# Sentinel-6 satellite

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In news

SpaceX launches Sentinel-6 satellite from Vandenberg Air Force base in California

## What is the Sentinel-6 satellite?

- The Copernicus Sentinel-6 Michael Freilich satellite, designed to monitor oceans
- This satellite will ensure the **continuity of sea-level observations into the fourth decade and will provide measurements of global sea-level rise**.
- This satellite has been **named after Dr. Michael Freilich,** who was the Director of NASA's Earth Science Division from 2006-2019 and passed away in August this year.
- Sentinel-6 will **send pulses to the Earth's surface and measure how long they take to return to it,** which will help scientists measure the sea surface height.
- It will **also measure water vapour along this path** and find its position using GPS and ground-based lasers.
- The mission, **called the Jason Continuity of Service (Jason-CS) mission, is designed to measure the height of the ocean, which is a key component in understanding how the Earth's climate is changing.**
- The spacecraft consists of **two satellites, one of them launched on Saturday, and the other, called Sentinel-6B, to be launched in 2025**
- It follows the most recent U.S.-European sea level observation satellite, Jason-3, which launched in 2016, and is currently providing high-precision and timely observations of the topography of the global ocean

## Who has developed it?

It has been developed jointly by the **European Space Agency (ESA), NASA**, European Organisation for the Exploitation of Meteorological Satellites (Eumetsat), the USA's National Oceanic and Atmospheric Administration (NOAA) and the EU, with contributions from F**rance's National Centre for Space Studies (CNES).**

## Significance of the satellite

- The data collected by the Sentinel-6 will **support operational oceanography, by providing improved forecasts of ocean currents, wind and wave conditions.**
- This data will **allow improvements in both short-term forecasting for weather predictions in the two-to-four-week range (hurricane intensity predictions), and long-term forecasting**, for instance for seasonal conditions like El Niño and La Niña.