



Utbredelsesdata sjøfugl



Benjamin Merkel

Norsk Polarinstitutt

benjamin.merkel@npolar.no

Offshore Norge seminar, Oslo, 28 april 2026





ett (eller noen få) egg



© E. Lore

sen modning



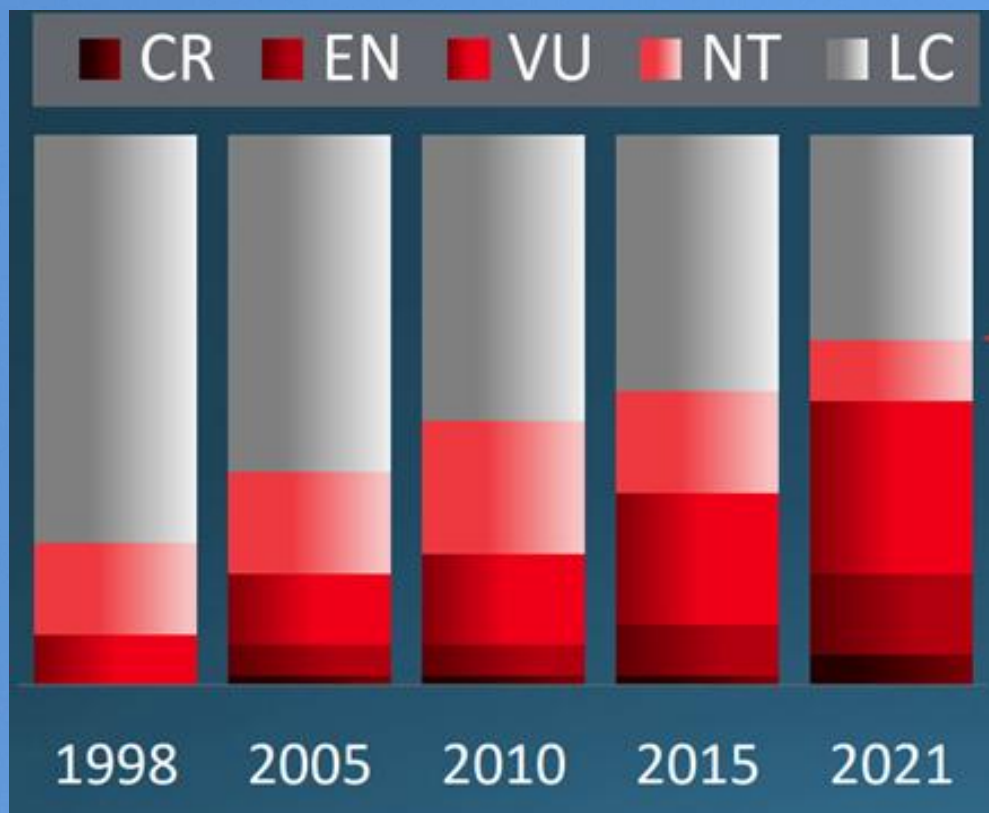
lang levetid



© E. L. Da



Sjøfuglstatus



Vi har (muligens) mistet over 60 % av sjøfuglene globalt siden 1950-tallet

Paleczny et al. 2015



Omtrent 50 % av sjøfuglarter er i tilbakegang globalt

Dias et al. 2019



2 av 3 sjøfuglarter er rødlistet i Norge

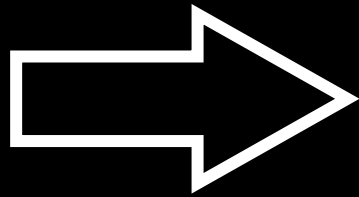
Norsk rødliste



1982

Runde

Photos: Roger Engvik,
Signe Christensen-Dalsgaard



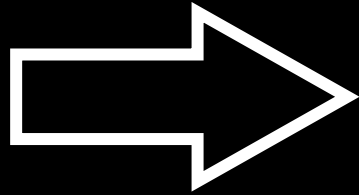
2023

1983



Hornøya

Photos: Rob Barrett,
Signe Christensen-Dalsgaard



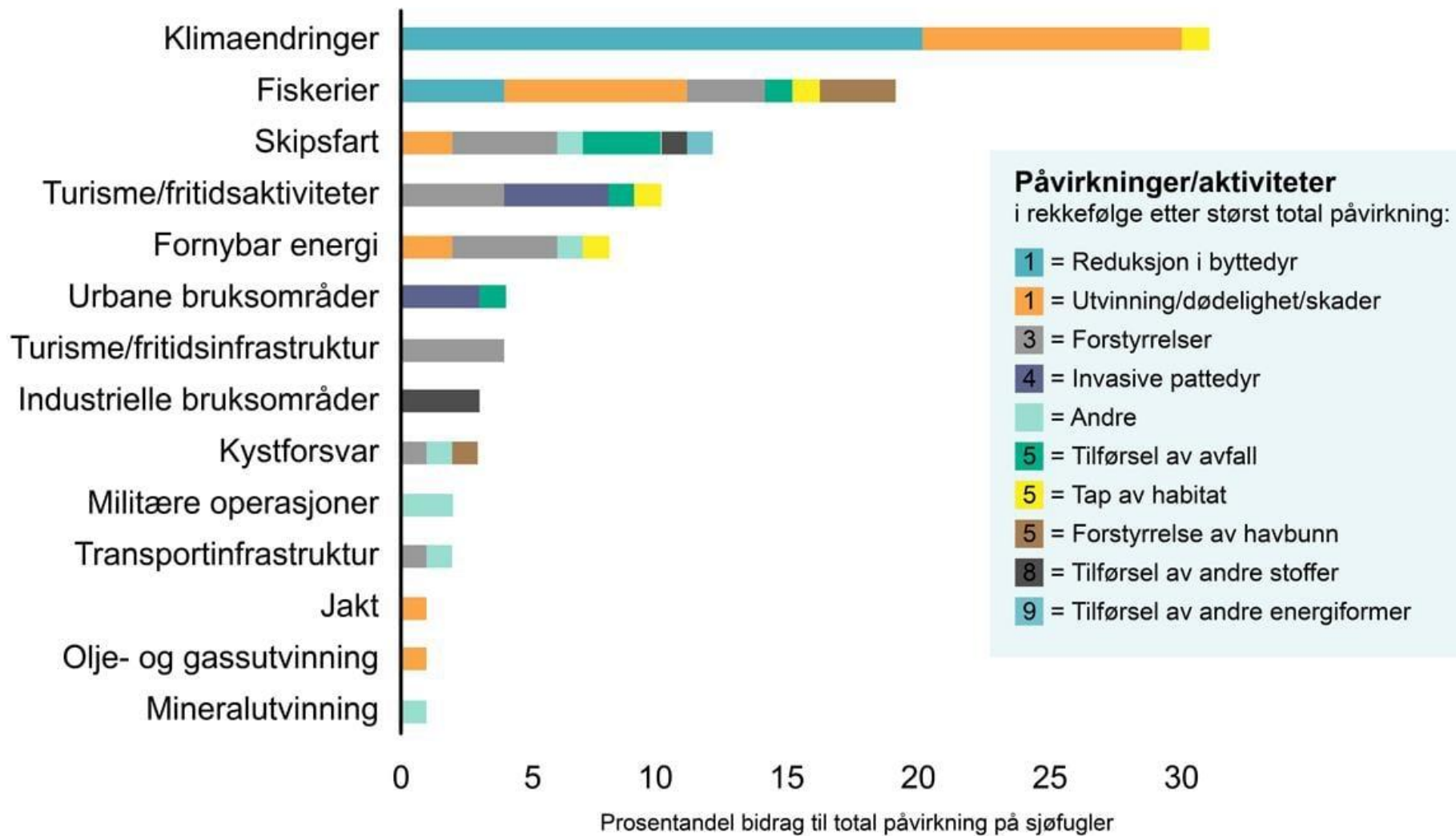
2023





2024

kumulativt!





$$r = b_0 - d_0 + i_0 - e_0$$

hovedsakelig påvirket av faktorer i hekkesesongen og i nærheten av hekkeplassen

påvirkes hovedsakelig av overlevelsen utenfor hekkesesongen, ofte langt fra hekkeområdet



SEATRACK
Seabird Tracking



Midlere bestandsendring siste år og siste ti år

2023-2024	POv	PDy	KOv	Kdy	Alle
Barentshavet	-14	11	-17	15	-4.3
Norskehavet	10	13	6	3	7.5
Nordsjøen	✗		10	2	5.8
Alle	-2.7	12.0	-0.8	4.9	2.9

2014-2024	POv	PDy	KOv	Kdy	Alle
Barentshavet	-1	-2	-4	-7	-2.8
Norskehavet	-13	1	-2	-5	-4.2
Nordsjøen	✗		-2	2	0.0
Alle	-7.3	0.1	-2.6	-3.2	-3.1



- Pelagisk overflate (POv)
- Pelagisk dykkende (PDy)
- Kystnær overflate (KOv)
- Kystnær dykkende (Kdy)





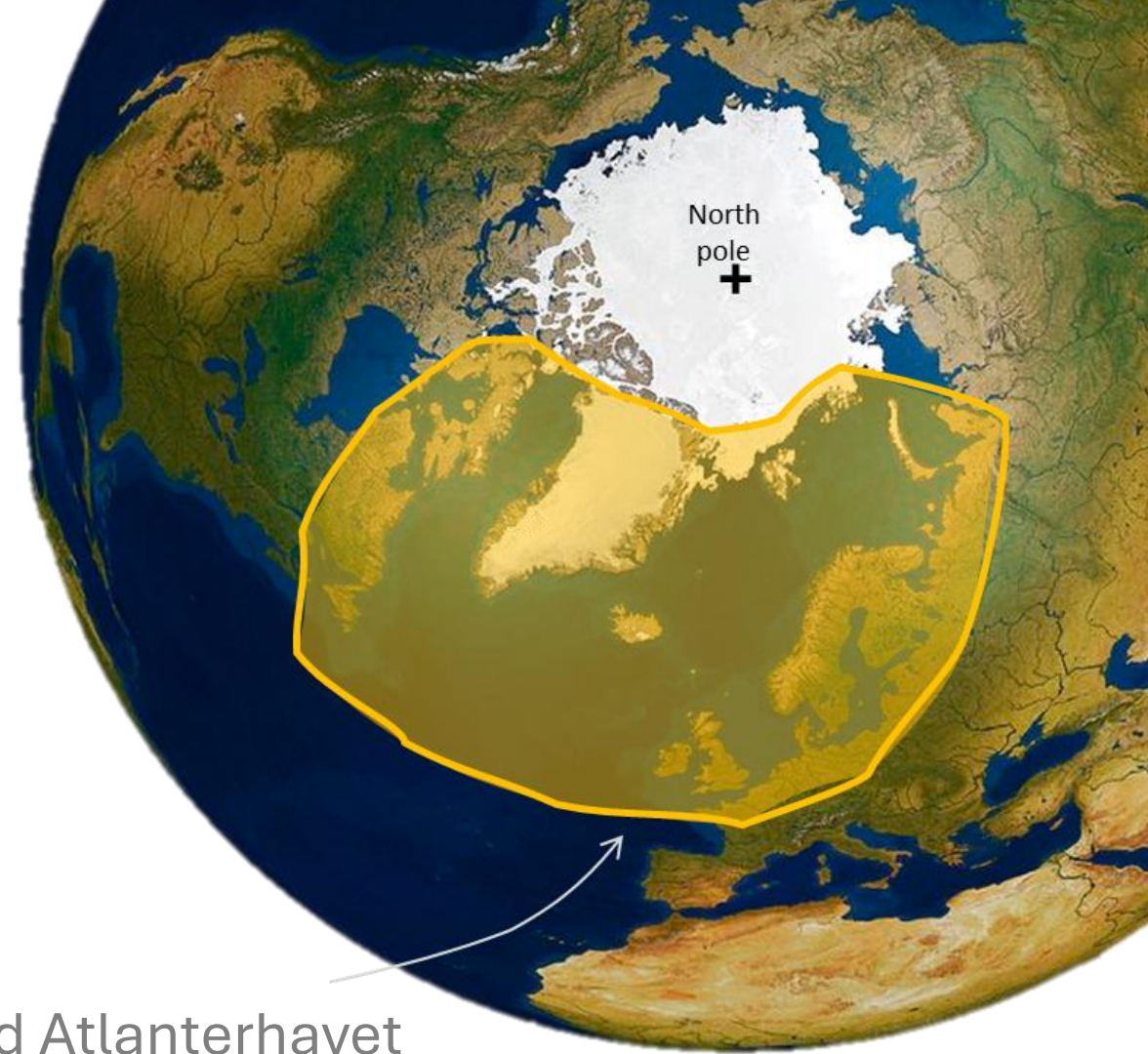
SEATRACK
Seabird Tracking



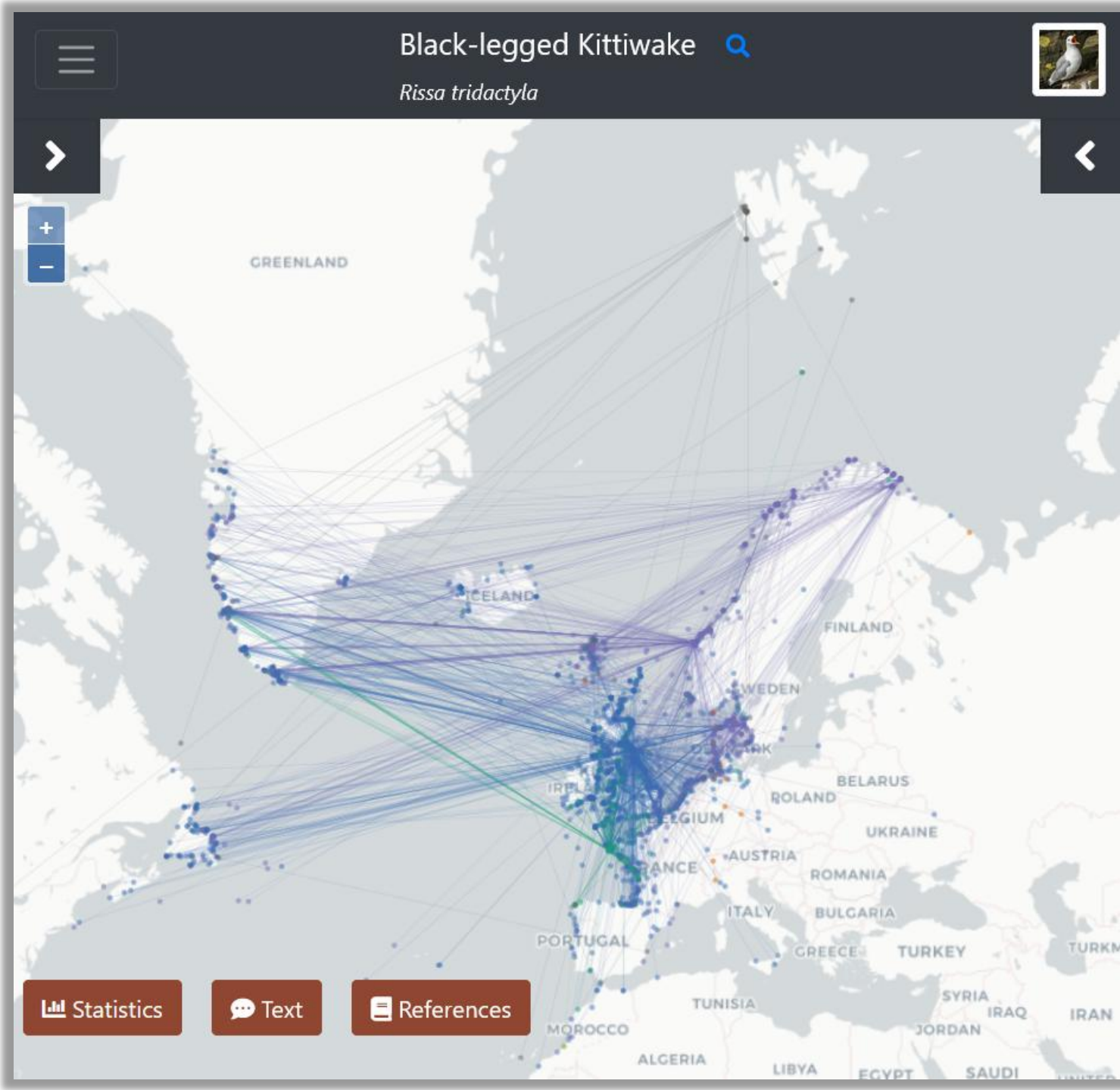
Hovedmål

Hvor er sjøfuglene i Nord-
Atlanteren når de ikke hekker?
Og **hvorfor** er de der?

Hvordan påvirker endringer i
miljøet og menneskelig
aktivitet **bestandsutvikling**?



Nord Atlanterhavet



<https://migrationatlas.org/>

LAYER SELECTION



Species

Black-legged kittiwake

Season

All_seasons

4 year period

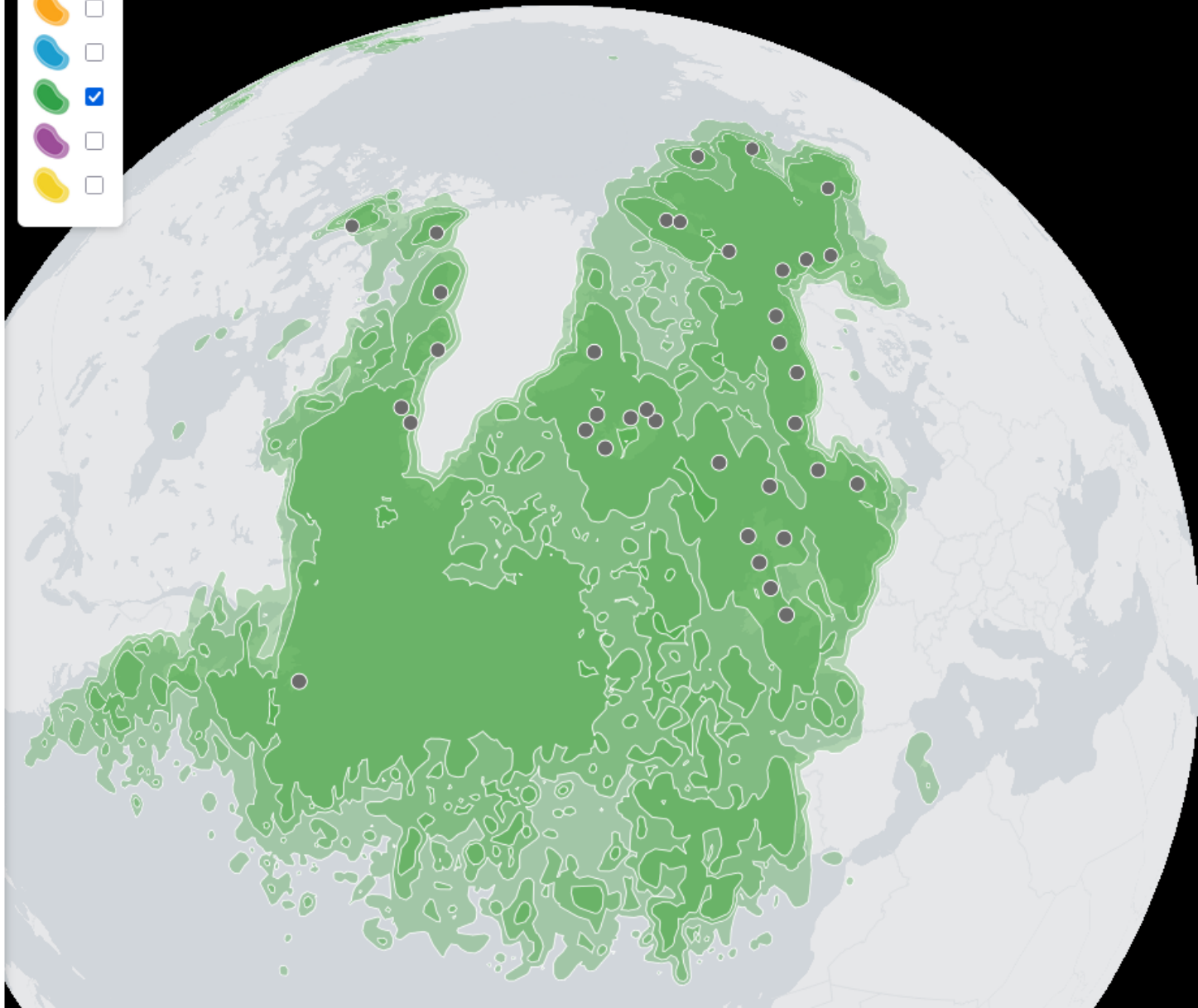
All_periods


Colony

All_colonies

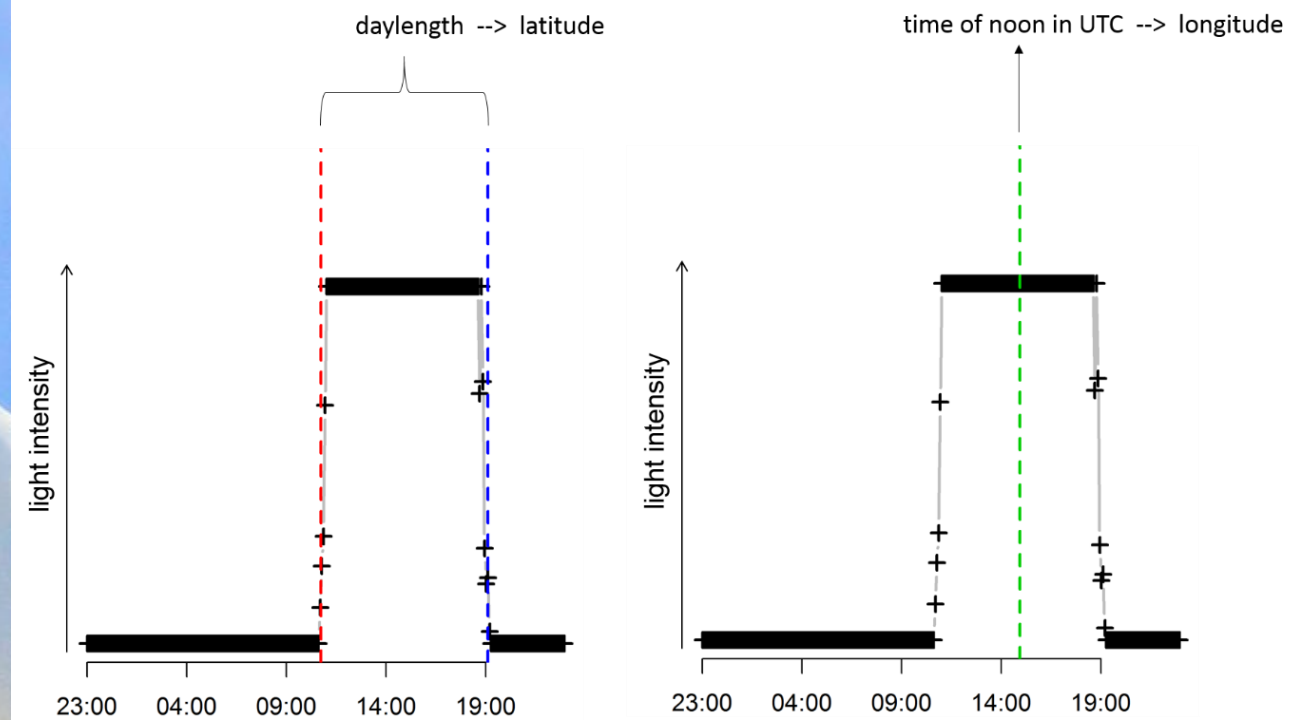
Data used to produce map

Species:	Black-legged kittiwake
Locations:	693680
Colonies:	25
Individuals:	936
Days:	241
Months:	9
Years:	2006 to 2026



 explore it yourself

GLS-loggers



+

- liten
- rimelig
- Ingen/liten tagging-effekt
- flere sensorer
- lang levetid

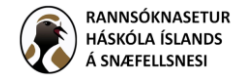
-

- oppløsning: 100 km
- må hentes inn
- krever skumring
 - jevndøgn
 - midnattssol
 - polarnatt



SEATRACK

Seabird Tracking



SEATRACK workshop 2023



* not part of phase III



Environment and Climate Change Canada

Environnement et Changement climatique Canada



this large-scale international collaboration only exists thanks to its **81 partners** from **51*** institutions based in **15*** countries



SEATRACK
Seabird Tracking

Funding

contribution to the program in terms of work time, field costs

Lead institutions/partners **50 %**



KYSTVERKET



Klima- og miljødepartementet



Energidepartementet

Governmental **25 %**

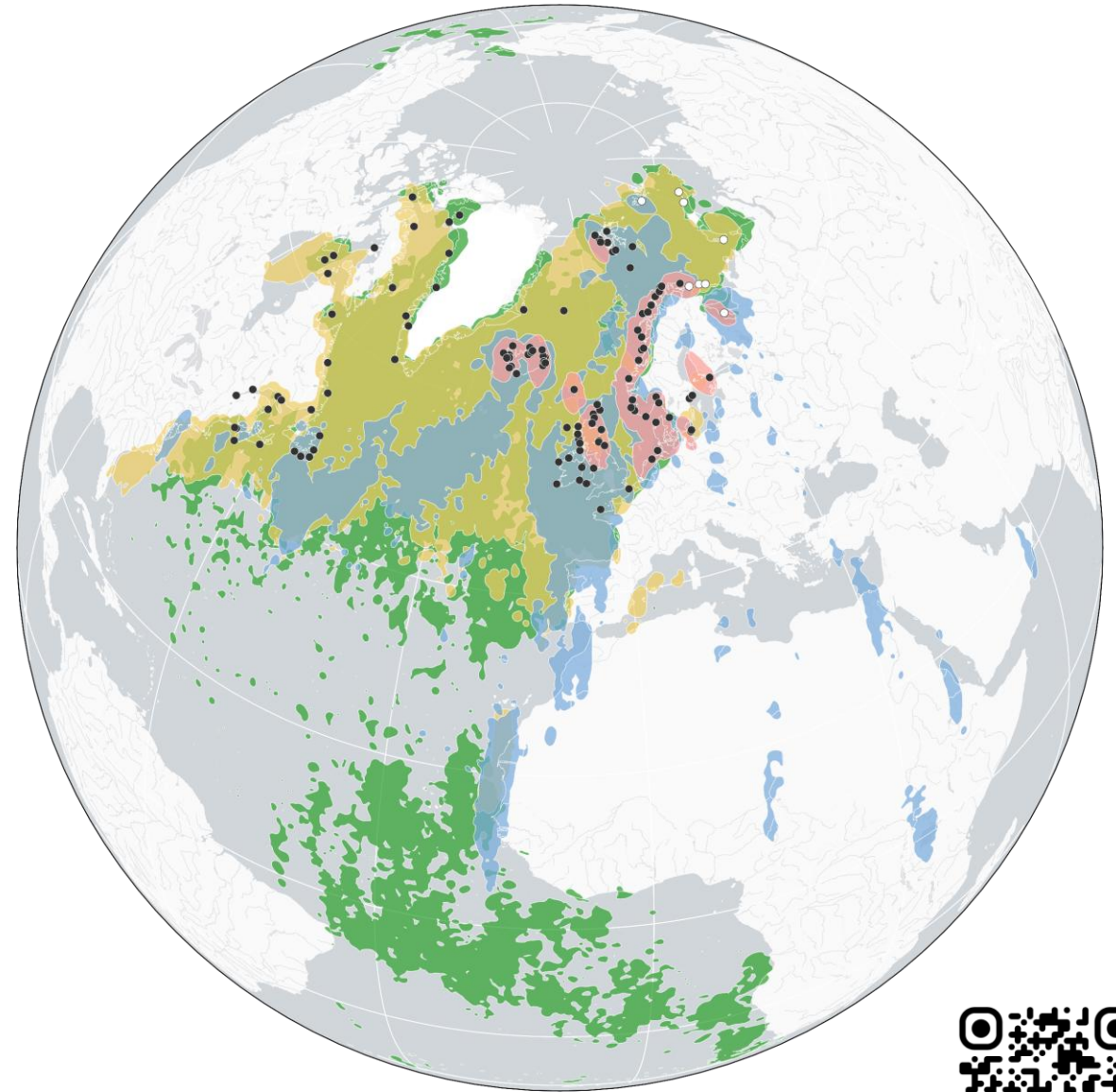



OFFSHORE NORGE



Energy companies **25 %**

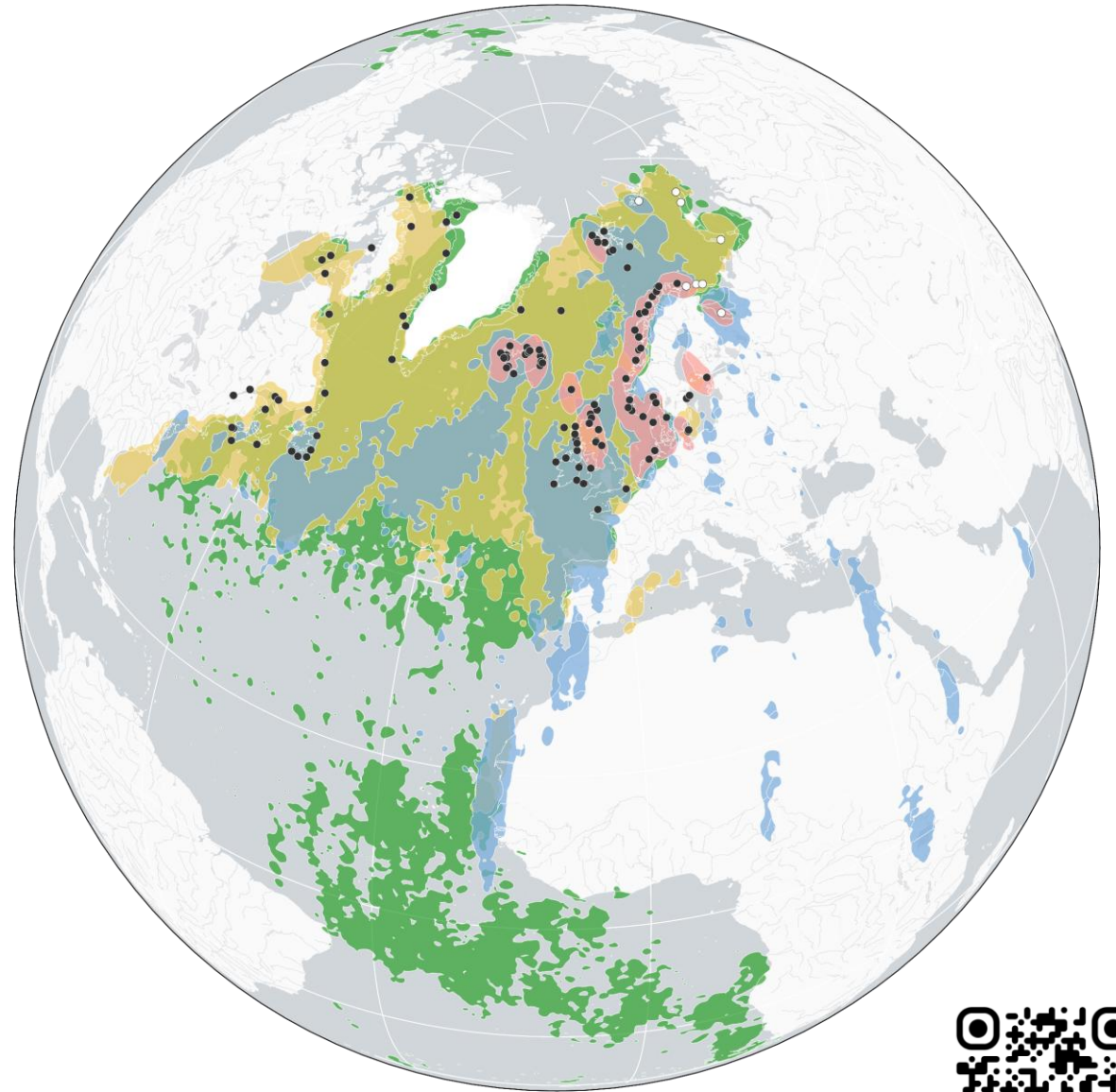
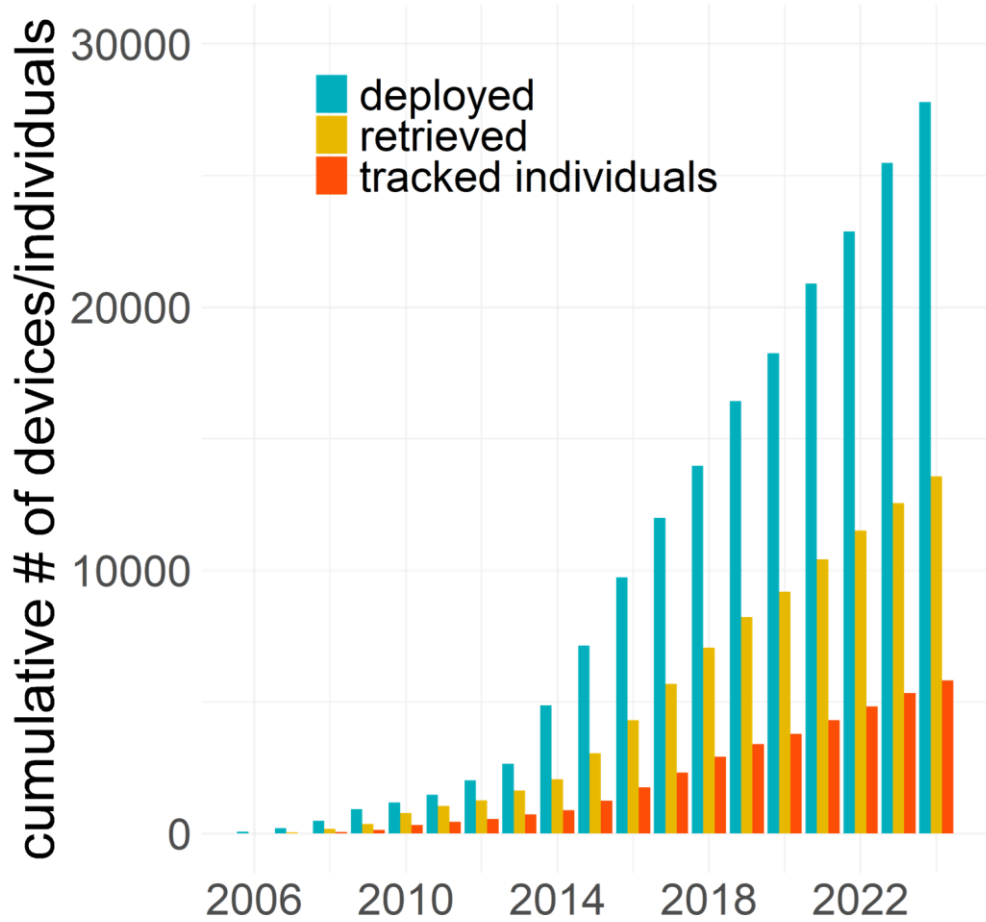
16 sjøfuglarter



 explore it yourself



Database

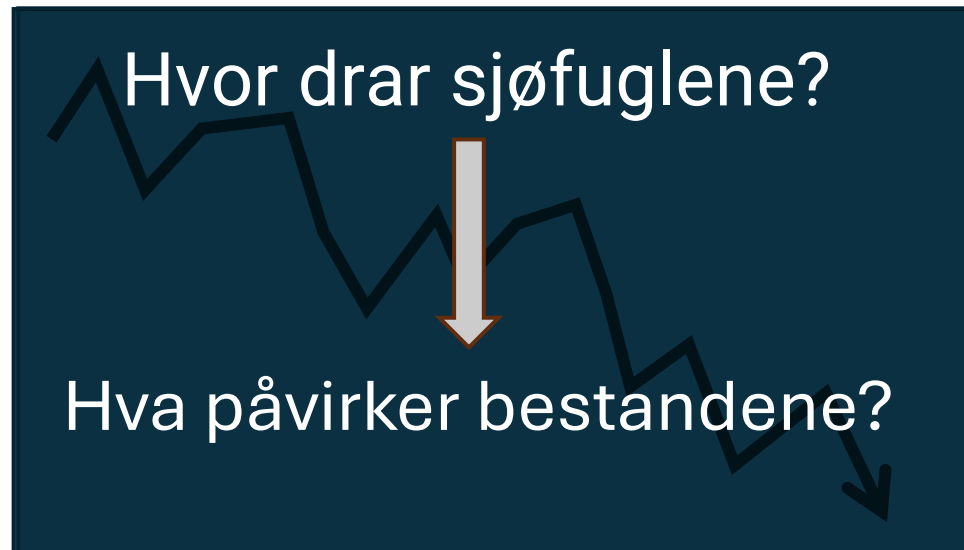


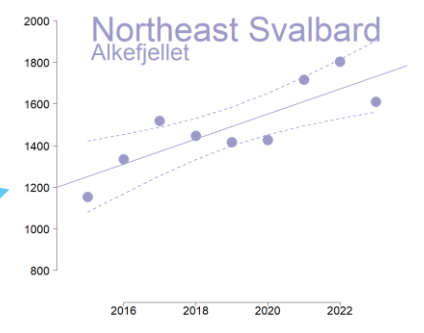
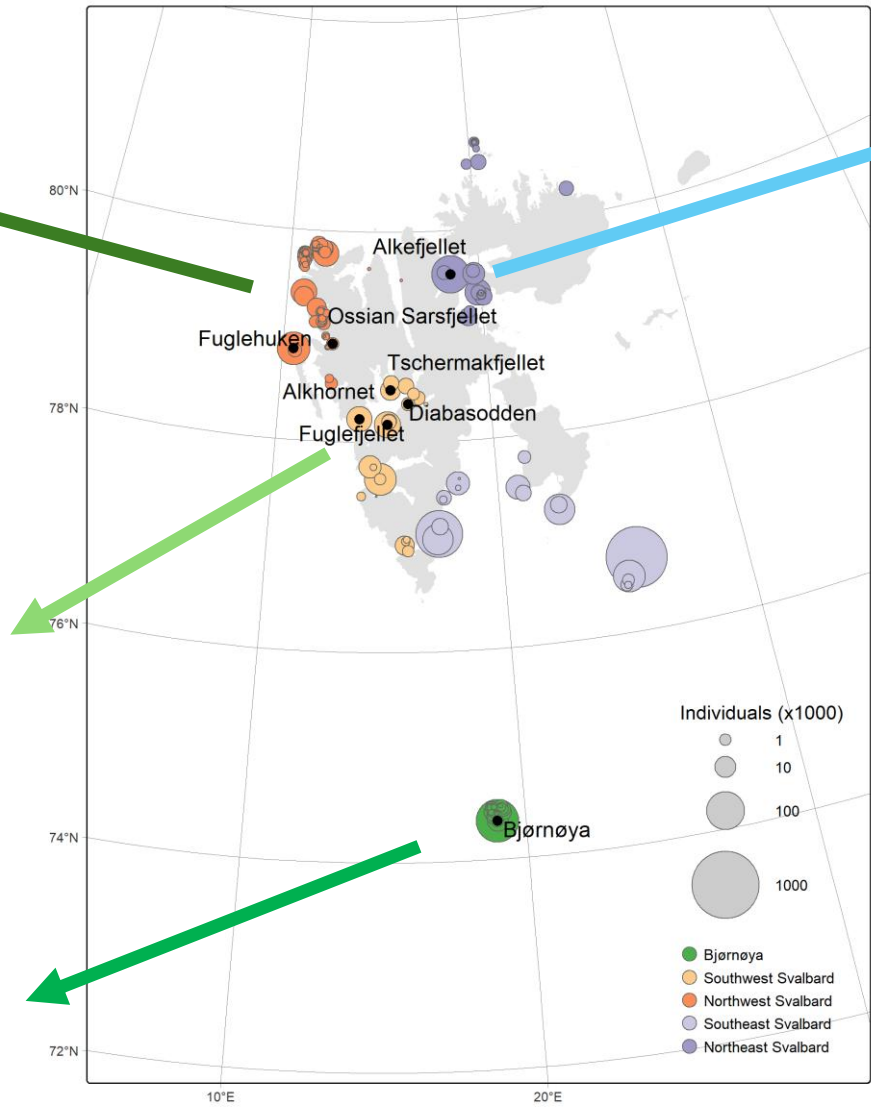
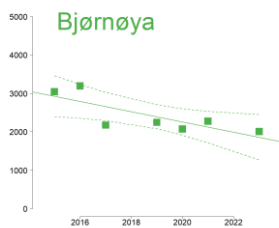
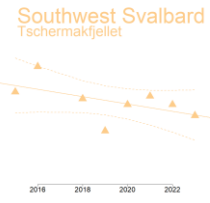
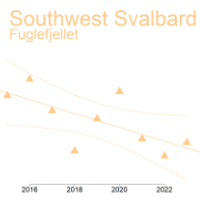
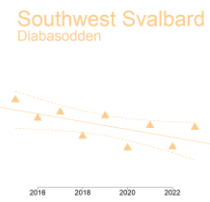
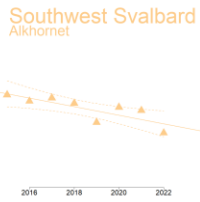
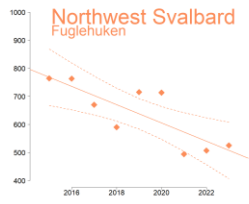
explore it yourself



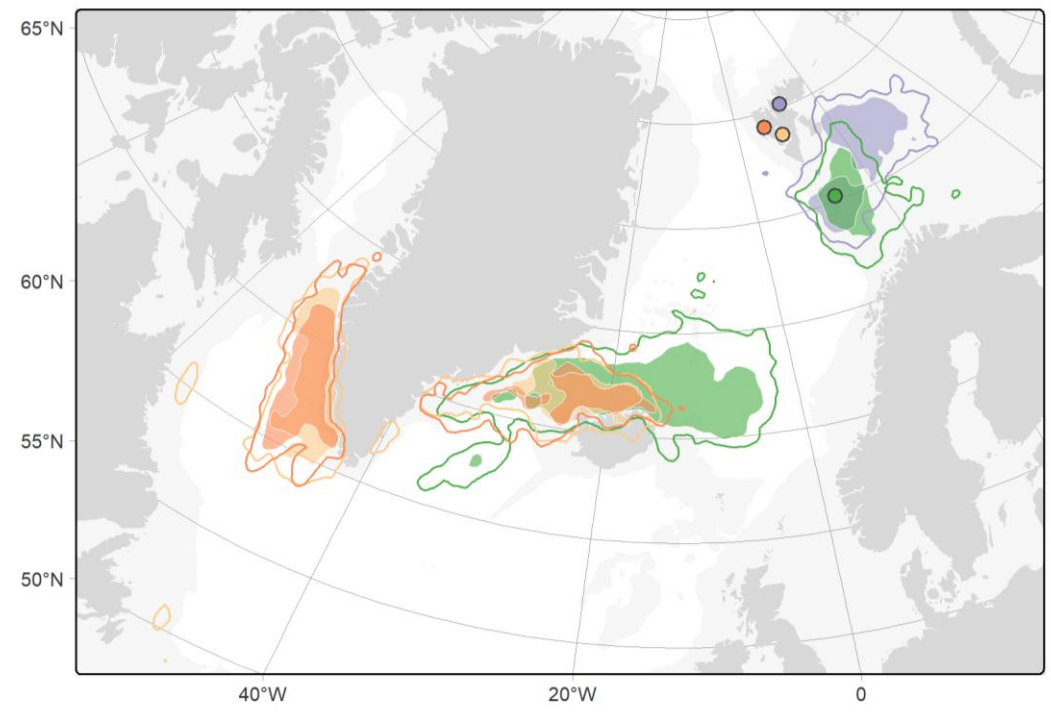


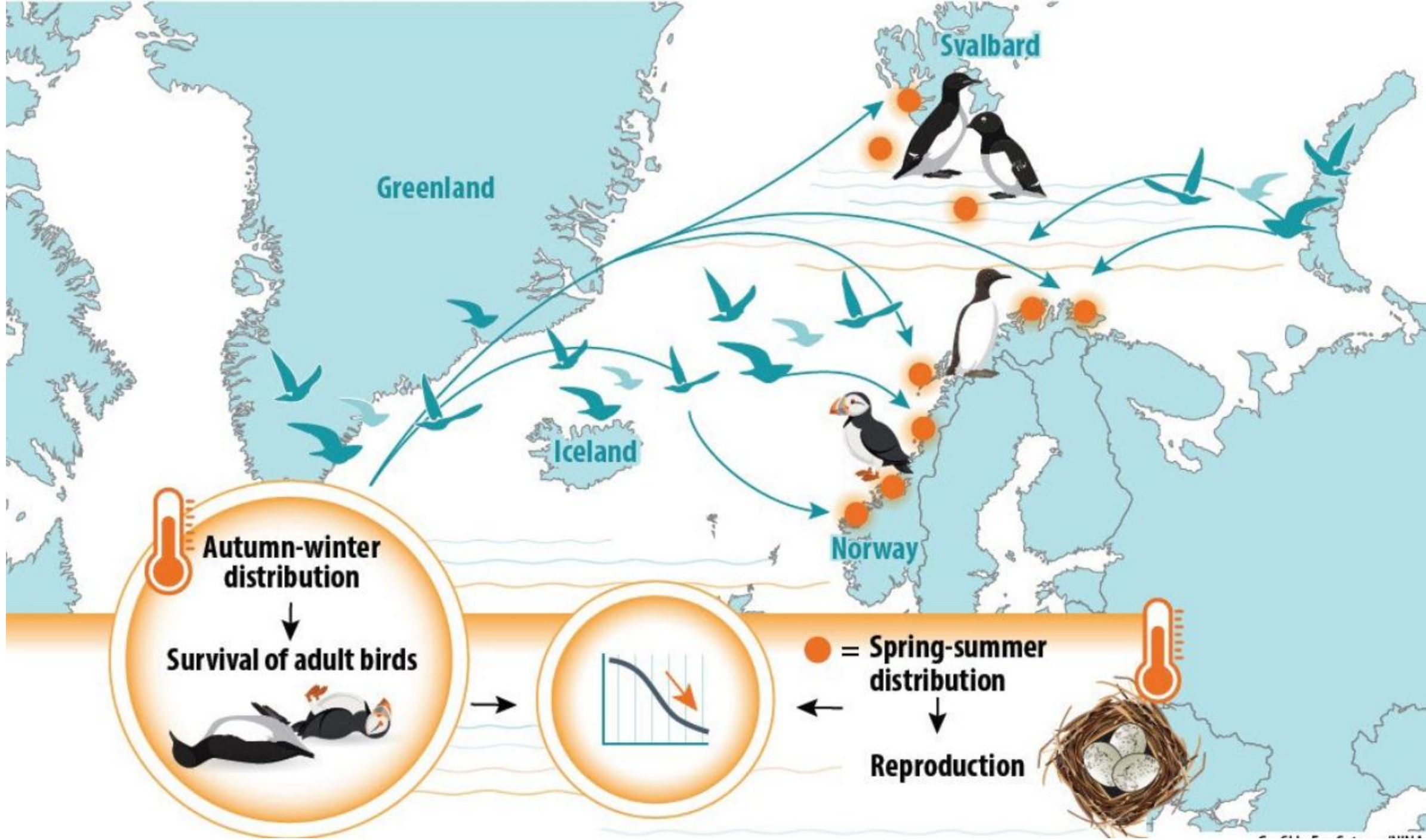
Forklare bestandstrender

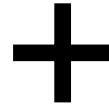




winter







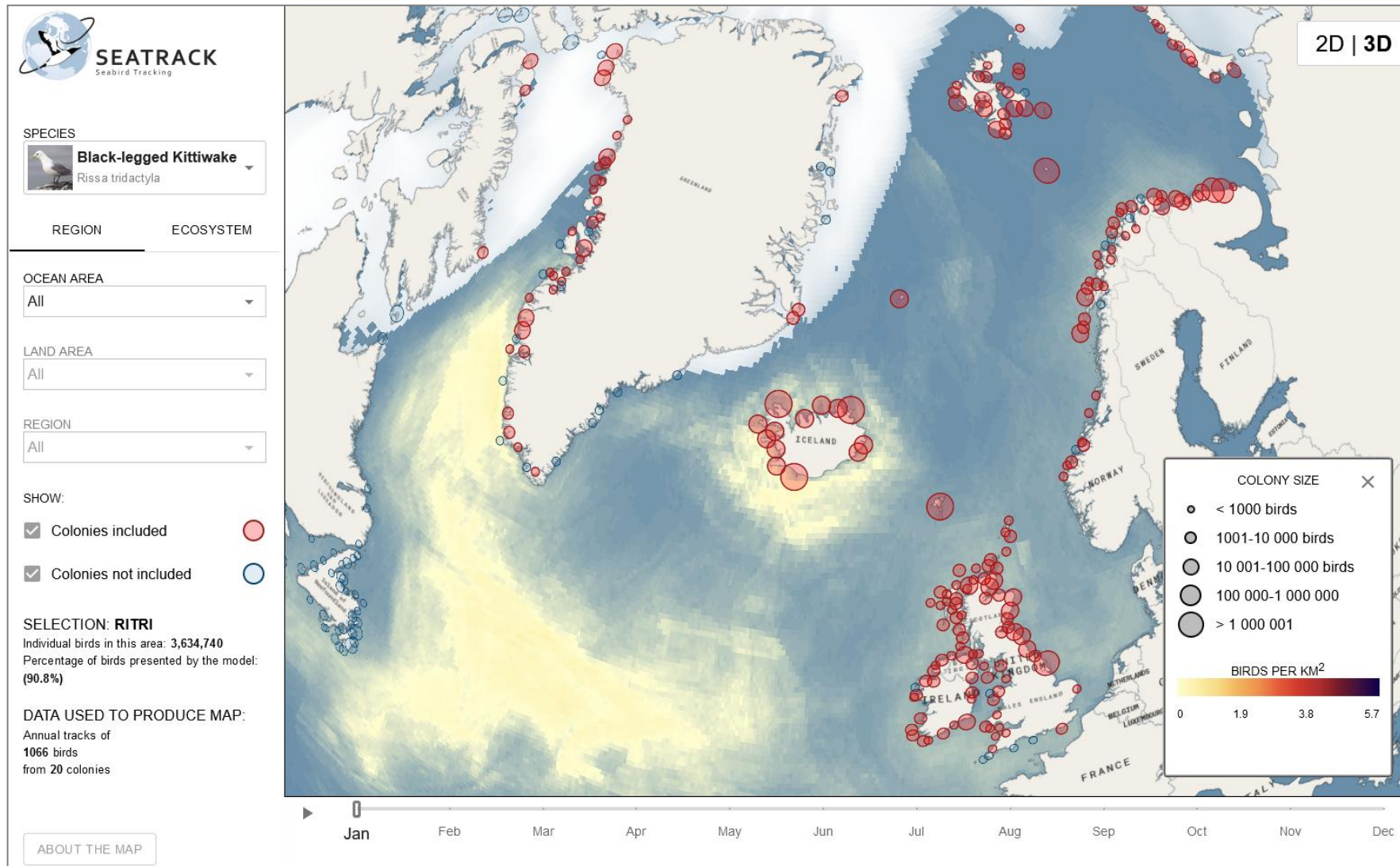
Forklare bestandstrender

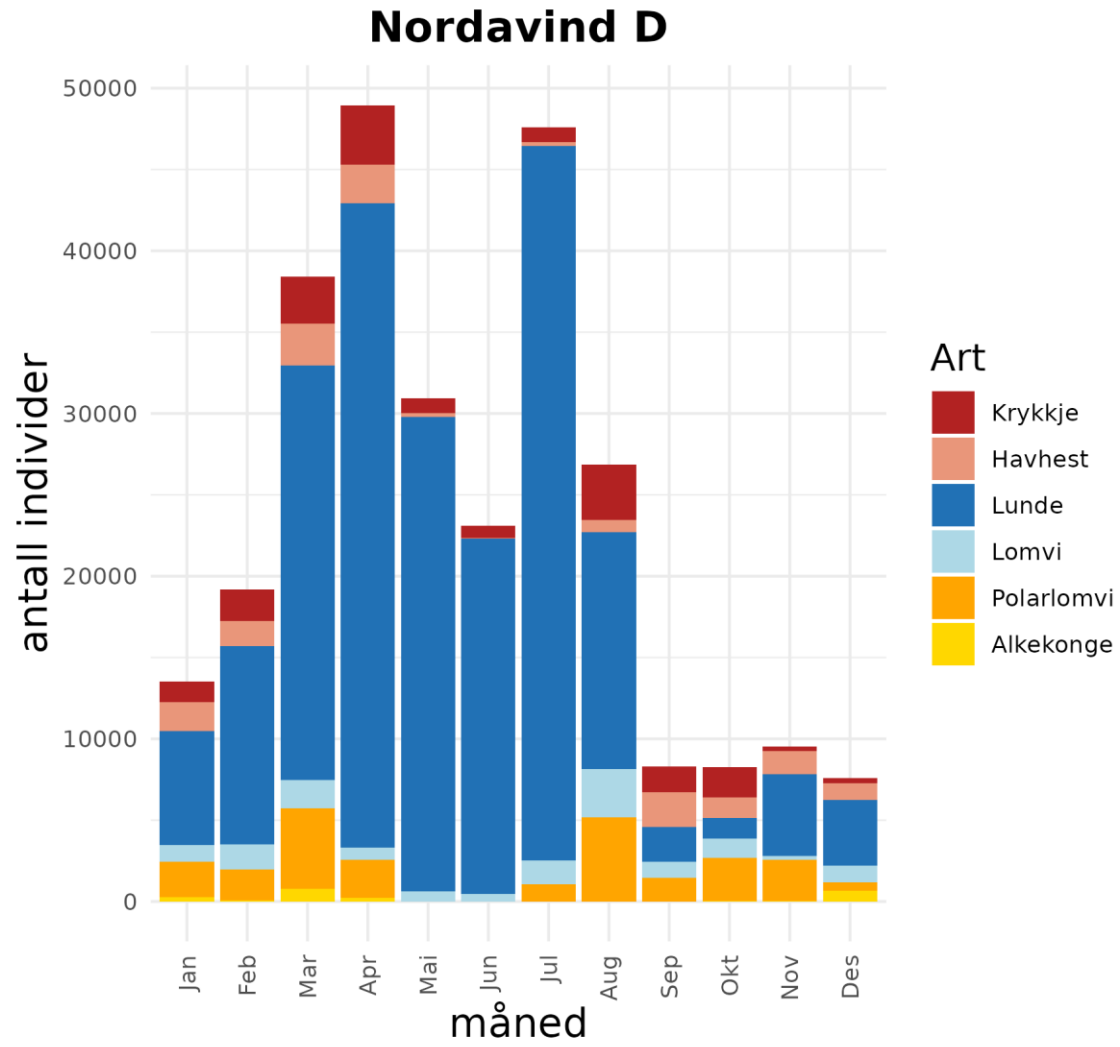


Utrede miljøkonsekvens

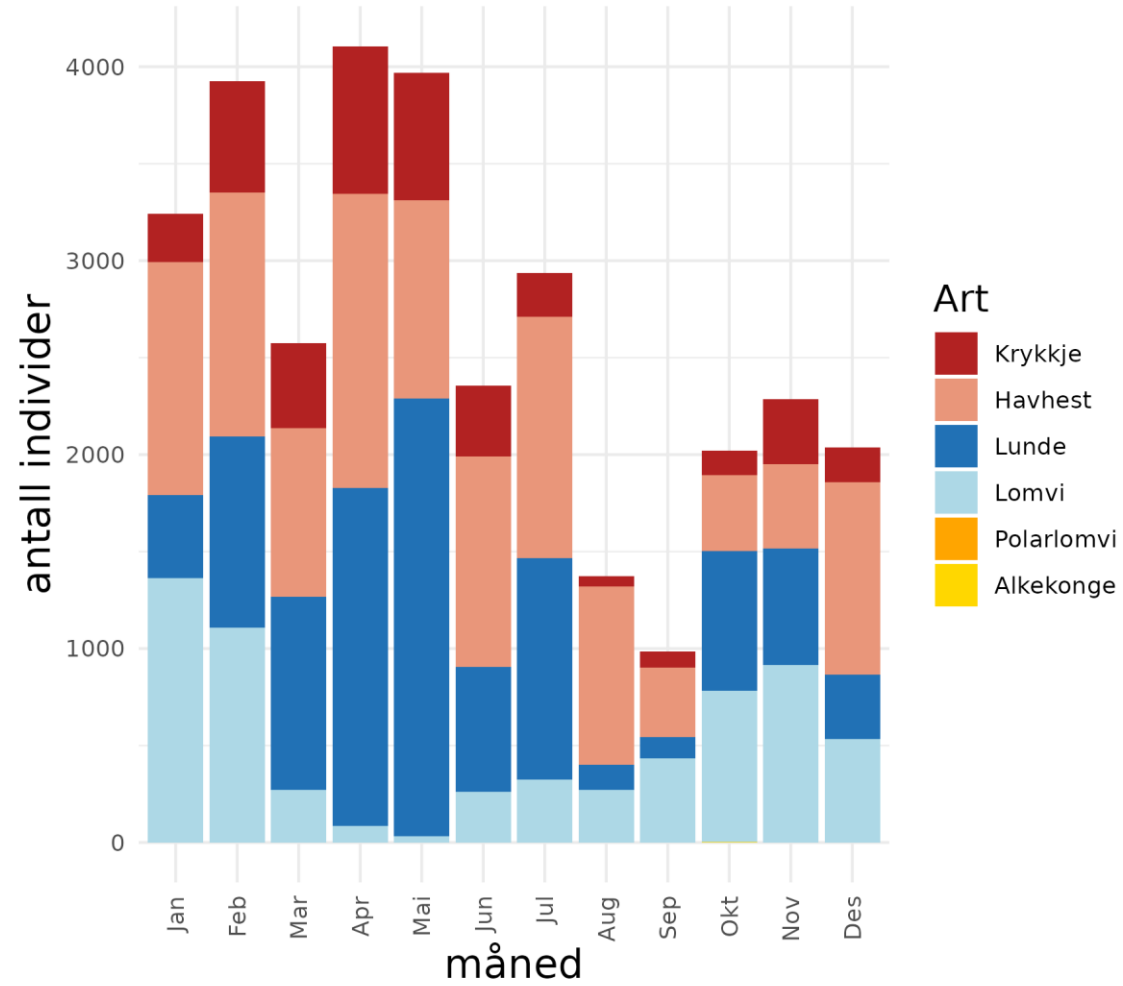


visualisere 33 800 000 sjøfugler (6 arter) gjennom hele året



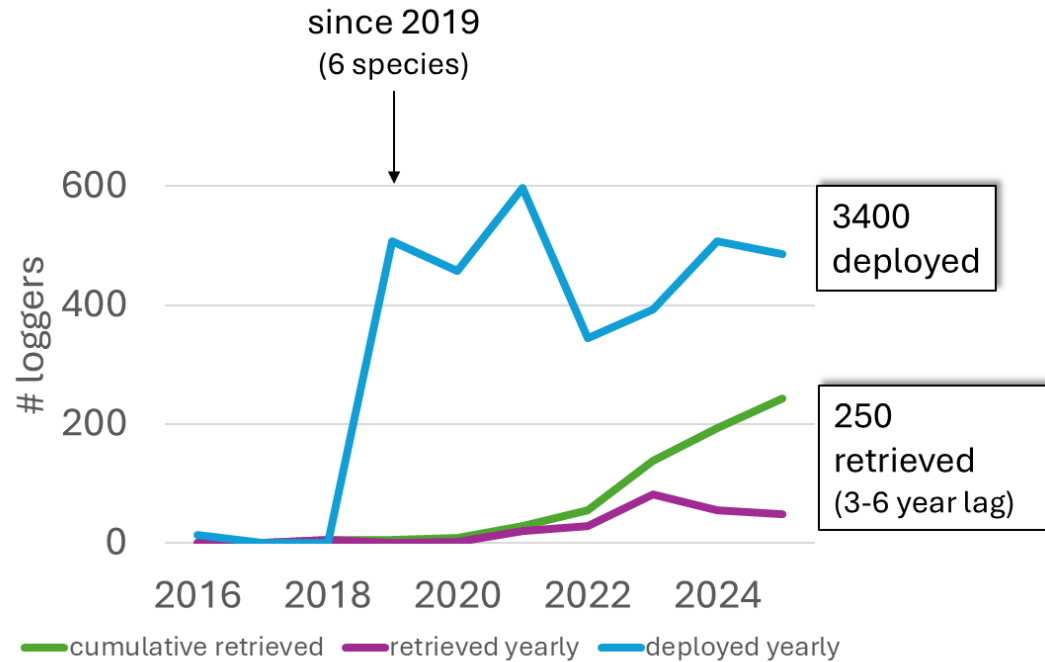


Vestavind C



Immatures make up 30 – 50% of a species' population

6 species
~3 400 loggers deployed
400-600 deployed every year
245 loggers retrieved (3-6 yr lag)



Brünnich's guillemot



common guillemot



Atlantic puffin



Little auk



Black-legged kittiwake





den nye kunnskapen blir brukt!

blue acceleration

-> flere interesser i økende tempo tar i bruk havets arealer og ressurser

miljøriskovurderinger

vurdering av kumulative virkninger (MARCIS)

integreerte havforvaltningsplaner

marine verneområder (MPA-er)/sårbare havområder

særlig verdifulle områder

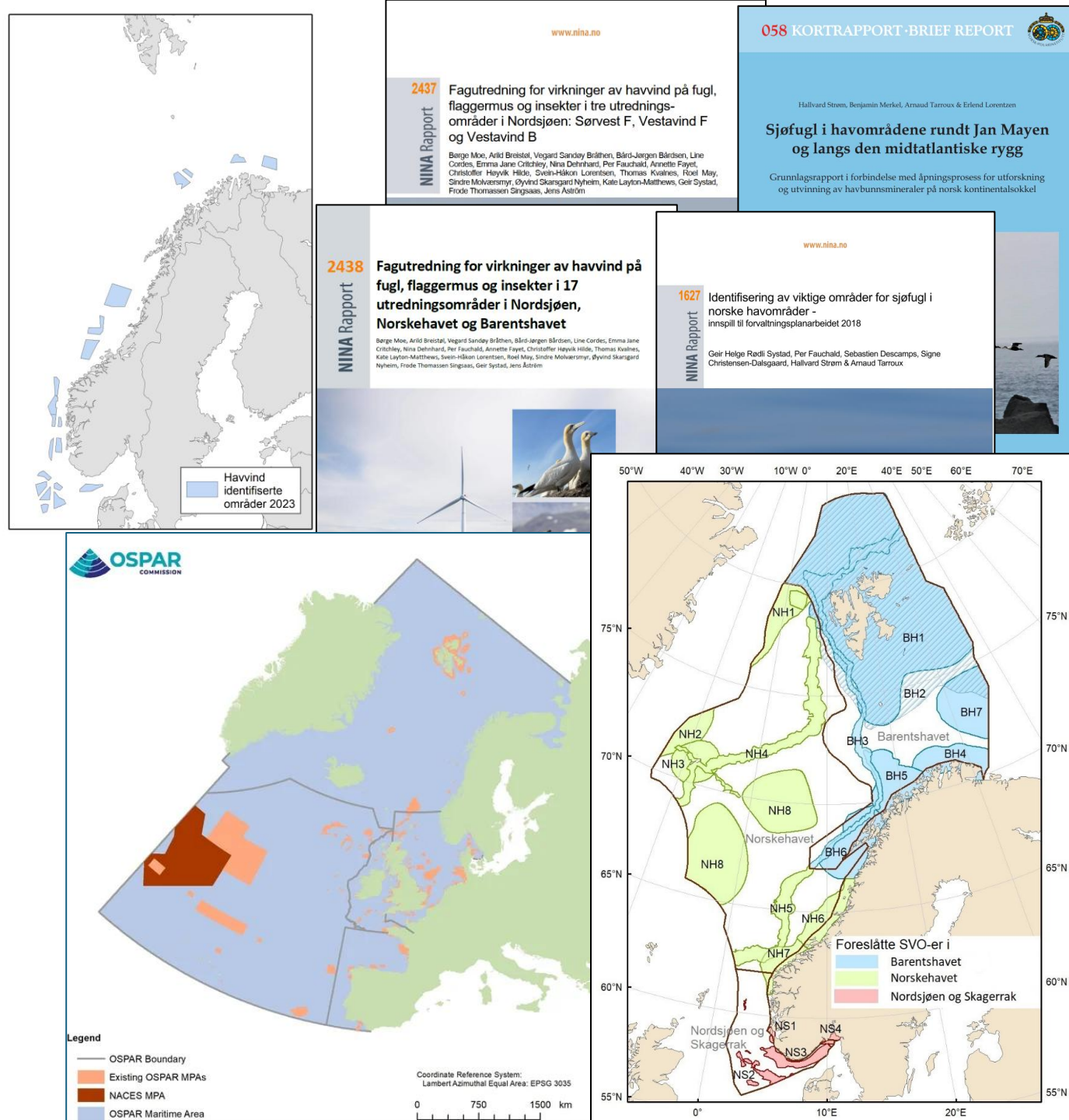
nye marine industri

OSPAR

ICES

utdanning

NGOs(Europa/USA)



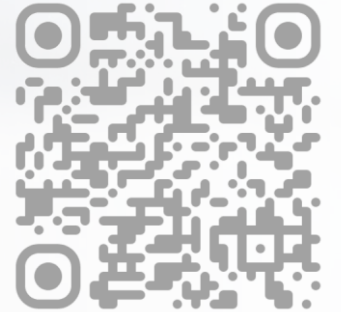


Spørsmål?

Distribution app



Abundance app



seatrack.net

