services, technologies, funding-calls, networking events, commercial opportunities, business activities as well as Startup support.**



Address the **educational, training, research and academic networking aspects** -as these relate to Copernicus activities in Ireland. Example include; **EO skills-development, specific EO training courses, promoting EO research, national capacity building, developing linkages with other EU Academies, educational institutions and EO end-user communities.**

Further information: <http://eonet.ie/>

Opportunities

User Fora

EO Scientific Advisory Committee

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