

ECMWF communication

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## **Copernicus Climate Change and Atmosphere Monitoring Services launched**

A ground-breaking agreement was signed in Brussels today between the European Commission and the European Centre for Medium-Range Weather Forecasts (ECMWF). This agreement means that ECMWF will be managing the Copernicus Climate Change and Atmosphere Monitoring Services. The European Union's flagship Copernicus programme ensures operational monitoring of the atmosphere, oceans, and continental surfaces, and will provide reliable, validated information services for a range of environmental and security applications. It comprises six services: Land Monitoring, Marine Monitoring, Atmosphere Monitoring, Emergency Management, Security and Climate Change that provide reliable and consistent environmental information.

The Copernicus Climate Change and the Atmosphere Monitoring Services represent an investment by the EU of €291 million over seven years and will draw together contributions from across Europe. ECMWF is an intergovernmental organisation that is both a research institute and an operational centre producing and delivering data on weather, climate and atmospheric composition to users across its member states.

ECMWF's Director-General Alan Thorpe said:

*"The Copernicus programme is a milestone for Earth observations and its many scientific and operational applications. The two services that ECMWF is managing are vital to provide to European policy-makers, businesses and society at large the highest quality environmental information. ECMWF will build upon its expertise in these fields and its extensive scientific and technical partnerships across Europe and beyond to lead this ambitious and extremely timely initiative. There is a critical need for science-based and user-driven services to be made available to policy-makers and citizens alike, and the EU's investment in the Copernicus Services will deliver just that."*

The Atmosphere Monitoring Service will combine state-of-the-art numerical models of the atmosphere, such as those used for the daily weather forecasts, with satellite and in-situ observations to provide daily forecasts of the composition of the air around the globe with a particular focus on Europe. This combination of millions of daily observations and the predictive power of numerical models will drive the reliability of the Copernicus Atmosphere Monitoring Service. It will deliver up-to-date

information in a number of areas of high societal relevance including air quality, climate forcing, ozone layer and UV radiation, solar radiation and solar energy resources, emissions of pollutants and greenhouse gases.

The Climate Change Service will deliver substantial economic value to Europe by providing authoritative climate information for the protection of citizens from climate related hazards such as high-impact weather events, improving planning of mitigation and adaptation practices for key human and societal activities, and promoting development of new services for the benefit of society. The Service will build upon and complement capabilities existing at national level and it will become a major contribution from the European Union to the WMO's Global Framework for Climate Services. It will provide comprehensive climate information covering the atmosphere, land, ocean, sea-ice and carbon, for timescales spanning decades to centuries. It will maximise the value of past, current and future Earth observations (from in-situ and satellite observing systems) by using state-of-the-art modelling, supercomputing and networking capabilities. This will produce a consistent, comprehensive and credible description of the past, current and future climate aimed at supporting adaptation and mitigation policies.

Speaking at the joint signing session where three Copernicus Services were being signed –Mercator, the French centre for ocean analysis and forecasting taking on Marine Monitoring, and ECMWF for Climate Change and Atmosphere Monitoring, Daniel Calleja, Director General, DG Enterprise and Industry, European Commission said:

*"The signature of these delegation agreements represents another major milestone for the Copernicus programme towards full operational status. The European Centre for Medium Range Weather Forecasts and Mercator Océan are the best possible partners for the Commission to implement the Copernicus services for monitoring the Atmosphere, Climate Change and the Marine Environment. Together we will develop services which will both support policy-making and stimulate the economy to the benefit of European citizens"*

End

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More information available at:

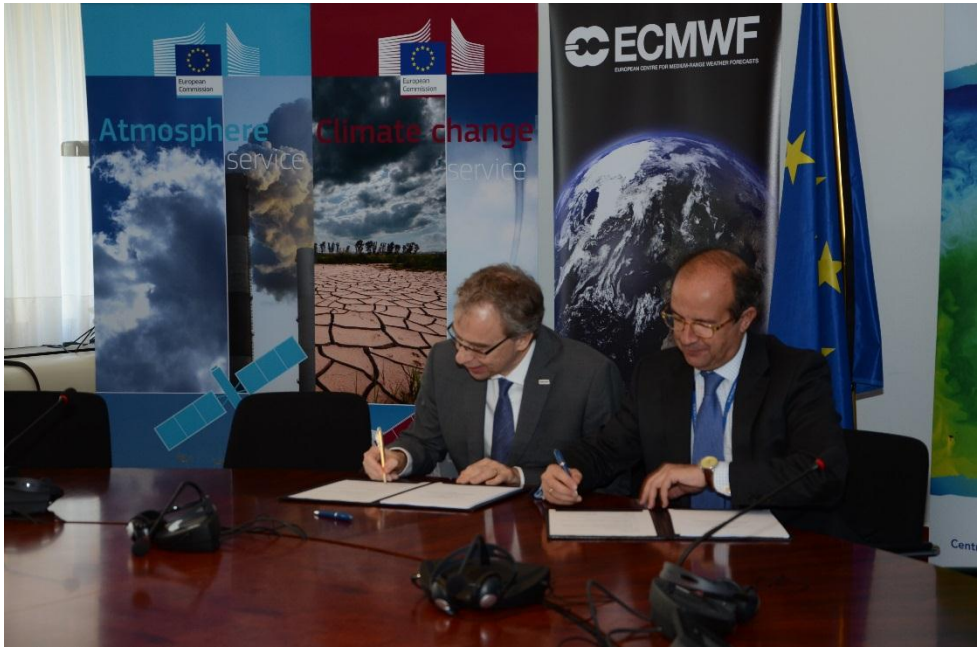
<http://www.ecmwf.int/en/about/what-we-do/copernicus/copernicus-climate-change-service>

<http://www.ecmwf.int/en/about/what-we-do/copernicus/copernicus-atmosphere-monitoring-service>

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

## Notes to editors

### **Copernicus**

Copernicus, the EU's Earth Observation Programme, ensures the regular observation and monitoring of Earth sub-systems, namely the atmosphere, oceans, and land surfaces. Through a combination of state-of-the-art satellites, contributing missions and in-situ data, Copernicus provides timely, reliable, and validated information in support of a broad range of environmental, climate and security policies and applications.

Copernicus will support its users – public authorities, the global scientific community, the private sector and citizens – in their vital tasks of monitoring our environment and security, by providing Earth Observation data and information, as well as added value services. This programme will enable considerable progress in improving maritime security, monitoring climate change, and providing support in emergency and crisis situations.

Copernicus will also help Europe's enterprises creating new jobs and business opportunities, through added-value services for environmental data exploitation, as well as supporting the space industry itself. Indirectly, a variety of other economic sectors will benefit from the advantages of timely, accurate and reliable Earth observation data, such as transport, oil and gas, insurance and agriculture.

Independent studies show that Copernicus could generate a financial benefit of some EUR 30 billion to Europe's total GDP and create around 50,000 jobs in Europe by 2030. Moreover, the free, full and open dissemination of Copernicus data and information will help citizens, businesses, researchers and policy makers to integrate an environmental dimension into their activities.

### **ECMWF**

The European Centre for Medium-Range Weather Forecasts (ECMWF) is an independent intergovernmental organisation supported by 34 countries.

ECMWF is both a research institute and a 24/7 operational service producing and disseminating numerical weather predictions and other data to our Member and Co-operating States. The Centre also offers a catalogue of forecast data that can be purchased by businesses worldwide and other commercial customers. The supercomputer facility (and associated data archive) at ECMWF is one of the largest of its type in Europe.

ECMWF was established in 1975 as a major initiative in European scientific and technical co-operation in meteorology, based on the concepts of a high-performance computing facility, a scientific and technical workforce, the production of medium-range weather forecasts, and related research and development, notably in the fields of climate monitoring and atmospheric composition.

ECMWF is based in Reading UK.