



Cluster Cooperation at Programme Level



Diego Fernández Prieto, European Space Agency & **Larissa LORINCZI**, Directorate-General Research & Innovation, European Commission

2024 European Polar Science Week

3–6 September 2024 | The Black Diamond | Copenhagen, Denmark

Polar regions may be entering into a new regime where sea-ice-atmosphere interactions, exchanges of heat, carbon, energy, momentum are changing their role in the Earth system.

A major coordinated effort to fully understand and characterize this “new regime” is urgent....

EC RTD – ESA joint collaboration a successful collaboration 5 years in the making



In February 2020

the European Commission Directorate-General for Research and Innovation and the European Space Agency signed a **cooperation agreement** to jointly advance Earth System Science and its response to the global challenges that society is facing at the onset of this century

- **EC and ESA polar cluster projects** are starting to be brought closer together and collaborating and will be **showcased** in this plenary
- **EC-ESA joint seminars, workshops, conferences and events** have been organised
- **Horizon Europe WorkProgrammes 2021-2022, 2023-2024 and draft 2025** have all included **topics** that are **ESA flagged (approx. 300 mio EUR)**
- **ESA is issuing tenders** to match the topics launched under HE, with a special work package for collaborating with HE projects and joint dissemination of results
- **The first HE projects (polar topic WP21) that have started collaboration with ESA** will be **showcased** in this plenary

Joint RTD-EOP Earth System Science initiative

alignment of selected scientific activities under their [Horizon Europe](#) and [FutureEO](#) programmes

EC-ESA Joint Flagship Action

Polar Regions and Global Impacts

[Polar Flagship - eo science for society \(esa.int\)](https://esa.int/polar-flagship)

European polar science clusters



European Polar Science Week 2020



ESA Polar Science Cluster Collocation Meeting 2021

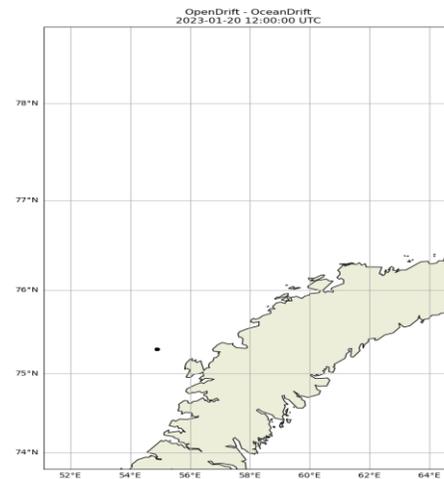
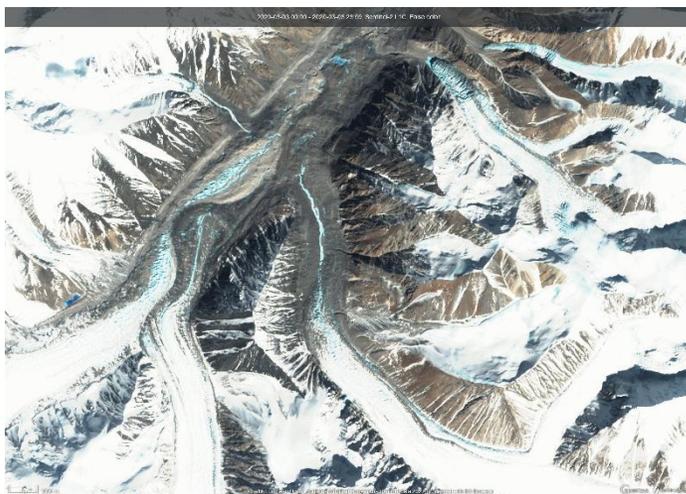
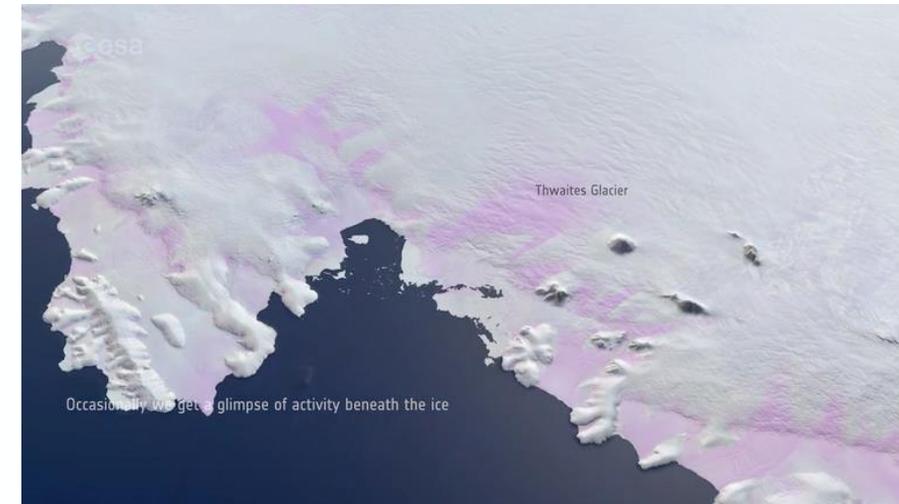
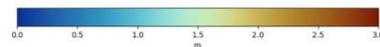
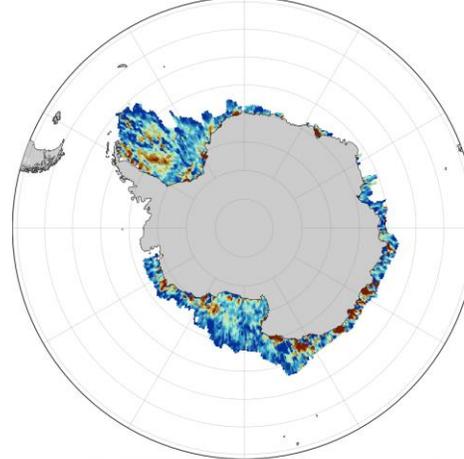
Ocean Carbon from Space Workshop

February 14, 2022 - February 18, 2022

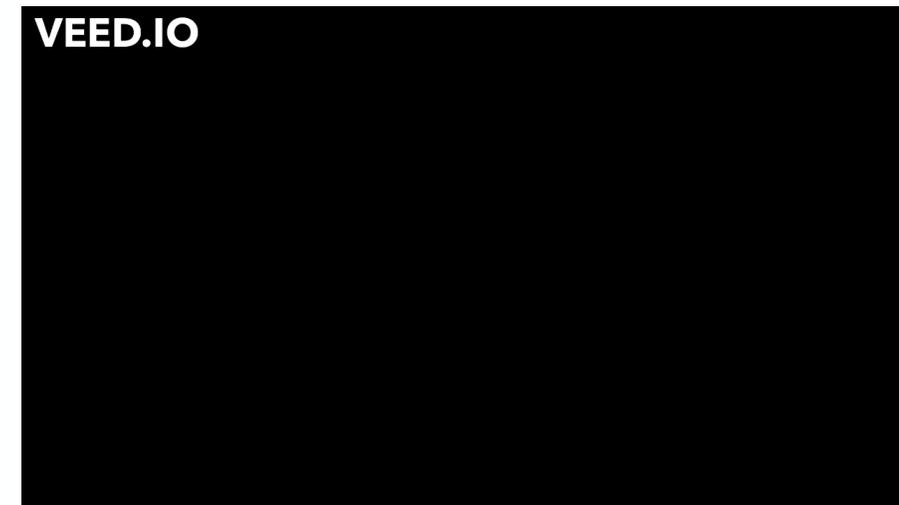


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But EO satellite data alone is not enough....



New ICT, Cloud Computing, AI, HPCc...

Interdisciplinary & Open Science

Enhanced models and improved predictions

In-situ data/enhanced networks/citizen data

A collaborative model based on 3 basic pillars...



Coordinated set of EC HE calls and ESA ITTs

Coordinated complementary projects focusing on common high-level goals



Fostering collaborative research and partnerships

Mechanisms to ensure collaboration between ESA and EC projects



Fostering scientific dialogue and networking

Continuous effort to reinforce the dialogue across the community

“... to jointly advance Earth system science and its contribution to respond to the global challenges that society is facing in the onset of this century”

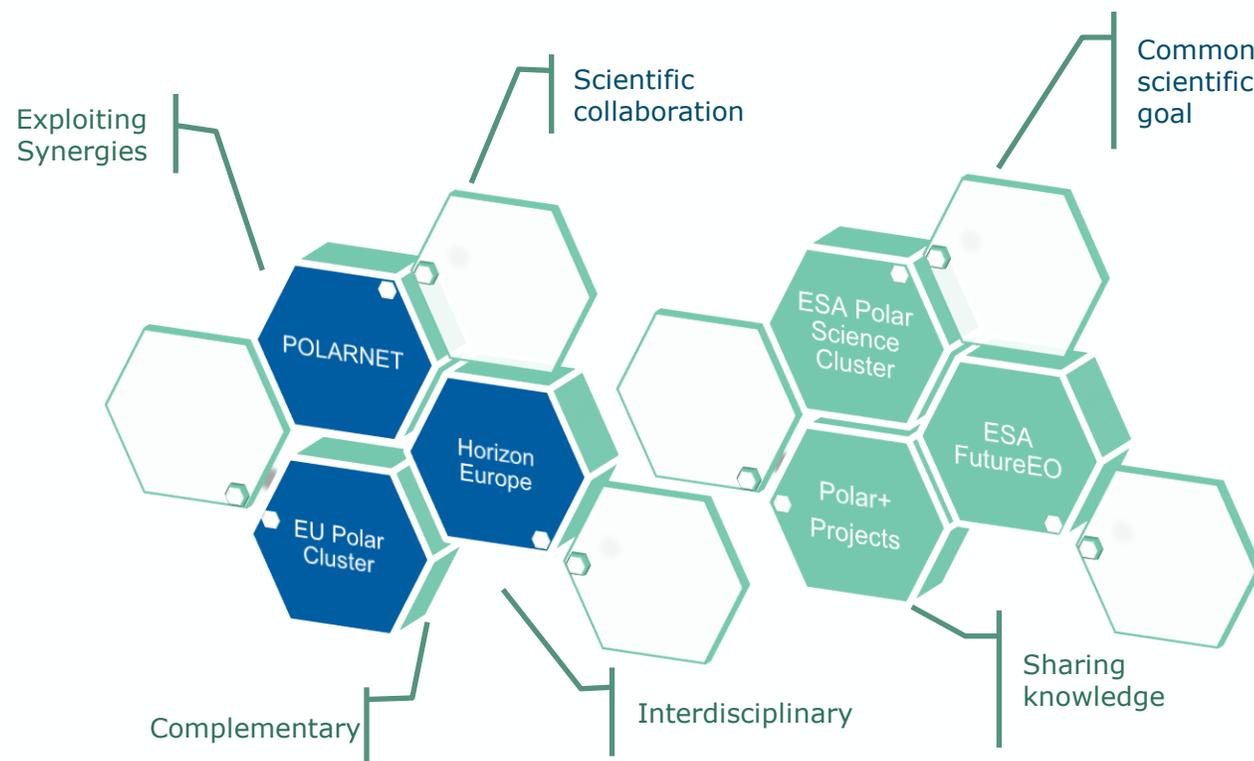
EC RTD – ESA joint future collaboration



Coordination of programming, identification of topics of joint interest, and mutual cross referencing in the different work programmes (2025+) to be continued and reinforced... **This event will help to identify new domains for collaboration in Polar science**

Active **clustering of resulting projects** with involvement of the agencies for identifying synergies and coordination of activities where relevant... **Action on-going to establish close cooperation across new ESA and EC projects to be kicked-off in 2024-2025**

Reinforced **outreach and communication about the success of the polar cluster and coordination between EC and ESA...** Actions on-going to maximise dissemination of data and results...



This session will...

- Provide a panorama of complementarity ESA and EC scientific projects and activities
- Present progress and concrete actions
- Discuss with scientists some of the first achievements and opportunities
- Gather feedback to prepare future actions