



# PolarRES: a brief introduction

Dr. Priscilla A. Mooney

# The PolarRES Project

## Polar Regions in the Earth System



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

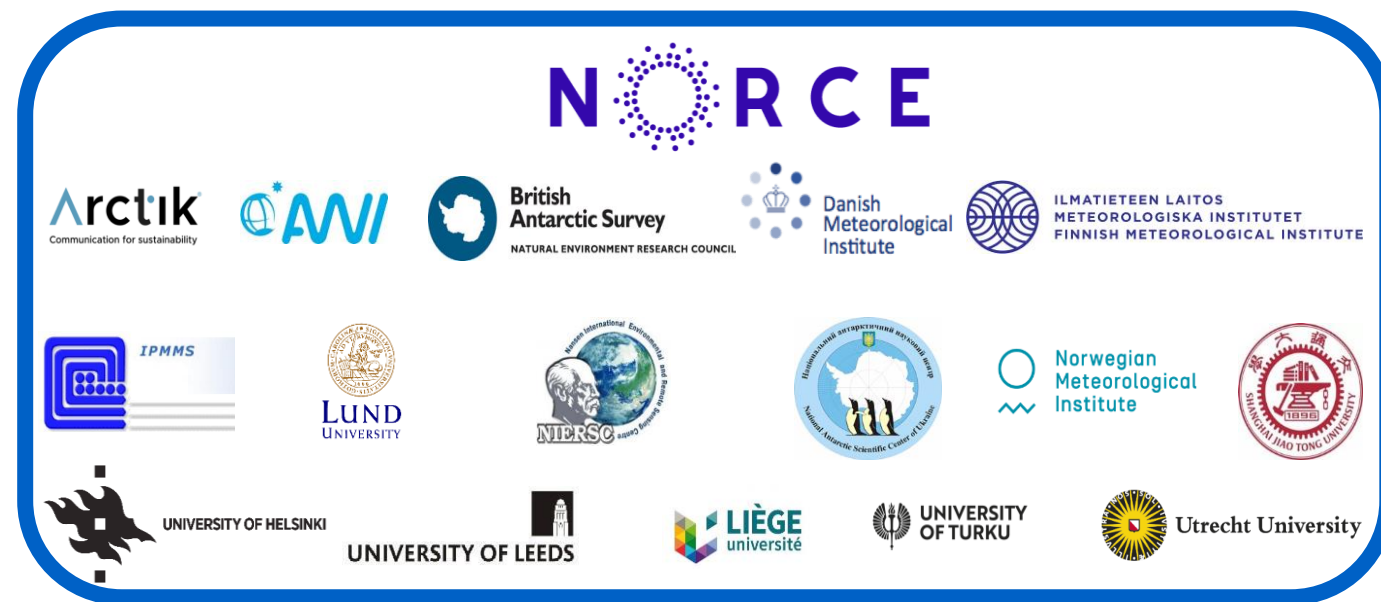
**Duration:**  
01.09.2021 - 31.08.2025

**Budget:**  
~ EUR 8 million

**Consortium:**  
17 Consortium members

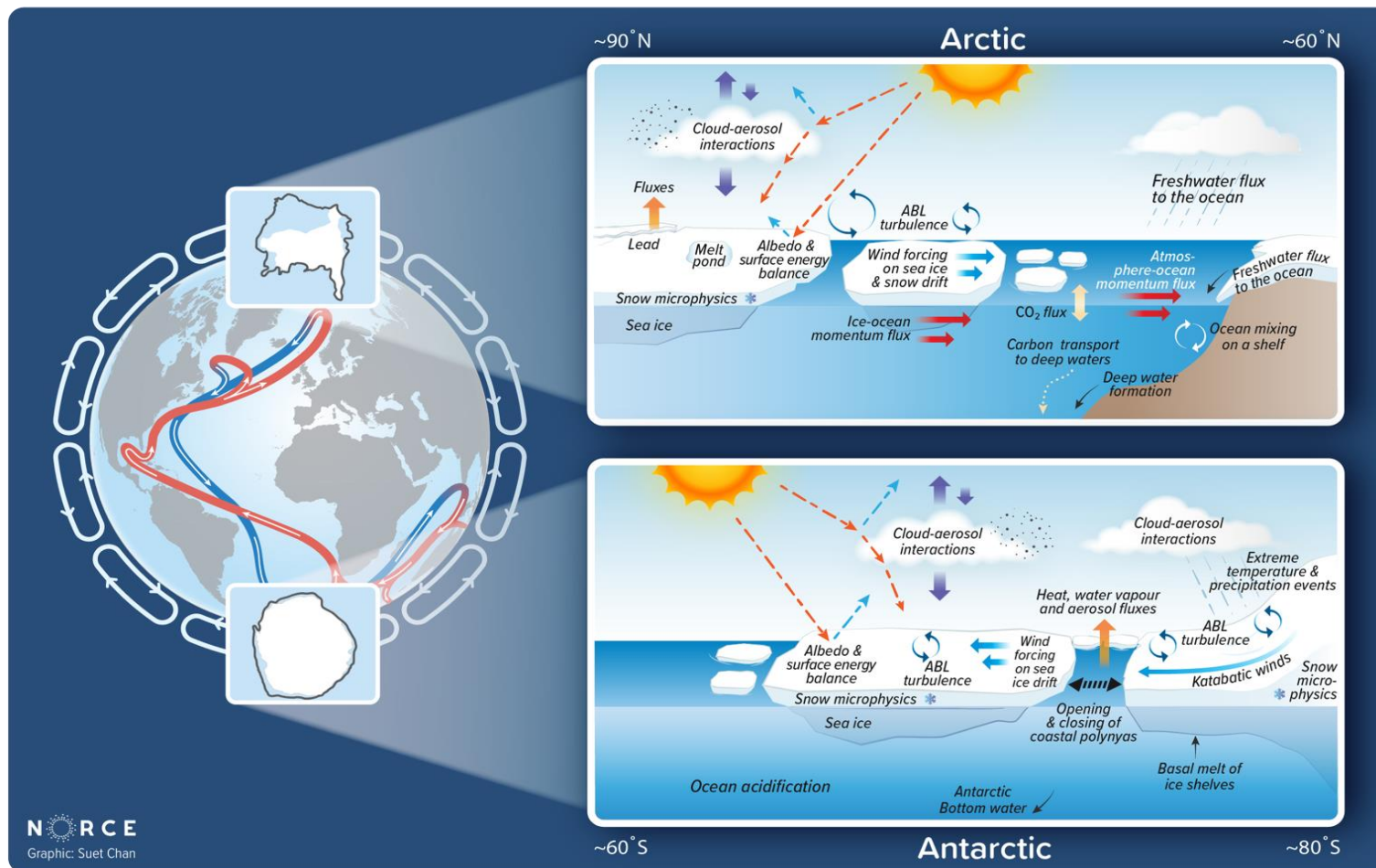
**Coordinator:**  
Dr. Priscilla A. Mooney

**Contact:**  
prmo@norceresearch.no



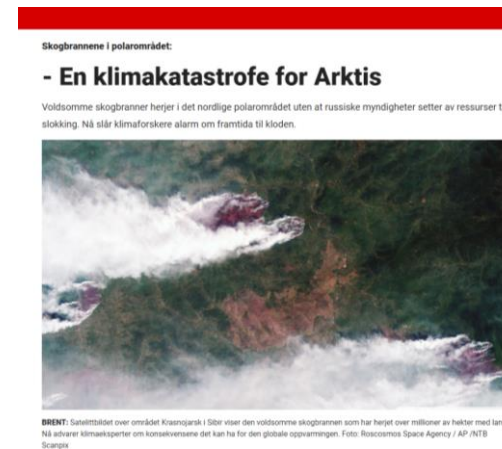
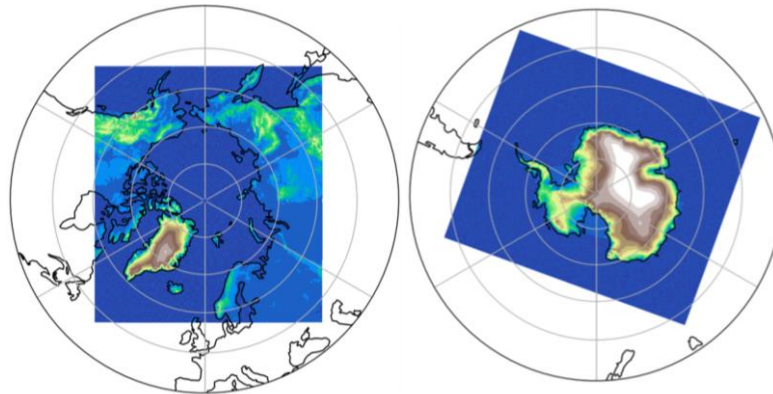
# Core Ambition

To improve regional climate information for impact assessments in the Arctic and Antarctic



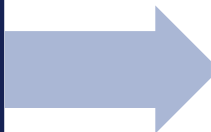
# Innovative hi-res climate projections

Identifier	Potential Storylines
<i>Northern Hemisphere Storylines</i>	
<i>NH1a</i>	<b>Strong Arctic Amplification</b>
<i>NH1b</i>	<b>Weak Arctic Amplification</b>



CMIP6  
Storyline  
GCMs

This work is led by  
Xavier Levine (NORCE)  
Siv Lauvset (NORCE)



High-Res. Polar  
Regional model  
ensemble

This work is led by  
Ruth Mottram (DMI)  
Priscilla Mooney (NORCE)

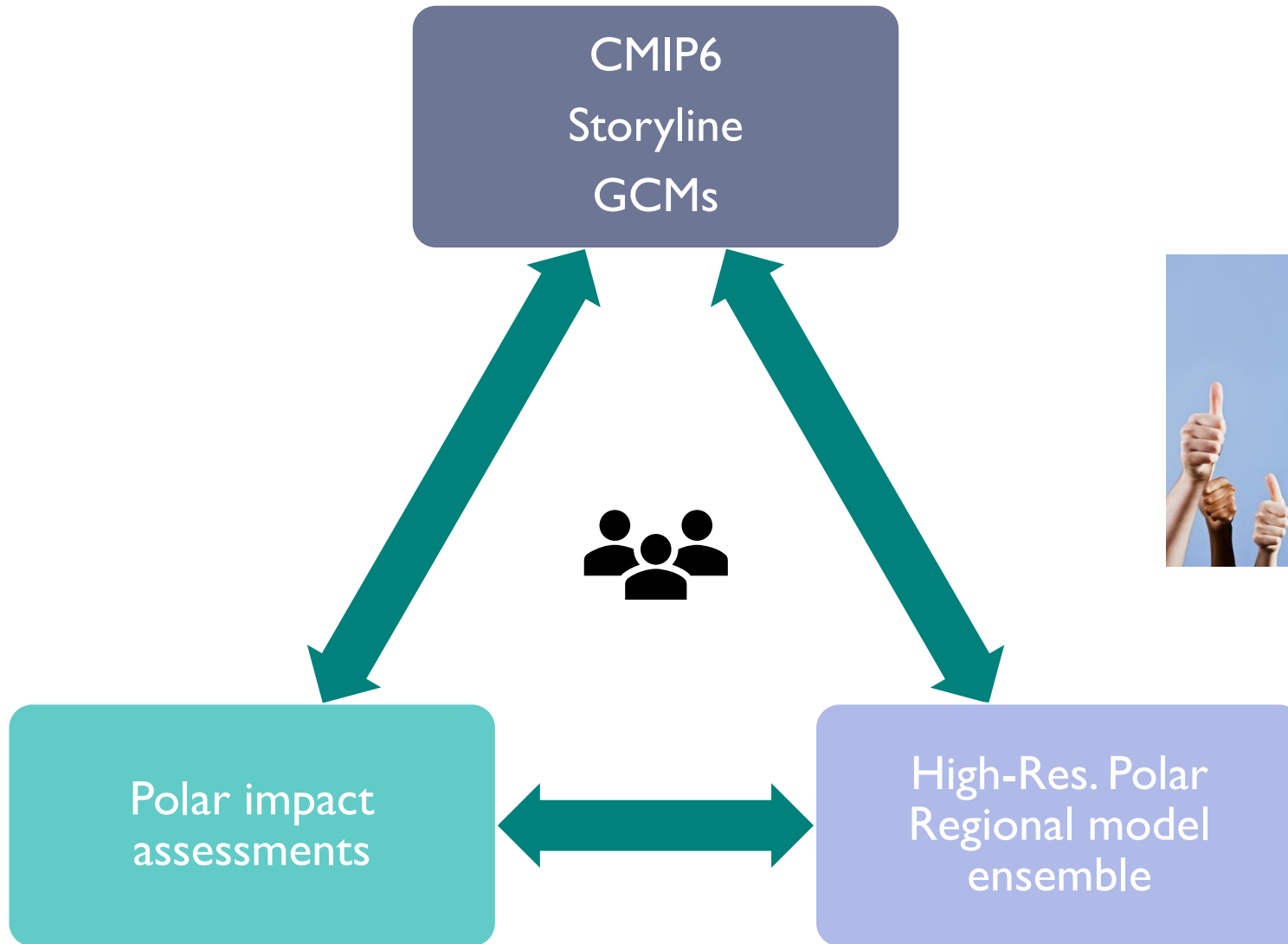


Polar impact  
assessments

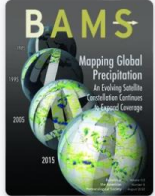
This work is led by  
Hanna Lee (NORCE)  
Nadine Johnston (BAS)



# Co-design RCM experiment protocol



# RCM experiment Protocol



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Article Type: **Research Article**

## Toward Effective Collaborations between Regional Climate Modeling and Impacts-Relevant Modeling Studies in Polar Regions

**Hanna Lee, Nadine Johnston, Lars Nieradzik, Andrew Orr, Ruth H. Mottram, Willem Jan van de Berg, and Priscilla A. Mooney**

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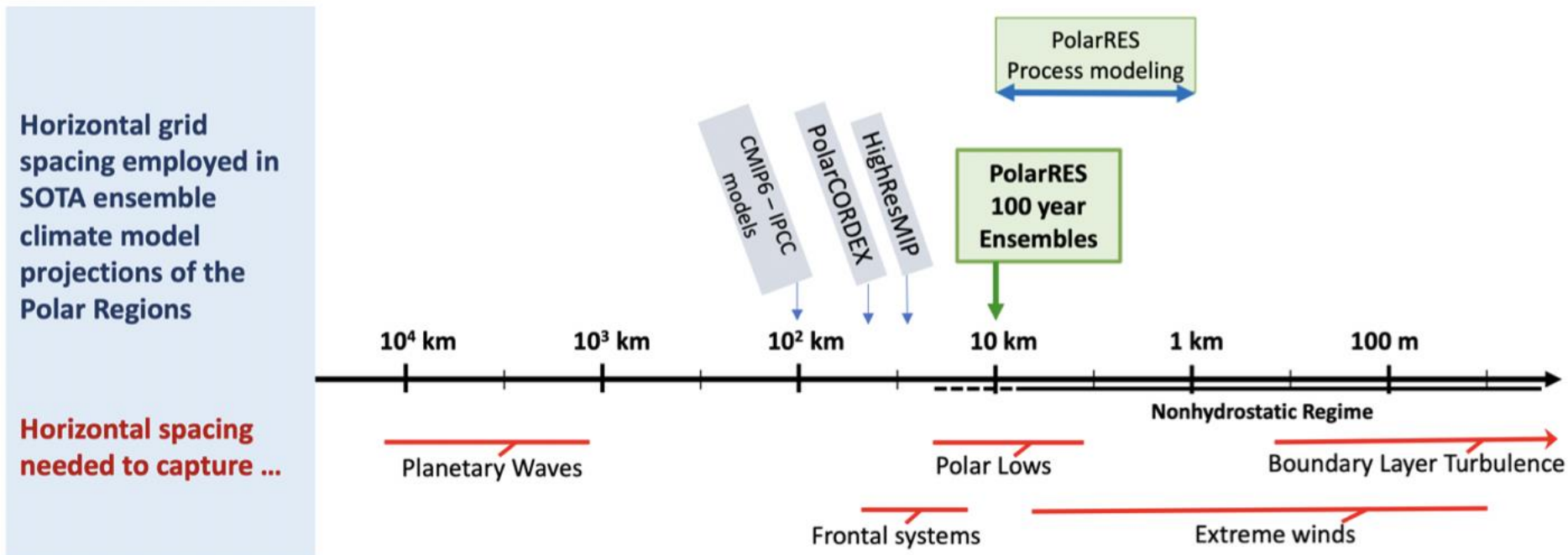
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# Next generation of hi-res climate projections for the polar regions



**Figure 1.4a** Horizontal grid spacing employed in state-of-the-art GCM and RCM projects/initiatives and the approximate grid spacing needed to capture key Global and Polar processes that span a range of spatial scales. PolarRES modelling activities will be positioned beyond the state-of-the-art (SOTA) to deliver new scientific knowledge and support impact assessments.

# Polar (change) Explorer

- Polar (change) Explorer
- Polar Panorama
- Polar Panorama Gallery
- Polar Panorama FAQ

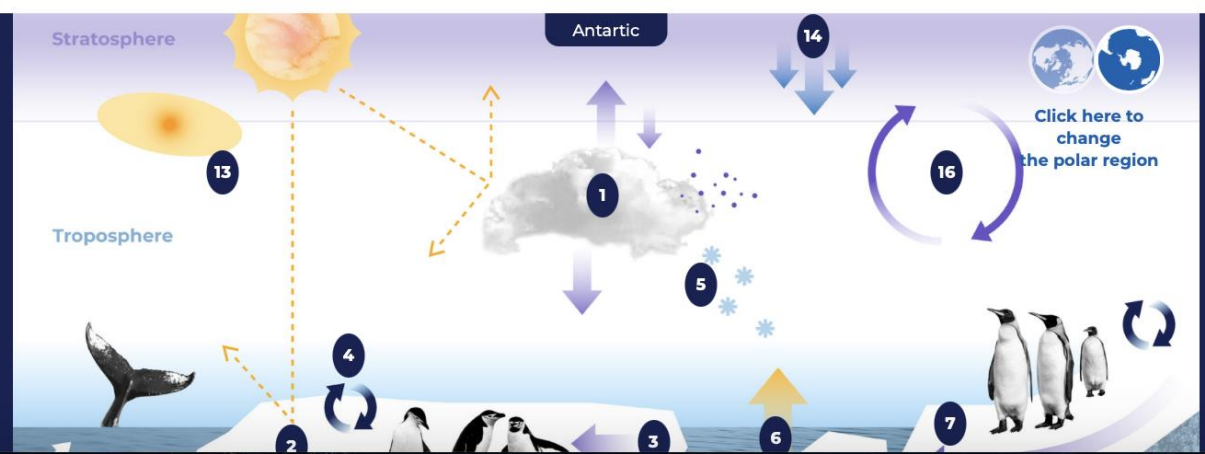
## How to use?

Our tool offers an intuitive and interactive experience. To explore processes such as cloud-aerosol interactions (1), lead flux (2), or impacts such as boreal forest fires (A), simply click on the corresponding number or letter. A pop-up window will appear, providing you with an explanation of the processes you selected. To switch between the two Polar Regions, click on the globe in the upper right corner.

To read more about the PolarRES outputs, see our [Zenodo site](#) for publications and datasets from project research.



# Thank You



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