



This project has received funding from  
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# Understanding changes in Greenlandic fisheries with Indigenous, Local and/or stakeholder Ecological Knowledge (LEK)

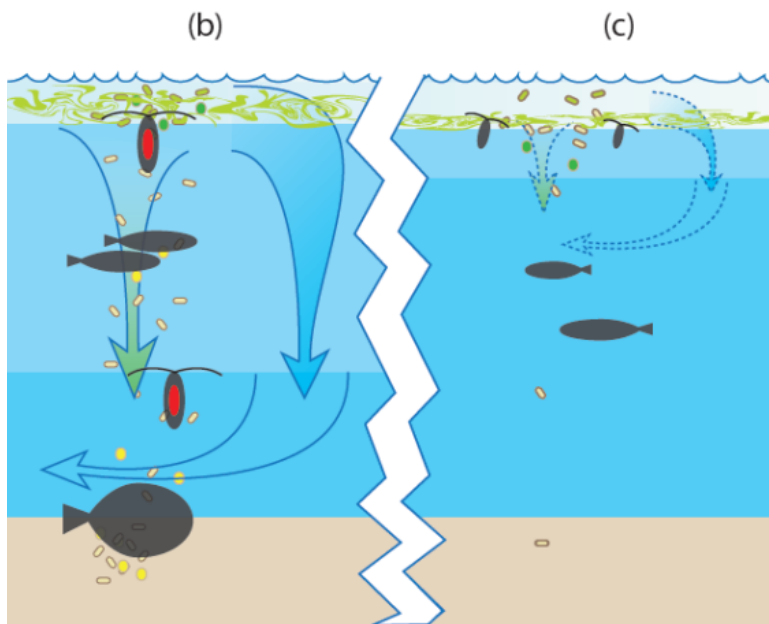
Presentation by Rikke Becker Jacobsen (AAU)

Contributors: Mathane Qatsa & Anna Burdenski (Tasiilaq), Caroline Bouchard & Ann-Dorte Burmeister (GINR), Kristen Ounanian and Sun Dyremose (AAU)

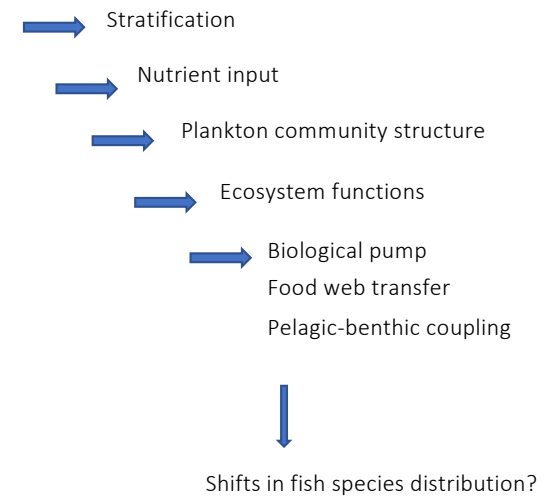


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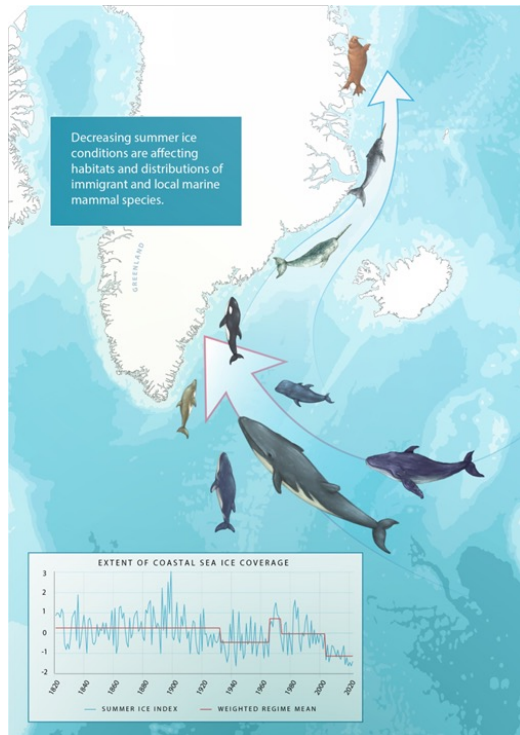
# Background: Ecological Tipping Cascades in the Arctic Sea?



Melting of ice



# Paradigm shift in East Greenland?



Heide et al.(2022). A regime shift in South East Greenland marine ecosystem

- Lack of summer pack Ice
- A warming ocean
- Influx of boreal fish species
- Increase in new/historically rare boreal cetaceans

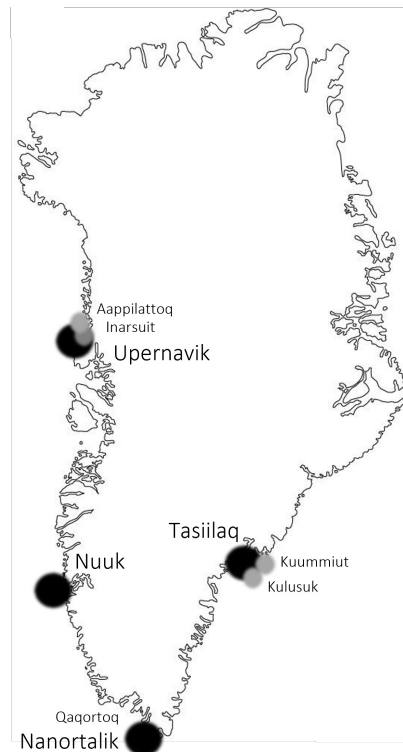
# Understanding on-going biodiversity change and adaptations from a local perspective

In line with recommendations, ECOTIP consulted local/Indigenous/stakeholder knowledge for an update on “most important changes last 10 years”:

- Observation of ecological changes
- Changes in the fishery
- Adaptation needs for fisheries and communities



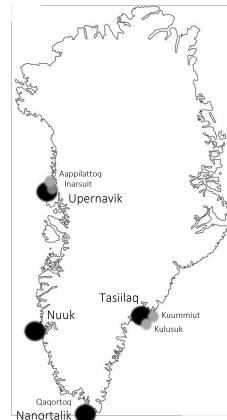
ECOTIP fishery stakeholder workshop (2021).  
Off-shore skippers, seafood company, small-scale fisher representative  
and managers



Field-work and interviews with coastal fishers, factories and  
community members (2021 – 2023)



# Adaptation capacity & vulnerability of Greenlandic fisheries across regions and segments



Jacobsen, Ounanian, Dyremose and Raakjær. 2023: **Ten years of climate change adaptation in Greenlandic fisheries: key observations from local ecological knowledge.**

*Climate Research.* DOI: <https://doi.org/10.3354/cr01728>

Ratchke, Qatsa, Burdenski and Jacobsen. 2025: **Understanding marine biodiversity shifts in Southeast Greenland with Indigenous and local knowledge.** *Human Ecology.* DOI:

<https://doi.org/10.1007/s10745-025-00570-4>





# Adaptation capacity & vulnerability

Fisheries are highly adaptive by de-fault:

- Seek opportunities
- Adapt seasons and fishing sites
- Year to year experimentation
- Monitor new species with interest
- Knowledge sharing
- Navigate markets and prices

But, especially **coastal fisheries** are 'coping' under multiple pressure:

Travel longer to reach fishing ground; work longer to fill up the boat; maintain crew; travel longer distance; sudden weather shifts and turn-arounds.

Factory structure – few species, low prices, low degree of processing/usage of resource.

And while fishes are good at seeking 'new opportunities', extended periods of 'absent fisheries/resources' are not remedied (South Greenland as case-in-point)

## RECOMMENDATIONS FOR DECISION-MAKERS



Prioritize on-going and close dialogue between Greenland Institute of Natural Resources, managers and fishers to explore and create shared understandings of biodiversity changes as they occur, and explore possibilities for swift adaptation in regulations and/or fishing techniques (e.g. by-catch regulations)



Keep it administratively uncomplicated for a coastal fisher to apply for multiple licenses in the coastal fisheries. This facilitates adaptive shifts between species depending on presence, absence and changing market conditions.



Investigate ways to enhance the working conditions of coastal fishers. Nearby landing sites, boats and deck technology that eases physical work has been suggested by coastal fishers.



Support the diversification of local markets. In addition to landing to factories, coastal fishers and hunters supply multiple domestic markets - including local fish market, sale to local institutions and sale via private network. This diversifies coastal fishers and hunters' adaptation strategies and provides local food security.



Strengthen initiatives aiming to expand and innovate local food knowledge on how to prepare 'rare species'. The older generation has experience with preparing a wider range of fish species and can be included in such initiatives.



Prioritize food security and nutrition in the management of hunting quotas. North Greenlandic hunters have explained how short hunting seasons and the Olympic 'race' is causing scarcity the rest of the year. Also, interviewees in South and North Greenland note that catches are no longer distributed widely in the community via traditional sharing system. There are concerns that elders and less well-off persons have less access to food caught and sold by fishers and hunters.



### POLICY BRIEF

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NALIMMASSARSINNAANERMUT ISIGINNITTARIAASEQ**



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Rikke Becker Jacobsen  
[rbj@plan.aau.dk](mailto:rbj@plan.aau.dk)  
Aalborg University

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