SEATRACK – More than a decade of multi-species, multi-population tracking of seabirds on an ocean-basin scale

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SEATRACK
Seabird Tracking

* not part of phase III

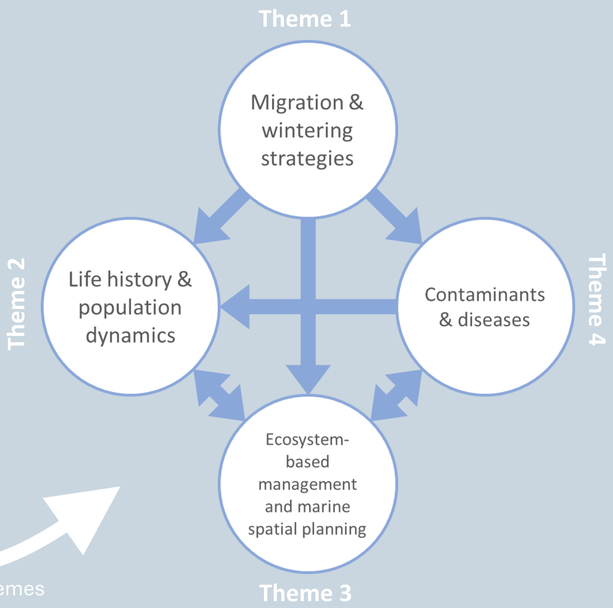
SEATRACK field sites included since phase I (red), phase II (blue) or phase III (yellow) throughout the North Atlantic. Russian colonies have been part of phase I and II but are not included in phase III of the program (white dots).

SEATRACK is a large-scale international collaboration of **70 partners** from **52 institutions** based in **14 countries** that systematically track seabirds since 2014.

Main questions

Where are North Atlantic seabirds when they are not breeding? And **why** are they there?

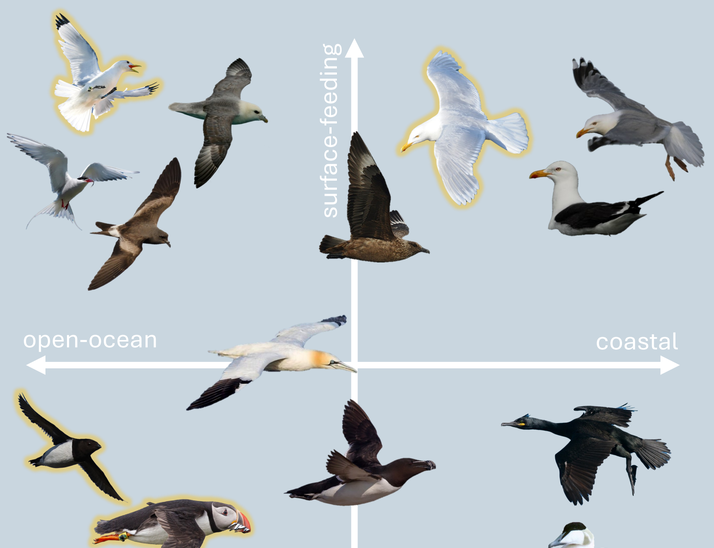
How does the changing environment and human activities **affect their demography** and **population trends**?



16 study species

Chosen to represent the North Atlantic seabird community

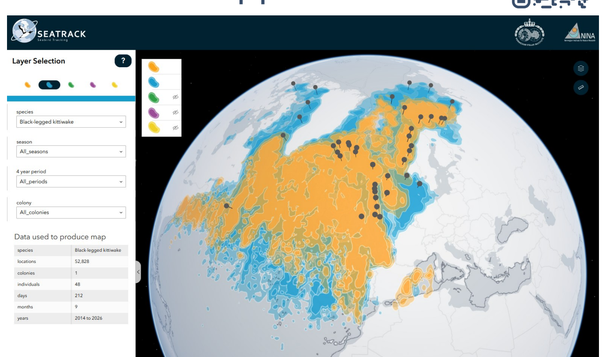
- Black-legged kittiwake
- Northern fulmar
- Arctic tern
- Leach's storm petrel
- Great Skua
- Glaucous gull
- Lesser black-backed gull
- Herring gull
- Northern gannet
- Little auk
- Atlantic puffin
- Common guillemot
- Brünnich's guillemot
- Razorbill
- European shag
- Common eider



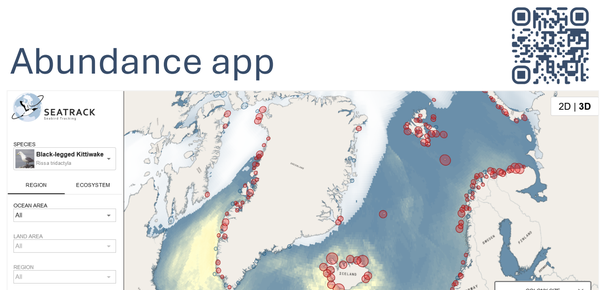
*Additionally, juveniles are tracked of species in **yellow***

Data products

Distribution app



Abundance app



Strengths of SEATRACK

Collaboration
Enabling synergies
Pooling resources

Infrastructure
Logistics
Standardization & comparability

Big picture
Multi-species hotspots
Community connectivity & vulnerability
General migration corridors

Real world impact
MPA, IPA, ERA, OSPAR, ARCTIC COUNCIL, ICES CIEM

Updatable
New population estimates
Increased spatial coverage (incl juveniles)
Improved methodology

Approach

Large-scale simultaneous and coordinated seabird tracking across the North Atlantic, with the help of:

- Common sampling protocol
- Standardized meta data collection
- Standardized data processing
- Centralized database and file archive
- Formalized data sharing
- Agreement of understanding
- Annual workshop

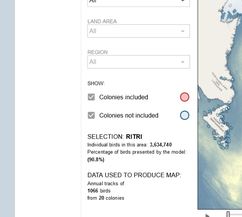
The project's history

Technology

Light-level geolocators (all species)

Leg-mounted GPS-loggers (species >900g)

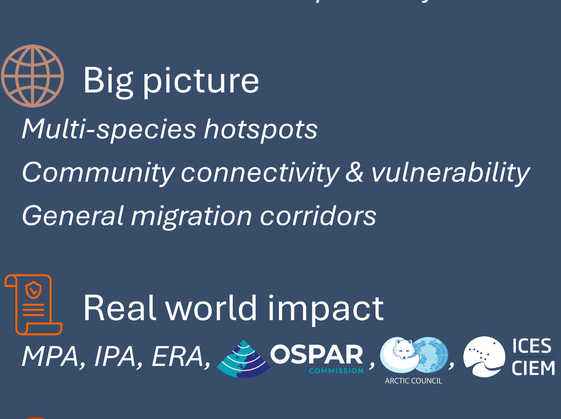
GPS-GSM tags (large gulls)



Data

Annually
~2 000 - 2 600 deployments
(**~500** on chicks since 2019)
~1 000 - 1 400 retrievals

Database status as of 2023
~25 000 loggers deployed
~12 000 loggers retrieved
>5 100 individuals tracked
~4.3M location datapoints
~2.4B sensor datapoints
(light, temperature, immersion)



webpage
seatrack.net

Want to get involved? seatrack@npolar.no