

Showcasing success stories from ESA's CryoSat Mission



Destabilisation of Antarctic glacier

United Kingdom (Leeds)

CryoSat

CryoSat's unbroken 13+ year record of land ice are used to compute the thinning of the Cadman glacier's ice shelf

[Destabilisation of Antarctic glacier](#)

Predicting floods in African rivers

Denmark (Copenhagen)

CryoSat, Envisat, GRACE

Altimetry data help improve hydrological-hydrodynamic models and better predict floods in five African rivers

[Predicting floods in African rivers](#)

Climate tipping points

United Kingdom (Leeds)

CryoSat, Envisat, ERS

Decades-long time series are enabling scientists to uncover the threat of sudden and potentially irreversible changes to Earth's climate

[Climate tipping points](#)

Monitoring coastal intrusions

Italy (Rome)

CryoSat

Machine learning methods and CryoSat data monitor intrusion events in the Gulf of Lion that impact marine life

[Monitoring coastal intrusions](#)

Global lake water loss

USA (Colorado)

CryoSat, Envisat

A worldwide, long-term study of lake water storage shows widespread decline in large global lakes

[Global lake water loss](#)

Tracking sea ice decline

France (Toulouse)

CryoSat, Envisat, ERS

A timeseries of sea ice thickness, spanning nearly three decades, uncovers long-term sea ice decline that is often masked by year-to-year variability

[Tracking sea ice decline](#)

Snow depth over sea ice

France (Toulouse)

CryoSat

Altimetric data are used to retrieve consistent snow depth measurements over sea ice, to help improve sea ice thickness monitoring

[Snow depth over sea ice](#)

Ionospheric currents

South Korea (Daejeon)

CryoSat

Eight years of CryoSat data are used to diagnose weak low-/mid-latitude ionospheric currents

[Ionospheric currents](#)