



OTO

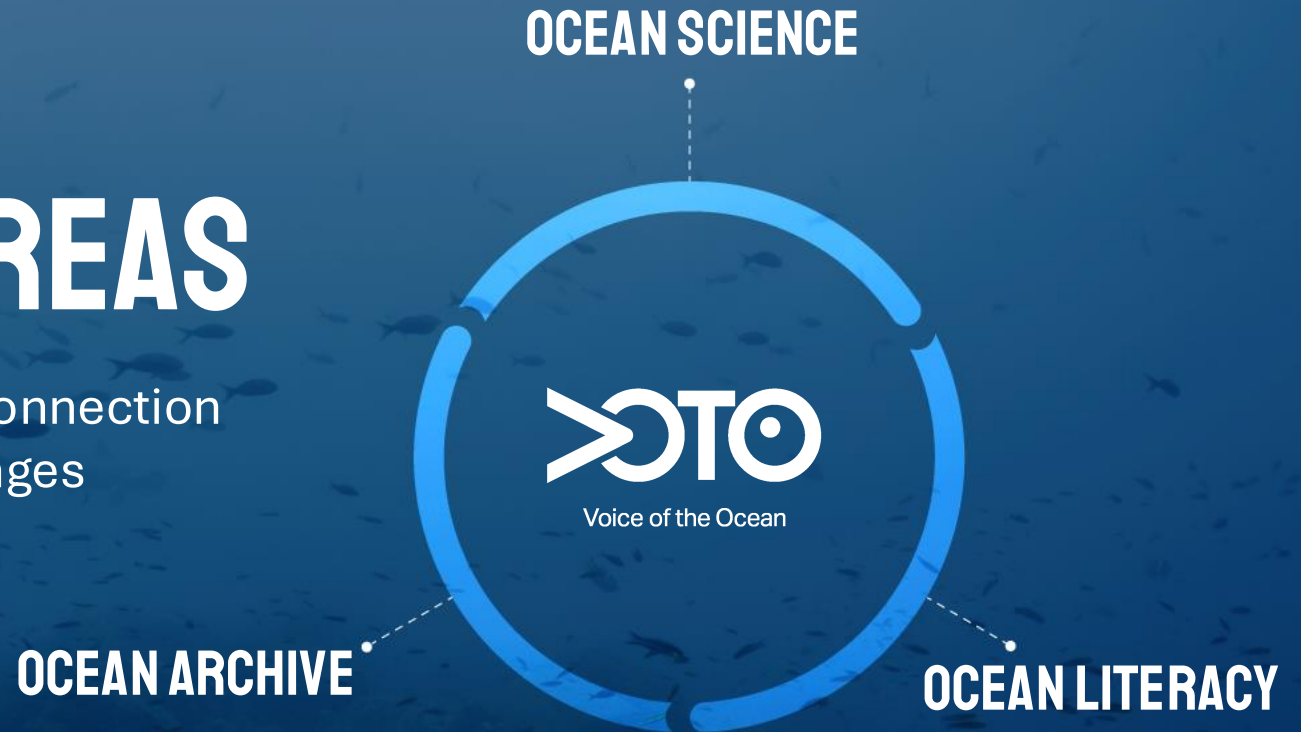
Voice of the Ocean

SND Nätverksträff

Anna Willstrand Wranne & Callum Rollo, 2026-04-22

THREE THEMATIC AREAS

We inspire, promote, and support a deeper connection to the ocean, making its wonders and challenges accessible to communities everywhere .



VOICE OF THE OCEAN FOUNDATION



OCEAN KNOWLEDGE



OCEAN CULTURE



OCEAN EDUCATION



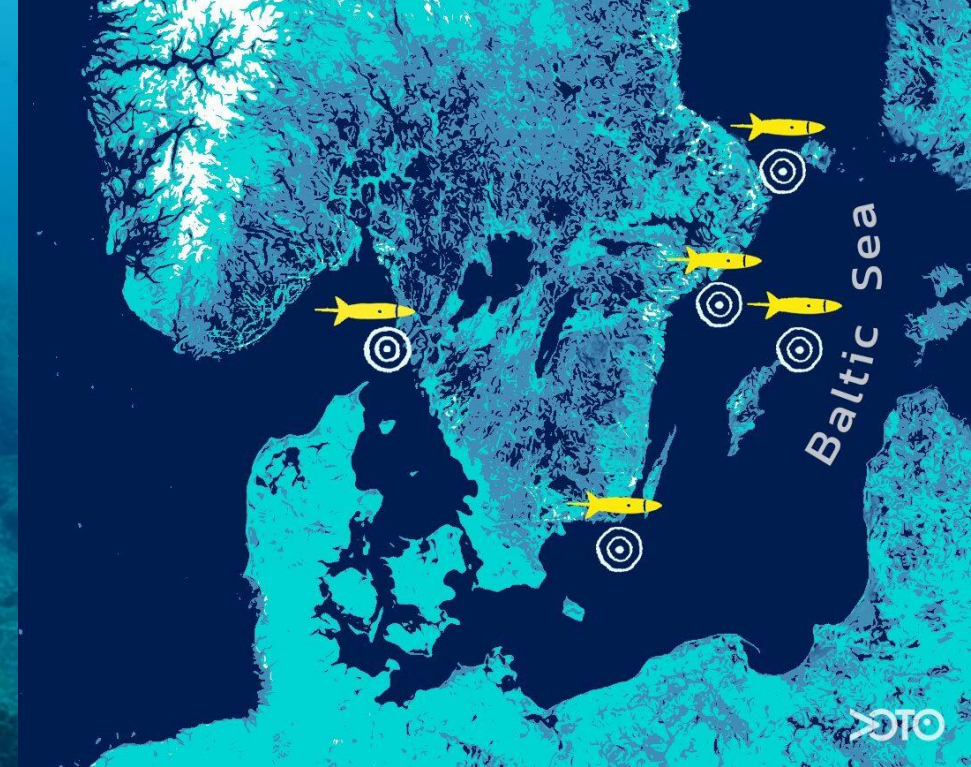
OCEAN ARCHIVE

VOICE OF THE OCEAN FOUNDATION

PERSISTENCE, RESOLUTION, ACCESSIBILITY

OCEAN KNOWLEDGE:

- WE RUN OCEAN OBSERVATORIES
- WE PROVIDE RESEARCH INFRASTRUCTURE THROUGH OCEAN SUPPORT
- WE WORK WITH THE WIDER SCIENTIFIC COMMUNITY (KNOWLEDGE EXCHANGE)
- WE INTERACT AND WORK CLOSELY WITH SENSOR & PLATFORM DEVELOPERS

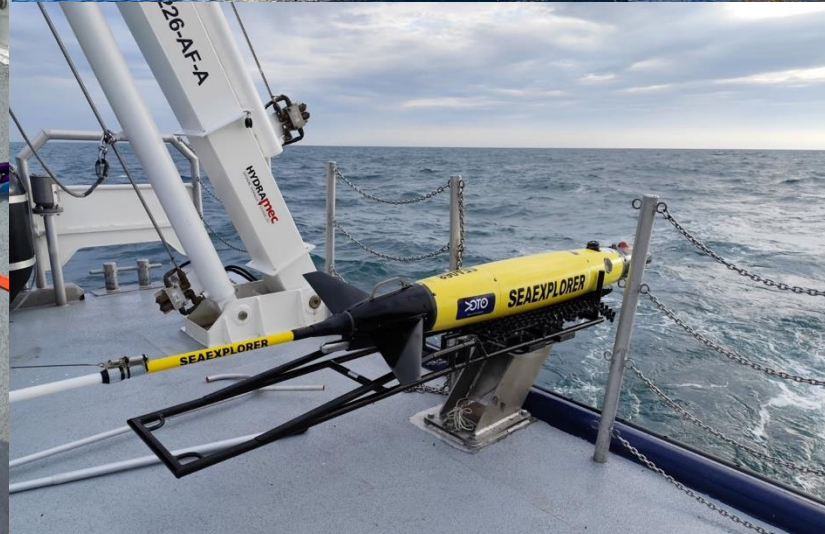


VOTO INFRASTRUCTURE

13 SeaExplorer gliders
4 Sailbuoys
1 mini AUV (Seaber YUCO)
Bottom-moored ADCP

We work closely with MidOcean AB that has vessels stationed in Göteborg, Karlskrona, Stockholm and on Gotland.

- CTD + Niskin bottles
- Wetlab
- Multibeam (MBES)
- ROV (with photogrammetry and MBES)
- Sidescan



GLIDER DEPLOYMENT

- Manual deployment from vessel



BUOYANCY CHANGE

- Ballast deflation of oil bladder



COMMUNICATION

- Data downloading
- Files transmission
- Route and mission updates

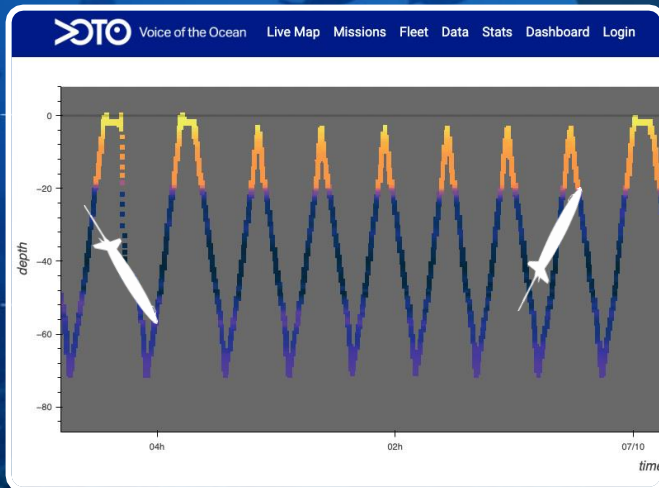


V SHAPED MOVEMENT

A glider doesn't have propellers or an internal engine. Instead, it uses a pump to gently change its buoyancy over time. This allows it to slowly move up and down through the water.

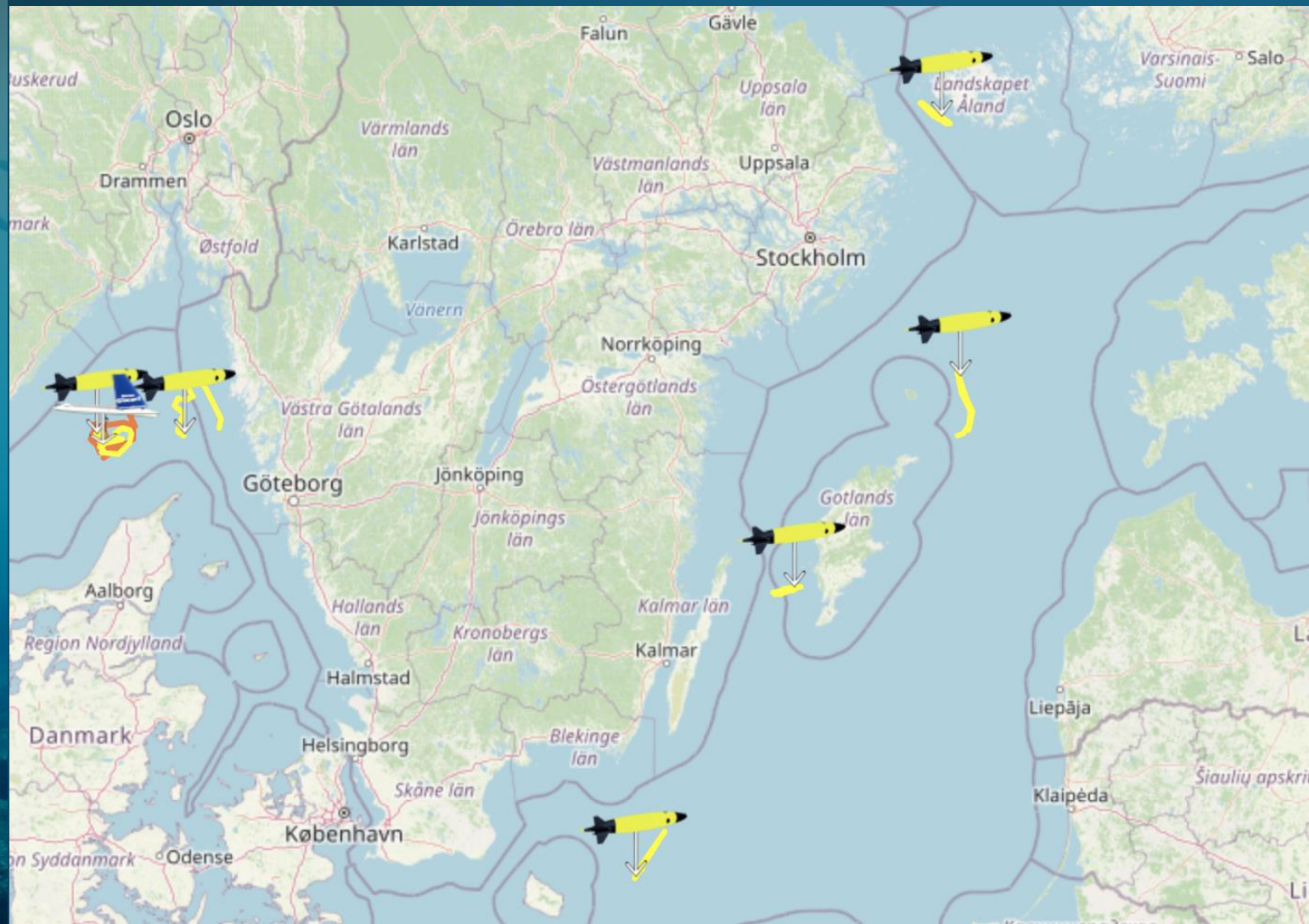
BUOYANCY CHANGE

- Ballast inflation of oil bladder



GLIDERS

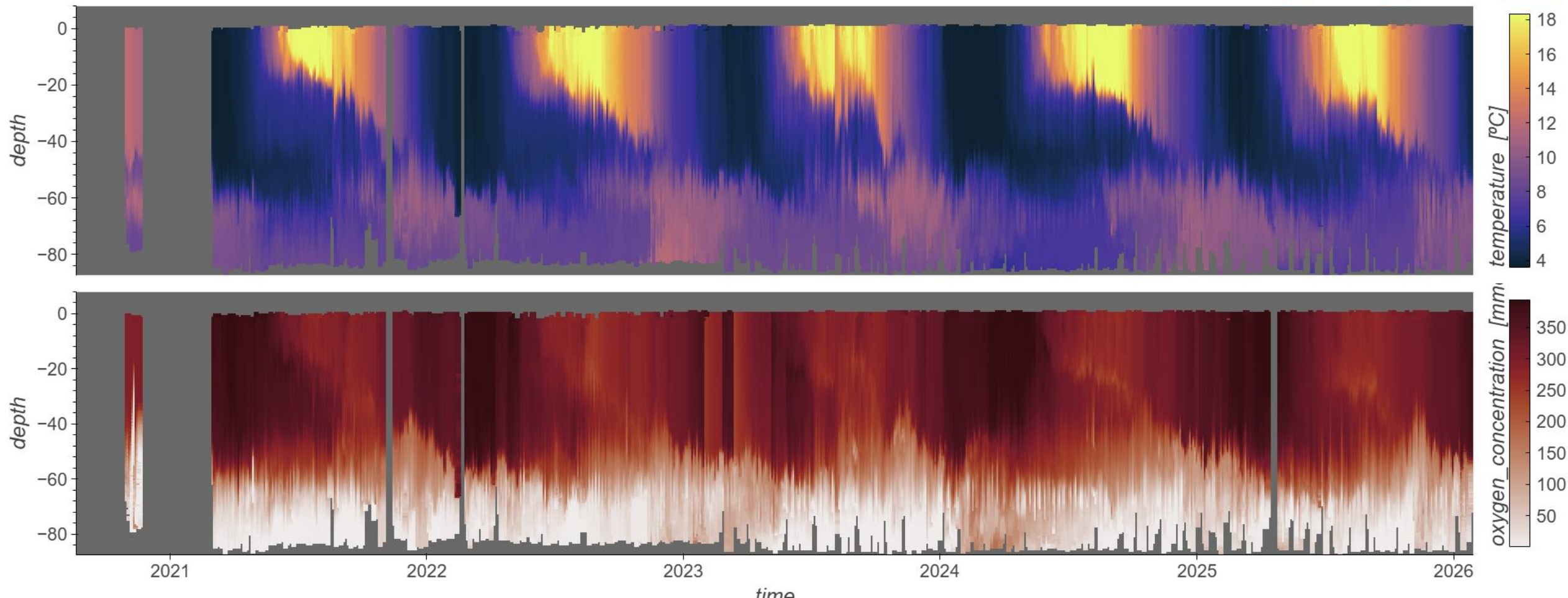
- 75 glider Missions per year in the Baltic
- 5-10 campaign missions
- 5 gliders in the water on average over the year
- 100 000 profiles per year
- each glider averaging four months in the water per year
- Endurance: 3-4 weeks, 8-10 weeks



Year	Glider Deployed	Skagerrak	Bornholm	Gotland	Åland	Total glider time	Total profiles	Mean gliders in water
2021	100.0 %	95.8 %	89.4 %	5.9 %	0.0 %	2 years 307 days	91652	3.2
2022	97.0 %	80.8 %	93.1 %	54.7 %	0.0 %	2 years 342 days	124710	2.9
2023	100.0 %	80.3 %	98.5 %	100.0 %	12.2 %	3 years 281 days	93118	3.7
2024	100.0 %	91.9 %	99.9 %	100.0 %	100.0 %	5 years 35 days	106526	5.0
2025	100.0 %	79.8 %	98.1 %	100.0 %	89.3 %	3 years 18 days	65935	4.6

VOTO OBSERVATORY DATA

BORNHOLM BASIN: 2021-03-05 – 2026-01-30



VOTO OBSERVATORY DATA

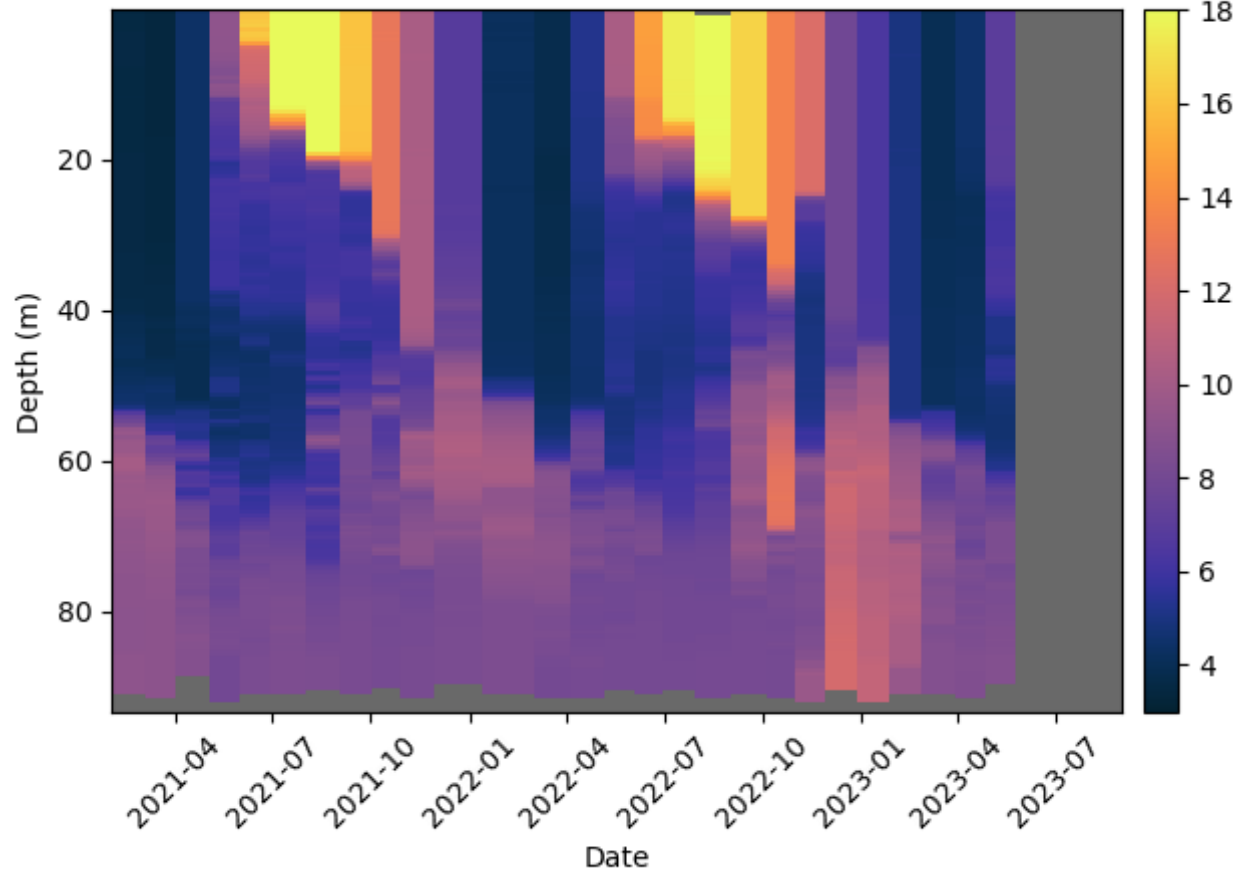
BORNHOLM BASIN: 2021-03-05 – 2023-08-10



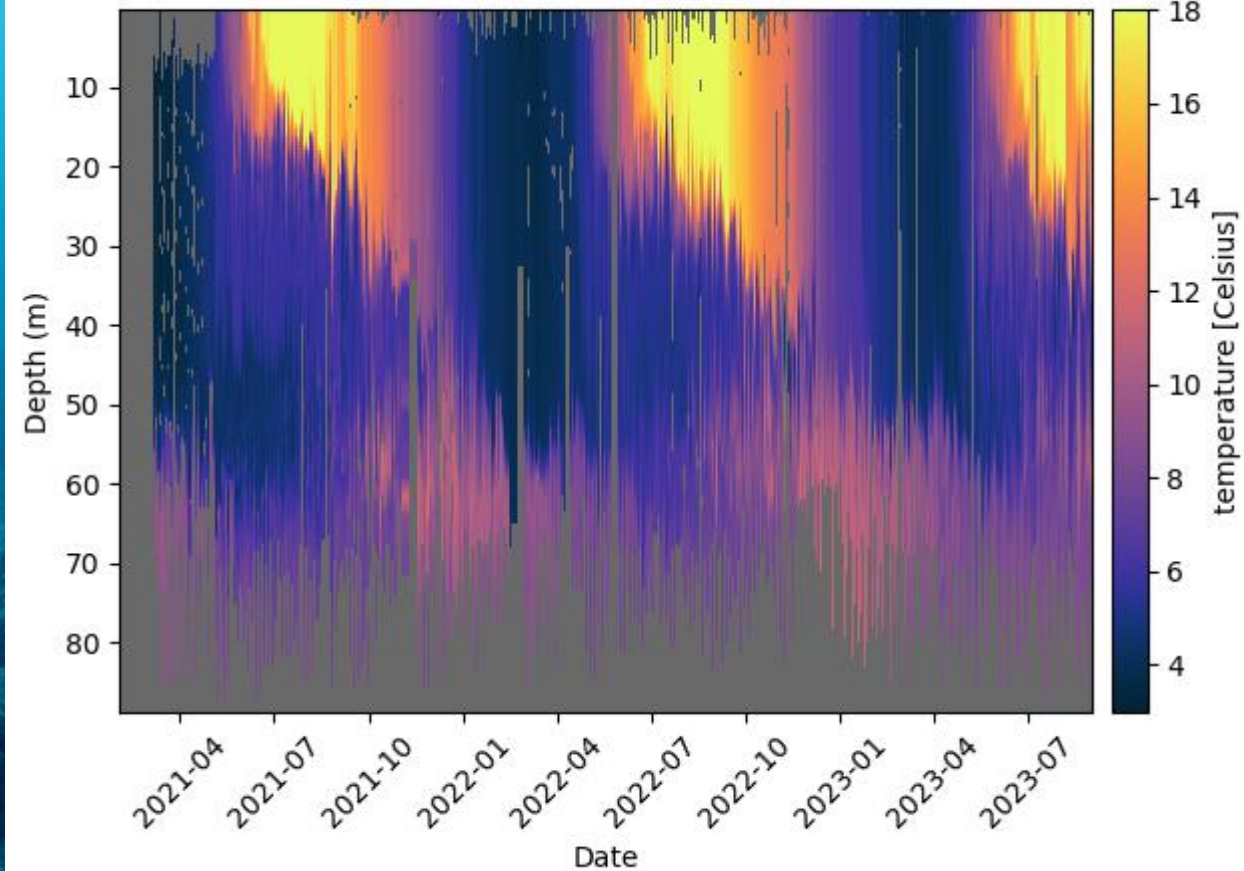
SMHI BY5 sampling station; monthly CTDs

VOTO Glider

SMHI Baltic Sea monitoring

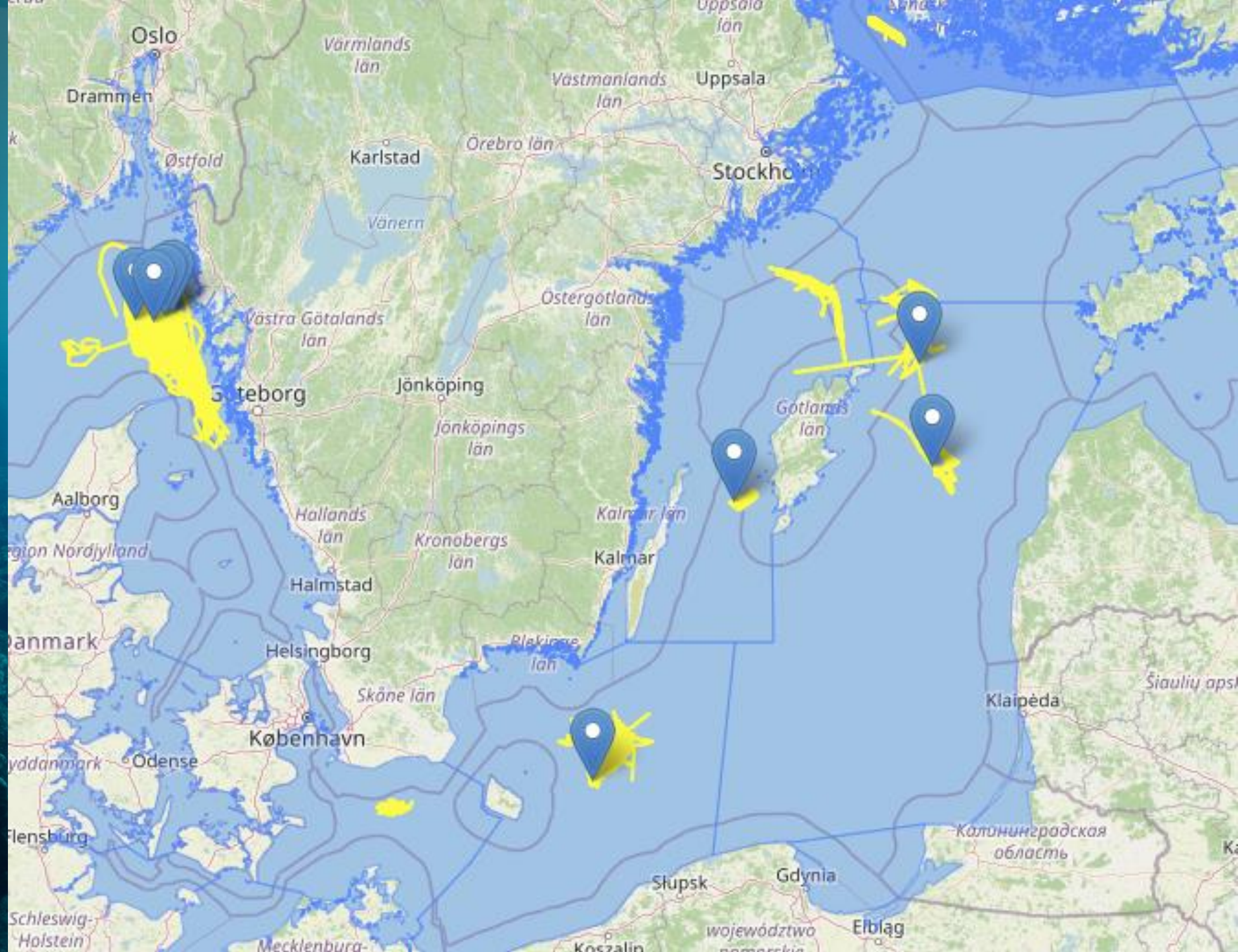


VOTO Glider data



GLIDERS

- Permits
- Combining data for better monitoring



DATAFLOW AIMS

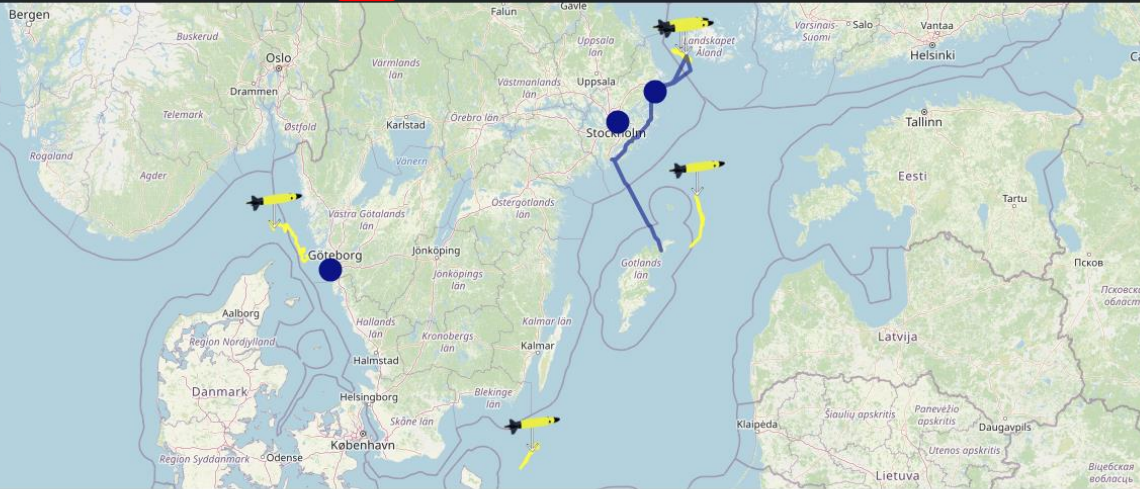
- Platform to end user < 30 minutes
- Maximum standardization
- Dataset federation via ERDDAP
- Automated QC
- Discoverability
- Open API access, no sign-in



VOTO DATA INFRASTRUCTURE

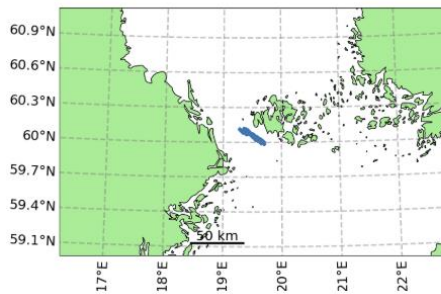
DATA FREELY AVAILABLE

VOTO Voice of the Ocean Live Map Missions Flex **Data** Statistics Dashboard Projects Account Logout 08:54:14

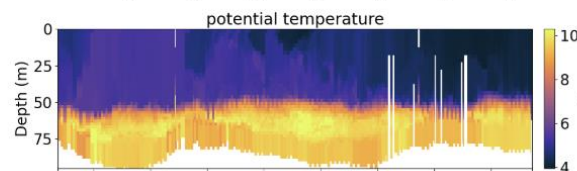
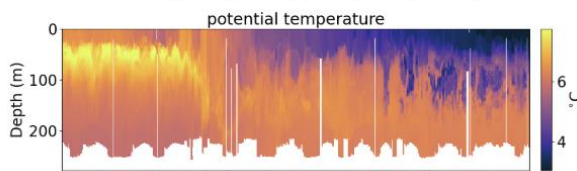
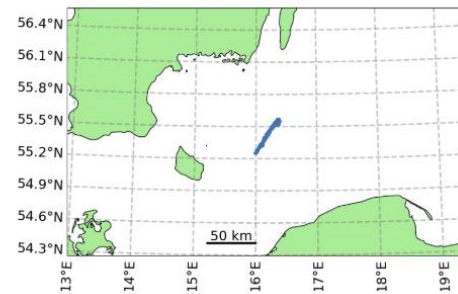


Near real time data

SEA078 Vresros mission 42



SEA056 Trift mission 102



- ERDDAP distribution, download in a format you are familiar with
- Scripts for download/processing available on Github
- The data is also distributed to EMODnet Physics
- [Observations Portal • VOTO \(voiceoftheocean.org\)](https://observations.voiceoftheocean.org)
- <https://observations.voiceoftheocean.org/dashboard>

SkaMix2

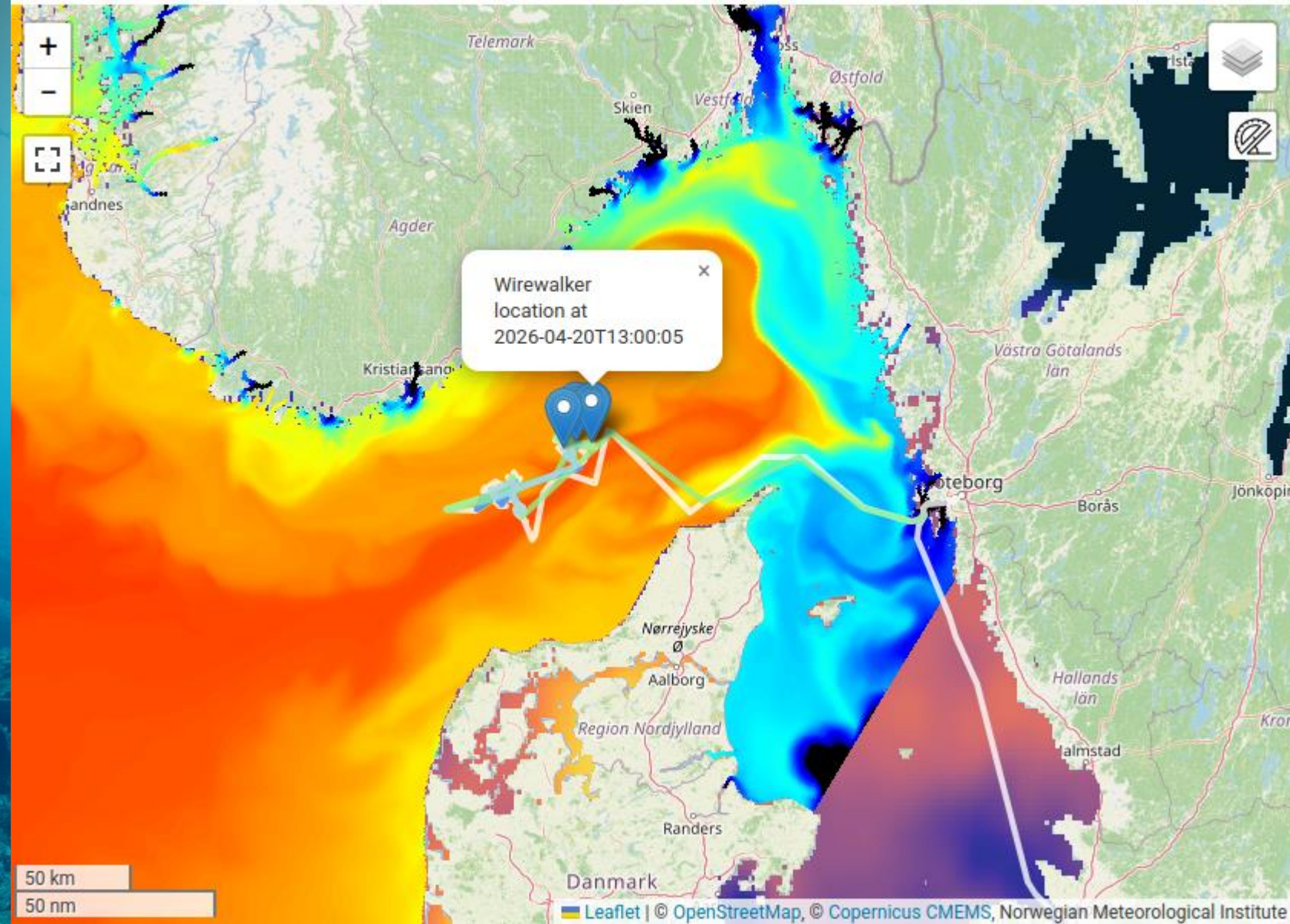
Collaborative international research cruise

Observing oceanic filaments – daily/hourly movement

We combine data from:

- Copernicus satellite observations
- Swedish autonomous platforms
- Norwegian ocean models
- German research vessels

Possible with FAIR data policies and API access to nrt data



<https://observations.voiceoftheocean.org/projects/skamix2>



Tack! Frågor?

