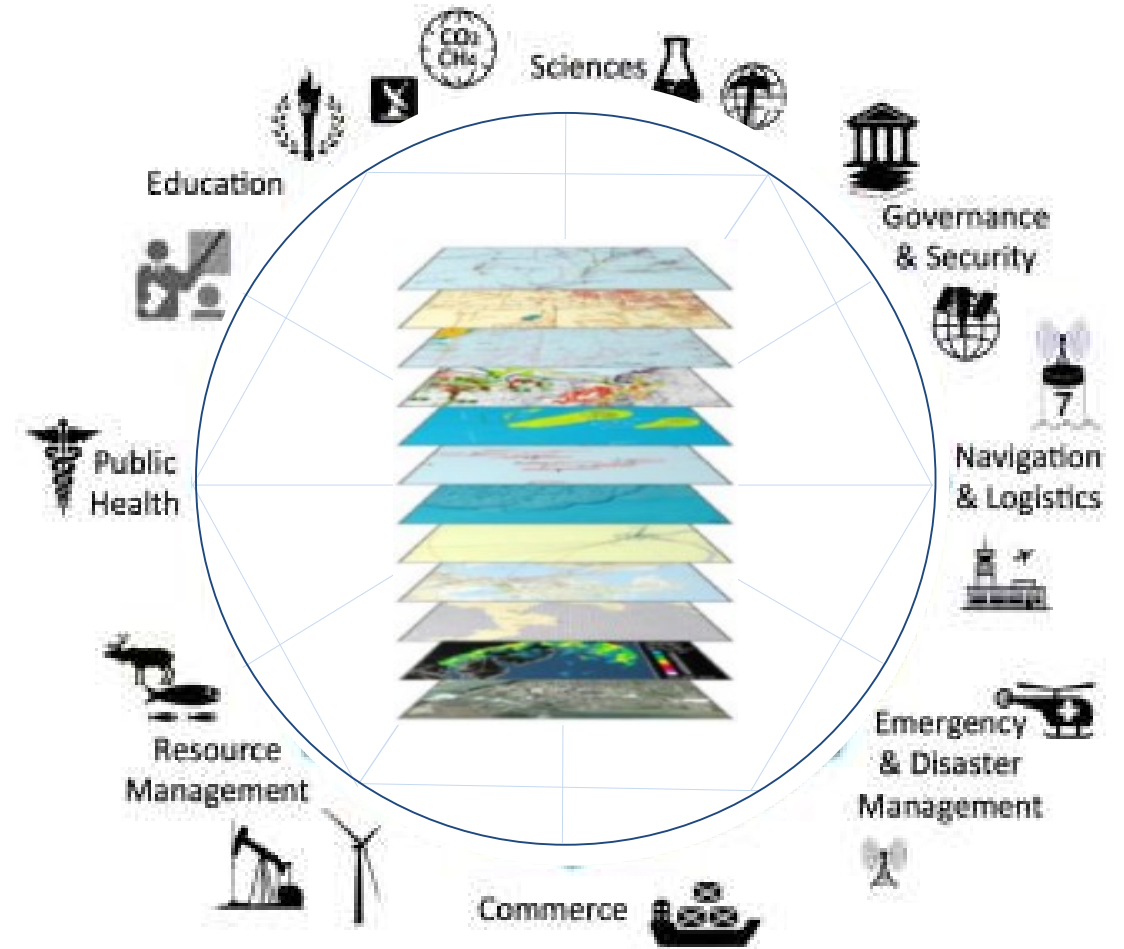# Norwegian SDI
Marine activities

Norway digital

- Cross-sectoral cooperation (since 2005)
- More than 600 organisations representing the public sector
- Enhances the availability and use of quality geographic information
- Sharing and re-using data through digital services across sectors and levels
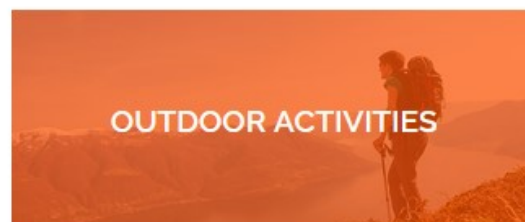- Underpinning the digital transformation in public sector

Geospatial strategy

National geospatial strategy towards 2025

- A national knowledge base of geospatial information that meets important societal needs

- Shared solutions and technology that support effective problem solving and enable new application opportunities in society

- Well-functioning interaction with respect to management, sharing, development and innovation between both public and private actors

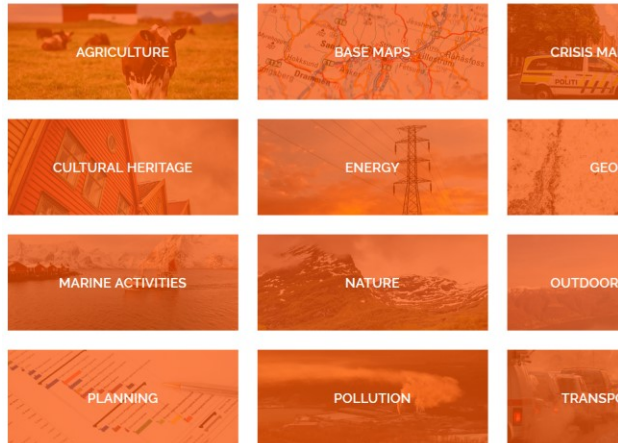- Framework conditions that are predictable and well suited to the challenges of digital society

Everything happens somewhere

National geospatial strategy towards 2025

Front page elements: www.colourbox.com

Kartverket

Main data topics

GEONORGE

AGRICULTURE	BASE MAPS	CRISIS MANAGEMENT
CULTURAL HERITAGE	ENERGY	GEOLOGY
MARINE ACTIVITIES	NATURE	OUTDOOR ACTIVITIES
PLANNING	POLLUTION	TRANSPORTATION

Kartverket

Geonorge.no

The Sea in Maps and Pictures

MAREANO maps depth and topography, sediment composition, contaminants, biotopes and habitats in Norwegian waters.

News
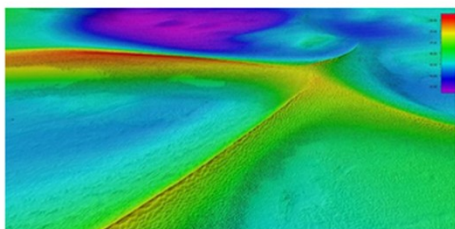
MAREANO Annual Report 2020

05.07.2021

This report gives an overview of conducted mapping surveys and programme results/deliverables of the MAREANO programme in 2020. A summary in English is included, the rest of the report is in Norwegian.
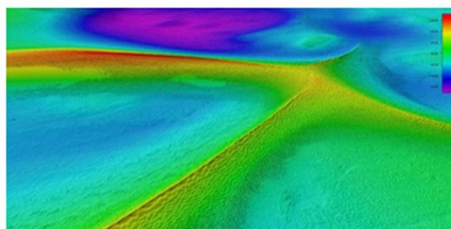
Mareano årsrapport 2020

05.07.2021

This annual report gives an overview of conducted mapping surveys and programme results/ deliverables of the MAREANO programme in 2020. The report has an English summary, but is otherwise written in Norwegian.
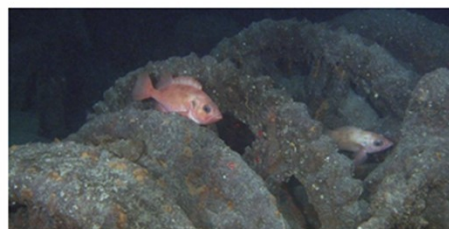
Scientists discover a missing shipwreck from 1913

28.05.2021

Researchers on a MAREANO-cruise found a wreck off Bodø that they assume must be DS Malmberget. After 108 years, we may be close to solving the mystery of this ship, which

Maps and data

Through the mapping program MAREANO, data on depth and topography, bottom conditions, biological diversity, nature types/biotopes, and any pollution in the sediments of Norwegian coastal and marine areas are collected, facilitated and made accessible to the public.

Selected maps

Vulnerable biotopes

Landscapes/Forms

General Biotopes

Shaded Relief

Organic chemistry

Coral Reefs

MAREANO images

Sedimentary environment
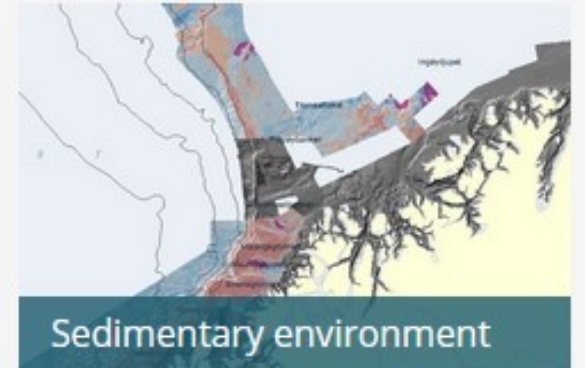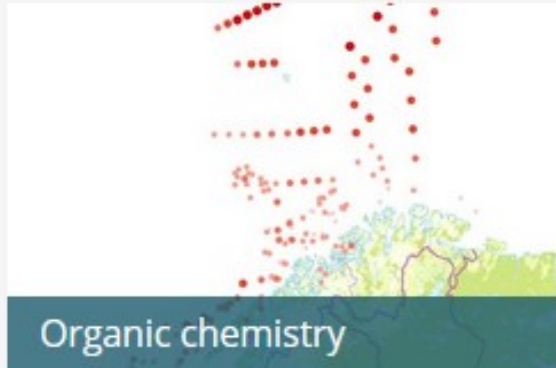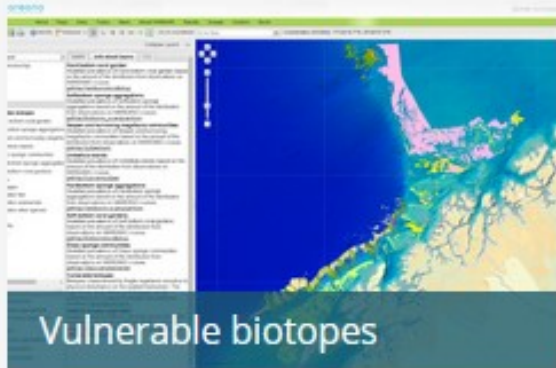
Marine basemaps in coastal Norway

- Awarded 85 mill NOK over three year period (2020-2022)
- 3 pilot areas agreed upon – work is starting up
- Submitting a proposal for national programme 2021
- Methods development
- New technology
- Standardized set of products
- Themed according to task / user type
- Datasets, digital maps, services (WMS, WFS, WCS) and statistics WPS
- Self-service: Combine and create your own unique marine base maps
- INSPIRE compliant
- Easy access and FREE on national geodata portal
- Easy to use across competence levels and platforms
- 2 years timeline from data collection to productss – rollout when available

Testing new technology at Runde, June 2017.
Photo: Arild Hareide/Runde Environment Centre

Kartverket

Marine Spatial Planning

Support the marine spatial planning process with updated and reliable geospatial information

Marine management is important to Norway. We have extensive ocean areas – six times greater than our land area. These areas are very rich in resources. We also have many activities that affect the marine life.

The purpose of the management plans is to facilitate value creation while maintaining natural diversity. Sustainability.

The Ministry of Climate and Environment is responsible for the work with the management plans, and lead an intergovernmental Steering Committee that has representation from all the ministries that work with issues relating to the marine area.

The foundation is an extensive collaboration, both between expert groups and between ministries
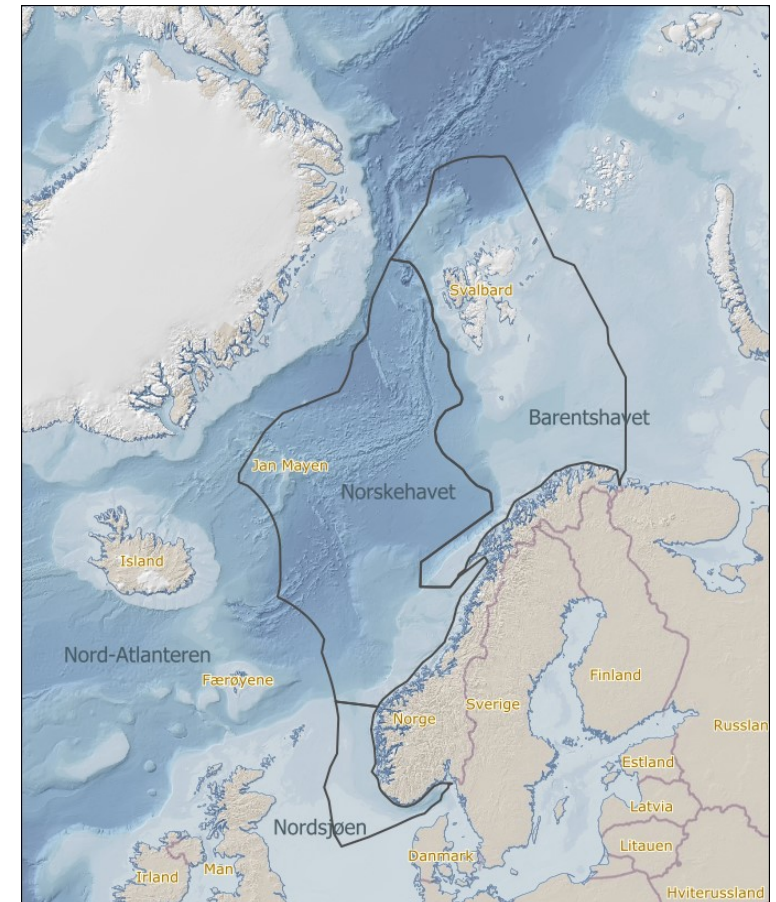
The Norwegian Government has developed integrated marine management plans for all Norwegian sea areas

MSP – Cross-sectoral cooperation

The Management Forum coordinates the work on the scientific basis of the management plans.

Members of the Management Forum:

- Norwegian Environment Agency
- Norwegian Mapping Authority
- Directorate of Fisheries
- Institute of Marine Research
- Norwegian Coastal Administration
- Norwegian Maritime Authority
- Norwegian Petroleum Directorate
- Petroleum Safety Authority
- Norwegian Radiation Protection Authority
- National Institute of Nutrition and Seafood Research
- Norwegian Polar Institute
- Norwegian Mapping Authority
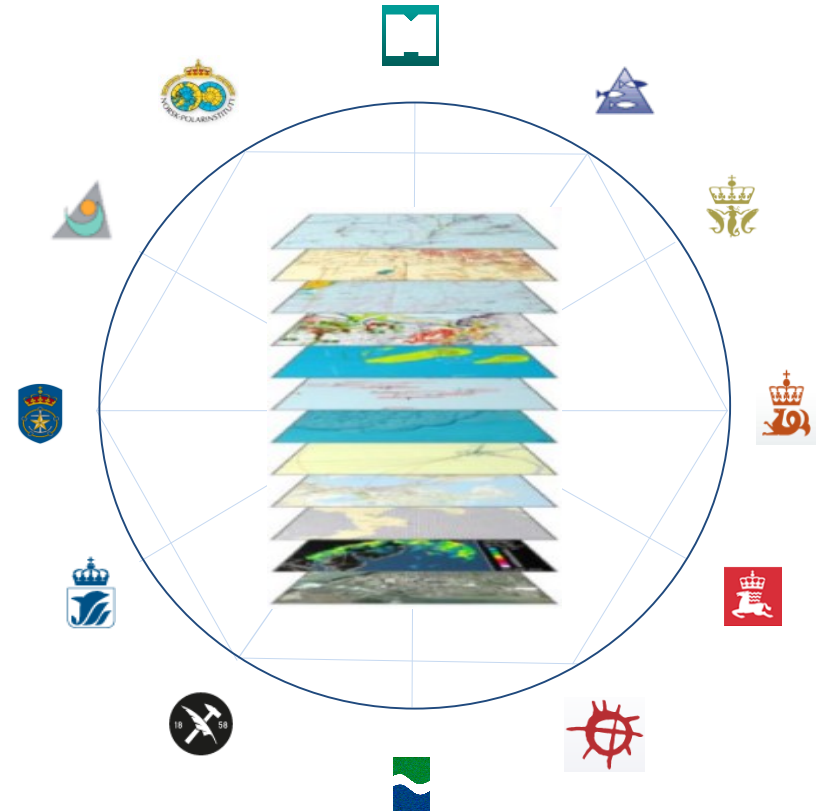
Marine Spatial Management Tool

A cross-sectoral develoment project through an intergovernmental cooperation

A governmental initiative based on the need for a more coherent and uniform geospatial information content, suitable for underpinning tasks attached to marine spatial planning and marine management

- More effective updates of the management plans

- Better overview over political decisions and actions related to marine management

- Contribute to more transparancy, openness and increased involvment from the stakeholders

Marine Spatial Management Tool

Service based approach

Key elements:

- Thematic geospatial information services offered from relevant sectorial authorities

- Standardized network based services enabling real time use of geospatial data content in user client (e.g. MSMT)

- Standardized and harmonized data content and user adapted presentation rules, cartography and semantics

- Real time access to associated metadata through network based services consumable in user client
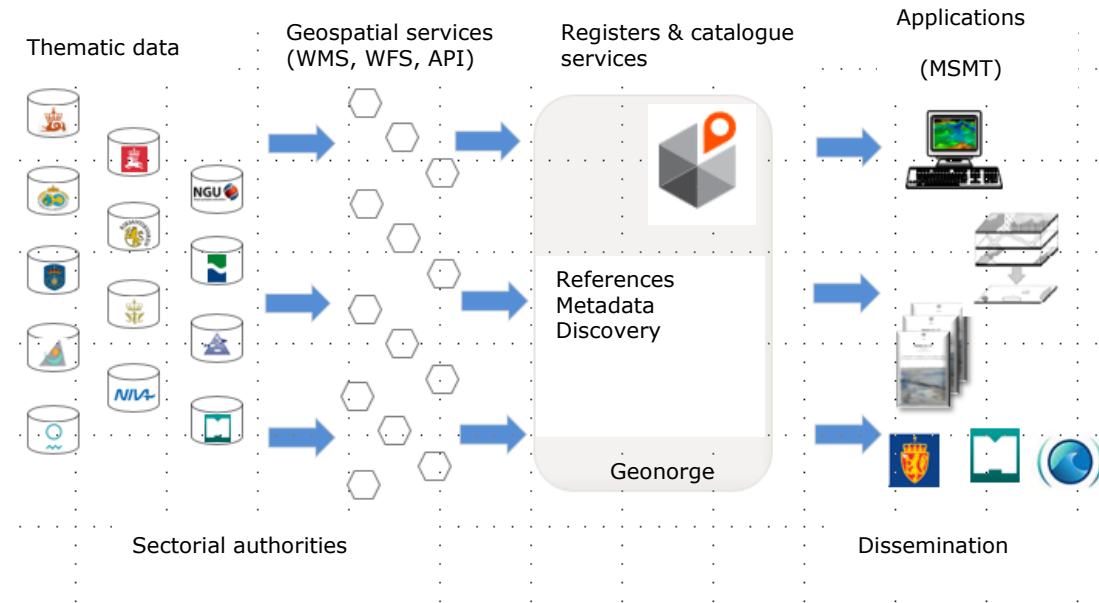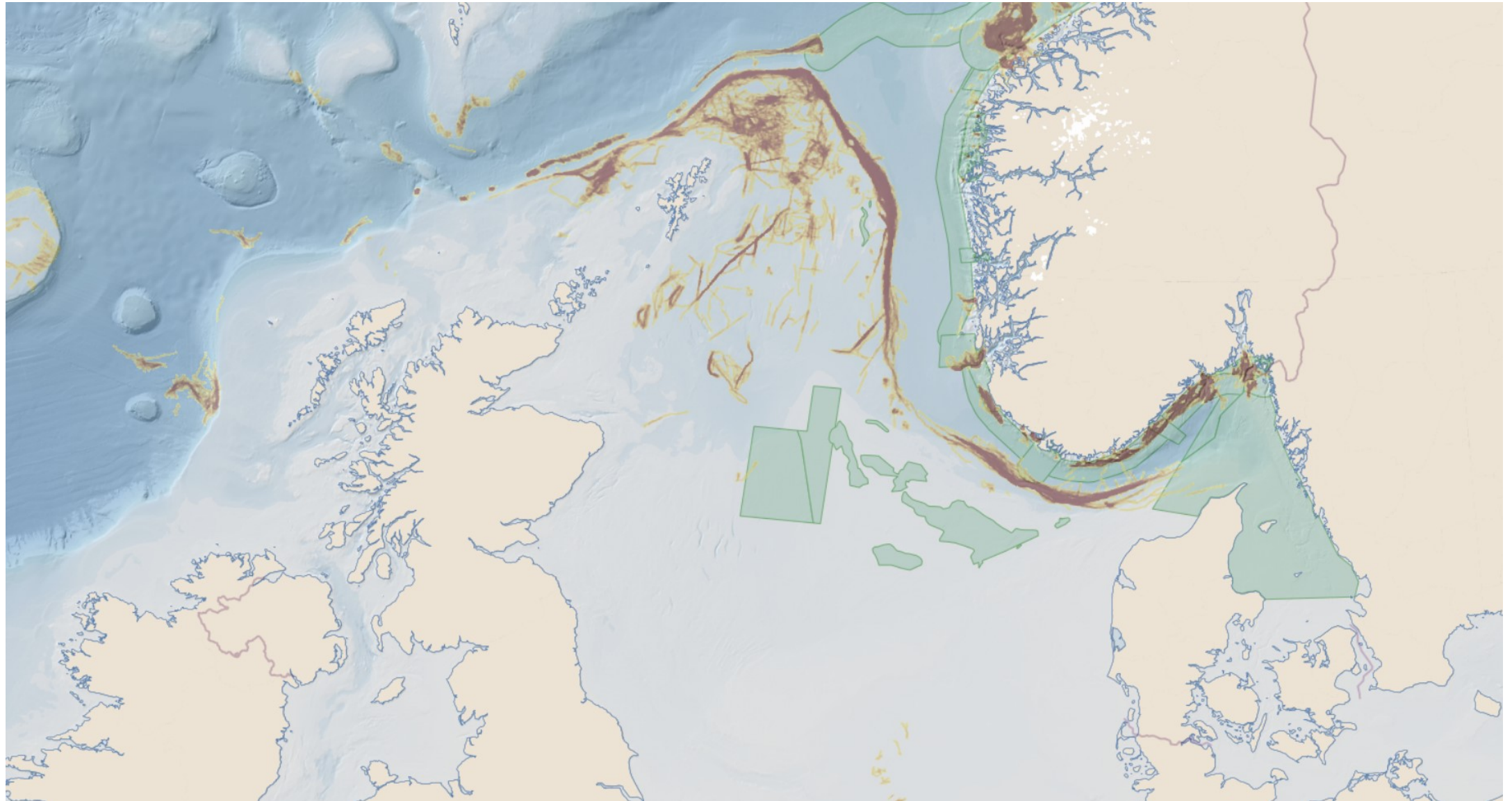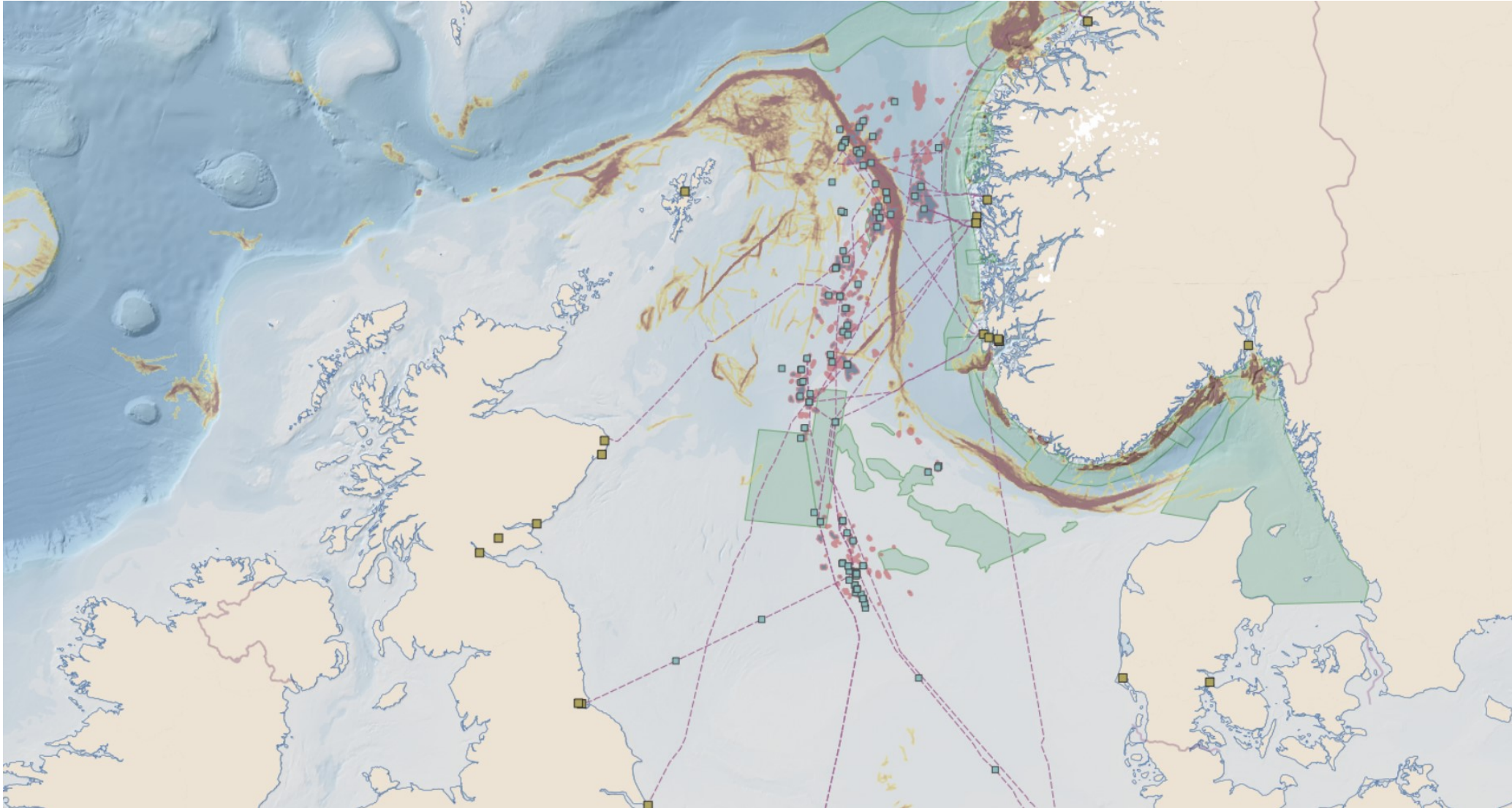
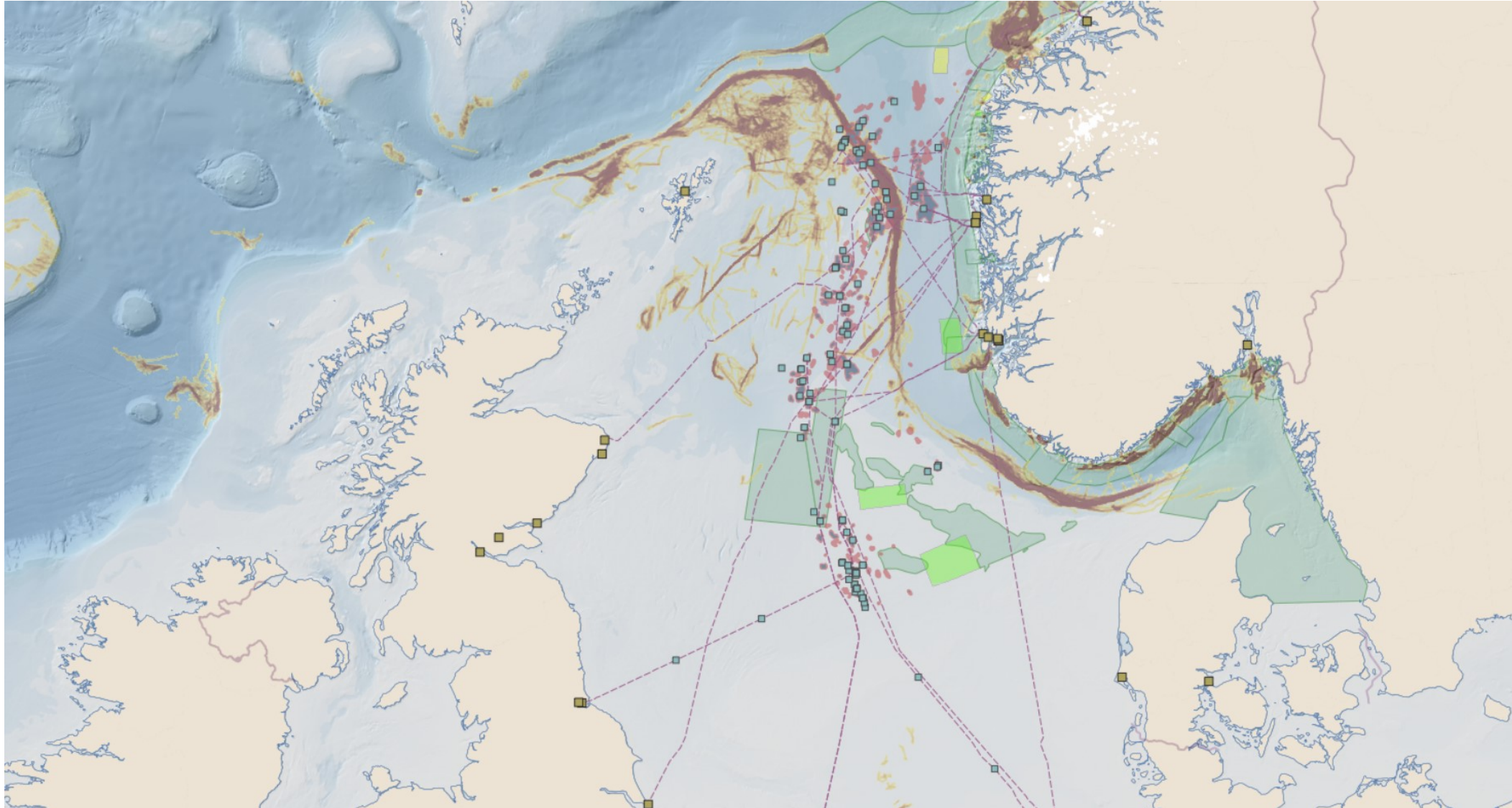# Base map (+ bathymetry)
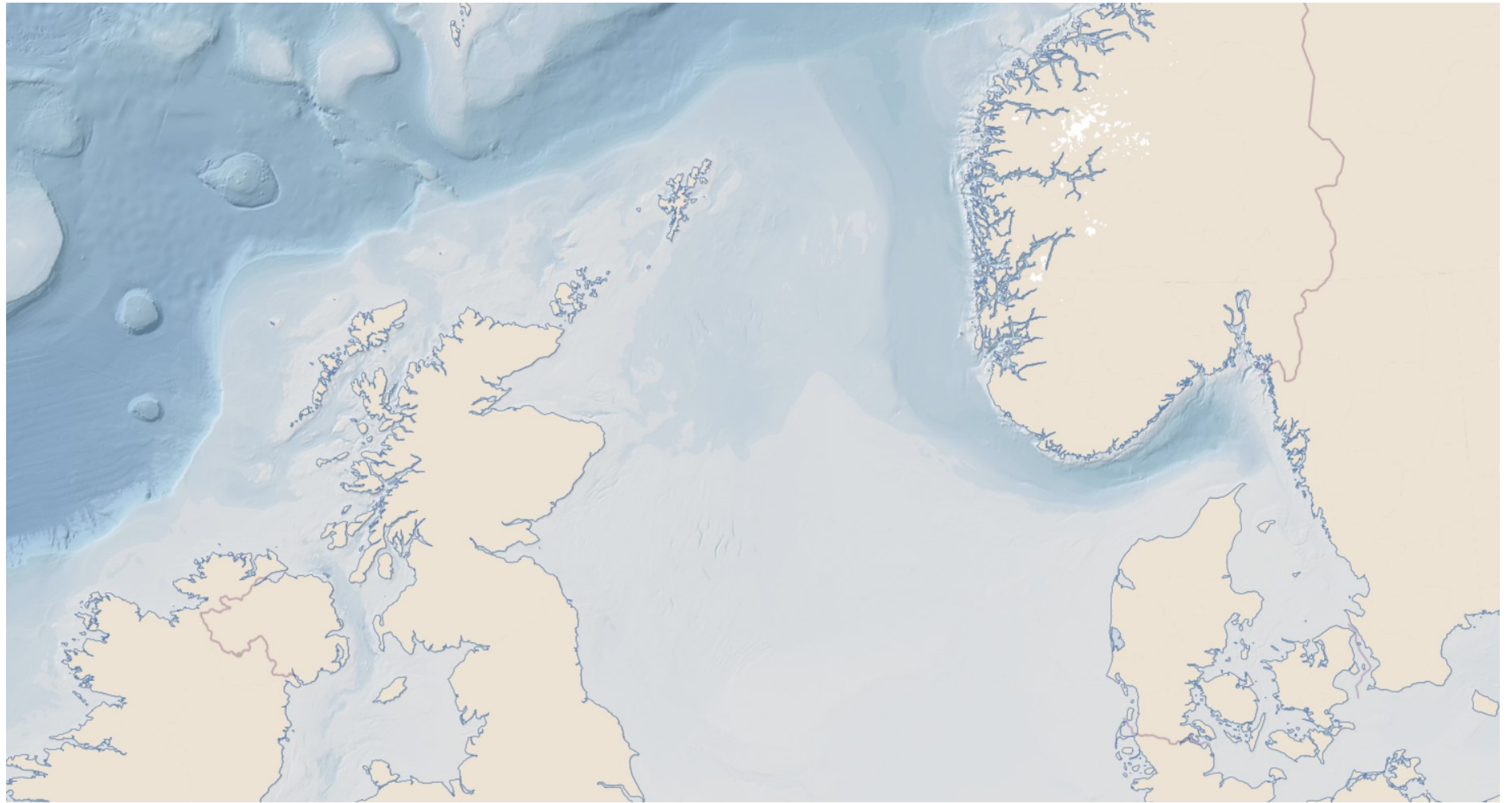
Particularly valuable marine areas ⬛ **+ Base map** 〰
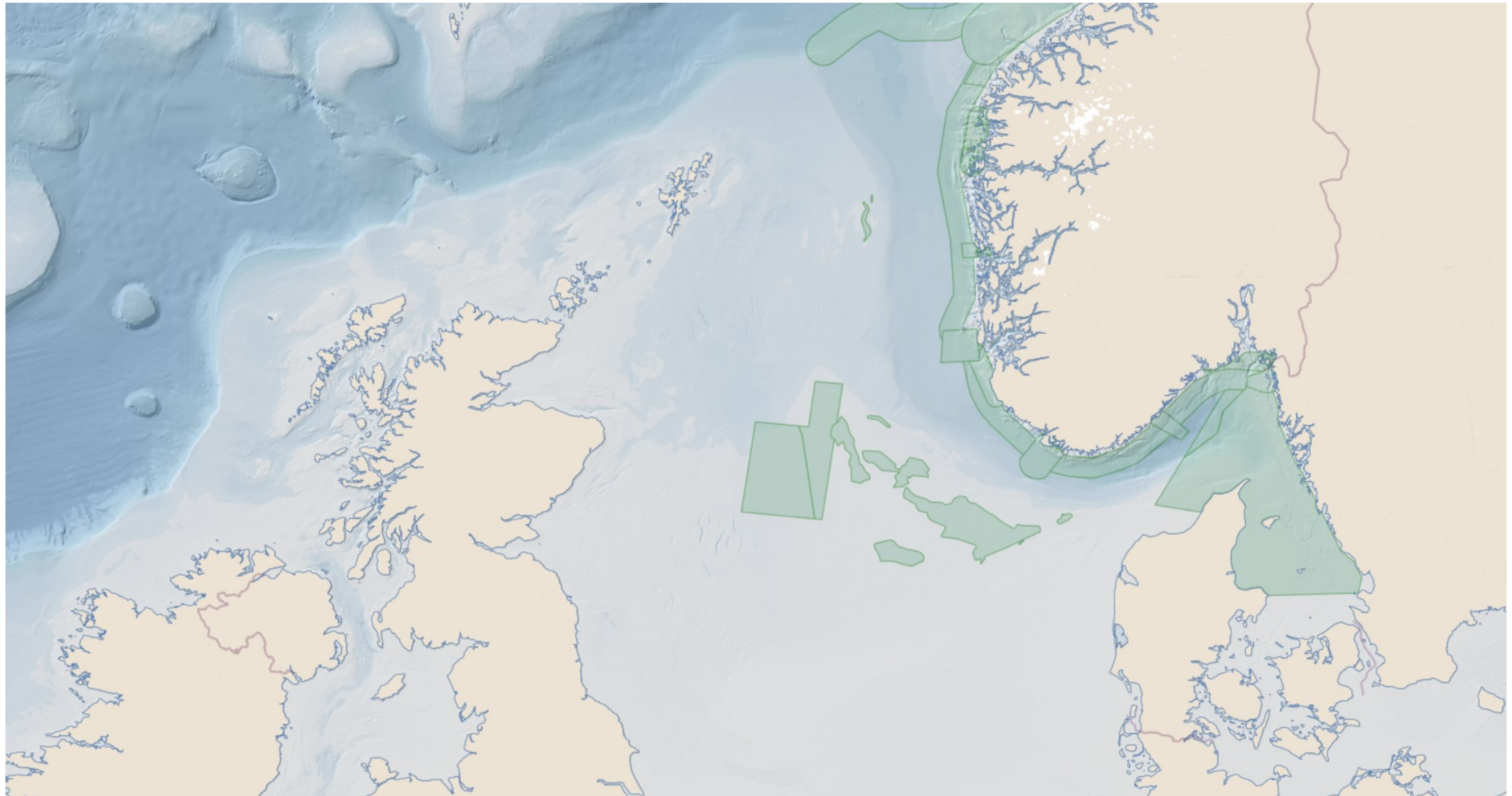
Commercial fishing ⚓ + **Valuable marine areas** 🗺 + **Base map** 〜

Petroleum activity 👑 + Commercial fishing ⚓ + Valuable marine areas⬛ + Base map 〰️

Offshore wind farm assessments🛟 + Petroleum activities👑 + Commercial fishing👑 + Valuable marine areas🏞 + Base map〰

Improve FAIRness of data

Findable
- Metadata has unique and persistent identifiers
- Rich metadata content regarding consistent naming, context description, search words
- Metadata includes the identifier of the data it describe
- Metadata are searchable through open standardized APIs

Accessible
- Metadata and geospatial data are available through standard web protocols
- Metadata are available even when the geospatial data is no longer available

Interoperable
- Metadata and geospatial data use international standards for content representation
- Metadata references to international and national thematic categories

Reusable
- Metadata contains a clear licensing information
- Metadata contains information about provenance, coverage, quality, updating frequency of referenced geospatial data
- Metadata and geospatial data comply with relevant international standards and available through open formats

Kartverket

Thank you !