

EARTH OBSERVATION HERITAGE MISSIONS AT ESA



Through its Heritage Space Programme, ESA is ensuring that data delivered by non-operational Earth observation Heritage Missions are continuing to facilitate ground-breaking science, benefiting society and the environment.

For more than 40 years, ESA has acquired data from over 45 remote sensing missions. As part of its Heritage Space Programme, ESA is preserving, continuously improving and delivering these data on a fully open and free basis to a range of stakeholders, to meet the growing global demand for long-term information on Earth's environment.

This information is enabling cutting-edge climate-related research and supporting the development of a wide-range of operational applications.



PRESERVATION



IMPROVEMENT



DELIVERY

The Heritage Missions consist of non-operational remote sensing missions, including cornerstone ESA missions such as the **European Remote Sensing satellites, ERS-1 and ERS-2**, which were launched into the same orbit in 1991 and 1995, respectively.

Other cornerstone ESA Heritage Missions include **Envisat** – which was launched in 2002 and remained operational for 10 years – and the **Gravity Field and Ocean Circulation Explorer (GOCE)**, which launched in 2009.

In addition, since the mid-1970s, ESA has had agreements to acquire and distribute data to European stakeholders from several missions operated by international partners. Data over Europe delivered by these missions and acquired by ESA are also covered as part of the Heritage Space Programme starting five years after the missions reach the end of their operational phase.

ESA is collaborating with numerous global partners that are responsible for these missions, including NASA, the National Oceanic and Atmospheric Administration (NOAA), the Japan Aerospace Exploration Agency (JAXA), the Korea Aerospace Research Institute (KARI), and many more.



ESA's Heritage Space Programme ensures long-term data archiving and preservation, data improvement and reprocessing, and enables the alignment and harmonisation of heritage data with current and future missions, to build long-term time series that detail different aspects of Earth's environment. This is crucial for applications that require the capability to look back in time, like climate change monitoring. In addition, the programme provides end users with access to heritage data, as well as ensuring information extraction through state-of-the-art technologies and tools in alignment with more recent missions.

The programme promotes the sharing of services and technology within ESA and fosters international collaboration between space agencies and other global organisations.

Furthermore, ESA is working to grow its archive of heritage data through the recovery and consolidation of data from additional missions of European interest that are no longer operational.



LONG-TERM DATA ARCHIVING
AND PRESERVATION,
DATA IMPROVEMENT AND
REPROCESSING

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A stroll through Heritage Missions

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COP26 fuels interest in satellite data

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How Envisat helped to shape global understanding of Earth's systems

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Heritage data still widely used today

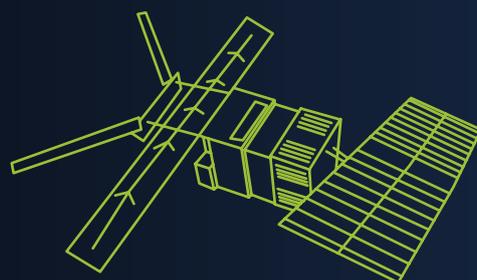
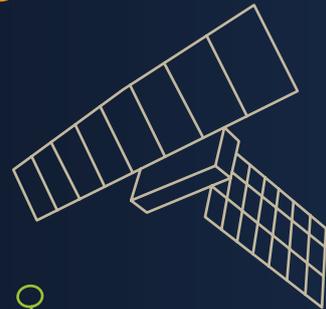
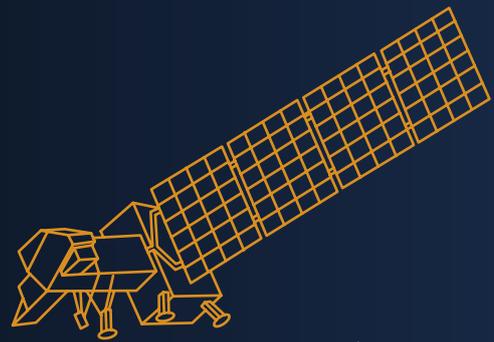
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ERS Heritage Data allow for 30 years of science

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10 years of Envisat data help to illuminate ocean processes

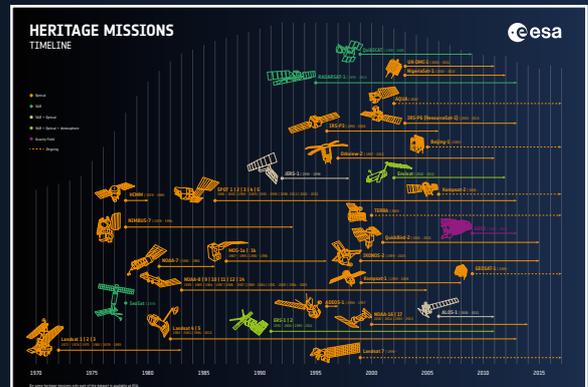
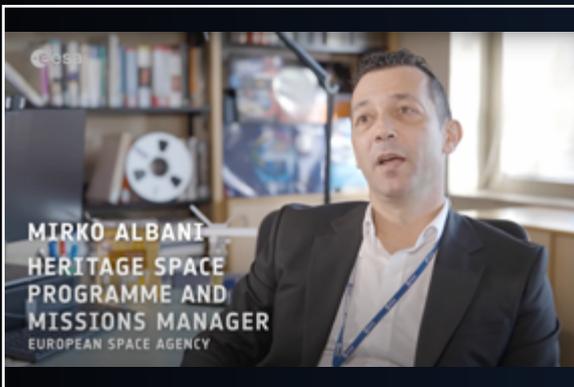
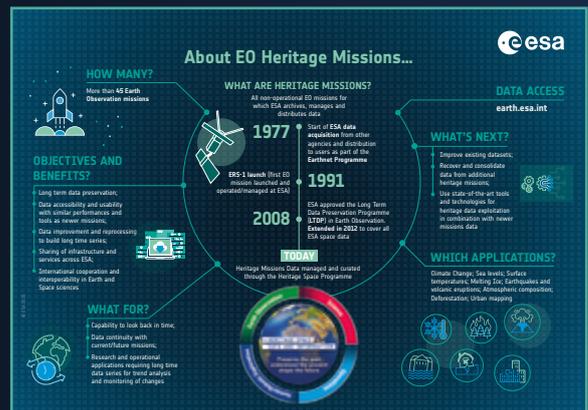
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LEARN MORE ABOUT OUR MISSIONS

Explore the resources below to discover more about the Heritage Missions at ESA.

These materials include a selection of infographics and an interview with Mirko Albani, ESA's Heritage Missions Manager.



LEARN MORE ABOUT **HERITAGE** MISSIONS AT ESA

earth.esa.int/missions/heritage-missions



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