

# ESA Science Clusters: A new science cluster on Land, soils and Agriculture?

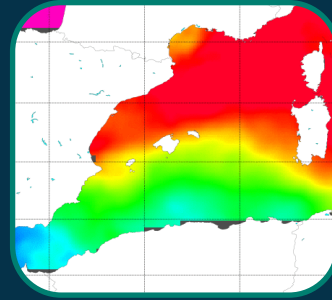
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# Science for Society - Pushing the frontier of science

We foster scientific excellence and maximise the scientific impacts of ESA missions in terms of new methods, novel products and breakthroughs in Earth System Science



**Engaging the community**



**New methods & products**



**Advancing Earth System Science**



**Scientific Campaigns**



**Training and Education**



**Open Science Tools/Virtual Labs**

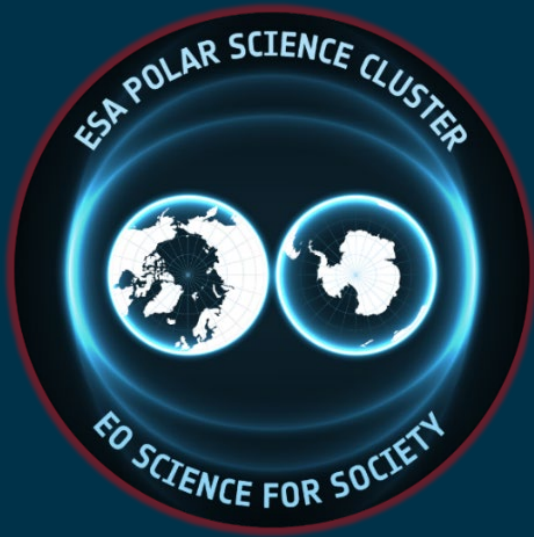


**Networking & collaboration**

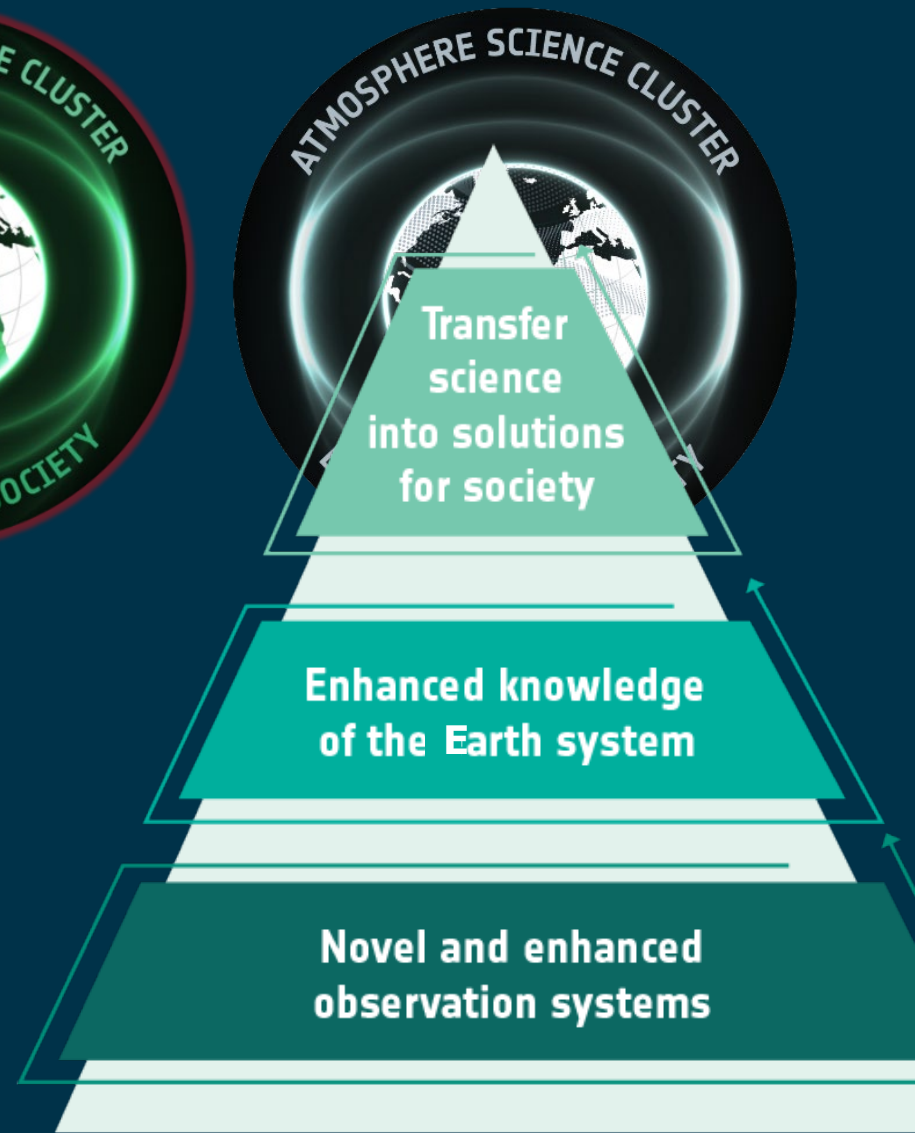


**Transfer to future missions**

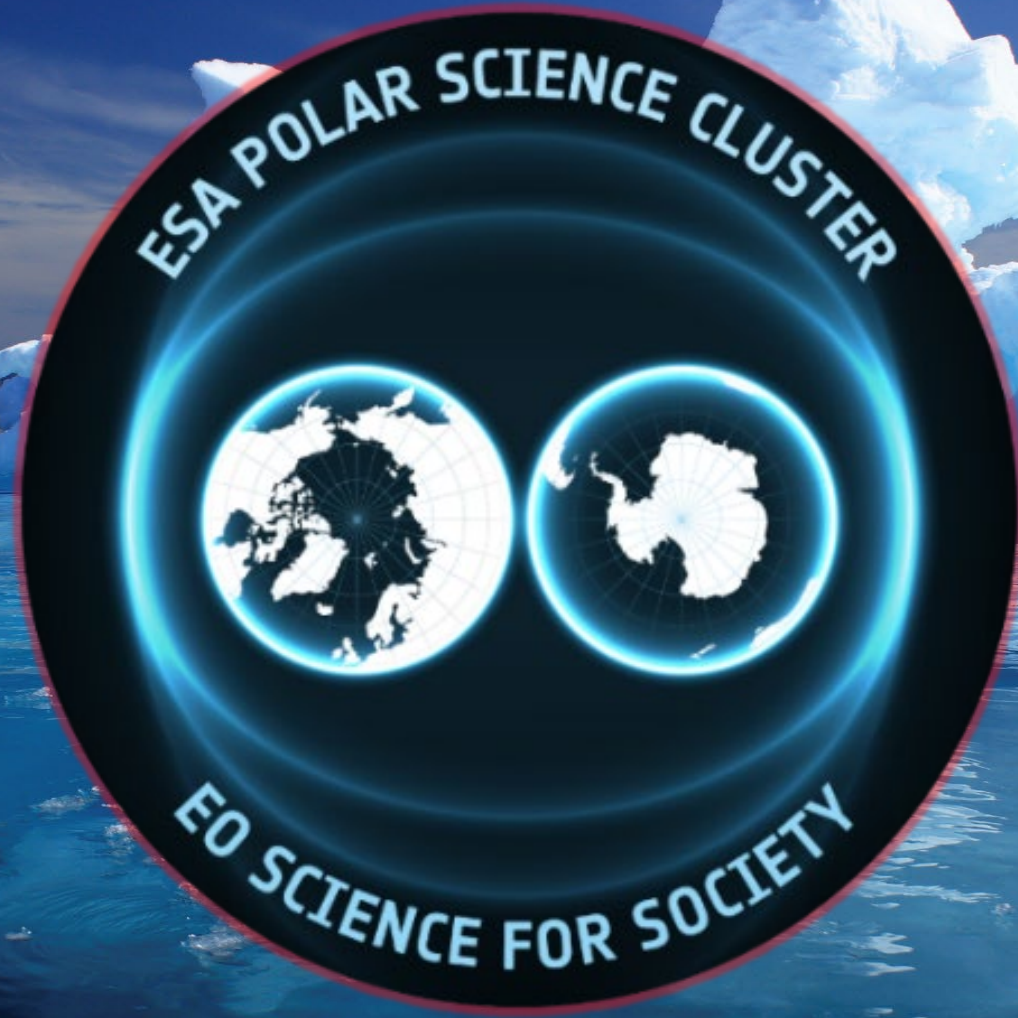
# ESA Science Clusters: A community approach



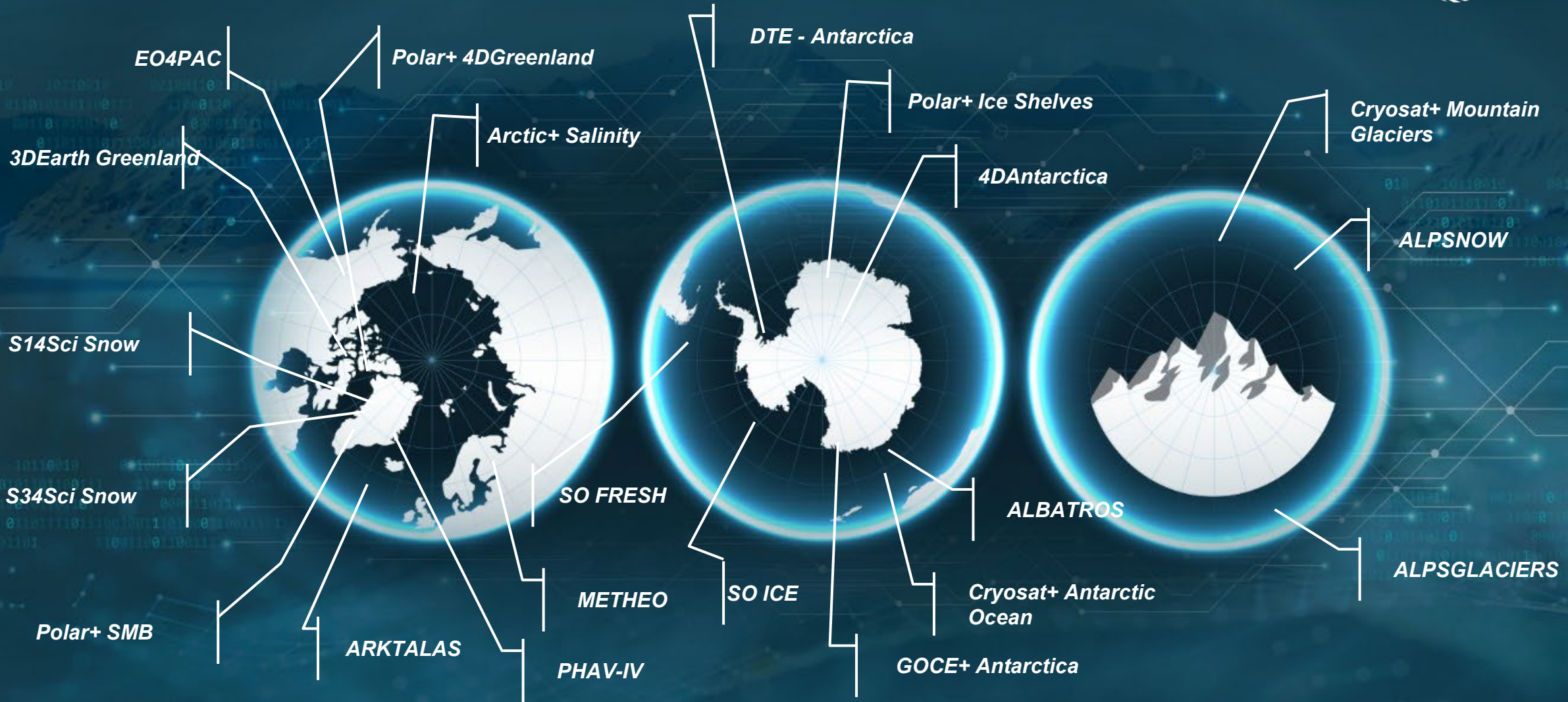
- **Promote a coordinated approach to science towards common and more ambitious goals;**
- **Promote collaborative research across projects and teams;**
- **Reinforcing networking and partnerships with other science programmes (e.g., Horizon Europe);**
- **Exploiting synergies and different expertise across domains;**
- **Based on a continuous dialogue with the scientific community;**



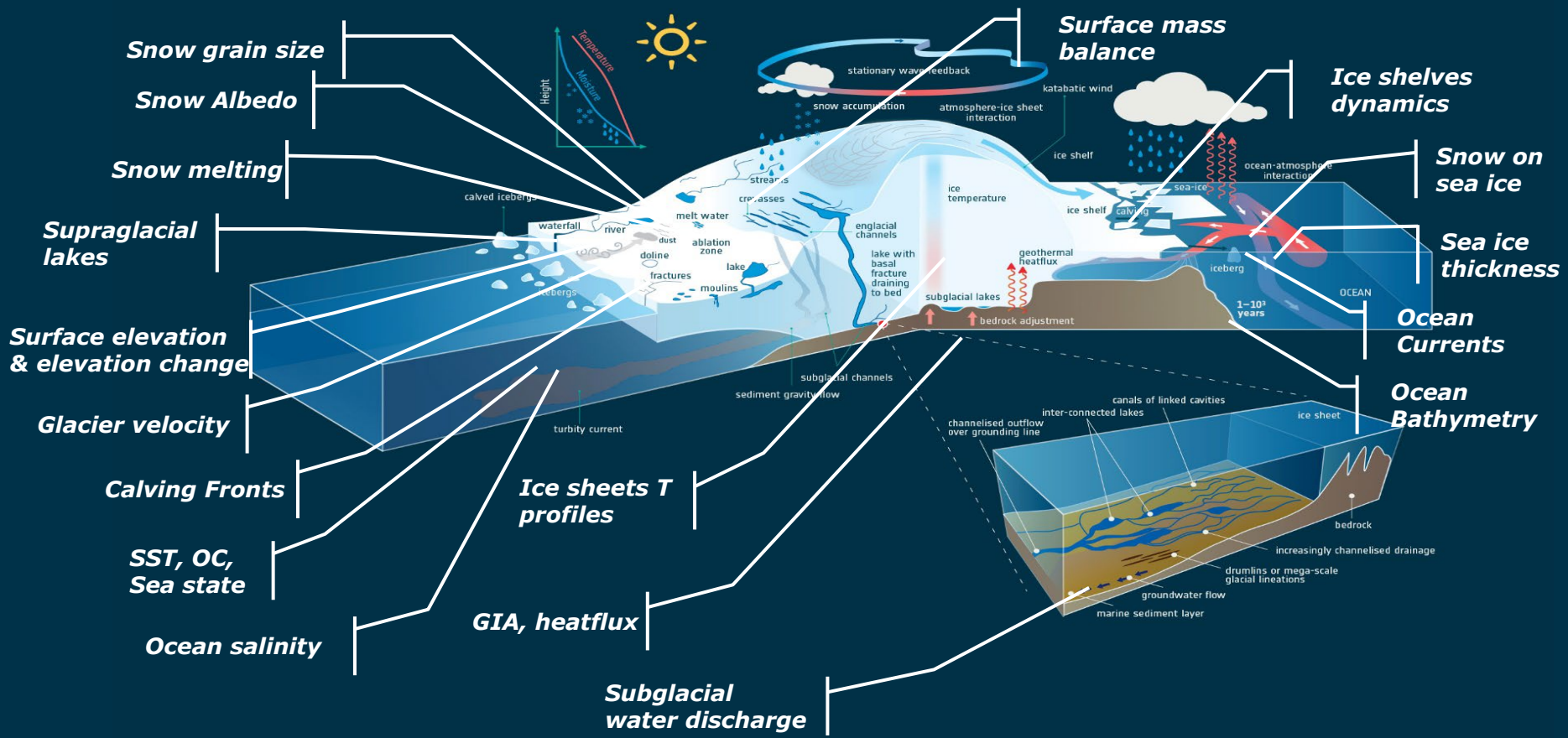
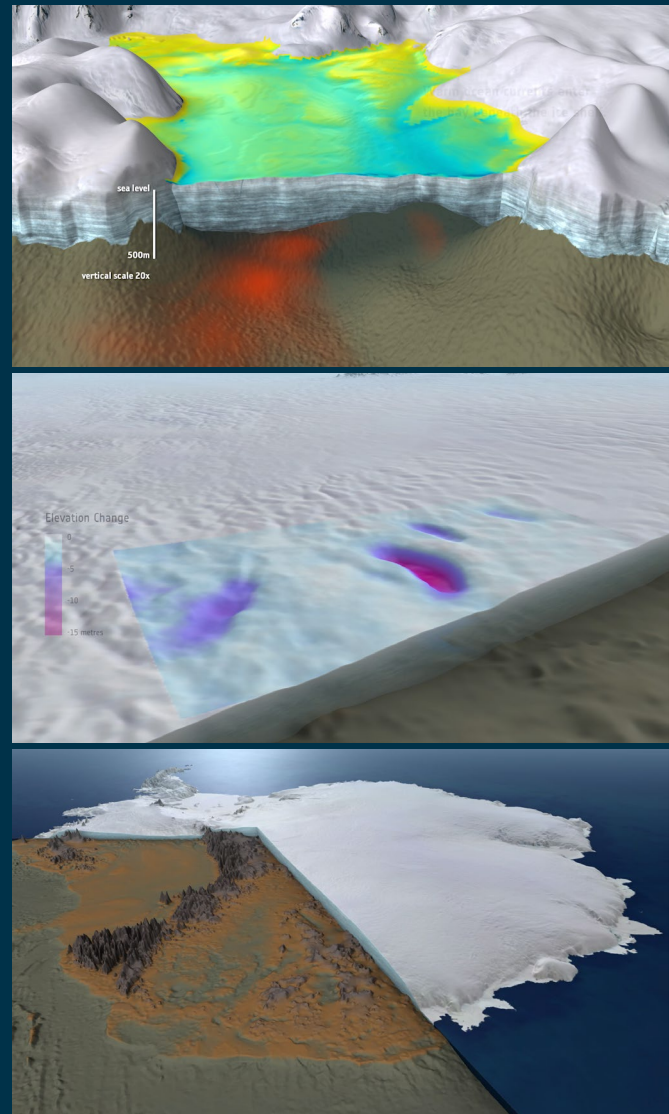
# Polar Science Cluster



# ESA Polar Science Cluster Activities



# An example: An integrated approach in Polar sciences



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# A new ESA science cluster on land, soils and agriculture ??...



## Common goals

*Coordinated projects focusing on common high-level goals*



**Fostering collaborative research and partnerships**

*New opportunities to ensure collaboration across projects*



**Fostering scientific dialogue and networking**

*Continuous effort to reinforce dialogue across the community*







# A common goal....



*“... 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”*

*The European Commission's Deputy Director General for Research and Innovation, Patrick Child and ESA's Director of Earth Observation Programmes, Josef Aschbacher at the signing ceremony, January 2020.*

# FLAGSHIPS ACTIONS

Kick-off in pilot phase (2020-2022)

Discover the  
EC-ESA Earth System Science Initiative  
Agora Europe – 25<sup>th</sup> 10:50



In preparation full implementation phase 2023+

Biodiversity



EC-ESA EARTH SYSTEM SCIENCE INITIATIVE

Water



P  
region

Terrestrial  
carbon



health

Green and Sustainable SD

Knowledge  
gaps in Earth  
system



Natural  
Disasters



# The Earth System Science Hub!!



*boosting the scientific capacity of ESA and its MSs through networking and partnerships, offering ESA as a hub for **scientific cooperation, exchange of ideas and promoting a community response** to major science challenges: climate crisis, biodiversity loss, ocean health, DTE, green deal...*

- A new and more collaborative way to implement the science programme...
- Bringing together world class scientists and new science talents with expertise across Earth science;
- A focal point for networking and new partnerships (e.g., space agencies, international partners);
- A Think-Tank to define new activities and shape the future evolution of the programme;

