



Kartverket

Norwegian SDI The Marine component

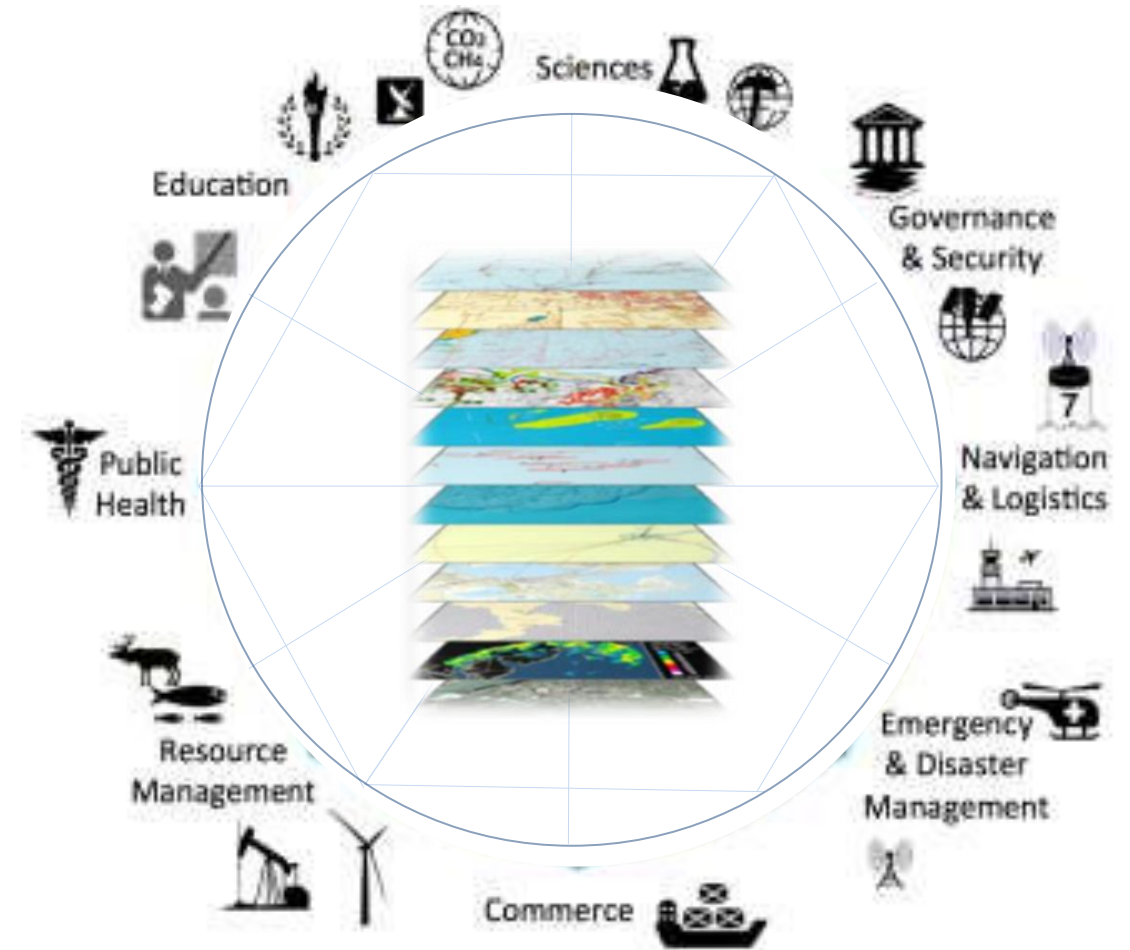
MSDIWG 14 (2023)



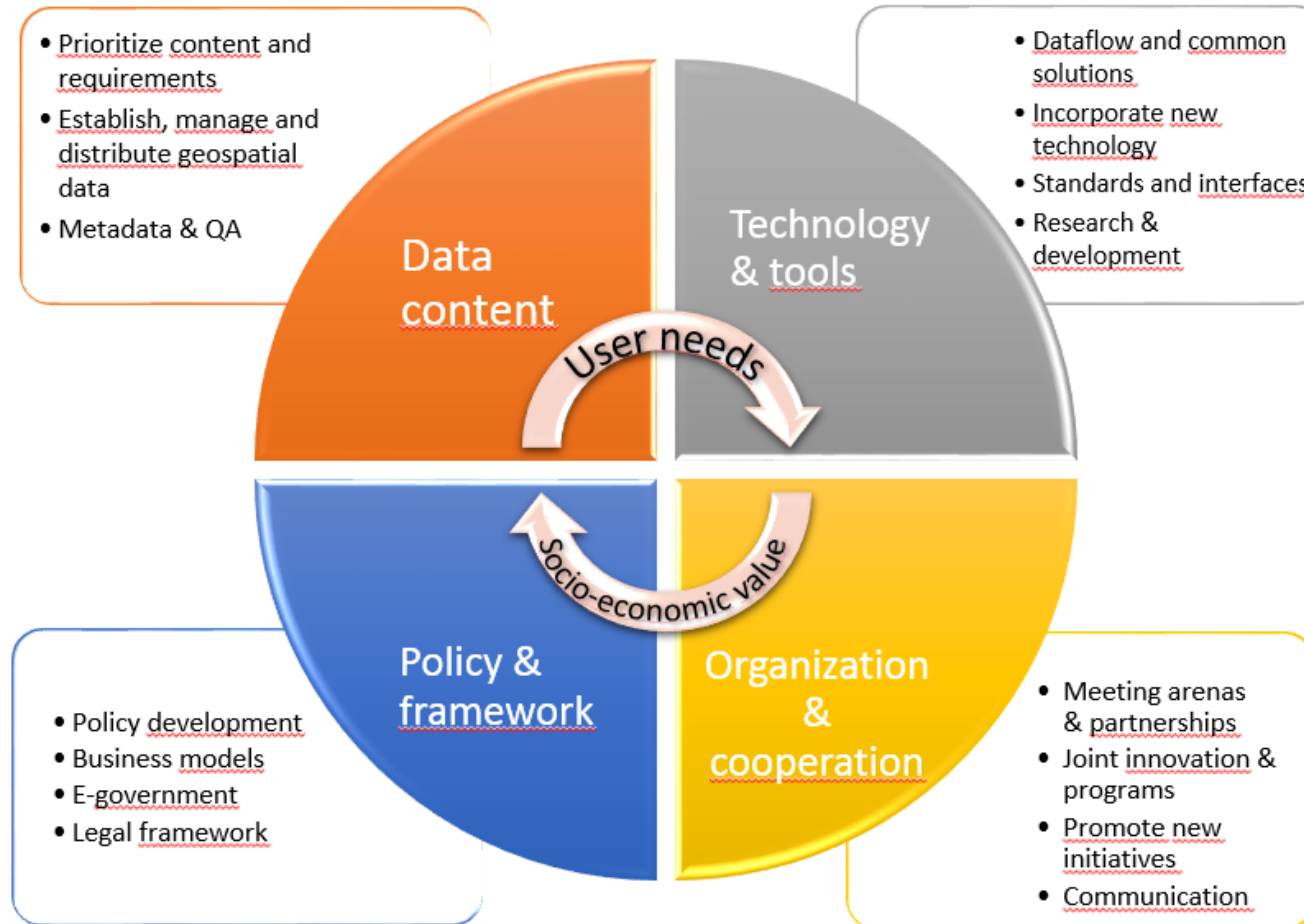
Njål Tengs-Hagir (IPA: [fatʃili'tator])
Director Business development
Norwegian Mapping Authority Hydrographic Service

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



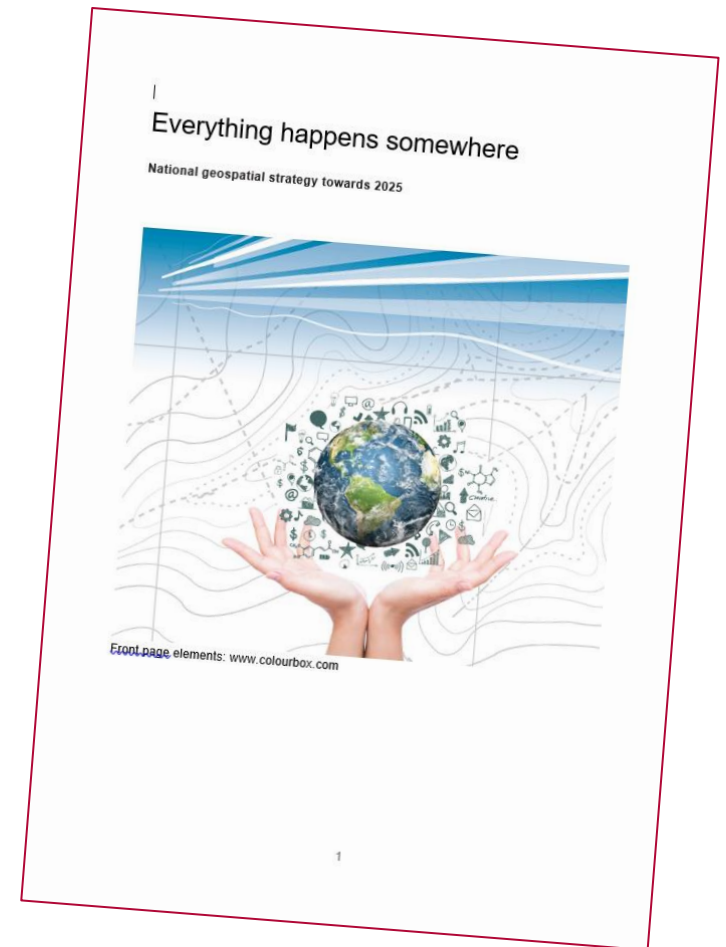
National Spatial Data Infrastructure



Governance

National geospatial strategy towards 2025

- A national knowledge base of geospatial information that comply with 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



Governance

Action plan (55 main activities) to the National Geospatial Strategy

Some current examples:























































- Identify core data vital to the NSDI
- User need assessment and data accessibility within priority user-areas in society
- Establish Marine Base Map Services supporting Coastal Zone Management
- Increase reusability of geospatial data managed by different sectors
- Mature approaches and develop crowdsource solutions
- Further develop Geonorge as a service-oriented infrastructure platform capable of providing geospatial information relevant to society
- Studies and assessments around analysis-ready data relevant area-planning and decision making
- Development of a National Hydrographic Infrastructure - efficient support of maritime geospatial information services
- Development of a National Harbor Database through cross-sectoral interaction and interoperability

Policy

Laws and Regulations

- Freedom of Information Act - Facilitate an open, transparent administration and the reuse of public information
- Geodata Act - Obligations to share geospatial data according to some common demands
- Planning and Building Act - Geospatial data approved for use in PBA forms the Norwegian Public Base of Geospatial Data (DOK)

Status example

| TITLE | OWNER | THEME |           |
|--|--------------------------------------|-------------------|---|
| Aquaculture locations | Norwegian Directorate of Fisheries | Marine activities |            |
| Depth data | Norwegian Mapping Authority | Base maps |            |
| Marine regulation zones- kelp harvesting | Norwegian Directorate of Fisheries | Marine activities |            |
| Maritime transport - anchoring areas | The Norwegian Coastal Administration | Marine activities |            |

Main data topics

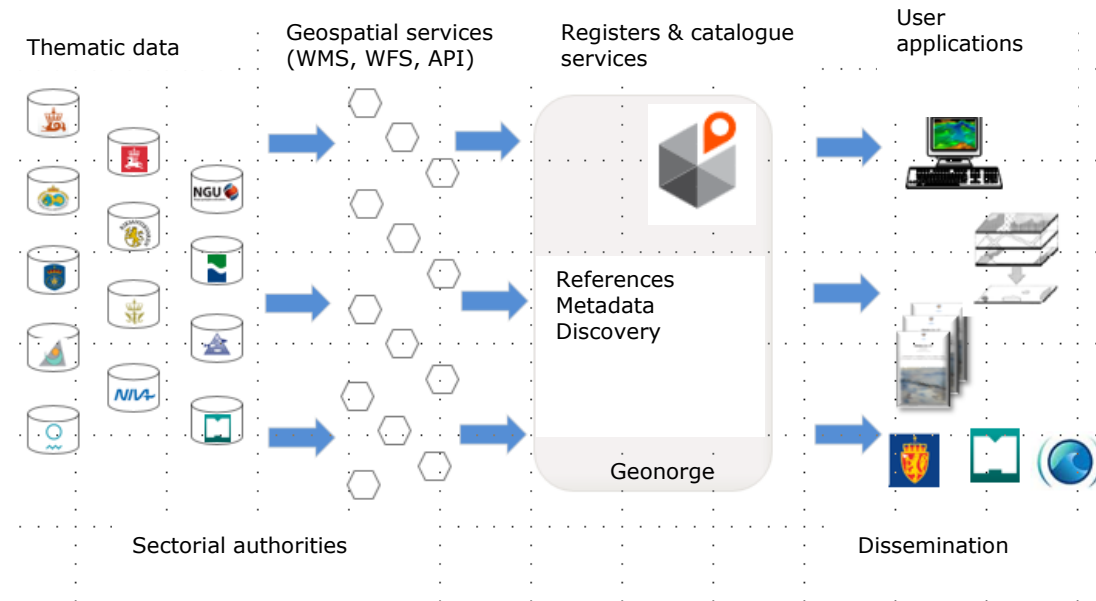


Making geospatial data available

Service based approach

Key elements:

- Sectoral authorities offer thematic geospatial services from data they are responsible for
- A national metadata registration common available through Geonorge
- Standardized and harmonized data according to data model / product specifications
- National registers for objects, presentation rules, documentation, etc.



Improve availability and usability

Making data and services more

- **F**indable
- **A**ccessible
- **I**nteroperable
- **R**eusable

GEONORGE

Geonorge > Norwegian NSDI registers > Mareano Status Register

Search register

Mareano Status Register - Search for register content Search

Mareano Status Register

The register provides an overview of data collected through the projects; Mareano and "Marine base map". The overview shows the status of various datasets' fulfillment of the FAIR principles as well as other requirements from the national geographical infrastructure Updated: 17/03/2021

Dataset Reports

Showing 51 - 63 of 63 hits Save As: CSV Save

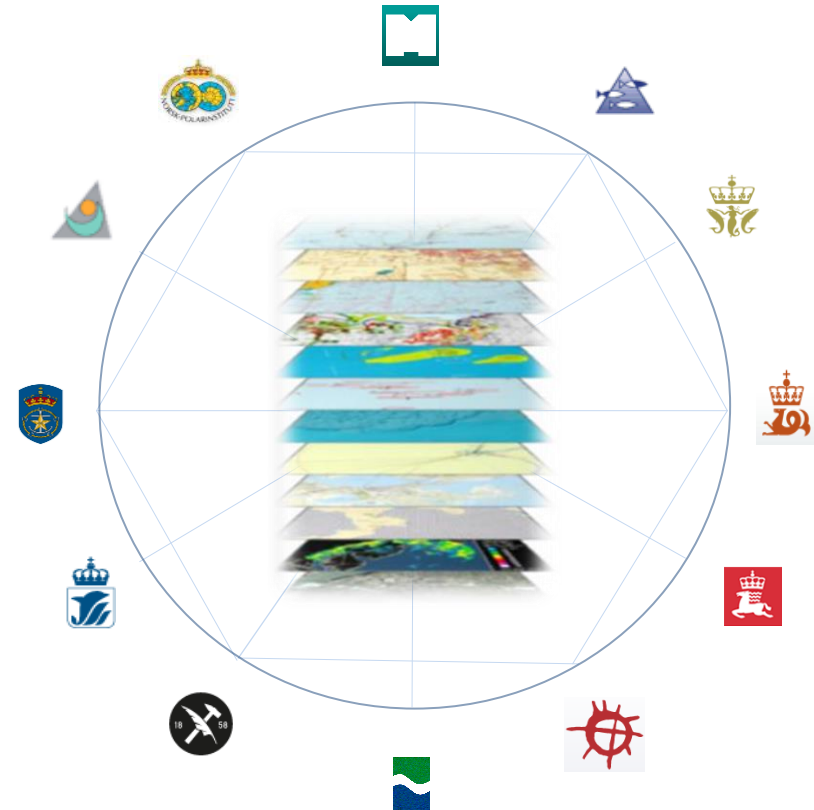
| Title | Owner | FAIR Status |
|---|------------------------------|---------------|
| Seabed sediments (genesis), overview | Geological Survey of Norway | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Seabed sediments (genesis), regional | Geological Survey of Norway | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Seabed sediments (grain size), detailed | Geological Survey of Norway | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Seabed sediments (grain size), overview | Geological Survey of Norway | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Seabed sediments (grain size), regional | Geological Survey of Norway | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Seismiske linjer, 2D | Geological Survey of Norway | 🟡🟠🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Sjøppel pr. Mareano-stasjon | Institute of Marine Research | 🟡🟠🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Terrain models of the seabed 50m grid | Norwegian Mapping Authority | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Terrain models of the seabed DTM 25m | Norwegian Mapping Authority | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Terrain models of the seabed DTM 5 | Norwegian Mapping Authority | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Tråspor | Institute of Marine Research | 🟡🟠🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Tungmetaller og andre uorganiske miljøelementer i marine sedimenter | Geological Survey of Norway | 🟢🟡🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |
| Vannkolonnendata | Geological Survey of Norway | 🟡🟠🔴🟠🟡🟢🟡🟠🟡🔴🟠🟡🟢 |

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 development 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 transparency, openness and increased involvement from the stakeholders



Marine basemaps in coastal Norway

- Awarded 85 mill NOK over three year period (2020-2022)
- 3 pilot areas agreed upon – and completed
- Submitting a proposal for national programme 2022 – Cost 3.5 bill. NOK – Net value 5 bill. NOK **yearly**
- 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 products – rollout when available

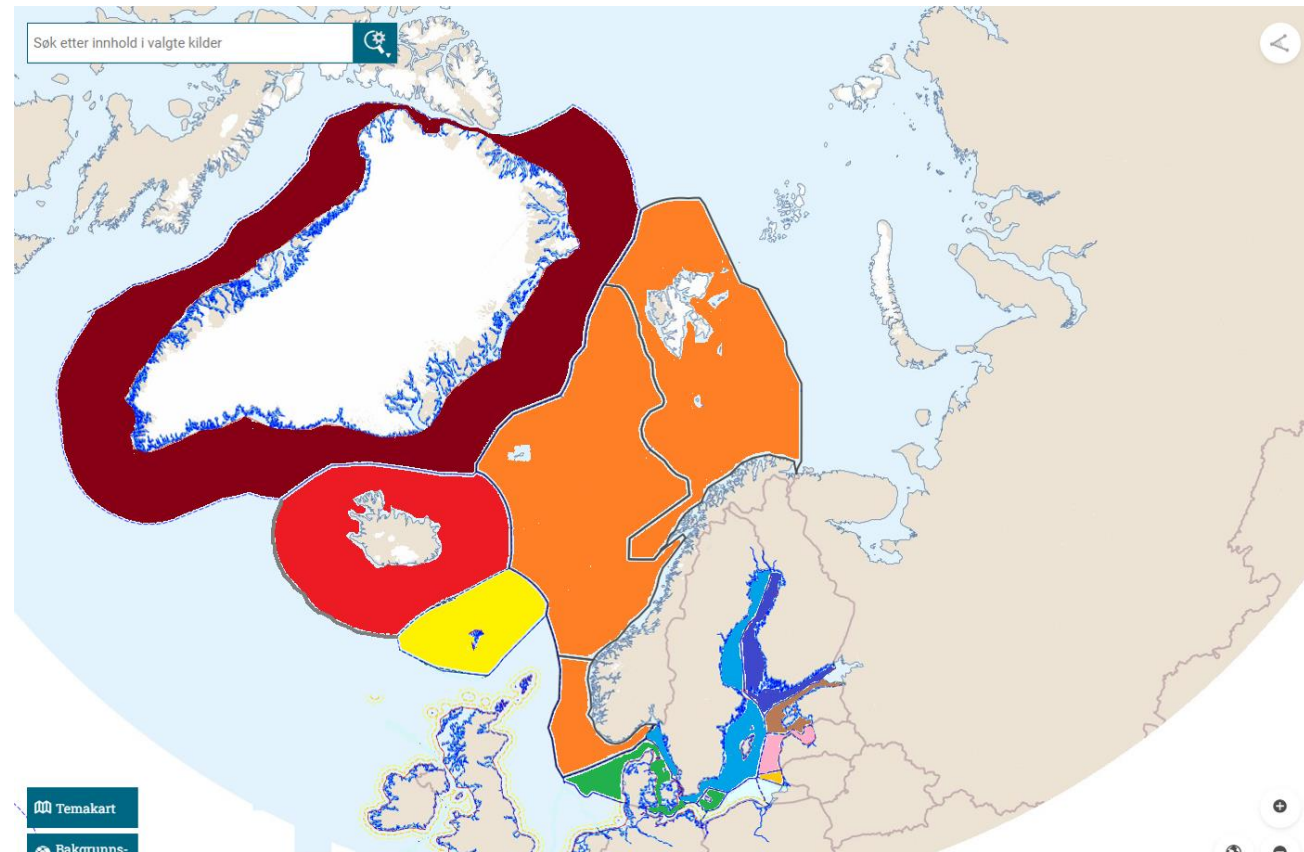


Testing new technology at Runde, June 2017.
Photo: Arild Hareide/Runde Environment
Centre



Nordic Council of Ministers

- Approved project 2022-2025
- 1.5 mill Euros
- Norway, Sweden, Denmark, Faroe Islands, Greenland, Finland, Åland, Iceland, Lithuania, Latvia, Estonia



An underwater photograph showing sunlight filtering through the surface of the water, creating a bright, shimmering effect. The water is a deep blue color, and the light rays are clearly visible. The text "Thank you !" is centered in the middle of the image.

Thank you !