

Traditional knowledge about polar bears in East Greenland: recent changes in the catch and climate

Fernando Ugarte, Alison Northey & Kristin Laidre

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



Photo: F. Ugarte

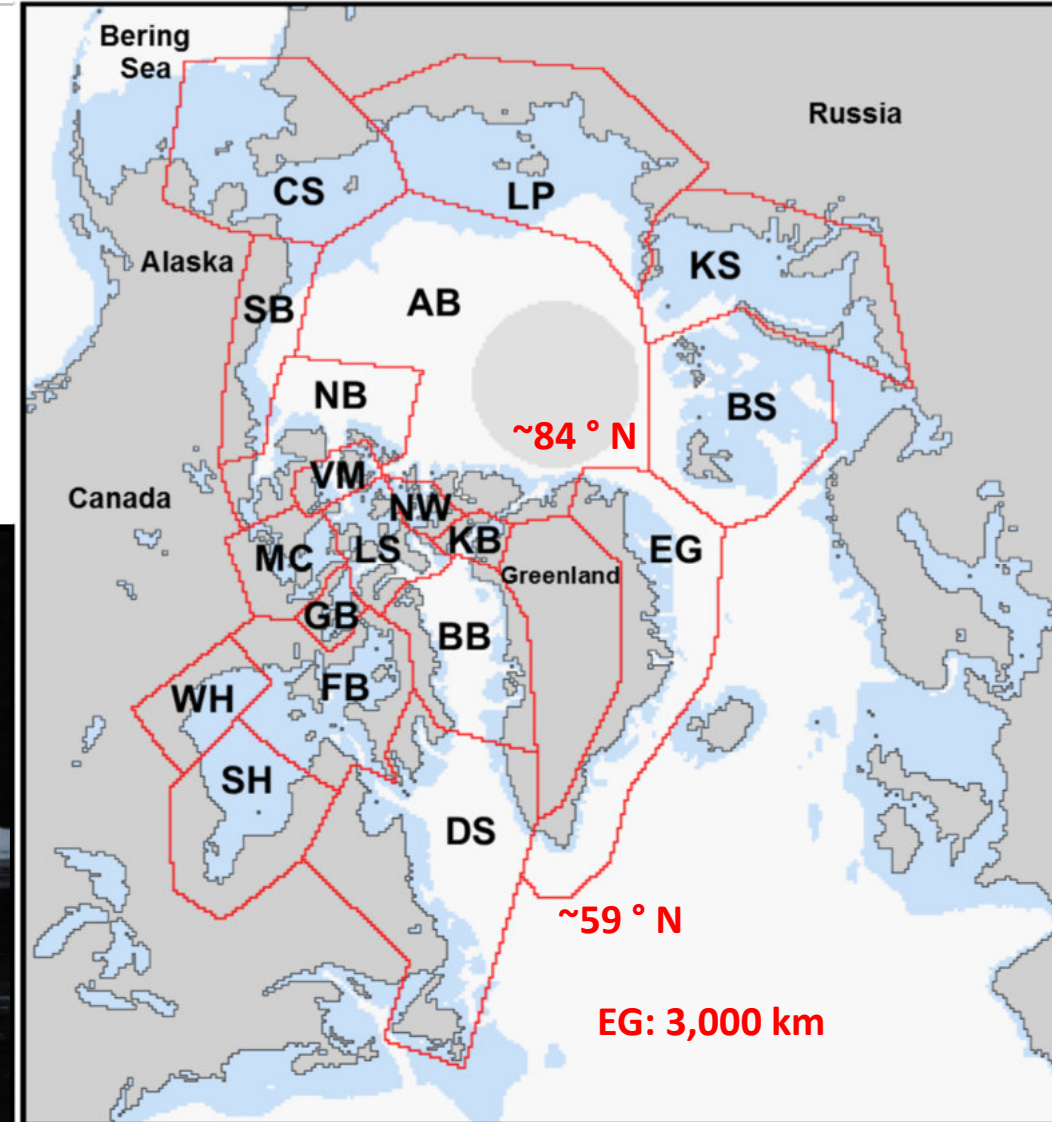
Polar bears in Greenland



- 5 sub-populations (out of 19), 3 harvested shared with Canada (DS is mainly Canadian!)
- Very few polar bears in the Arctic Basin (AB) now, but more expected in future
- Subsistence quota of 196 per year



Photo: F. Ugarte



What about East Greenland?

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



Is the catch sustainable?

How many polar bears?

How many populations?

Photo: F. Ugarte

Ongoing studies in East Greenland

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



2015: Interview study

(Laidre et al 2018)

2015 – 2020: satellite tracking

2021: Aerial survey

2022: Assessment & advice



Publication in Spring 2018

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



 **frontiers**
in Marine Science

ORIGINAL RESEARCH
published: 11 May 2018
doi: 10.3389/fmars.2018.00135



Traditional Knowledge About Polar Bears (*Ursus maritimus*) in East Greenland: Changes in the Catch and Climate Over Two Decades

Kristin L. Laidre^{1*}, Allison D. Northey¹ and Fernando Ugarte²

¹ Applied Physics Laboratory, Polar Science Center, University of Washington, Seattle, WA, United States, ² Department of Birds and Mammals, Greenland Institute of Natural Resources, Nuuk, Greenland

<https://www.frontiersin.org/articles/10.3389/fmars.2018.00135/full>

Photo: F. Ugarte

Interview studies 1999 & 2015



For comparison, there is an interview study from 1999 (Sandell et al 2001).

http://www.natur.gl/fileadmin/user_files/Dokumenter/Tekniske_rapporter/GN_TR_40_dk.pdf

Interview study 2015 - aims



Gather Inuit knowledge about

- changes in the catch after quotas were established in 2006
- effect of changes in the climate (loss of sea ice) on the catch and on the polar bears in the past 15 years
- important areas to cover during field research
- the current economical and social significance of the polar bear hunt in East Greenland



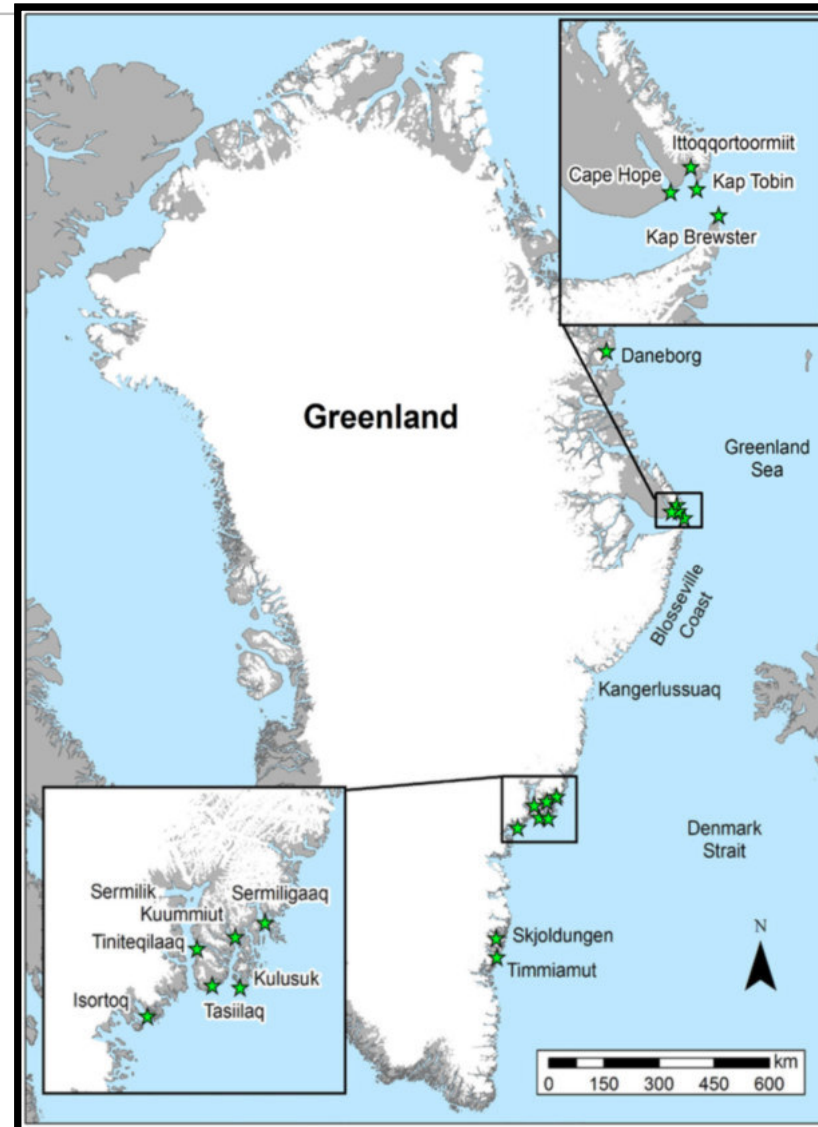
Photo: F. Ugarte

Study areas



Tasiilaq

- 1 city and 5 settlements
- pop. 3,000 in 2016
- 68 full time hunters



Ittoqqortoormiit

- 1 settlement
- pop. 389 in 2016
- 12 full time hunters

Selection of interviewees



Photo: F. Ugarte

Polar bear hunters

- Taken at least 3 polar bears in 2009 – 2013
- 16 hunters in Tasiilaq (ages 32 – 64)
- 9 hunters in Ittoqqortoormiit (ages 20 – 58)

Interviews



Methods

- Hunters were interviewed by a local with predefined questions, maps and dictaphone
- Input to Excel in English
- Maps coded and digitized with ESRI ArcGIS



Photo: F. Ugarte

55 predefined questions



- How old are you?
- How old were you when you participated in a polar bear hunt for the first time?
- How old were you when you caught a polar bear for the first time?
- How often do you go polar bear hunting? (i.e., number of times per year)

- Possibility to expand answers
- Maps

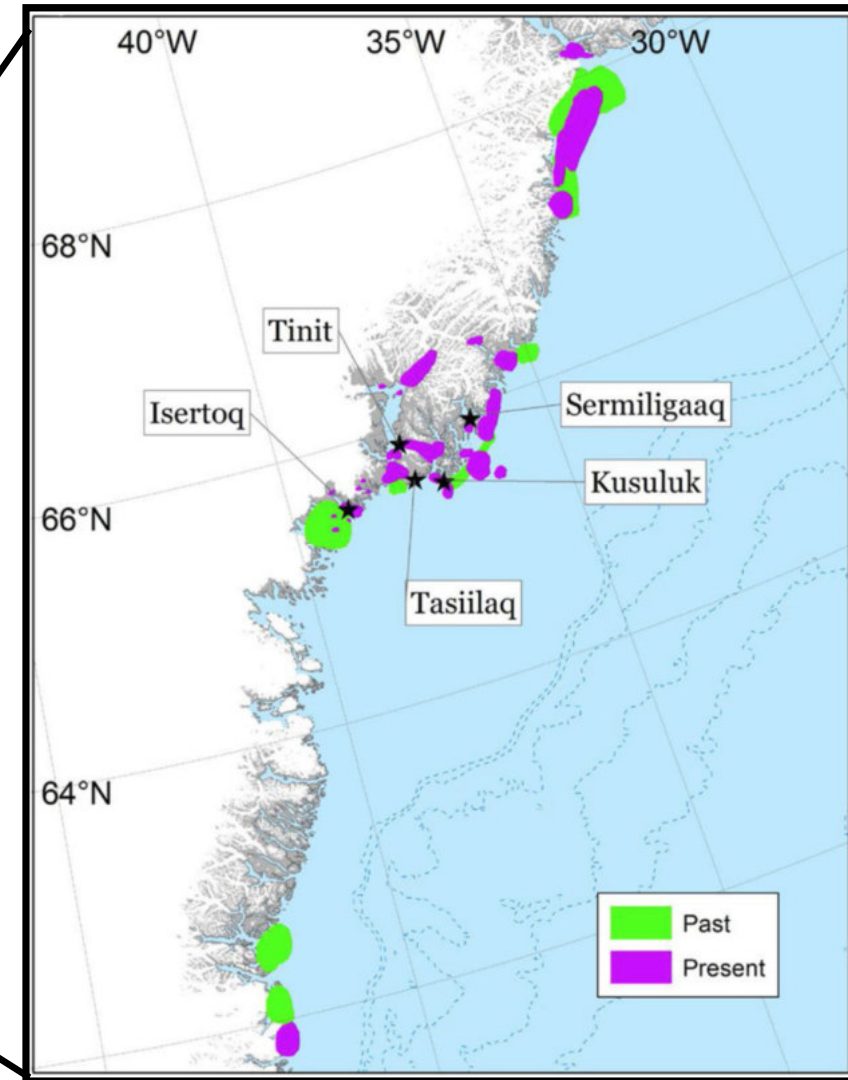
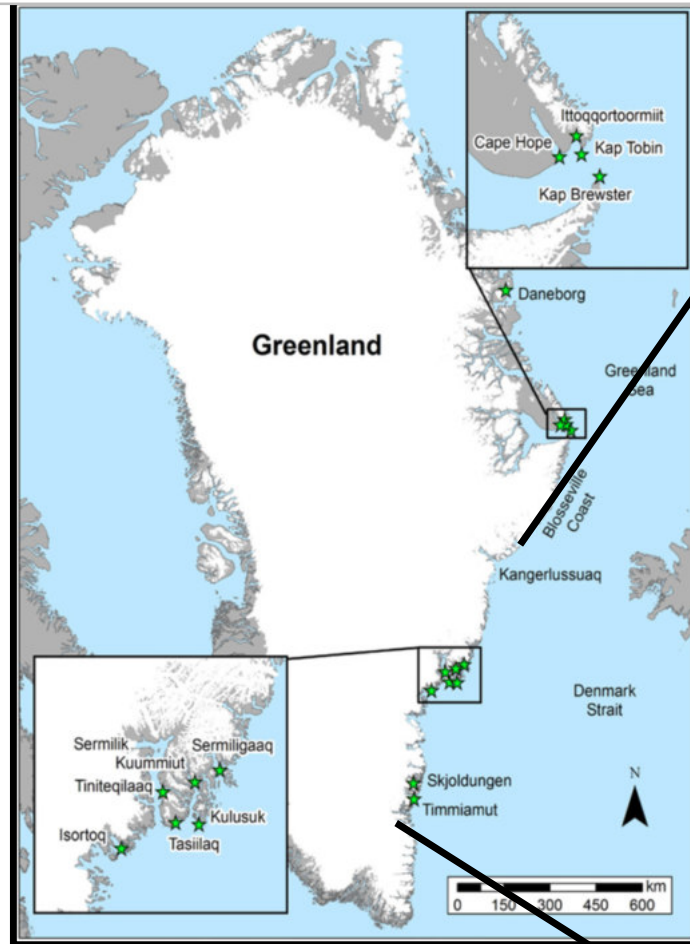
Photo: F. Ugarte

<https://www.frontiersin.org/articles/10.3389/fmars.2018.00135/full#supplementary-material>

Results – Tasiilaq



Tasiilaq
Small change
in hunting
grounds

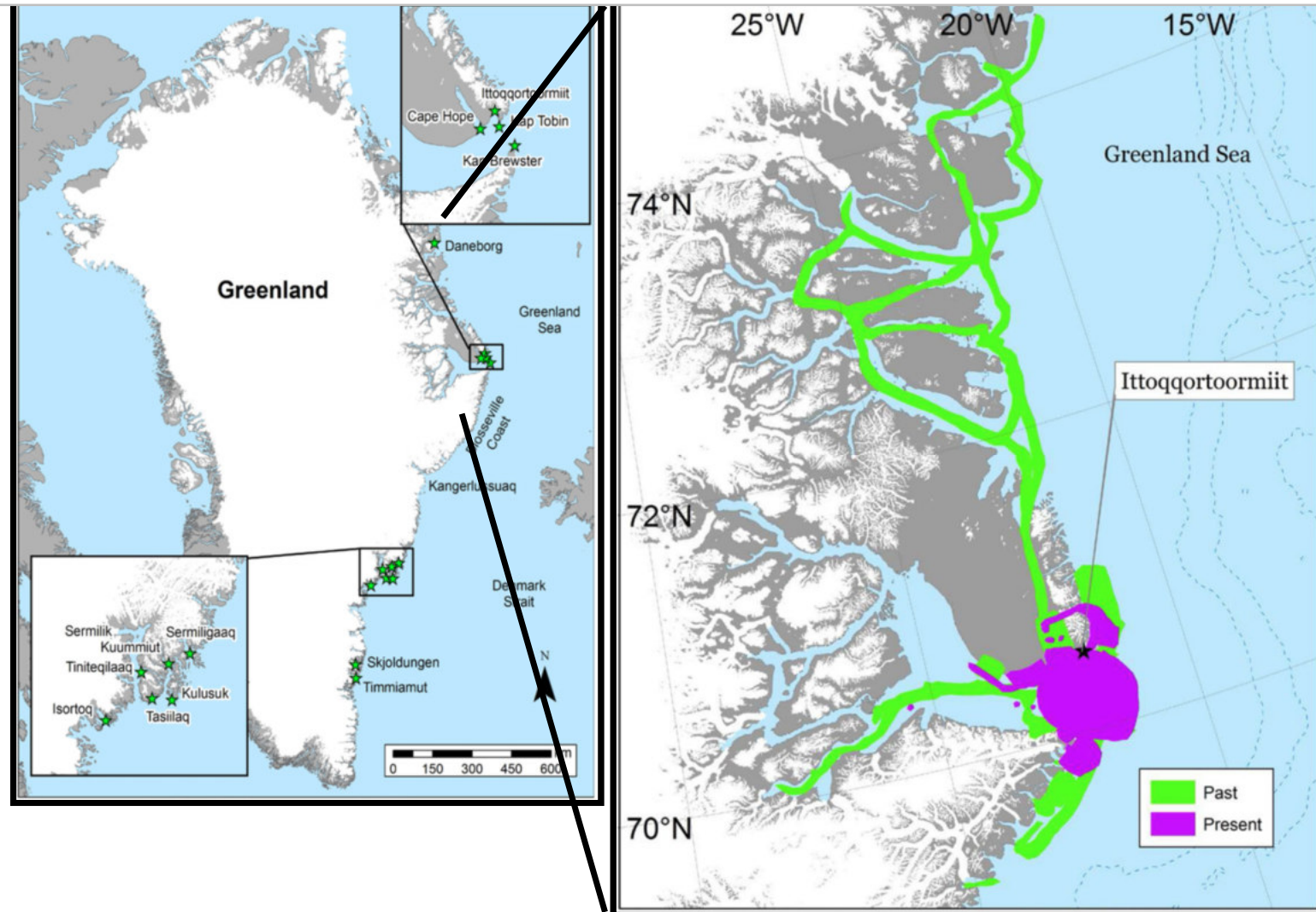


Results – Ittoqqortoormiit

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



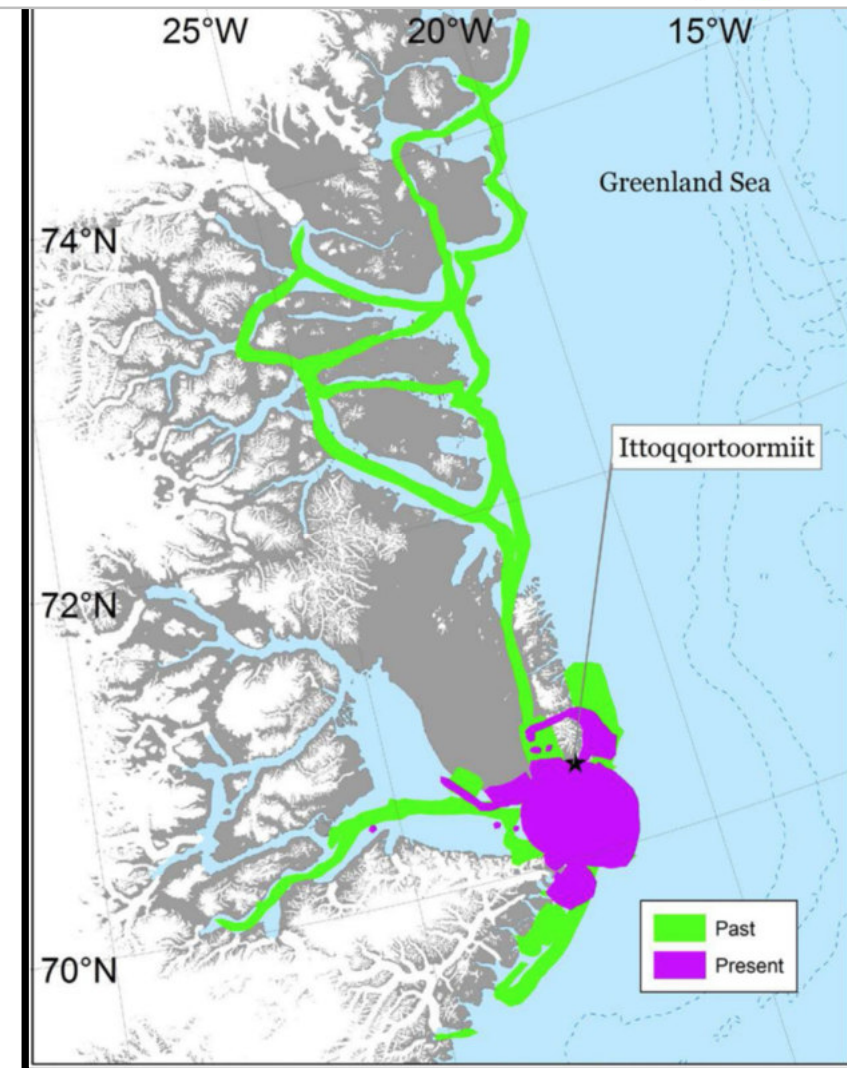
Ittoqqortoormiit
Huge reduction
of hunting
grounds



Conclusions



- Highly specialized polar bear hunters in Ittoqqortoormiit
- Hunters noted large changes to the climate in the areas where they hunt polar bears (loss of sea ice, receding glaciers, unstable weather, and warmer temperatures)
- Ice loss has created more areas of open water so dog sledges have become unsafe for hunting transportation



Conclusions



- Hunters would like to see a small proportion of the quota allocated for trophy hunting
- In Tasiilaq, bears have been observed consuming whole seals
- More polar bears are coming into the communities and introduction of quotas and loss of sea ice were given as potential reasons

isbjørn

Filtrér efter emneord...

Isbjørn Isbjørn i Zoo Isbjørne Isbjørnejagt Isbjørnekvote Is



Isbjørn aflivet ved Kangerlussuaq

En isbjørn er mandag eftermiddag blevet aflivet ved oplyser politiet.

24. september 2018 · 16:11



Jagtbetjent: Flere isbjørne og varm bjørnene ind til byen

Klimaforandringerne har betydet, at flere isbjørne kommer i beboede områder advarer biologer om. Det kan jagt betjente i Kangerlussuaq godt skrive under, da han har oplevet isbjørne i længere og længere.

3. september 2018 · 08:13



Isbjørn spottet i Godthåbsfjorden

Fredag er der spottet en isbjørn i bunden af Godthåbsfjorden i Sermitsuaq A.G.

1. september 2018 · 16:34



Biologi: Mindre havis skyld i flere isbjørne

Mindre havis og strengere regulering af jagt på isbjørne kan sammenstød mellem mennesker og isbjørne, forklarer biologer.

30. august 2018 · 12:51



Biologi: Imaata sikuata milliartornera saassussisarannut pissutaasoq

Silap pissusiata allanngoriartornerata kingunerisaanissittumi saassussisut takusalissagivut uumassuller.

30. august 2018 · 12:50



Endnu en person er dræbt af isbjørn

En person er dræbt og to andre er blevet såret af en isbjørn i Nauyasut i Nunavut. Det oplyser canadiske embedsfolk.

28. august 2018 · 17:01

Imaata sikuata milliartornera nannut

https://knr.gl/da/node/212688

KNR Kalaallit Nunaata Radioa
Greenlandic Broadcasting Corporation

Nuuk 2°C 3.9 m/s

Nyheder TV Radio Vejret Politik Erhverv Kultur Sport Udland Billedgalleri

Inatsisartut Vigtige udvalgsposter besat 15.1 timer siden

Økonomisk Råd roser plan om fiskerikommission 16.6 timer siden

Afgiftsændringer på el- og hybridbiler hænger i en tynd tråd 16.7 timer siden

Foto: WWF

Biologi: Imaata sikuata milliartornera nannut saassussisarannut pissutaasoq

30. august 2018 · 12:50 af [Jonas Flevé](#) · Versionering: [Connie Fontain](#)

Silap pissusiata allanngoriartornerata kingunerisaanik nannut amerlanerusut issittumi saassussisut takusalissagivut

Seneste nyheder

- Vigtige udvalgsposter besat
- Økonomisk Råd roser plan om fiskerikommission
- Afgiftsændringer på el- og hybridbiler hænger i en tynd tråd
- Tavshed fra Naalakkersuisut om Kangerlussuaqs fremtid
- Nobels fredspris uddelt
- Atassut får en ekstra post i Naalakkersuisut
- Bent fra Måløv udløste tre ugers politisk kaos
- Her er det nye Naalakkersuisut
- Mangel på medarbejdere hæmmer væksten
- Berthelsen efterlyser endnu flere arbejdspladser på Kuannersuit

Mest læste

- Her er Kielsens nye koalition
- Her er det nye Naalakkersuisut
- Østgrønlandske spækhuggere er fyldt med gift
- 20-årig tilbageholdt efter knivstikkeri
- Kielsen kan ikke holde åbningstale
- Aqqaq Jerimiasen overtager udenrigsområdet

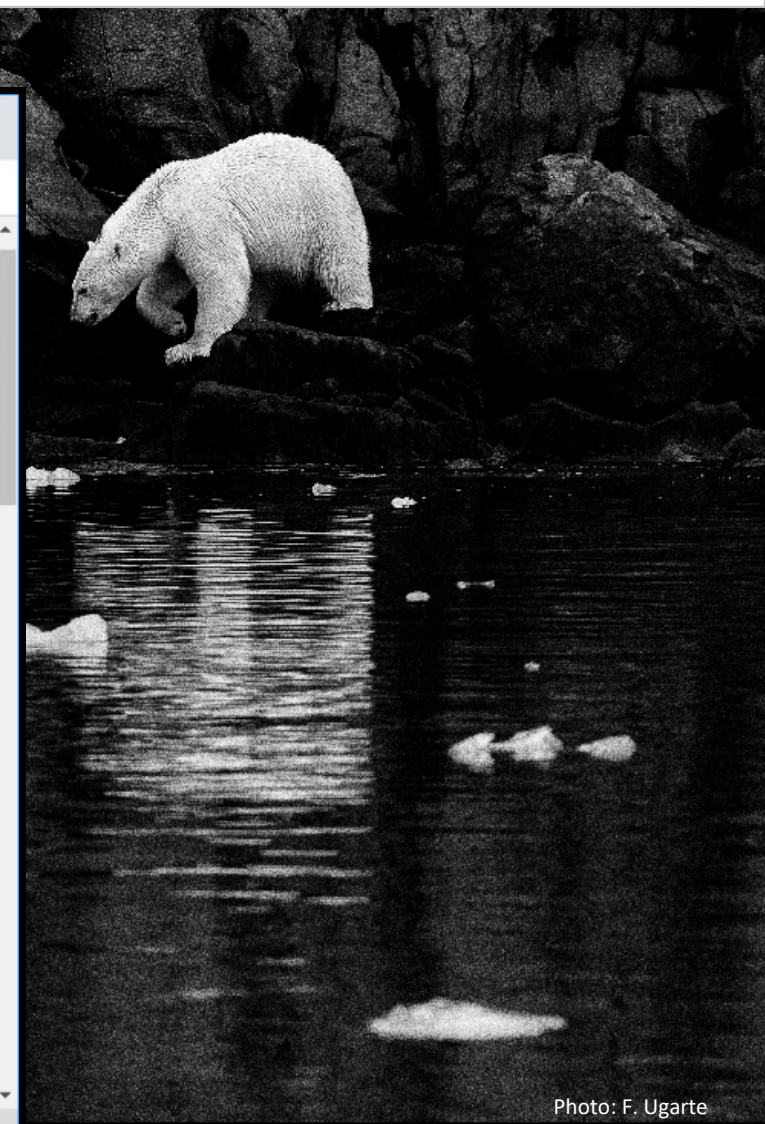


Photo: F. Ugarte

Qujanaq

Pinnngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



Photo: F. Ugarte

Polar bear studies in Baffin Bay and Kane Basin 2009 - 17

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut

With support from Greenland, Denmark (DANCEA), Nunavut & Canada

Scientific Working Group of the
Canada / Greenland Joint
Commission on Polar Bear

Kristin Laidre (Greenland)
Erik Born (Greenland)
Stephen Atkinson (Nunavut)
Nick Lun (Canada)
Øystein Wiig (Norway)

Erik Regehr & Seth Stapleton

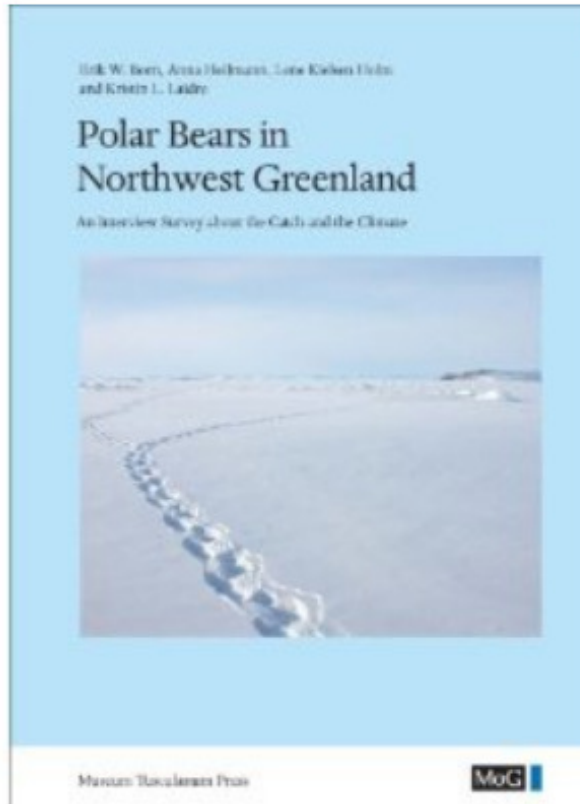
Reports:

- SWG 2016
- Regehr et al 2017

<http://www.natur.gl/en/communication/focus/polar-bear-surveys-2011-2014/>

Interview study in West Greenland 2006

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



Polar Bears in Northwest Greenland: An Interview Survey about the Catch and the Climate (Monographs on Greenland - Man & Society) [Hardcover]

[Erik W. Born](#) (Author), [Anna Heilmann](#) (Author), [Lene Kielsen Holm](#) (Author), [Kristin L. Laidre](#) (Author)

- Need to document what the hunters have observed**
- Climate changes in Greenland
 - Increased polar bear catch

02 07 2006

Photo: A. Heilmann



Conclusions from 2006 (Born et al 2011)

Pinngortitaleriffik
Greenland Institute of Natural Resources
Grønlands Naturinstitut



- Polar bears have become thinner
- Decrease in sea ice cover and warmer, more unpredictable weather influenced travelling and hunting activities
- Increased number of polar bears caught from boat (versus dog-sled)
- Increased occurrence of polar bears close to the coast

Photo: F. Ugarte