

Greenland Rising

Sea level changes &
communities
2019-2024

Robin Bell, Jacky Austermann, David Blockley, Casey Brayton, Ninni Jeremiassen, Jonny Kingslake, Diana Krawczyk, Pilunnguaq Kristensen, Frank Nitsche, Maatalii Okalik, Guy Paxman, Jane Plesner, Dave Porter, Marina Reimer, Aqqaluk Sørensen, Kirsty Tinto, Margie Turrin, **Karl Zinglarsen**



Award #1928146

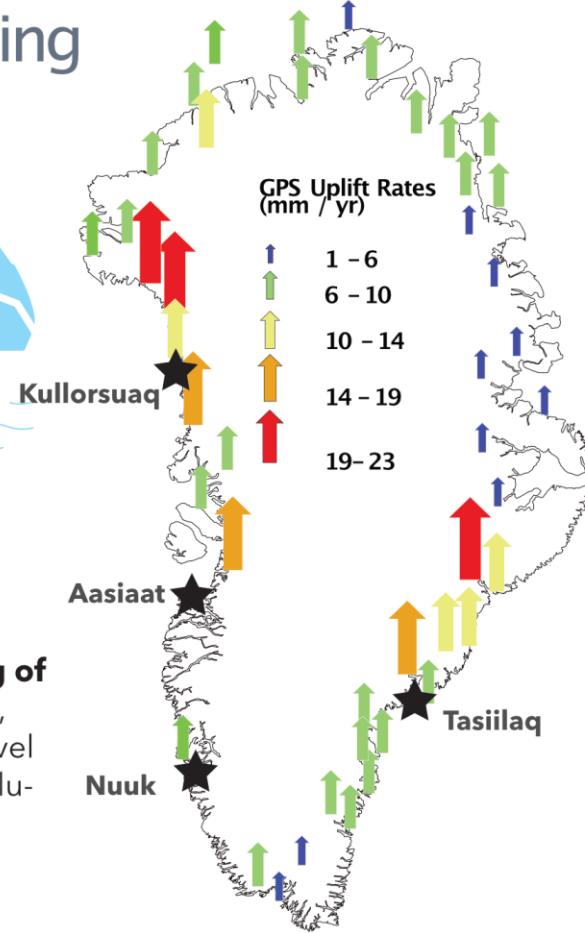
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Greenland Rising



natural
environment

Data informed modeling of sea level: Modelling past, present, and future sea level change and ice sheet evolution



social systems



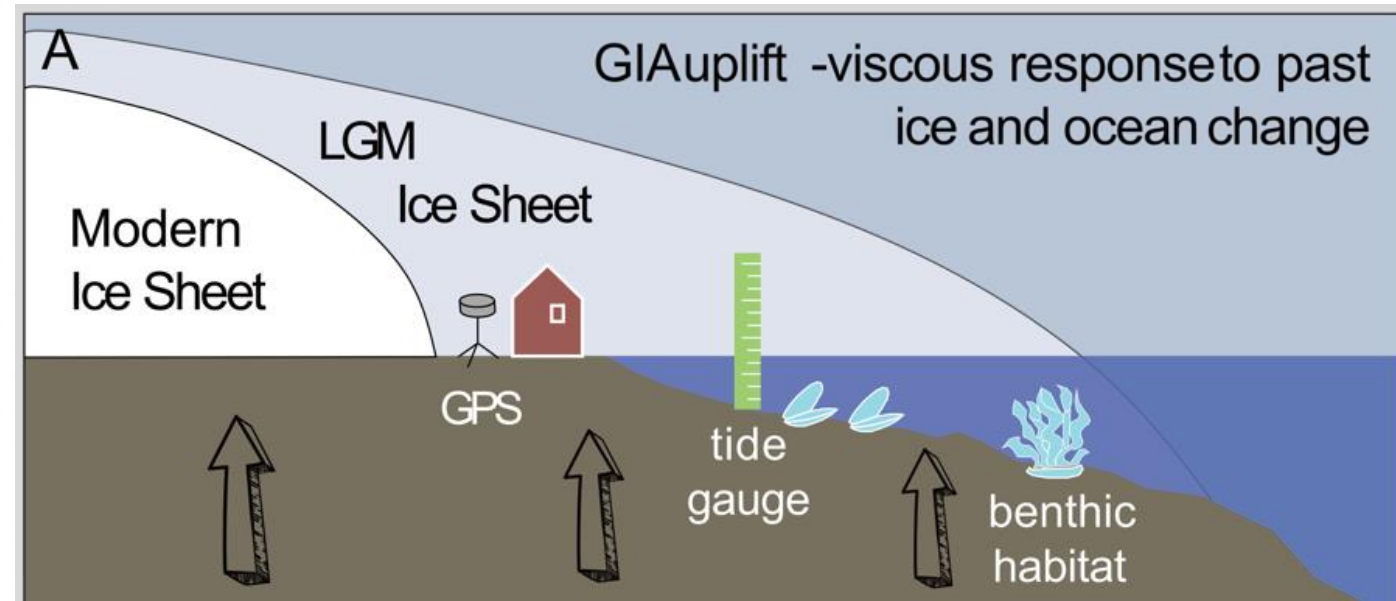
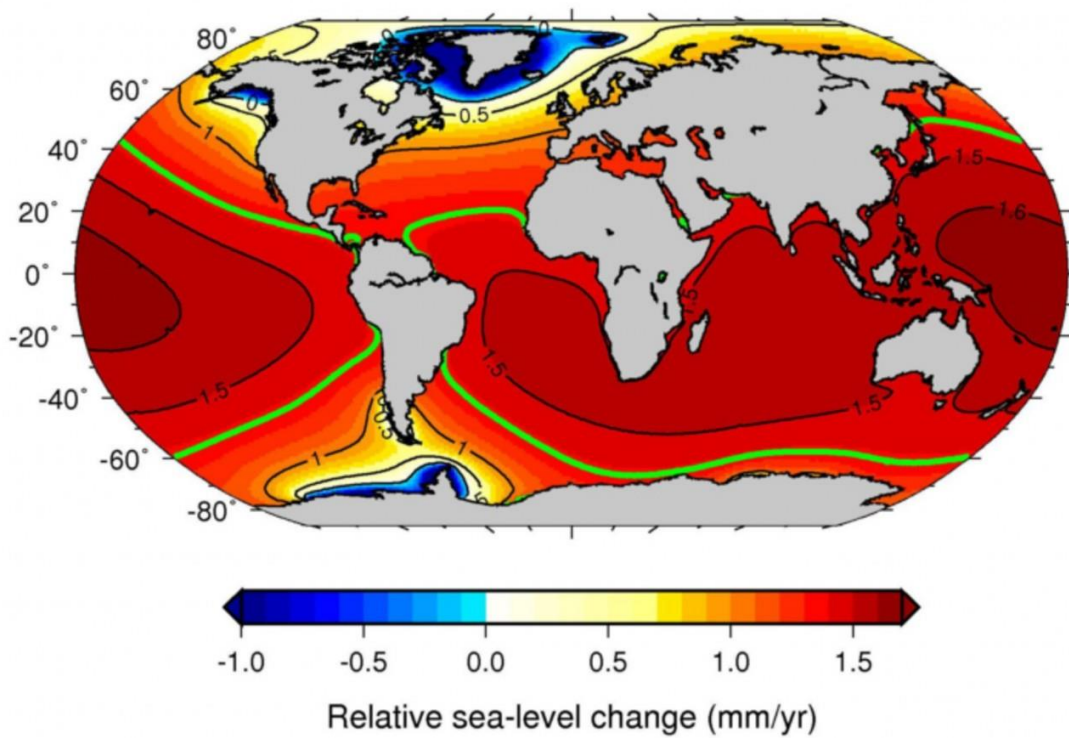
Community Engagement:
Involving local communities through STEM education and integration in sea level monitoring



built
environment

Baseline bathymetry and habitat: Shallow water mapping of shelves, ports, and shipping routes and exploring changing natural habitats

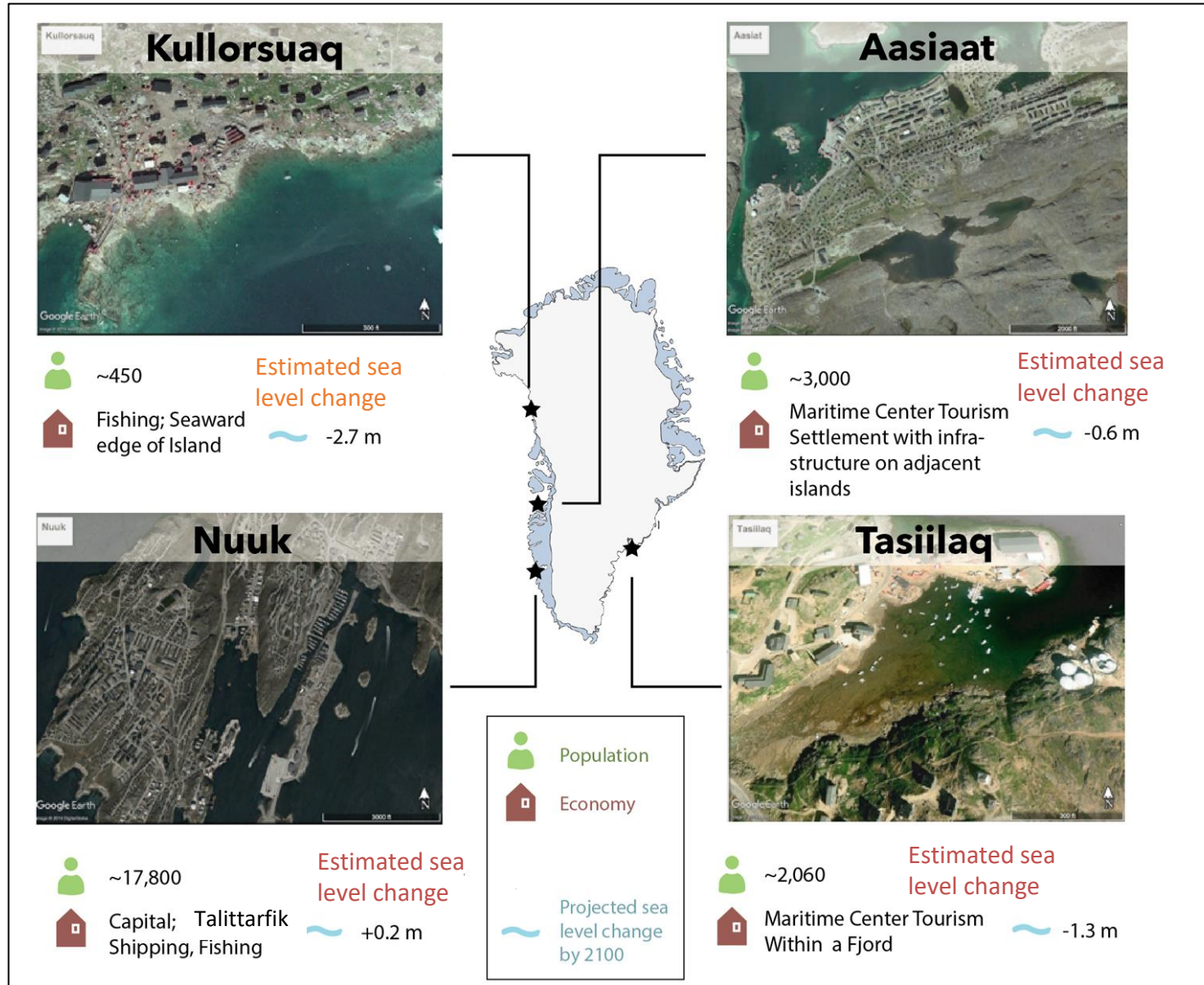
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Bamber, J. and Riva, R.: The sea level fingerprint of recent ice mass fluxes, *The Cryosphere*, 4, 621–627, <https://doi.org/10.5194/tc-4-621-2010>, 2010.



These are four communities we are working in, each is being affected differently.





Gathering Community Input

Organized & Held:
Community meetings with
municipal groups,
ministries of housing &
infrastructure, community
hunting & fishing groups,
boat clubs and others.

- Spoke the local language
- Trusted community members
- Shared life experiences



Photo M. Reimer

Community designed bathymetry surveys

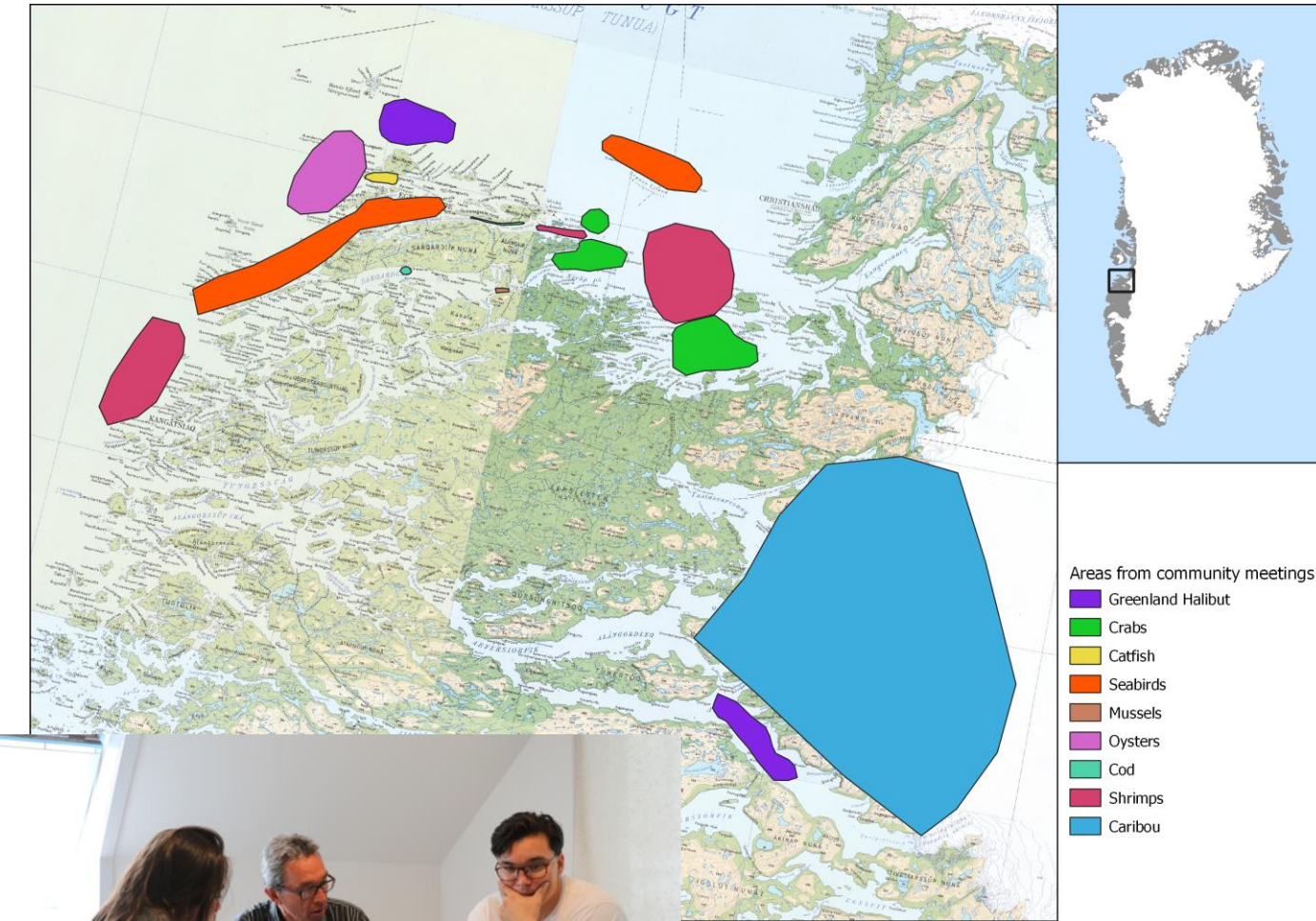


Photo M. Reimer

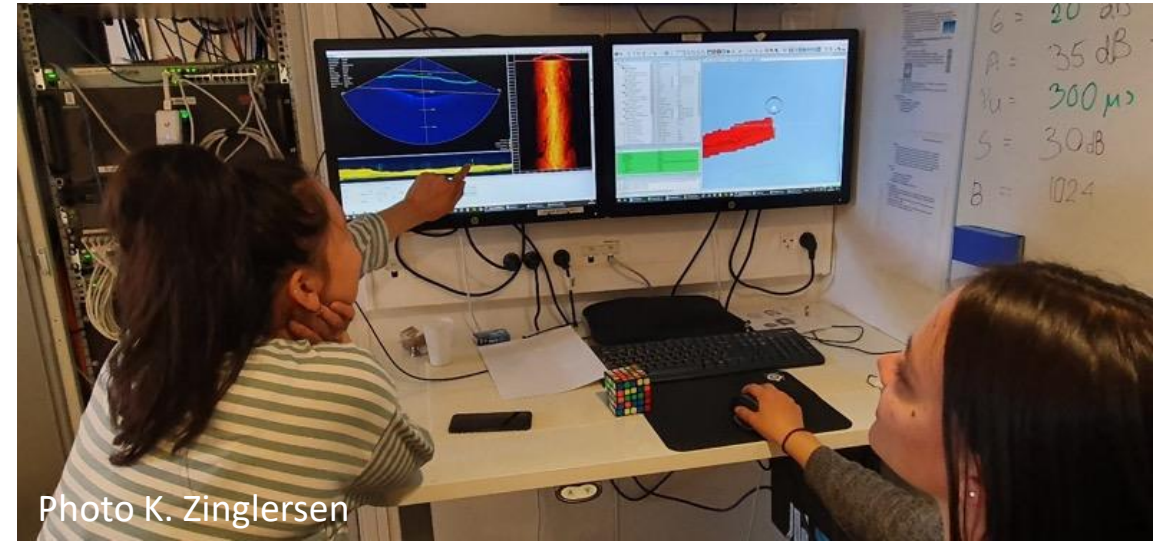
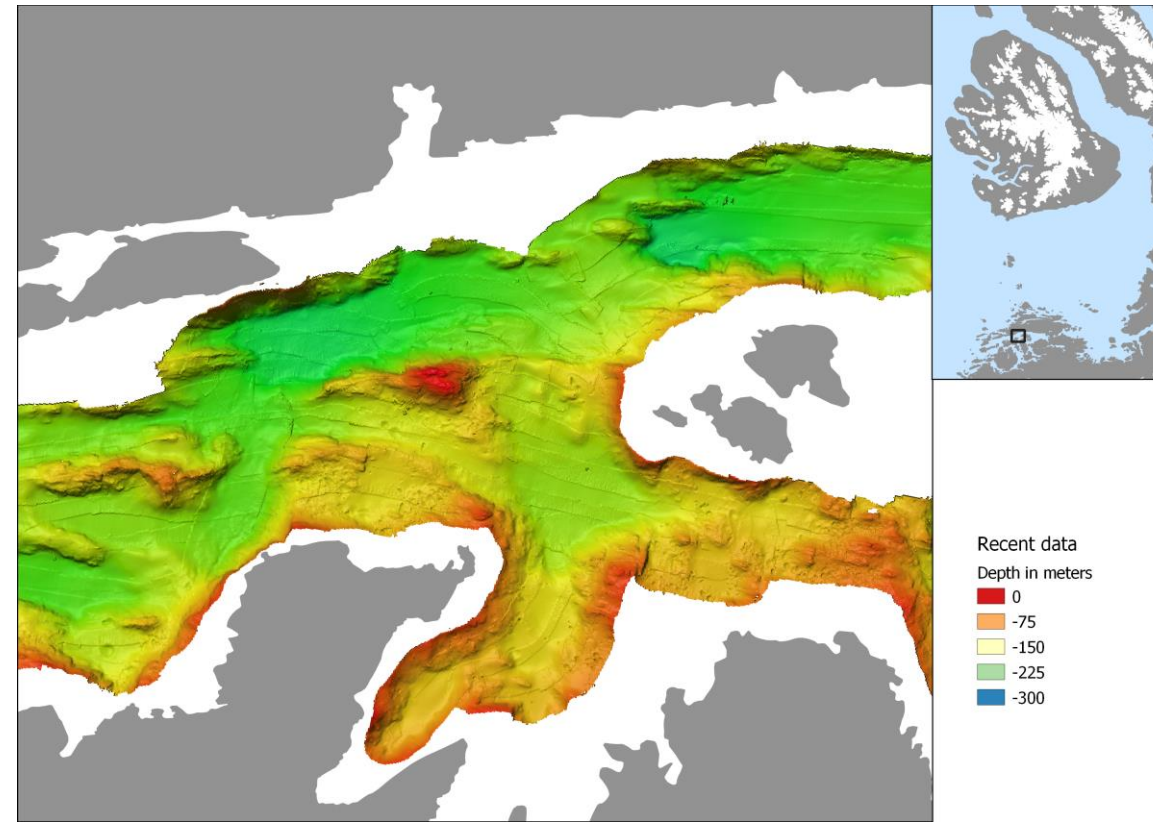
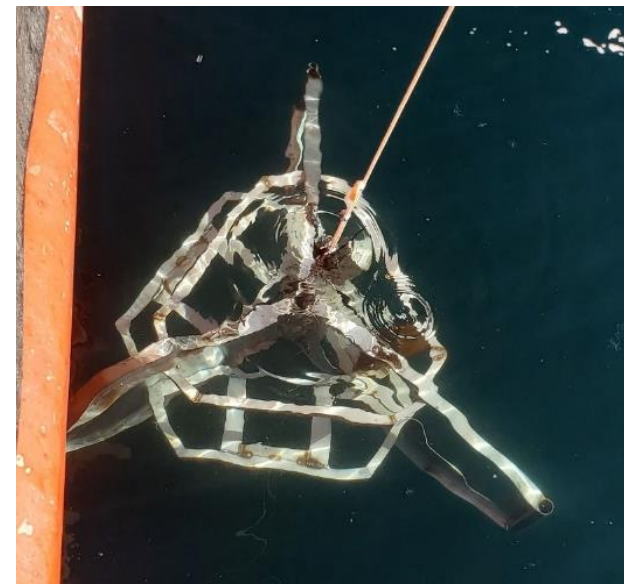
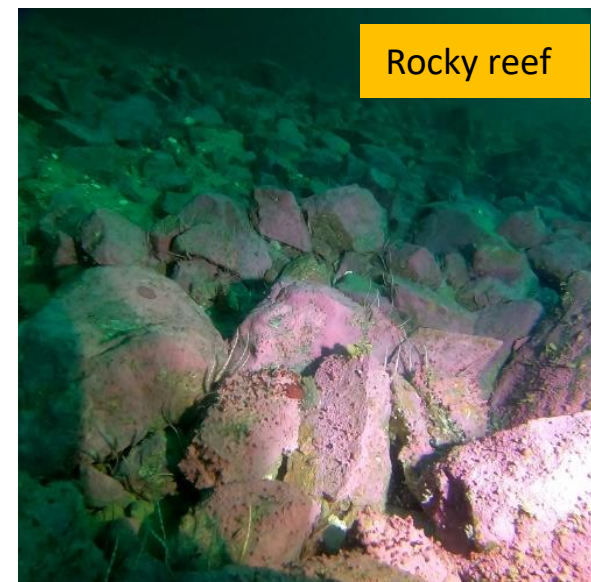


Photo K. Zinglarsen

Ground truthing



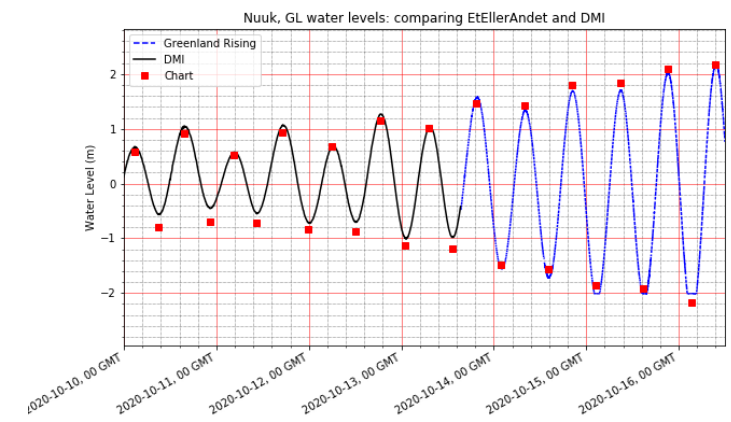
Drop video camera system being deployed.
Photo: David Blockley



Tide Gauges



Photos K. Zinglensen





Examples: In Nuuk Students Designed A Tide Gauge Installation & Helped in the Field



Students from Nuuk Internationale Friskole 9th grade, teacher Melissa Hansen, designed and participated in the installation of the tide gauge with Aqqaluk Sørensen from GINR. Students are collecting the data.

Photo K. Zinglensen



Students Experiment with 3D Models & Create Time Lapse Videos



Photos M. Reimer

Aqqaluk Sørensen discussed simple physics concepts. Students used 3 D models of Greenland topography as a based. Marina Reimer showed them how to set up experiments and do time laps photography with their cell phones.

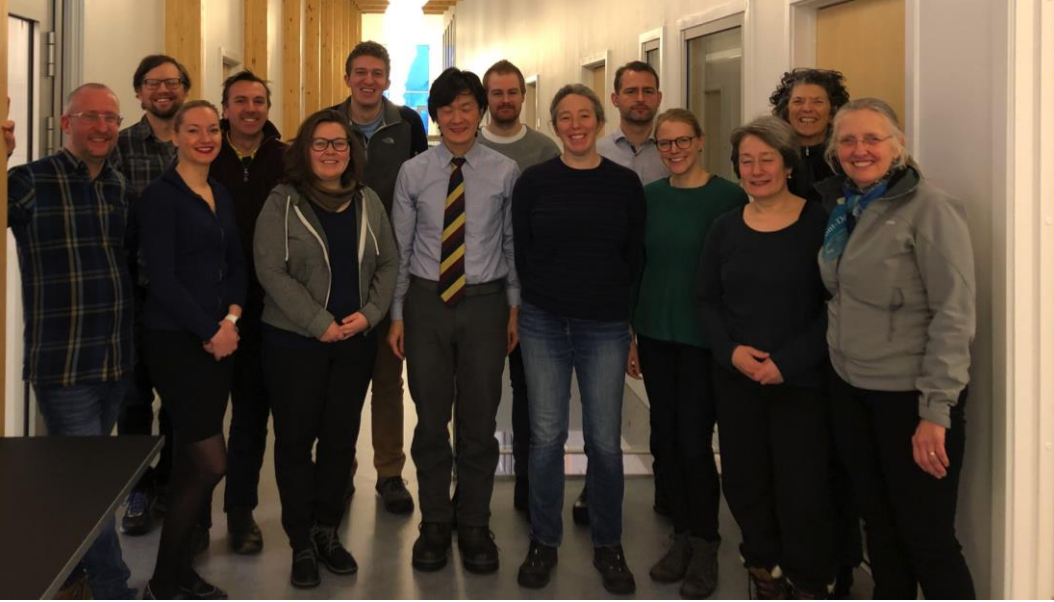


Photo K. Zinglersen

The full project team

Jacky Austermann, Robin Bell, David Blockley, Casey Brayton, Jonny Kingslake, Diana Krawczyk, Frank Nitsche, Guy Paxman, Dave Porter, Marina Reimer, Aqqaluk Sørensen, Kirsty Tinto, Margie Turrin, Karl Zinglersen. Students: Maatali Okalik, Ninni Jeremiassen, Jane Petersen, Per la Cour, Pilunnguaq Kristensen

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