Why is sea level falling around Greenland?

Assessing Greenland's sea level change impact on coastal communities

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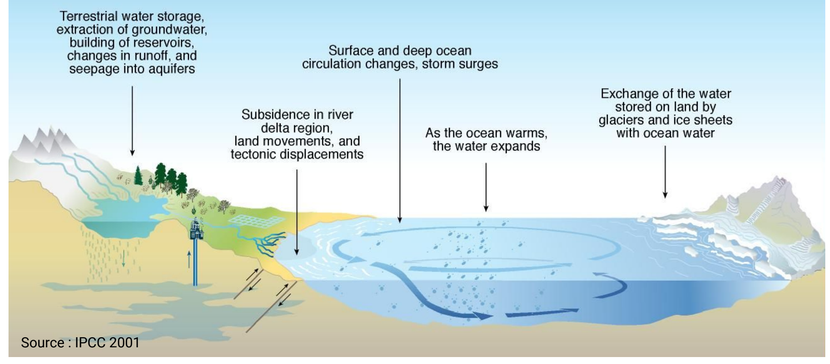
My info

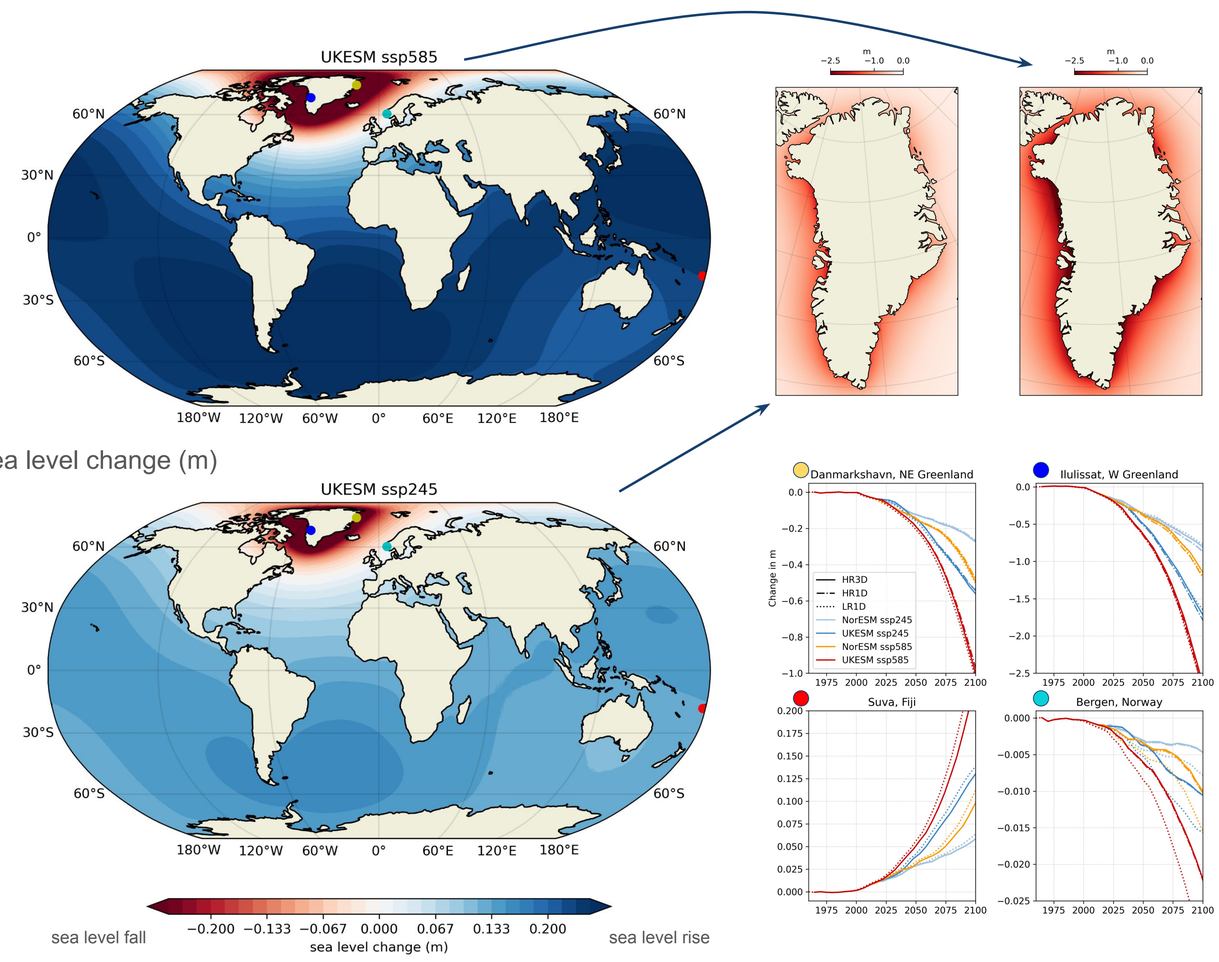
SEAS info

Background and motivation

I have an education as **applied mathematician** and work on ice sheet and sea level simulations and climate data.
My focus are the current **feedbacks between climate, ice sheets and sea level**. These interactions are affecting all of us which is why working within this topic is highly motivating for me.
As a SEAS member, I have the opportunity to learn more about maritime sustainability from a variety of perspectives.

What causes the sea level to change?





Climate Narratives

Project description

Greenland's **glaciers are melting** at an increasing speed contributing to sea level. Understanding how much and where ice is melting in Greenland can help us estimate where **sea level is rising how fast**. These results give a basis to listen to local communities and discuss consequences with them as part of the project ClimateNarratives.

Main questions

- ★ How fast will sea level change locally around the globe?
- ★ How much does the Greenland ice sheet melt contribute to the local sea level changes?
- ★ How and why do changes in Greenland and Fiji differ?
- ★ How can our scientific understanding benefit from dialog and collaboration with local communities?
- ★ How do different scientific fields include local communities into scientific discussions/results?

Marine sustainability

Sea level and the retreating Greenland ice sheet impact tides, open ocean and sea ice which again shape the life of people living in coastal regions including aspects of drinking water, fishery, infrastructure, cultural heritage and traditions

Aims

- ❏ Learn "sea level modeling"
- ❏ Improve IPCC sea level projections
- ❏ Work inter- and transdisciplinary (SEAS and ClimateNarratives)
- ❏ Combine research from glaciology, sea-level and land-use disciplines
- ❏ Learn from coastal communities

Highlighted activities

- ✓ Attended sea level workshop (Gaevle, Sweden) & sea level conference (Santa Barbara, CA, USA)
- ✓ Stay at "ILLU - science and art hub" in Ilulissat, Greenland
- ✓ 4 months research stay at McGill University, Montreal, Canada

Next:

- Publications
- Additional focus: impact on tides & storm floods
- Learn from local communities (like in Ilulissat, Greenland) about their experiences and questions around sea level change

Supervisory and mentor team

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