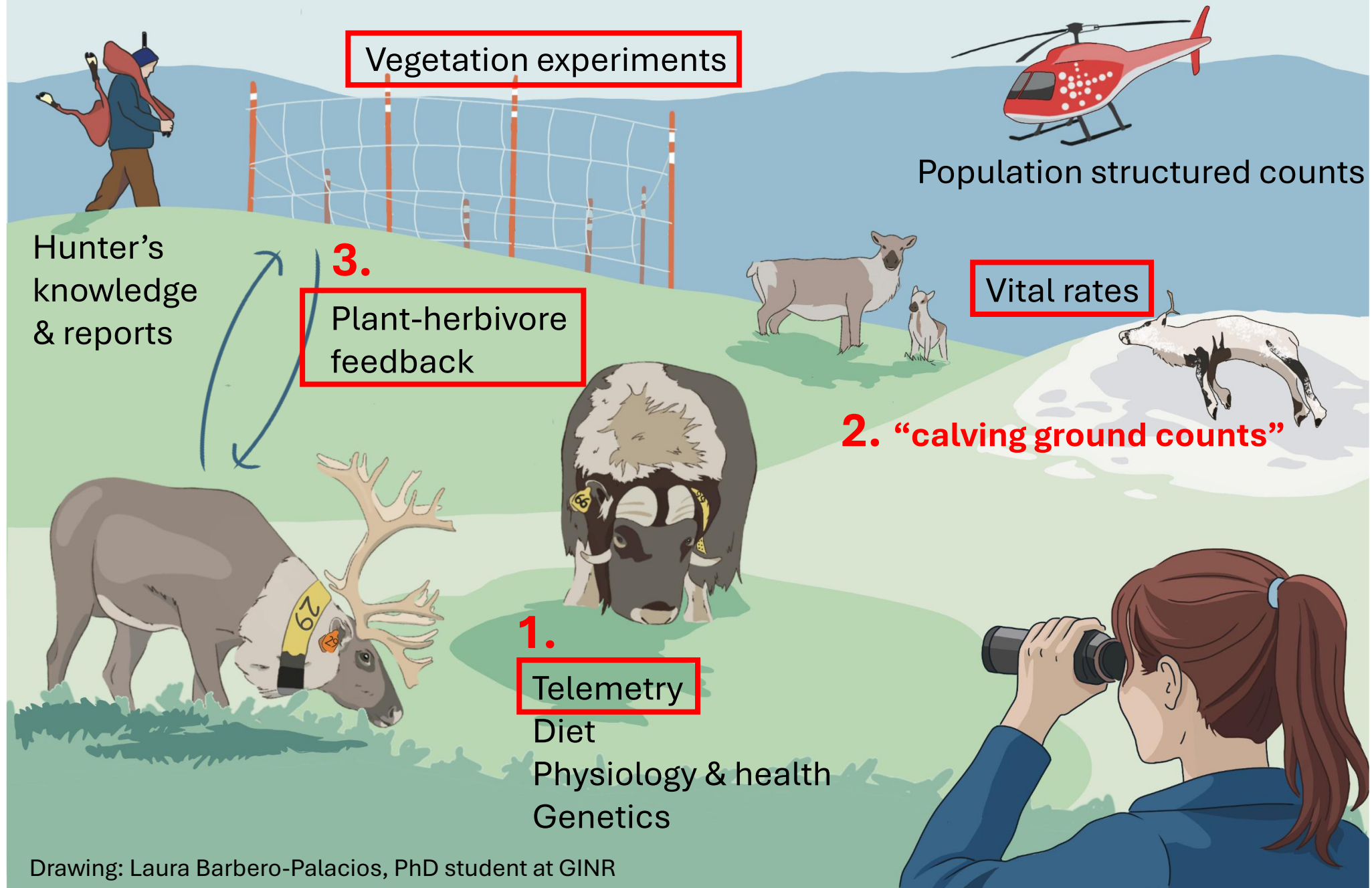


Emerging research on caribou and muskox: How do they use and shape their landscape

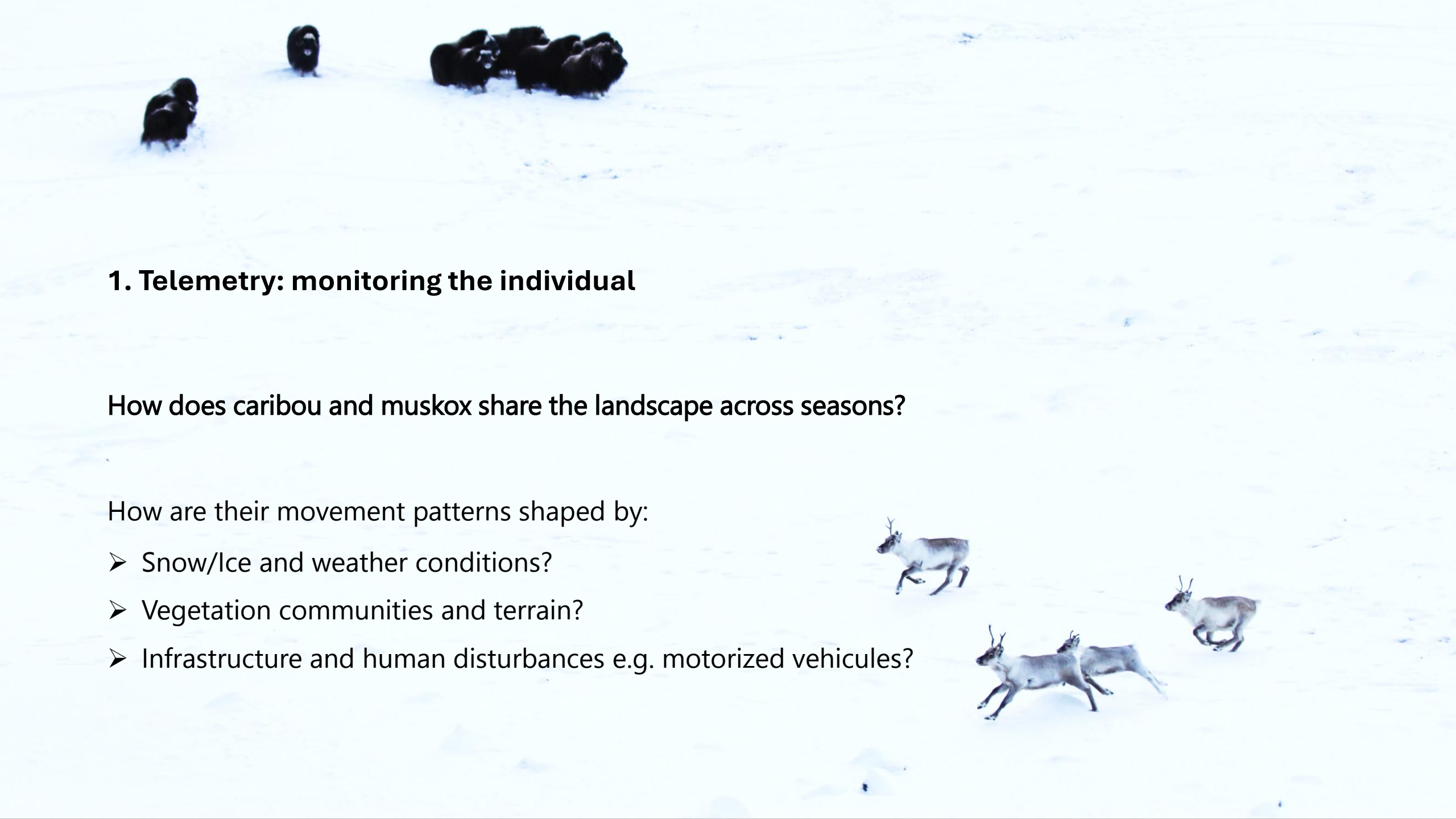


Complementary monitoring methods ongoing in Kangerlussuaq-Sisimiut



Drawing: Laura Barbero-Palacios, PhD student at GINR





1. Telemetry: monitoring the individual

How does caribou and muskox share the landscape across seasons?

How are their movement patterns shaped by:

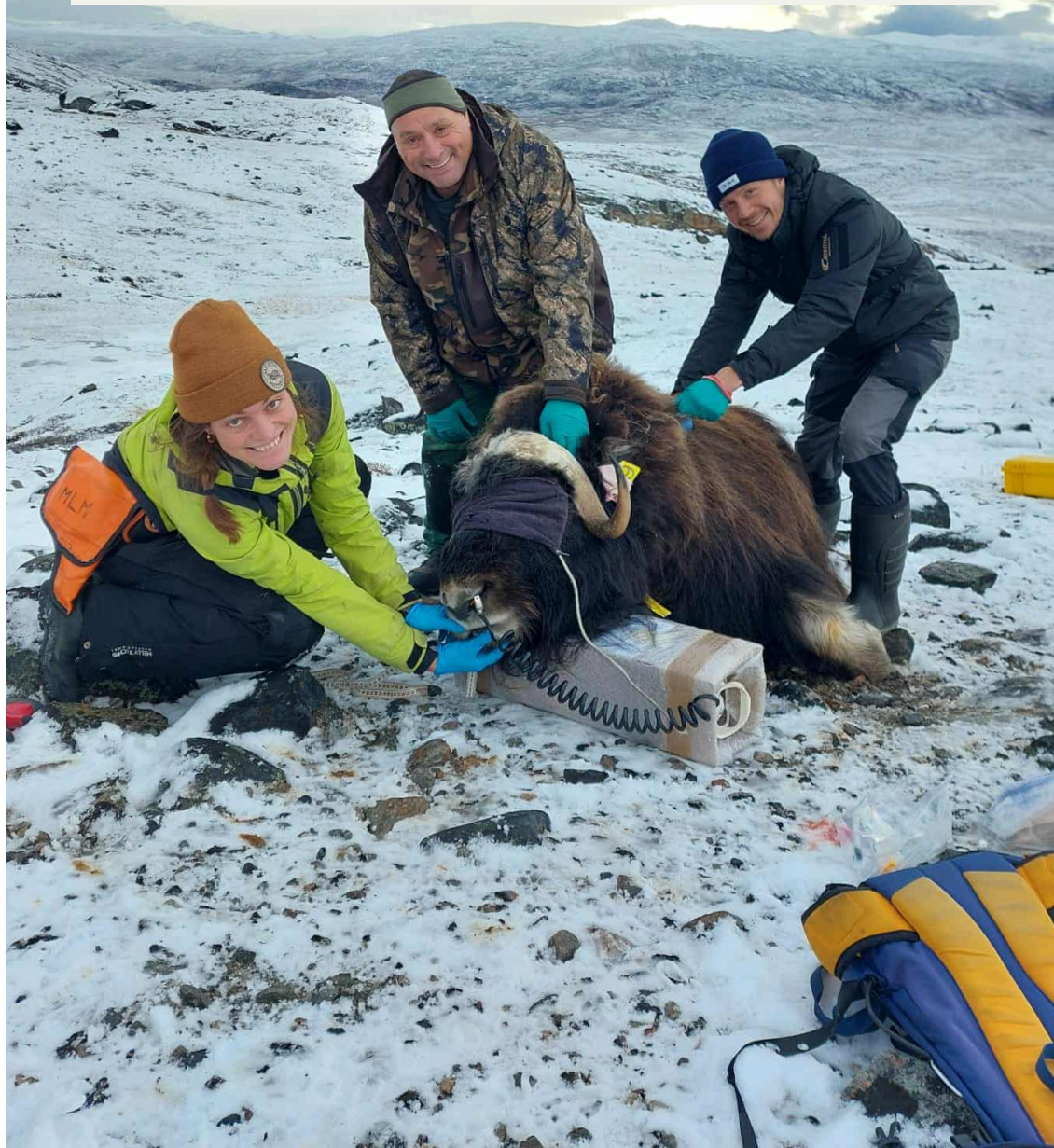
- Snow/Ice and weather conditions?
- Vegetation communities and terrain?
- Infrastructure and human disturbances e.g. motorized vehicles?





Oct-Nov. 2025

49 GPS-halsbånd + Øremærkerne



2026-mi ukiukkut piniarnermi pingaarutilik:

Umimmaat GPS-italinnik qungasequtserneqarsimasut pisarineqartariaqanngillat, aammalu inassutigineqarpoq neqaat nerineqassanngitsoq nakorsaasersugaasimanerat peqqutigalugu. Umimmaat qungasequtaat GPS-itallit takujuminaassinnaasarpot, kisiannili ilisarnaatit sungaartunik qalipaattillit siutaannut ikkunneqarsimasut ersarittaqalutik.

Eqqaamajuk: Umimmak pisarinialersinnagu sungaartunik qalipaatilinnik siutimigut ilisarnaasernerqarsimanersoq tamatigut maluginiaqqaartassagakku. Umimmak GPS-italimmik qungasequtserneqarsimasooq pisarisooraanni qungasequtaa (aammalu allerua) sumiiffimmi piniarnermik nakkutilliisumut imaluunniit UNESCO-mi Park Rangerimut, Qeqqata Kommuniaut, Pinngortitaleriffimmulluunniit tunniunneqassapput.



Vigtigt ved vinterjagt 2026:

Moskusokser med GPS-halsbånd bør ikke nedlægges, og det anbefales ikke at spise mærkede dyr på grund af den medicin, de har fået. GPS-halsbåndene er svære at se i felten, men de gule øremærker er tydelige.

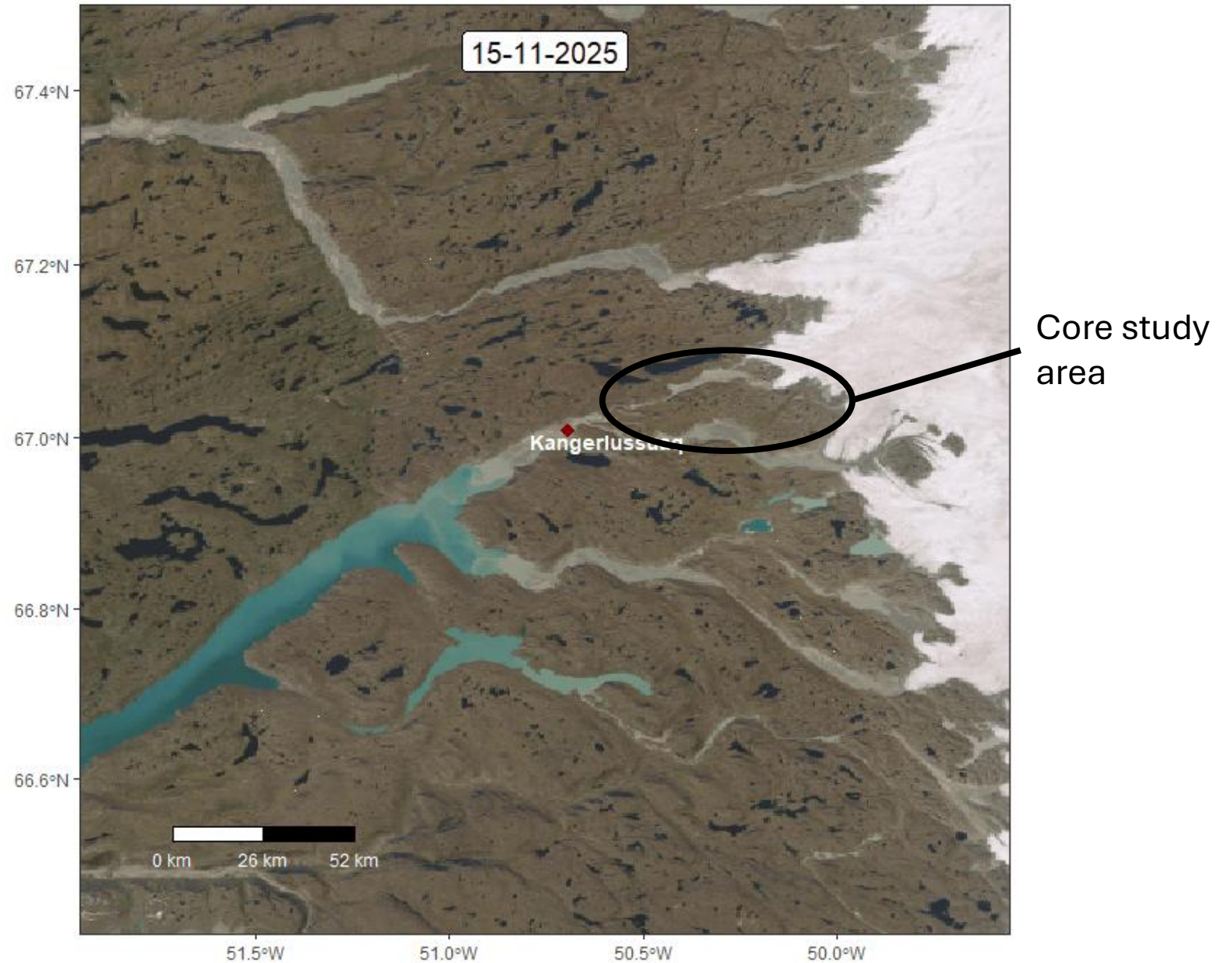
Husk: Tjek altid, om dyret har et gult øremærke, inden det nedlægges. Hvis et dyr med GPS-halsbånd nedlægges ved et uheld, skal halsbåndet (og gerne underkæben) afleveres til den lokale jagtbetjent, UNESCO Park Ranger, Qeqqata Kommunia eller Pinngortitaleriffik.



- Muskox movement

2 months with GPS-data

Very stationary, as expected





40 GPS-halsbånd + Øremærkerne

38 Øremærkerne

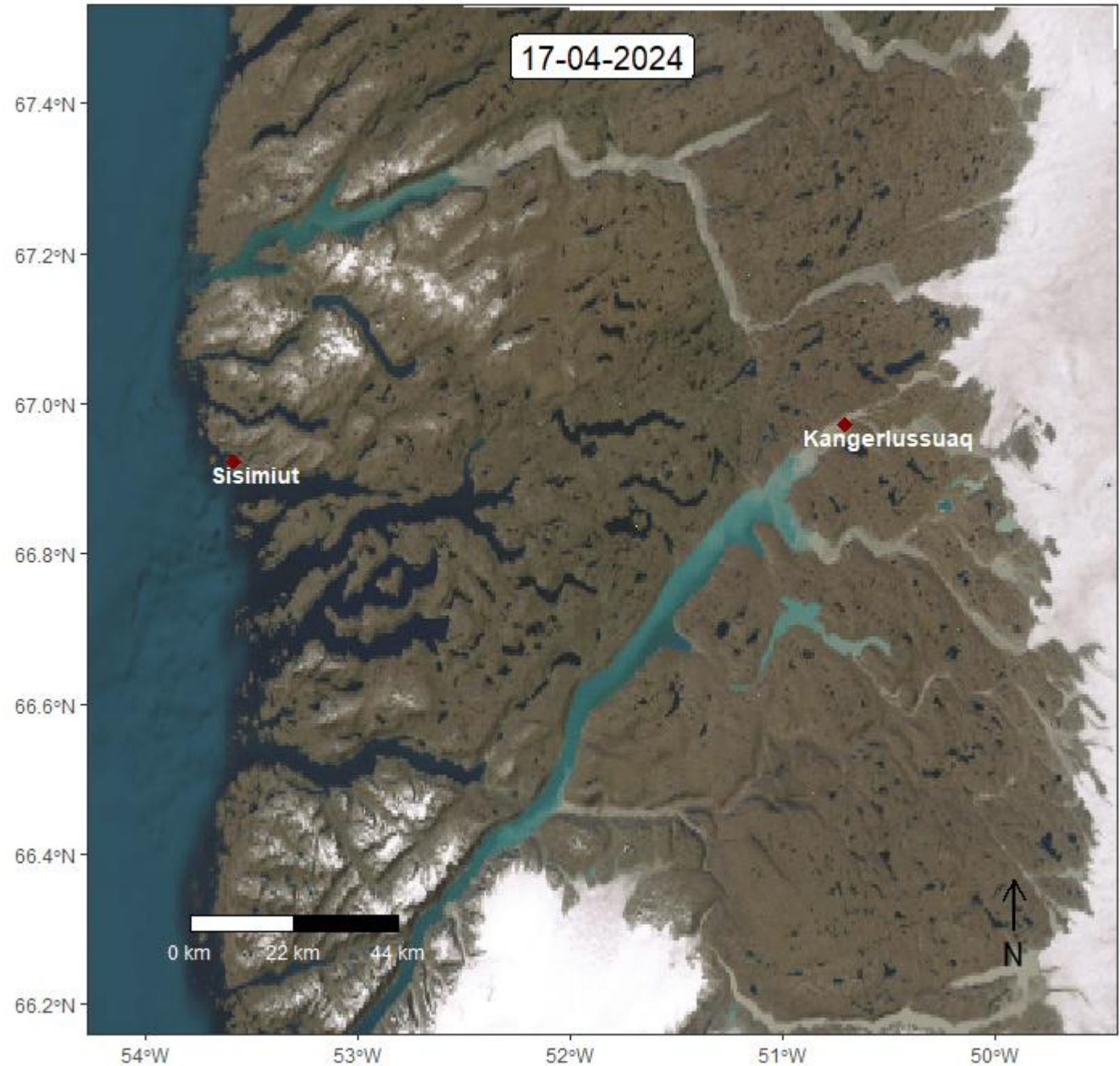




- Caribou movement

1,5 years of GPS-data

No signs of seasonal migration from the inland ice to the coast.

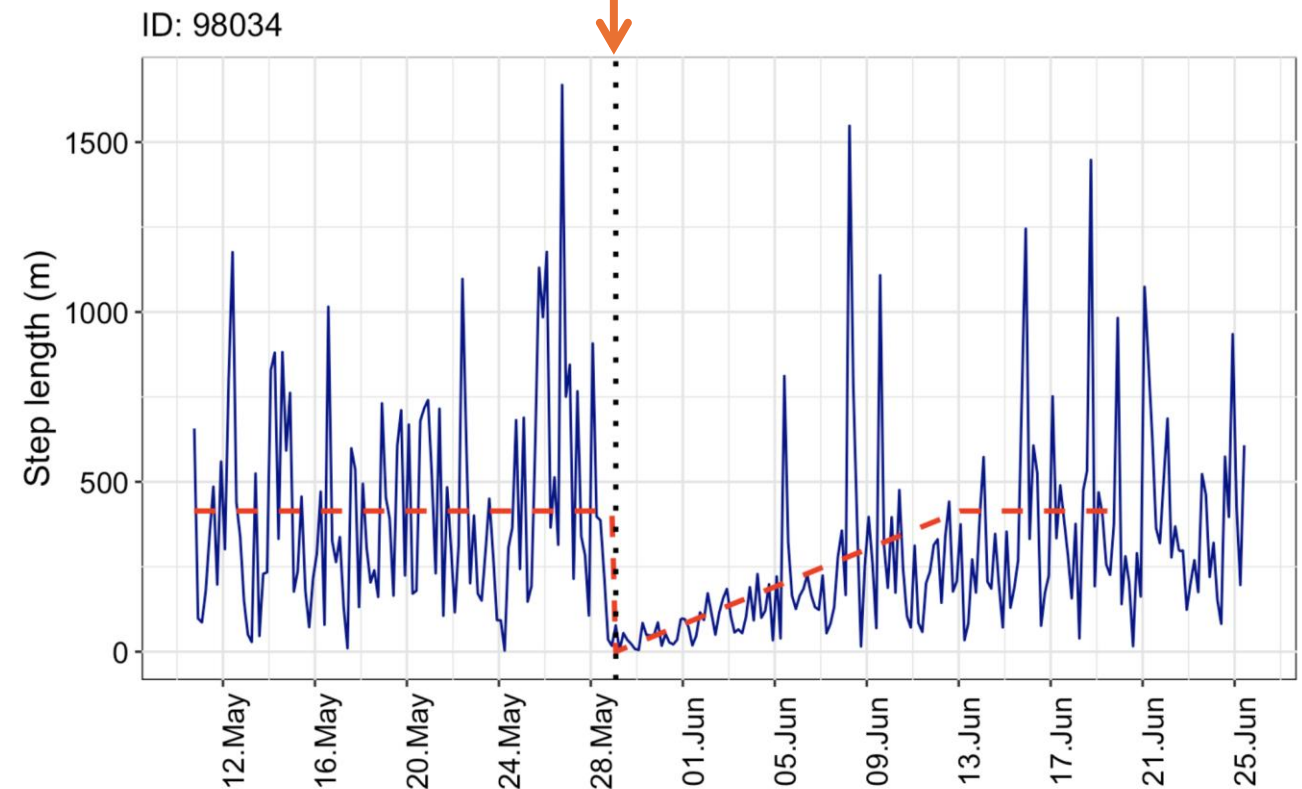




Selected calving ground characteristics (GPS data):

- Early spring
- Grassland
- South facing
- Medium elevation

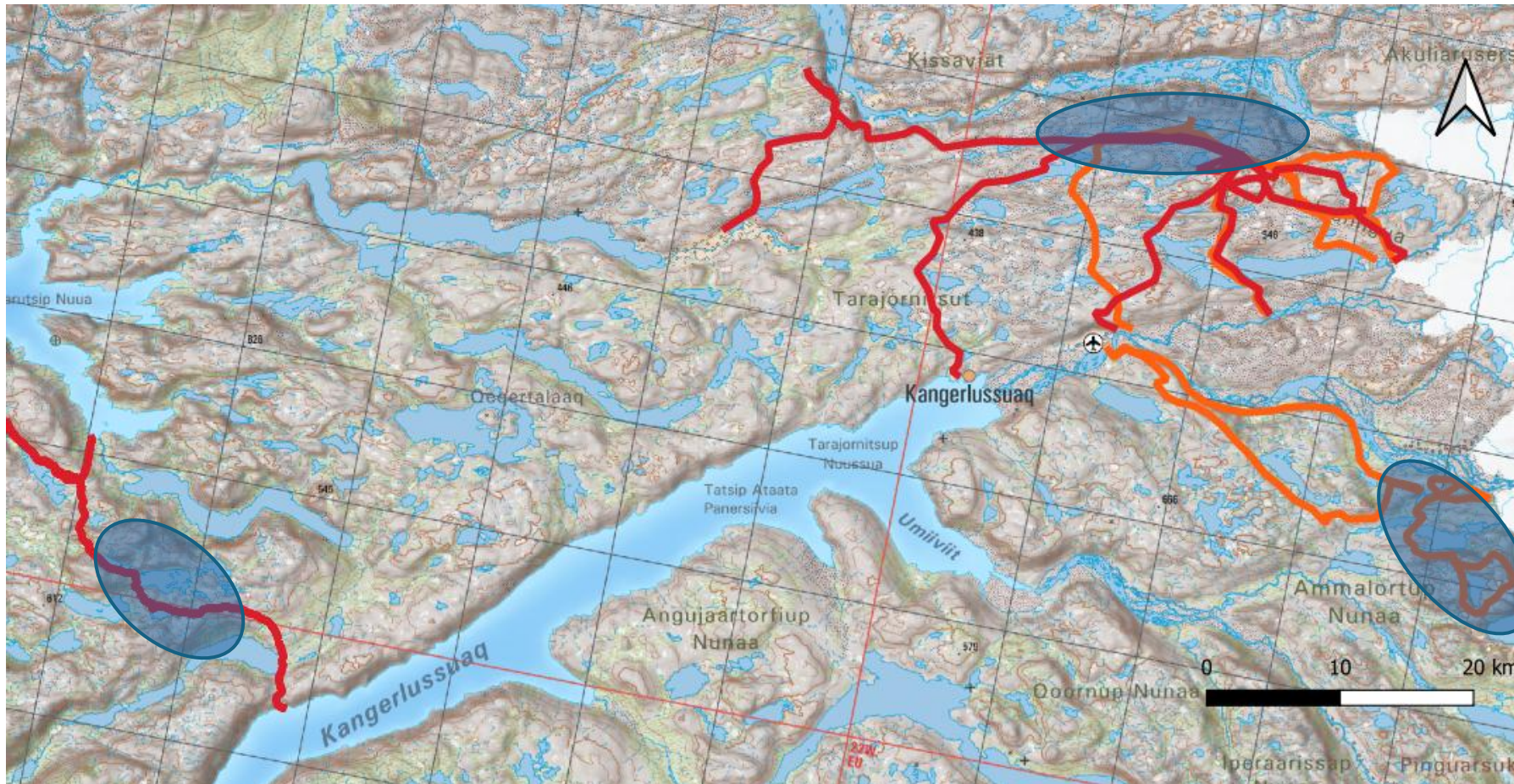
Calving average date in
2024 and 2025: 28 May



2. Calving grounds' summer counts: vital rates estimation

Reproduction - Mortality

- Number of calves per females
- Number of carcasses from natural winter mortality
- Total number of individuals georeferenced in a delimited area



+ Bird counts in the planned West Greenland National Park area

For ~ 1000 caribou:

2024 ~ 70% females with calves

2025 ~ 60% females with calves

Few carcasses in both years

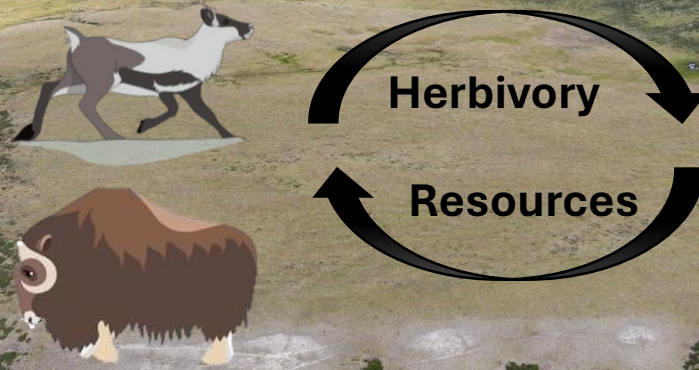
- 2024 June-July
- 2025 June-July
- Areas with obs. female caribou and calves

No females and calves obs. outside the blue areas!

Aggregation on calving grounds, juni 2025



3. Plant-Herbivore feedback & vegetation experiments



To understand caribou and muskox movements, we should also:

- Map the vegetation communities → New map!
- Study their diet
- Experiments to partition the drivers of veg. change
- Anticipate habitat use changes by modelling the feedback loop

@Jeff Kerby



Laura's PhD

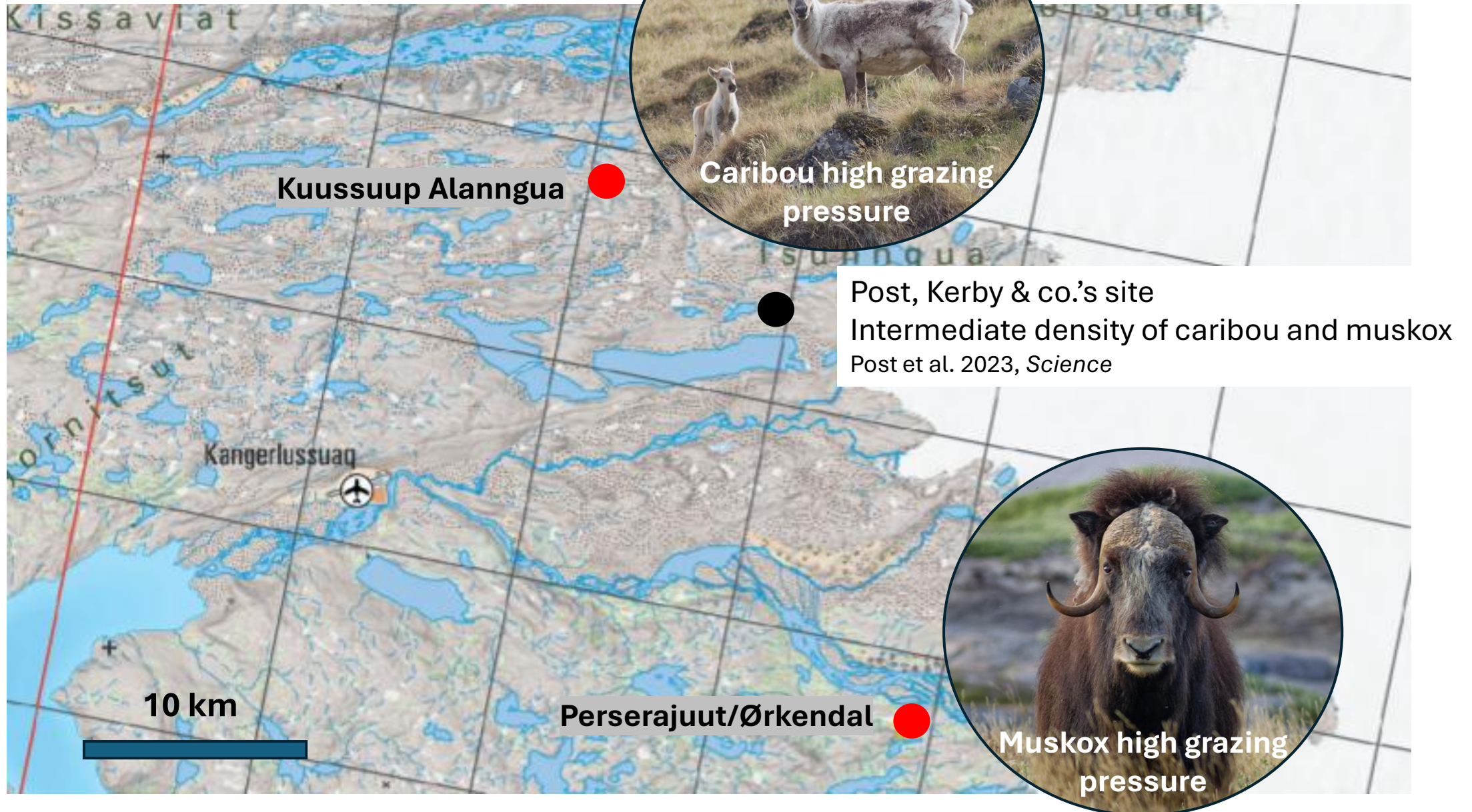


- New vegetation map for Qeqqata kommunia!
- New exclosure experiments in two sites

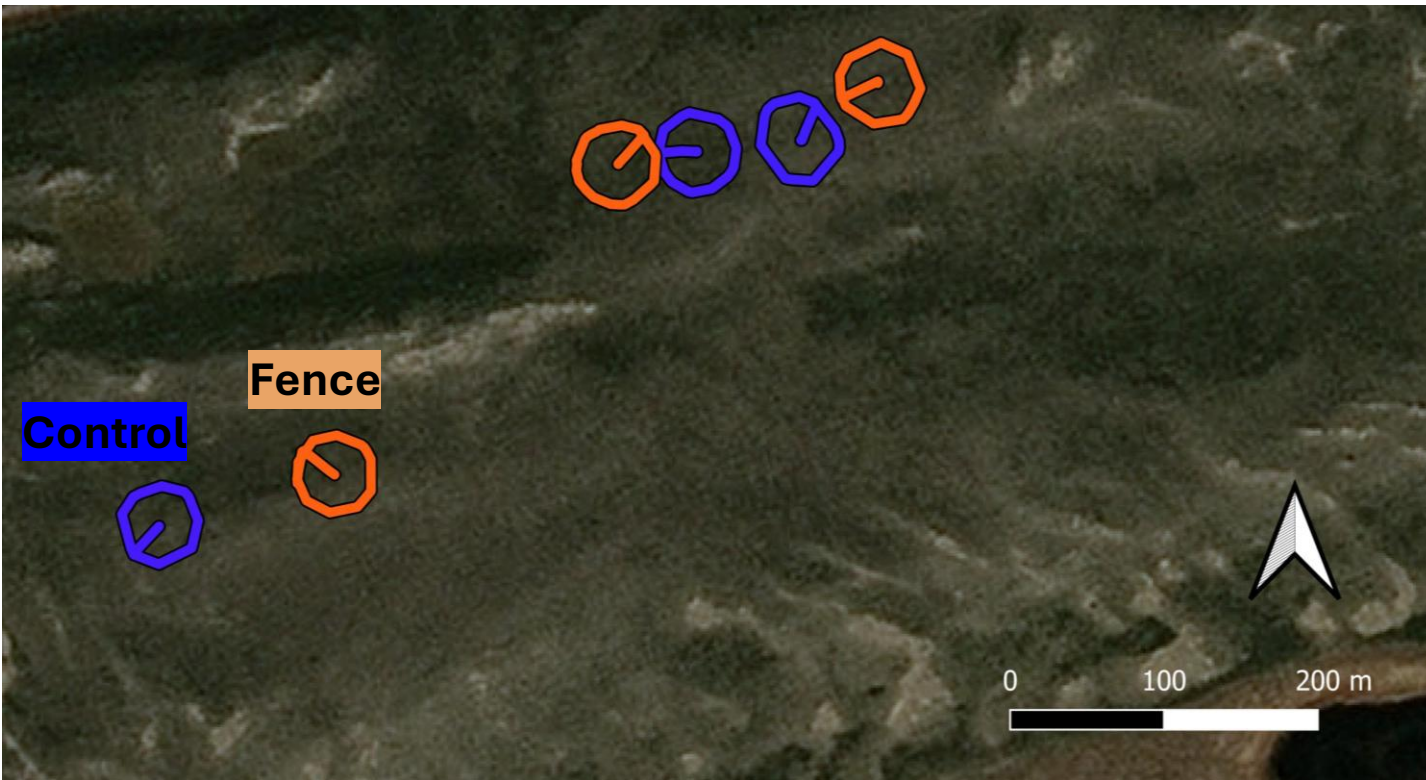
2024: Baseline measurements



Herbivore exclusion experiment



1 site = 3 fences of 40-45m diameter + controls



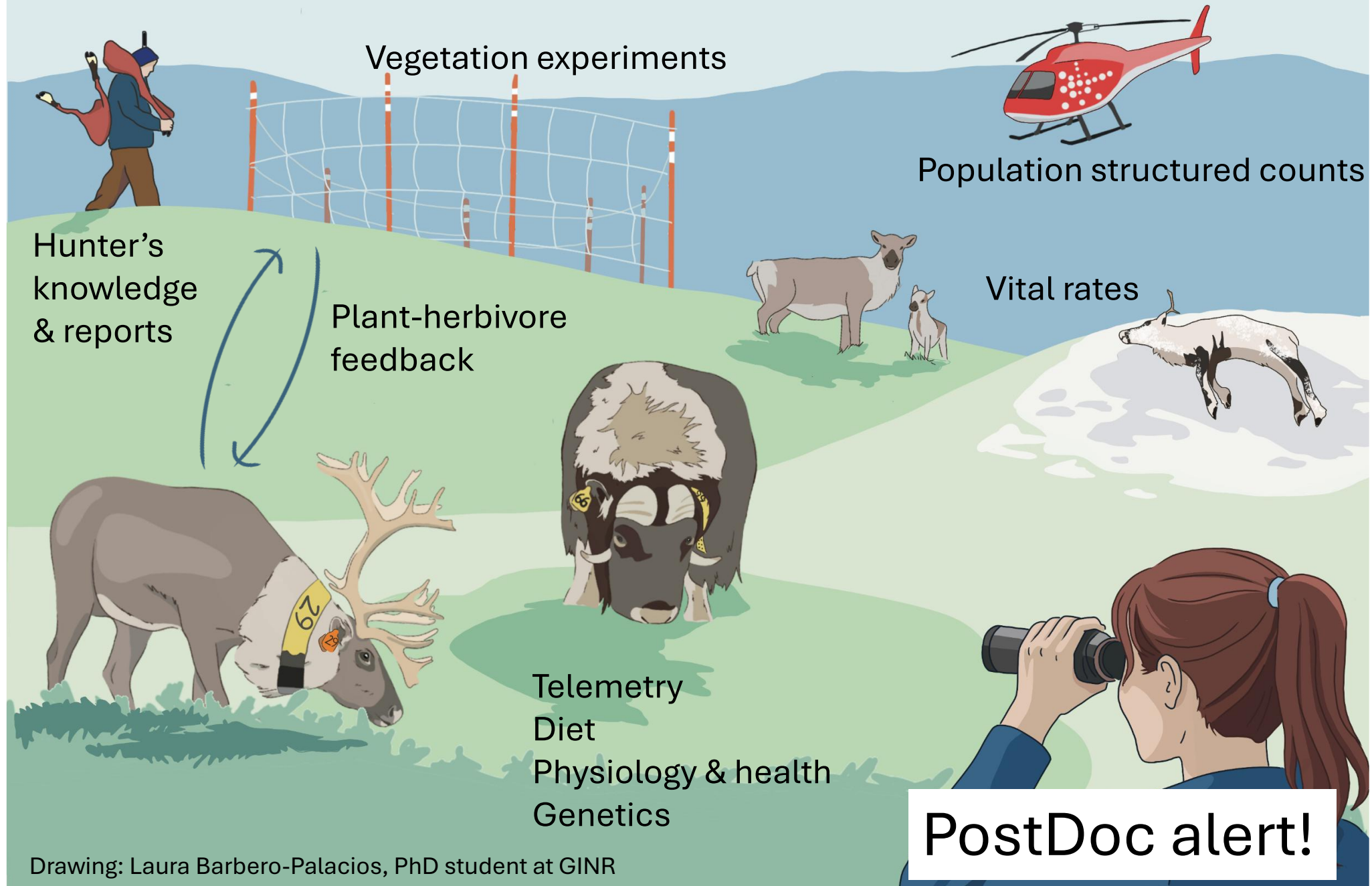
2025: a lot of things to carry...



Hegnene er meget svære at se! Pas på de røde vejstolper!



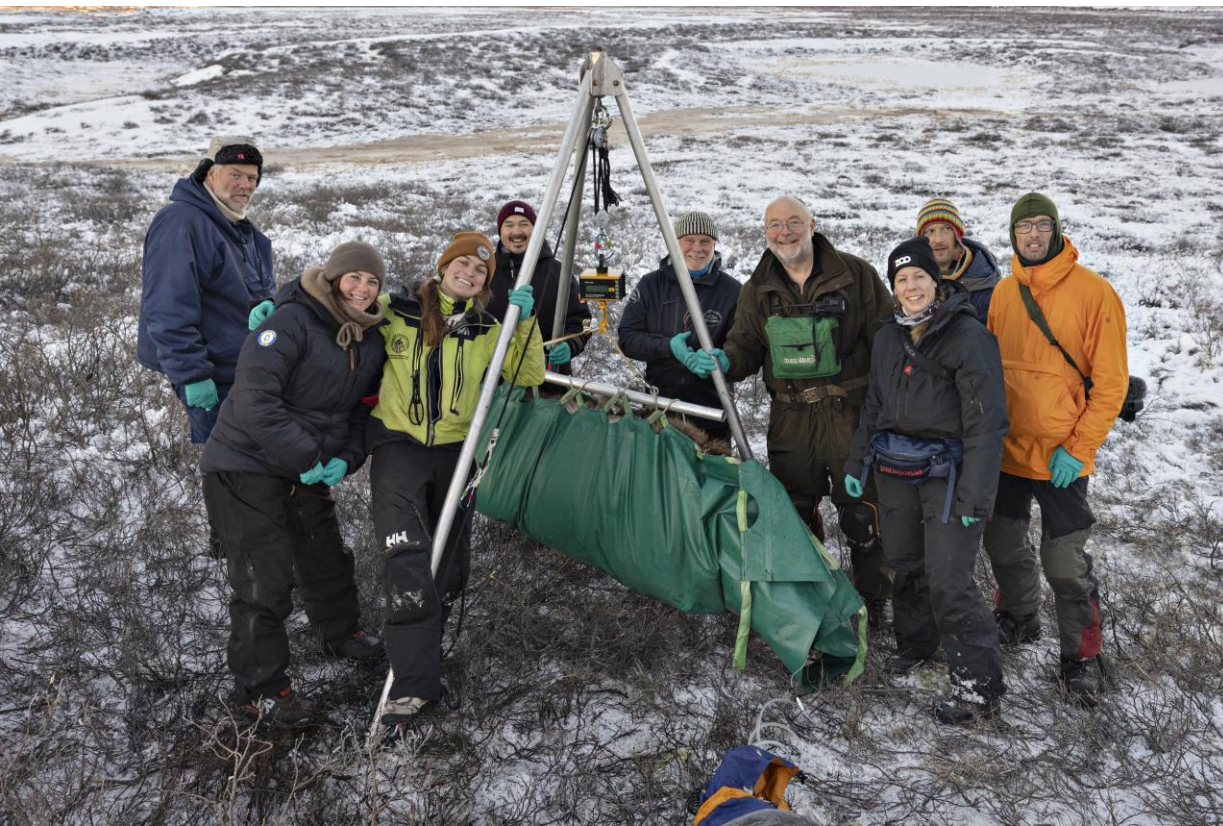
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Drawing: Laura Barbero-Palacios, PhD student at GINR

PostDoc alert!





Qujanaq!

tuttu@natur.gl

- Aarhus Universtiy
- ZOO-Copenhagen
- Cambridge Universtiy, SPRI
- Copenhagen University
- Lings Hunting Greenland
- KISS and Kang Mini tours logistic support
- UNESCO world heritage Aasivissuit-Nipisat
- Polar Trophy Hunt
- AirGreenland pilots Geir and Alex
- Dedicated assistants and students: Thank you Laura, Aurel, Ababsi, Mala, Amelia, Arthur and Théo!