



# OCEAN:ICE

Ocean-Cryosphere Exchange in Antarctica: Impacts on Climate and the Earth System

## Ocean-Cryosphere Exchanges in ANtarctica: Impacts on Climate and the Earth System

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### PolarRES

Exploring future polar climate



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# PolarRES

Exploring future polar climates

**Project name:**  
Polar Regions in the Earth System

**Duration:**  
01.09.2021- 31.08.2025

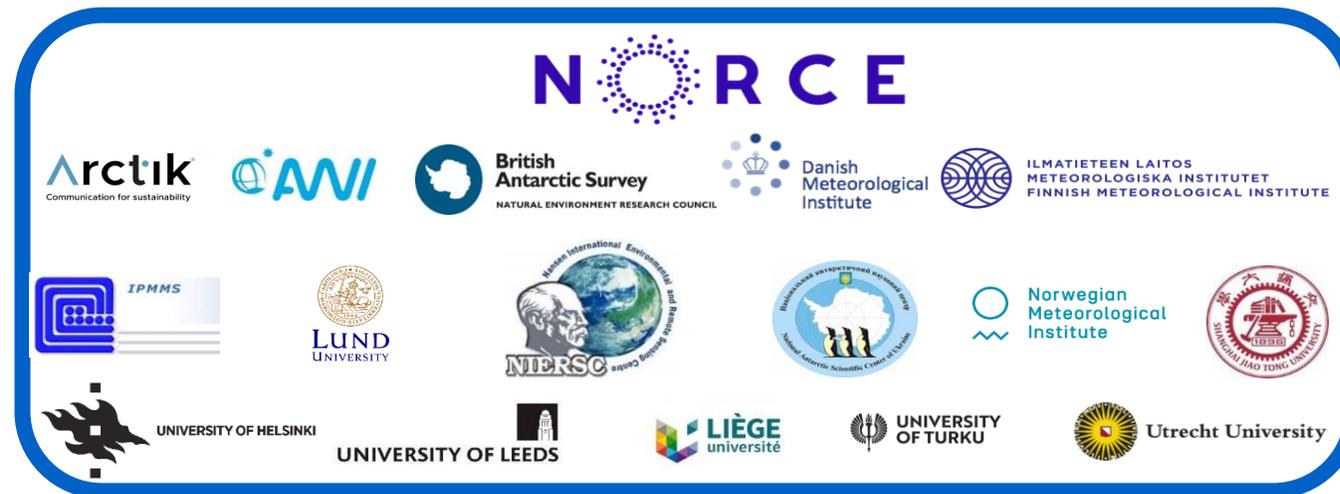
**Budget:**  
~ EUR 8 million

**Consortium:**  
17 Consortium members

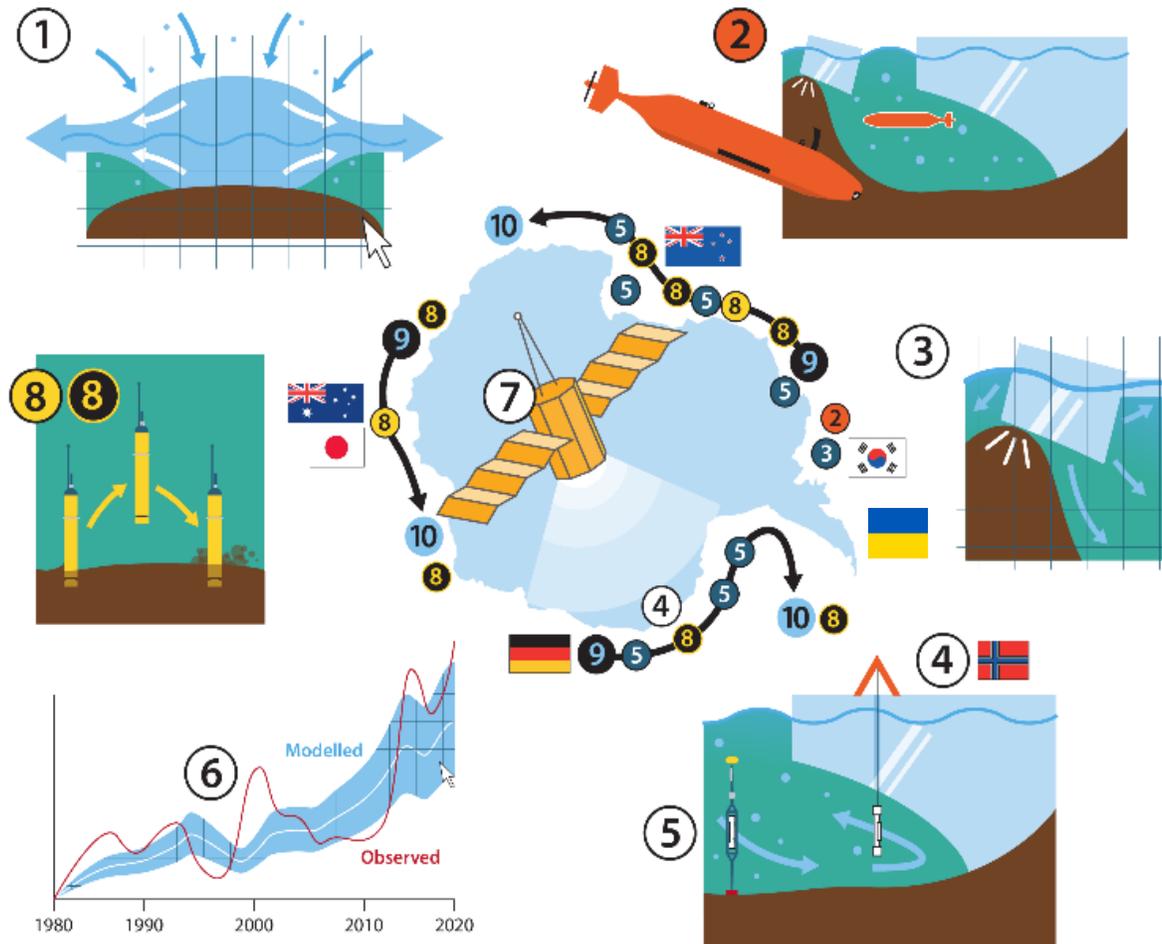
**Coordinator:**  
Dr. Priscilla A. Mooney

**Contact:**  
prmo@norceresearch.no

PI: Priscilla Mooney, NORCE



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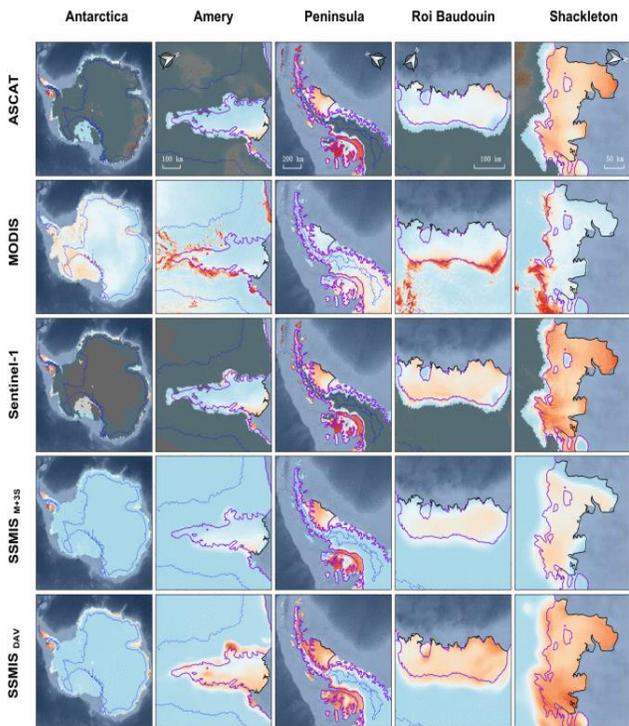


- **O1:** Reduce the spatial and knowledge gaps in ocean observations around Antarctica.
- **O2:** Improve critical ice sheet-ocean processes in numerical models.
- **O3:** Improve representation of AIS dynamics and integrate this knowledge into ice sheet-climate models.
- **O4:** Quantify AIS melt sensitivity to climate forcing and reduce the 'deep uncertainty' in freshwater flux and SLR projections to 2300.
- **O5:** Assess how global ocean circulation is impacted by freshwater discharge from the northern and southern ice sheets.
- **O6:** Assess the ocean impact on key global climate metrics from polar ice sheet melt to 2300 and beyond.
- **O7:** Deliver free and open data access and contribute to international assessments, climate model development, observing initiatives and policymakers.

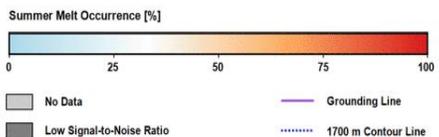
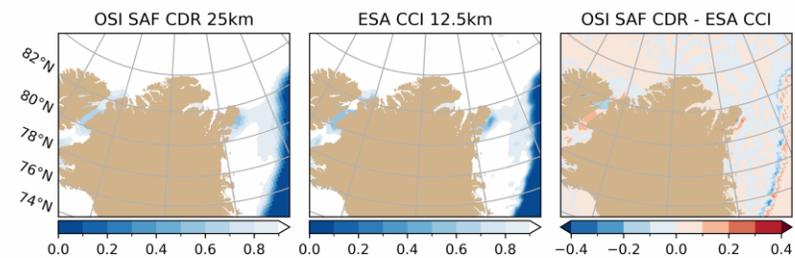


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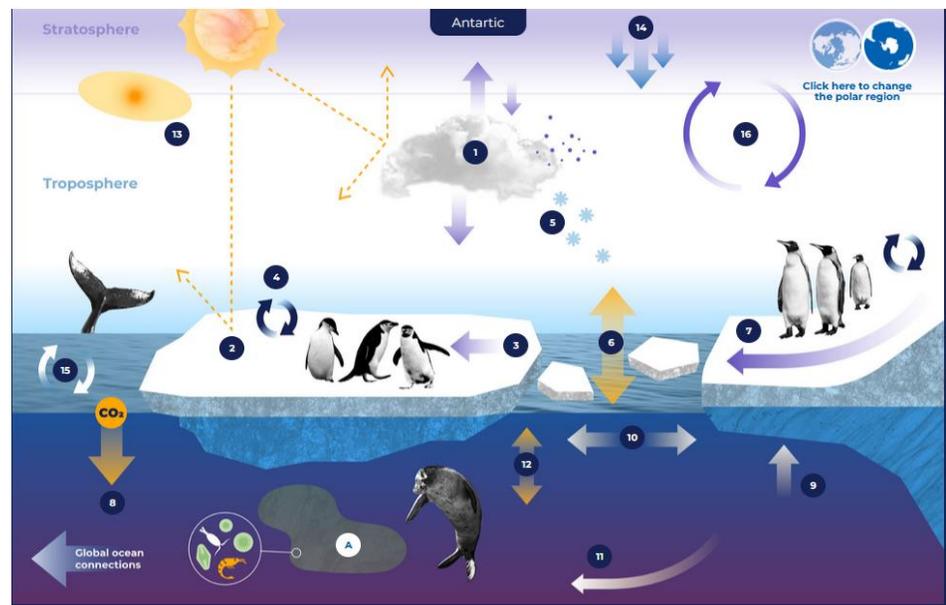
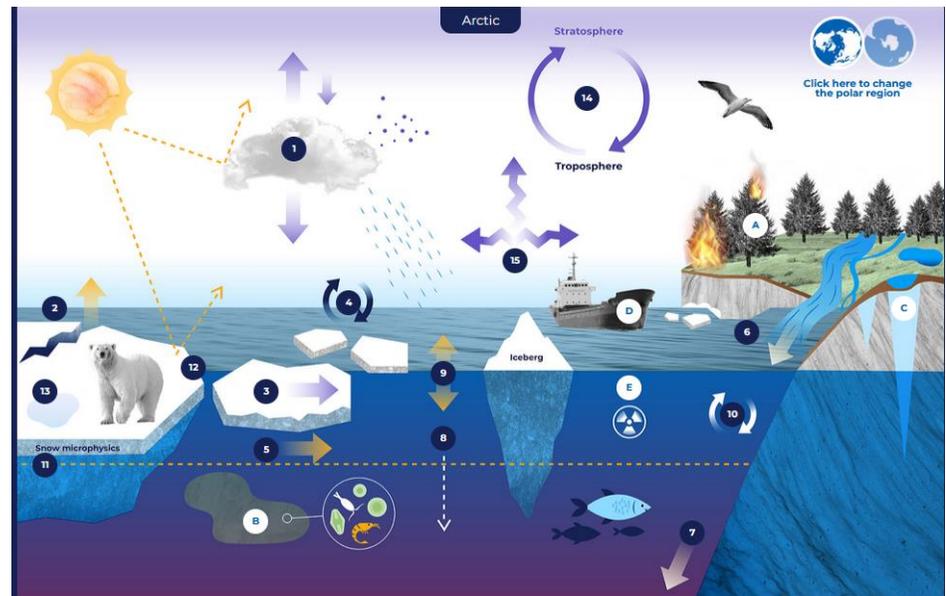
Exploring future polar climates



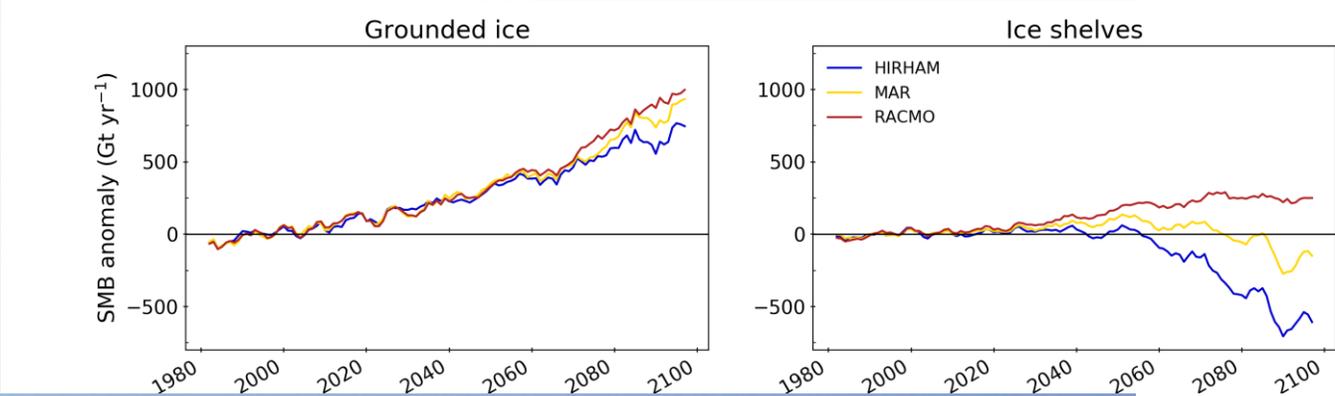
Sea Ice Concentration on 2018-02-05



De Roda Husman, 2023



Small differences in model parameterisations can lead to very large differences over the long term



Want to find out more?  
Thursday 2.30pm  
Session 20



**PolarRES**  
Exploring future polar climates



**OCEAN:ICE**

**Protect**  
CRYOSPHERE & SEA LEVEL

