

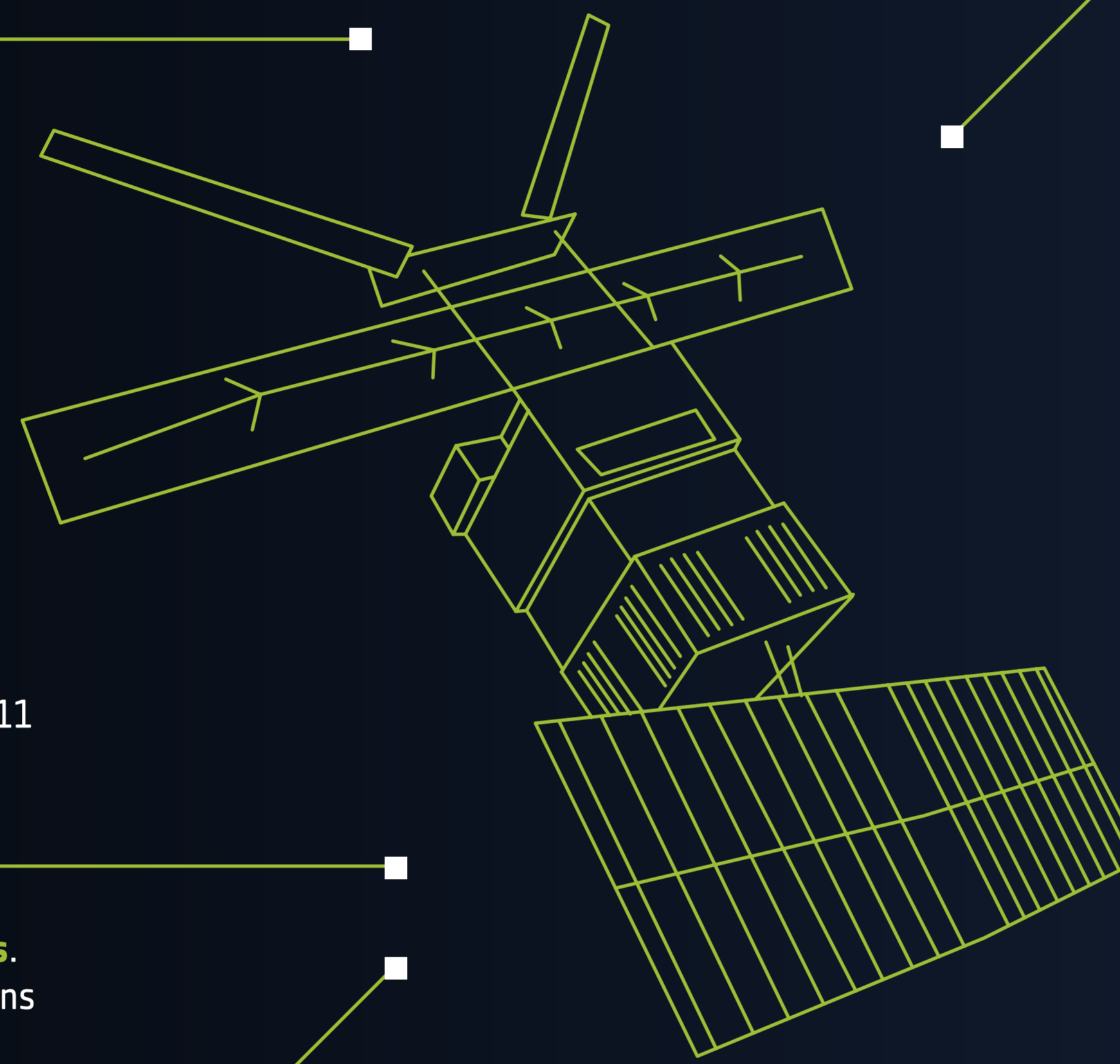
# Highlighting ERS-2 achievements

## The spacecraft

Launched on



ERS-2 (European Remote Sensing satellite) was launched from French Guiana on an Ariane 4 rocket. Along with its predecessor ERS-1, it formed part of a trailblazing European remote sensing programme that transformed how the planet is continuously monitored from space. The ERS-2 mission ended on 5 September 2011



## Heritage Value

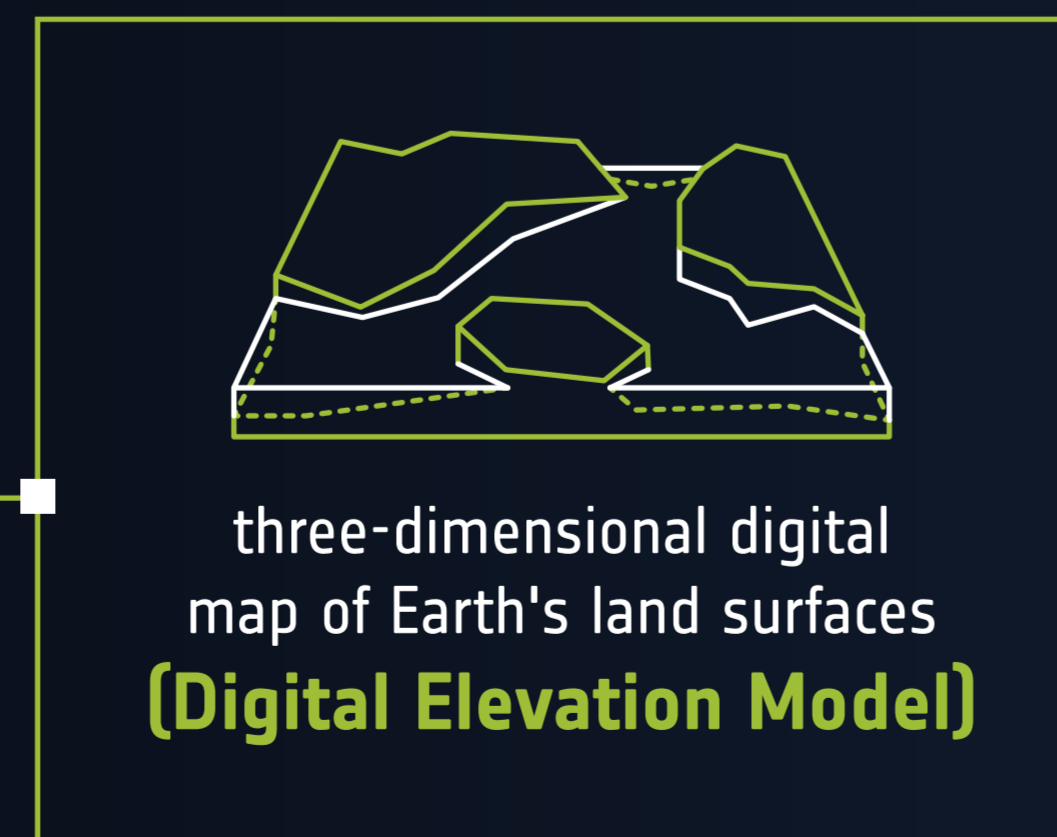
Both satellites far exceeded their design life of **three years**. ERS paved the way for Envisat, MetOp and Sentinel missions

## Data

ERS data supported over 5,000 projects producing some 4000 scientific publications. Archived heritage data still provide a wealth of information and are today accessible and enhanced as part of the **Heritage Space Programme**, enabling scientists to piece together datasets that detail the long-term changes impacting the planet

## Innovation

A tandem mission was implemented following the launch of ERS-2, which enabled an accurate, three-dimensional digital map of Earth's land surfaces (Digital Elevation Model) also allowing detection of small changes on Earth's surface with a range precision of 1 cm, opening new fields of applications



## Contributions to various applications



### Floods

ERS-2 was often used in the context of the International Charter on Space and Major Disasters, as in the cases of floods for post flood analysis and to study flood patterns



### Extreme Weather

ERS-2 carried a C-band scatterometer, capable of measuring ocean surface wind fields even in the fiercest of weathers. The instrument served to improve weather forecasting



### Rainforest Deforestation

Deforestation and illegal logging activities were identified owing to the thermal imaging from ERS-2's Along Track Scanning Radiometer (ATSR)



### Ozone Monitoring

The GOME (Global Ozone Monitoring Experiment) instrument on ERS-2 provided the first European trace gas measurements from space, enabling observations of high latitude 'ozone holes' at both latitudes



### Sea and Land Surface Temperature

ERS Along Track Scanning Radiometer (ATSR) was used to track water and land surface temperatures, which are crucial for climate change monitoring



### Ocean Wave Height

ERS-2's synthetic aperture radar sensor in Wave Mode was used to derive average ocean wave height



### Land Cover Classification and Change Detection

ERS SAR data allowed the generation of large-scale land cover maps featuring seasonal variation of vegetation in support of forestry, agriculture monitoring and planning, and urban mapping applications



### Ice Monitoring

ERS has allowed the tracking of changes in arctic sea-ice extent and the tracking of calving fronts in Greenland's largest ice streams