EUMETSAT at a glance

EUMETSAT, Europe's meteorological and climate satellite agency, operates fleets of satellites that observe the Earth's atmosphere, oceans and land 24 hours a day, every day. We send the observations from these satellites' instruments in near-real time to the users of our data, such as the national meteorological and hydrological services in our 30 member states, for use in weather forecasting models. The data are also essential for monitoring the Earth's changing climate.

Accurate weather forecasts are crucial for our safety and for the sustainability of our economies. Many sectors of the economy, for example, agriculture, transportation, tourism, energy and construction, depend heavily on reliable weather forecasting.

Earth observation data from EUMETSAT's meteorological satellites are indispensable for weather forecasting from a few hours to two weeks in advance, as well as for seasonal forecasts.

EUMETSAT operates its satellites on two different types of orbit – geostationary and low-Earth orbits. Our Meteosat satellites fly on a geostationary orbit, about 36,000km above the Earth, maintaining a constant view of the same area. The low-Earth-orbiting Metop satellites fly at a much lower altitude, 817km above the Earth, observing a wider range of parameters in more detail and on a global scale.

In addition, the European Commission has entrusted EUMETSAT with key roles in two of its flagship initiatives, the European Union's Copernicus environment-monitoring programme and the Destination Earth programme, which is creating digital "twins" of the Earth. EUMETSAT operates Copernicus Sentinel satellite missions observing the oceans, atmosphere and climate, and is responsible for the data lake underpinning the Destination Earth initiative.

To meet our goal of providing weather and climate data users with the information they need, EUMETSAT cooperates with satellite agencies in Europe and internationally (i.e. the US, China, Japan, Korea, Canada and India), sharing data, expertise and infrastructure.

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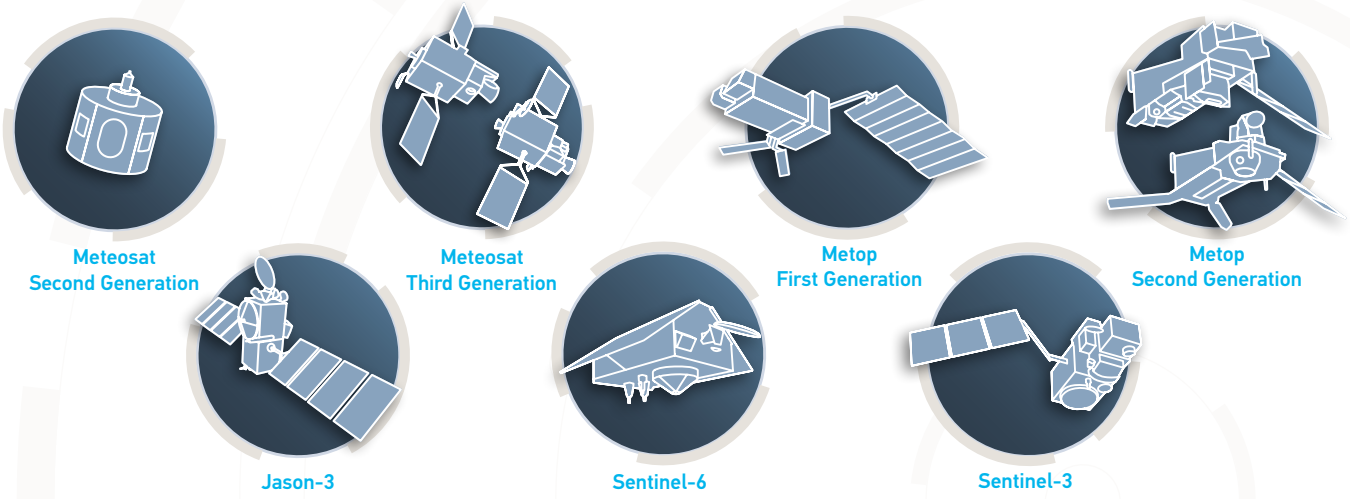
EUMETSAT delivers observations of weather, atmospheric composition, oceans, land and climate from instruments on satellites in geostationary and low-Earth orbits.



OPERATIONAL SATELLITES IN GEOSTATIONARY ORBIT

Meteosat-12

• Launched 2022 • 0° longitude

Scans Europe, Africa and parts of the Atlantic and western Indian oceans every 10 minutes. Observes lightning activity over Europe, Africa, and parts of the Middle East, South America, Atlantic and Indian oceans.

Meteosat-11

• Launched 2015 • 9.5°E

Scans Europe and adjacent seas every five minutes.

Meteosat-10

• Launched 2012 • 0° longitude

Scans Europe, Africa and parts of the Atlantic and western Indian oceans every 15 minutes.

Meteosat-9

• Launched 2005 • 45.6-45.9°E

EUMETSAT's contribution to the international Indian Ocean data coverage mission.

SATELLITES IN COMMISSIONING

- Meteosat Third Generation Sounder 1
- Metop Second Generation A1

FUTURE LAUNCHES

Geostationary orbit

- Meteosat Third Generation Imager 2

Low-Earth orbit

- Metop Second Generation B1
- Copernicus Sentinel-6B
- Copernicus Sentinel-3C
- Copernicus CO2M (carbon dioxide and methane monitoring)

OPERATIONAL SATELLITES IN LOW-EARTH ORBIT

Metop-B

• Launched 2012 • Inclination 98.7°

EUMETSAT Polar System (EPS) primary satellite, delivering ocean, land and atmospheric observations such as detailed temperature and humidity profiles, sea surface wind speeds, atmospheric composition, and much more.

Metop-C

• Launched 2018 • Inclination 98.7°

EPS secondary satellite, delivering ocean, land and atmospheric observations.

Jason-3

• Launched 2016 • Inclination 66°

Measures ocean surface topography and sea state from 1,336km altitude. Mission shared with the French Space Agency (CNES), the US National Oceanic and Atmospheric Administration (NOAA), NASA and the European Commission.

Copernicus Sentinel-6 Michael Freilich

• Launched 2020 • Inclination 66°

Provides global sea surface height observations for climate monitoring and ocean and seasonal forecasts from 1,336km altitude. Mission shared with the European Commission, the European Space Agency, NASA and NOAA, with support from CNES.

Copernicus Sentinel-3A

• Launched 2016 • Inclination 98.7°

Delivers marine and near-real-time atmospheric data

Copernicus Sentinel-3B

• Launched 2018 • Inclination 98.7°

Delivers marine and near-real-time atmospheric data