The Nordic assessment of coastal Biodiversity and Ecosystem Services: a subregional study inspired by the broader IPBES context

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Background to the Nordic study

- A Nordic meeting on IPBES2 2014, proposed a Nordic Assessment on Biodiversity and Ecosystem Services - **inspired** by IPBES
- A *Norden* report 2016 A scoping study "*Framing a Nordic IPBES-like study*"
- A study related to **indigenous and local knowledge** (ILK) performed by NAPTEK at Swedish Biodiversity Centre, financed by SEPA ; "*Indigenous and local knowledge in a scoping study for the Nordic IPBES assessment* " (CBM nr. 96 2015).
- Funding: from the **Nordic Council of Ministers** and some national funds

Objectives at a Nordic level focusing on **coastal areas**

COAST in all Nordic countries

50% of Sweden's population lives within 10 km of the coast.

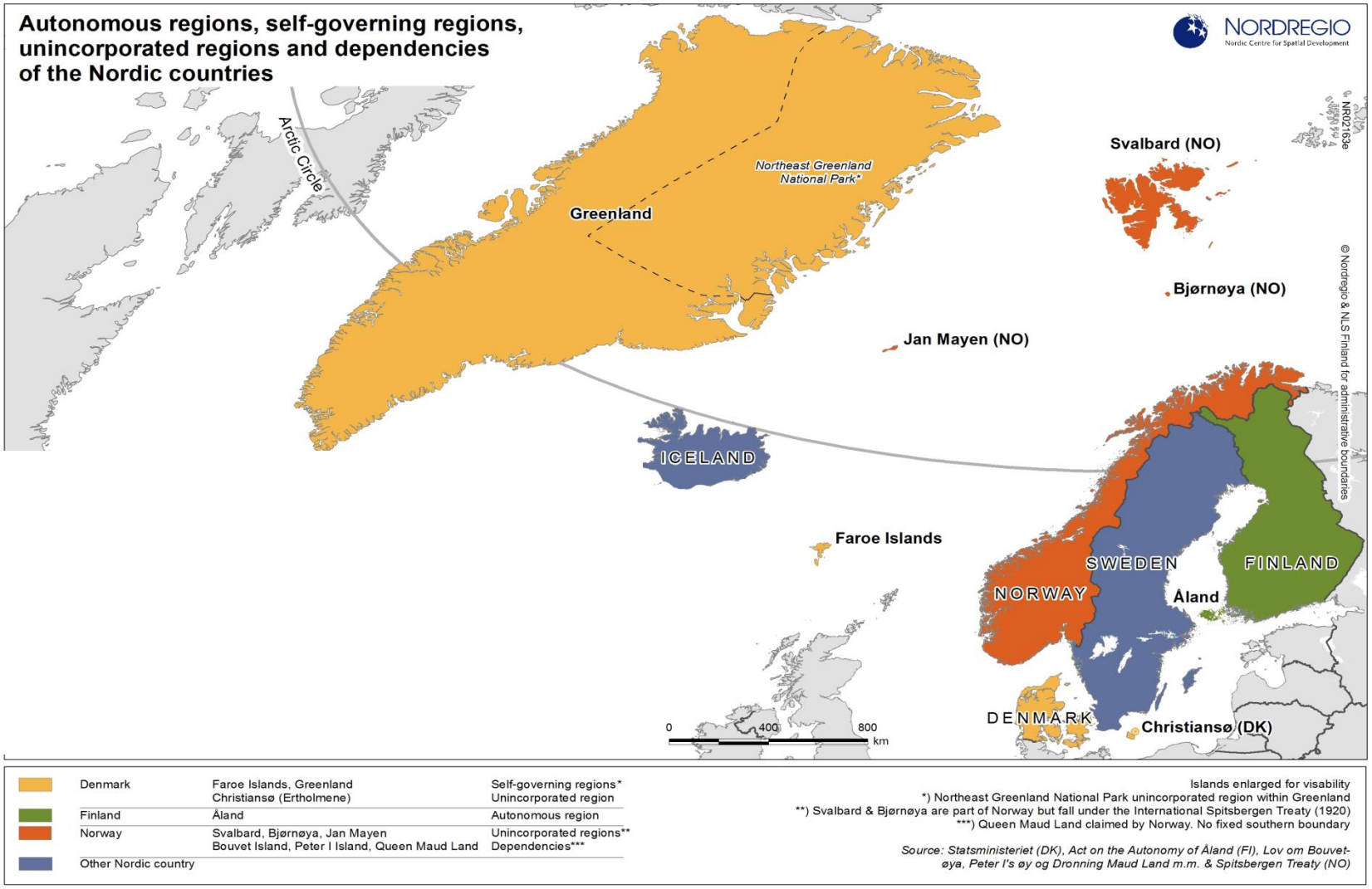
Strengthen

- trans national cooperation
- science-policy interface for biodiversity and ecosystem service
- nature conservation and sustainable use of coastal ecosystems
- long-term human well-being and sustainable development

Key datasets

- Based on existing data, scientific literature and other information, including indigenous and local knowledge
- Communicate assessment in a user-friendly manner for policy makers and other users
- Different case studies

Nordic countries and autonomous regions



Source: Nordregio. Map ID: 10146e, Designer/Cartographer Linus Rispling, Data source, Statsministeriet (DK), Act on the Autonomy of Åland (FI), Lov om Bouvetøya, Peter I's øy og Dronning Maud Land m.m. & Spitsbergen Treaty (NO), Published 25 June 2015

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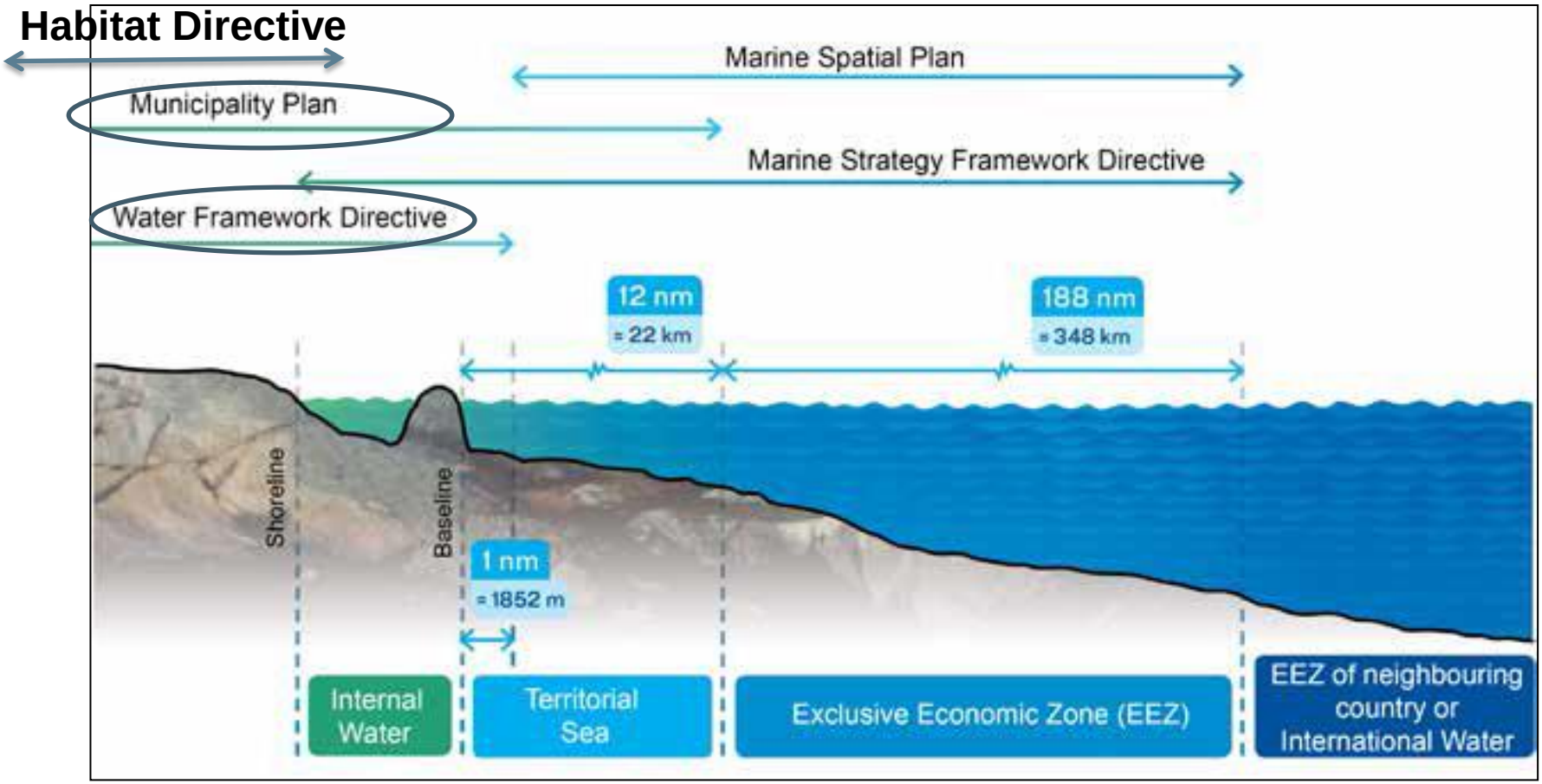
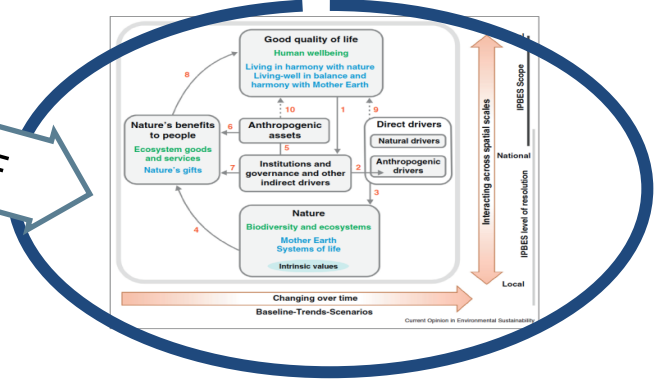
Coastal zone



Chapter structure

Follow IPBES CF



Chapter 1:
Setting the scene

- Presenting assessment of relevant policy questions

  why and what……. *why a Nordic assessment, what are BD and ES/NCP, connection to human well-being and livelihoods, target groups…etc.*

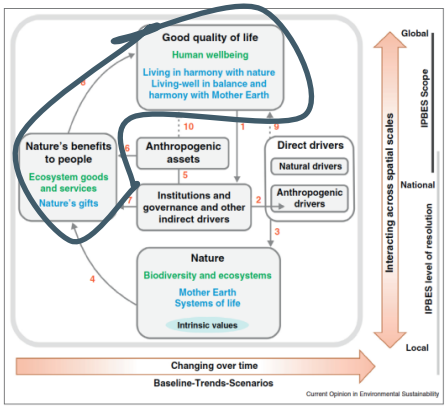
- An IPBES like context - the **CF**, in an Nordic pragmatic way

- Nordic Context - similarities and differences between Nordic coastal regions

- Description of the costal region
  - the Nordic coastal region
  - Ecosystem structure and function (e.g. biogeographical regions, habitat types, water quality)
  - Socio-economical
  - Cultural

- Key questions for the Nordic coastal regions

Chapter 2:
Nature's contribution's to people and quality of life in coastal areas

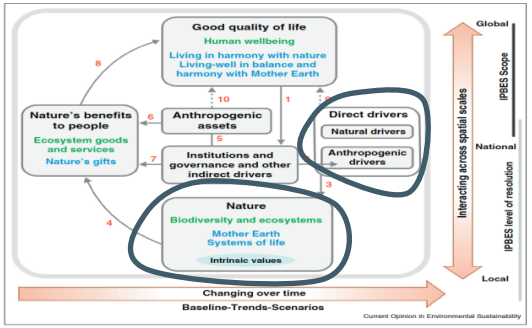


- Status and trends of ecosystem services / *Nature's contribution to people* ¨
  - Regulating
  - Material - food and energy
  - Non Material

- Cross border flow of services, *Nordic footprint*
  Examine the multiple values of biodiversity and ecosystem services, on multiple scales.

- Future trends

- Knowledge gaps



Chapter 3: Status, trends and future dynamics of biodiversity and ecosystems underpinning nature's benefits to people

•Assess status and current trends of biodiversity and ecosystems in coastal water and on the shore line

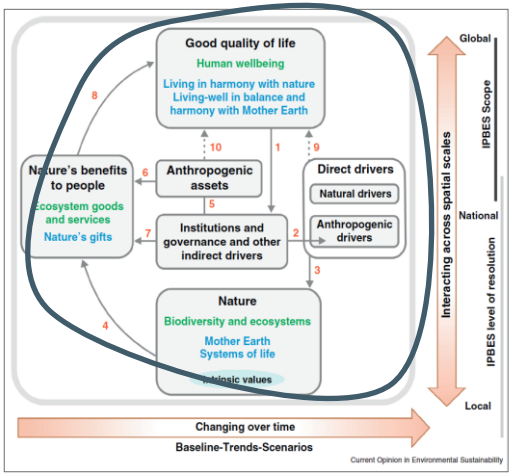
Nordic coastal region large variability, marine to near limnic conditions
Large variation in biodiversity

Chapter 4: Direct and indirect drivers of change in the context of different perspectives of human well-being

- Assess the status, trends and future dynamics of indirect and direct drivers, focusing on those affecting "Nature," "Nature's contribution to people" and how that links to "Good quality of life"
- Explore the concept of direct and indirect drivers

Main drivers ; exploitation, eutrophication, natural changes (the land uplift in northern Baltic) climate changes

Chapter 5 cross sector - cross scale



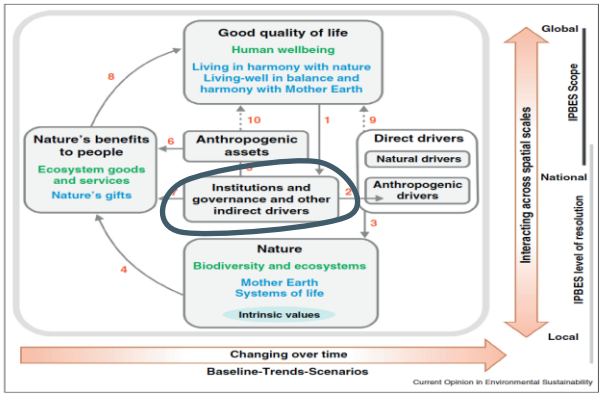
- an integrated approach to assessing the relationship between nature and humans at and across different scales
- Delphi analysis across Case Studies (establishing the impact of drivers over time and space)
- include analysis of dynamics, including feed-backs, time-lags, tipping points, cross-regional interrelations, synergies and trade-offs

Two sections :

1. <u>what might happen in the future</u>, how combinations of indirect and direct drivers may change and how changes may affect biodiversity, ecosystem services and human wellbeing

2. <u>propose actions to changes</u>, and identify pathways and actions to achieve environmental policy goals and visions of sustainable development

Chapter 6
Options for governance, institutional arrangements and private and public decision-making across scales and sectors



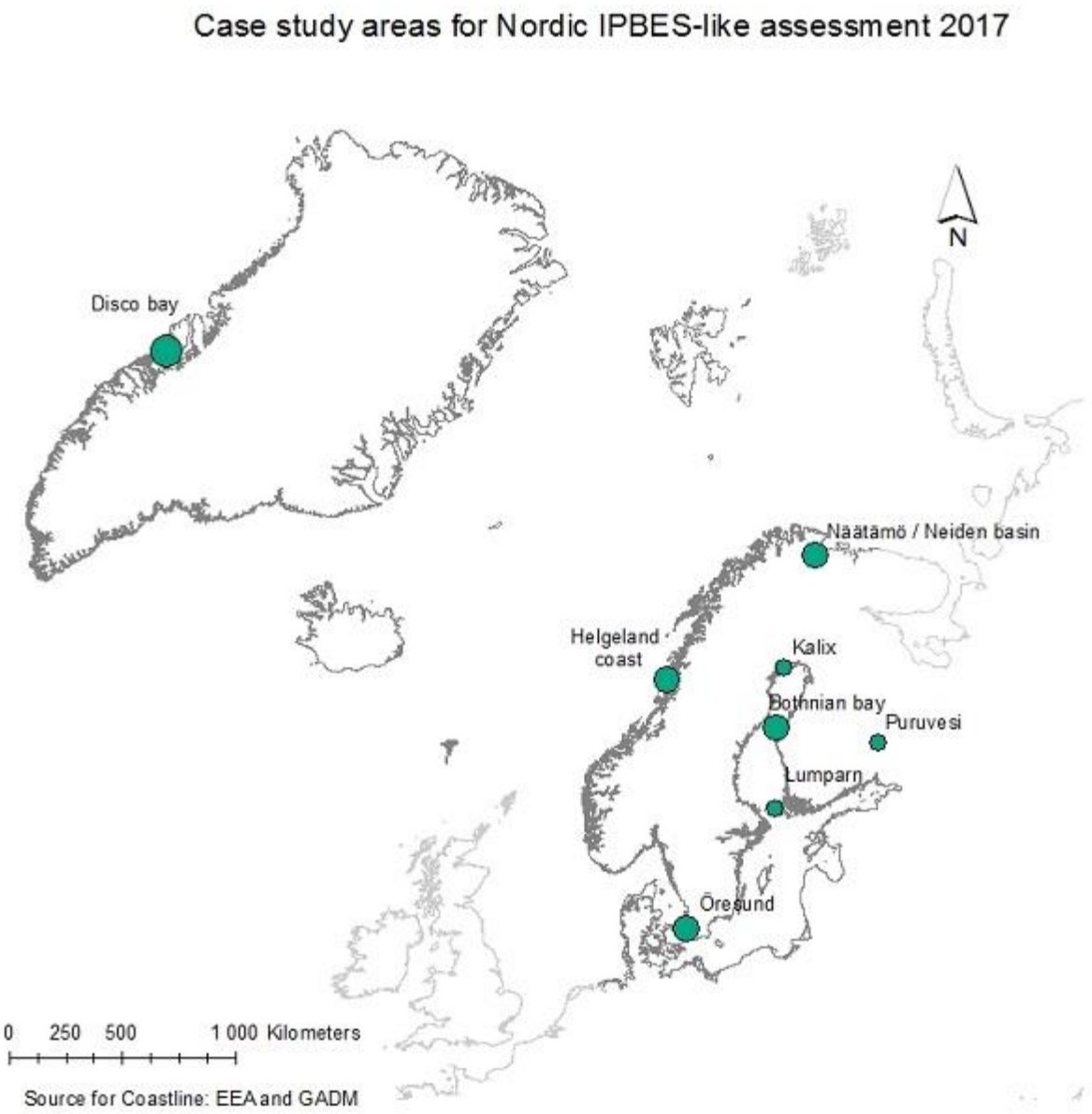
•Focus on management and governance in Nordic countries, e.g. public participation, right of public access and different policy instruments such as fiscal reforms

•Rules and norms from international and government level to local customary norms

•Assess overlapping policy and legal frameworks and how these contradict or support each other

• Include nature conservation, sustainable use and management practices

8 case study areas



Disko bay, Grenland

HELGELAND coast, Norge

Näätämö river from Finland to Norge into Barents hav

Öresund region

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Öresund region

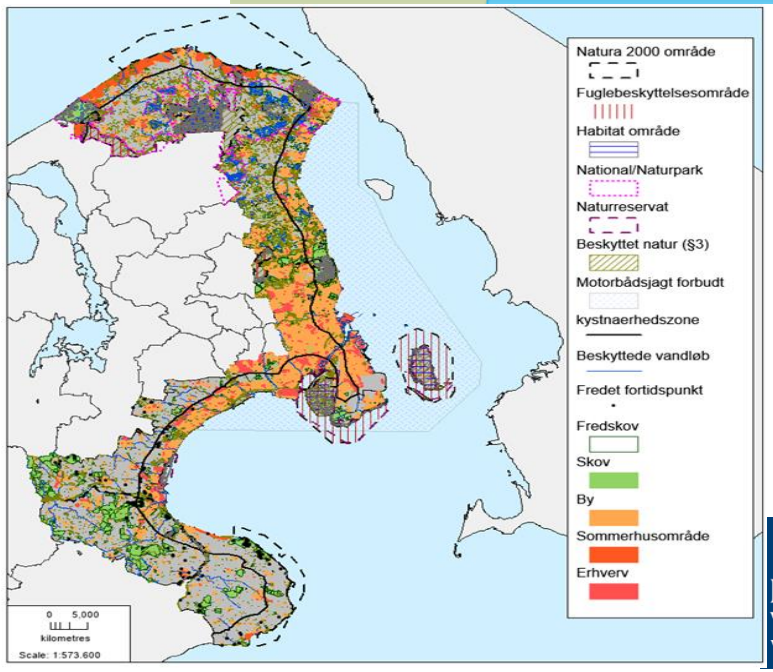
Densely populated urban area with 2 millions inhabitants in the coastal municipalities

Fishery

Recreational activities

Biodiversity and Ecosystem status

Habitat decline (eutrophication, bottom trawling, oil spills and coastal development reduces biodiversity.

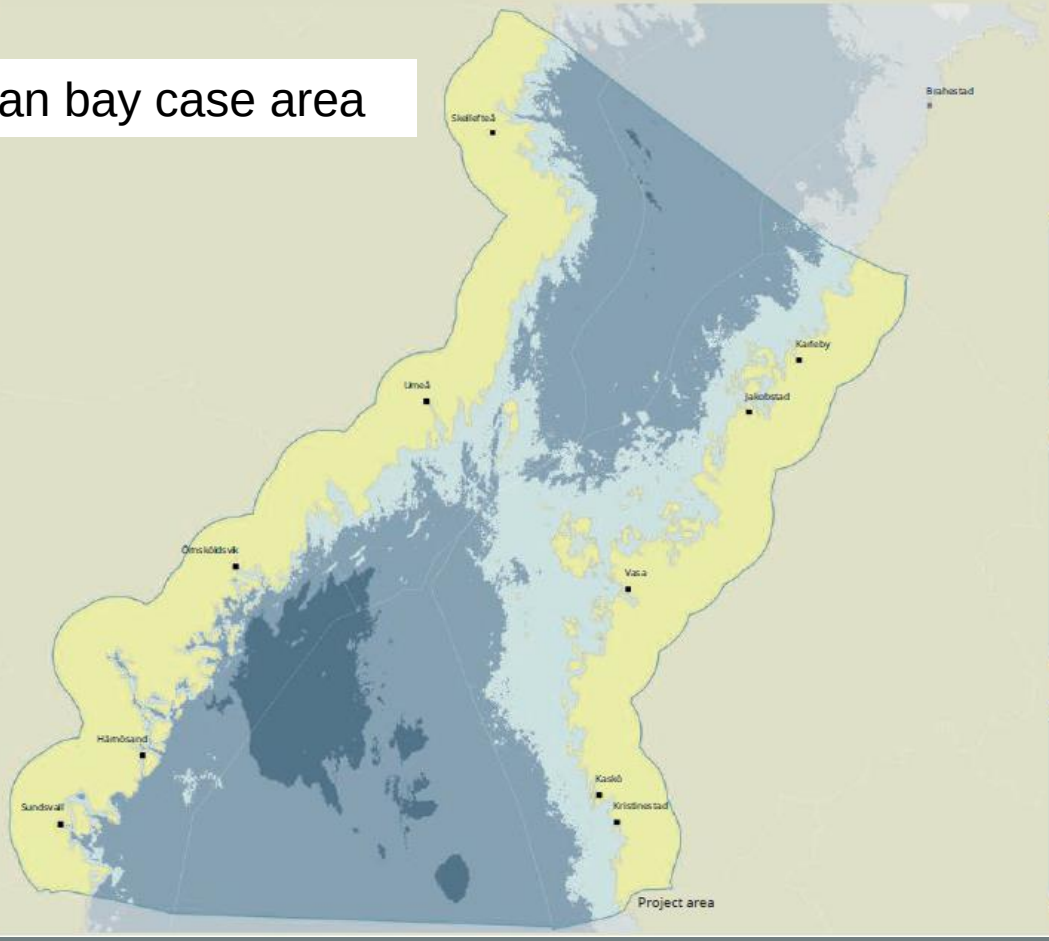


Kvarken - the Bothian bay case area

Map data and participation
SeaGIS 2.0 is investigating how different activities linked to the sea are related to each other and existing conflict areas. The ambition is to develop a planning process based on transparency and stakeholder participation.

Regional targets and Blue Growth
Wind power, fishing, shipping and tourism are examples of blue growth sectors that can be developed in the region. We are creating an inventory of the interests in the sectors through a series of dialog meetings with representatives from Finland and Sweden.

Ecosystem services
SeaGIS 2.0 maps important ecosystem services within the project area and spreads knowledge about them, so authorities and other actors are made more aware of how to utilise ecosystem services in marine planning and management.



Establishing the map service
We are developing a user-friendly digital map service for storage, visualisation and mediation of large amount of geographical information associated to the marine environment and to MSP.

Cooperation for a better environment
We are assessing the status of the marine environment and of occurring habitats and species in the region. We are also analysing the current level of protection for habitats and species and the future needs for protection.

Oil protection collaboration
SeaGIS 2.0 is supporting authorities in Finland and Sweden to more effectively handle oil spills and, in addition, developing a system for how to prioritise important or vulnerable nature areas in case of an accident.

In SeaGIS 2.0 Maps important ecosystem services and spreads knowledge to authorities and other actors.
Transnational Sweden - Finland

Natural changes; the land uplift in Kvarken

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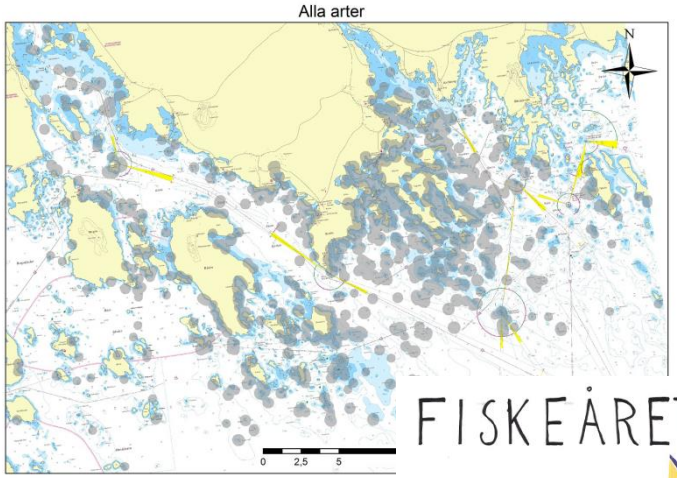
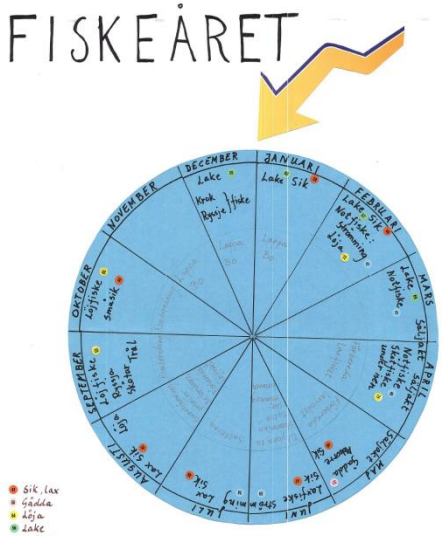
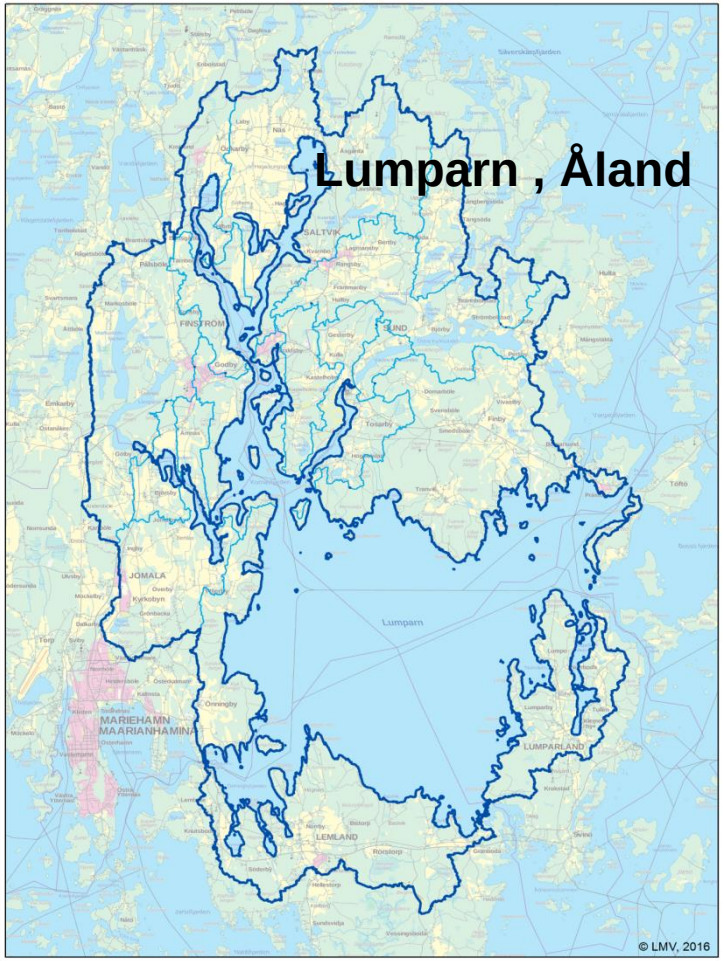
KALIX, Bothnian Bay
Local and traditional fishery (ILK)







Restauration of Lumparn
catchment area, eutrophicated inland water of 301.1 km^2
The municipality and local interests initiatives

DELPHI ANALYSIS PRELIMINARY RESULTS FROM TWO CASE STUDIES *HELGELAND* - NORWAY AND *DISKO BAY* - GREENLAND

ECOSYSTEM SERVICES/**NCP**	HELGELAND - NORWAY	DISKO BAY - GREENLAND
PROVISIONING /**MATERIAL**	• FISHERY (COMMERCIAL) • AQUACULTURE (COMMERCIAL) • ALGAE AND OTHER PLANTS	• FISHERY (COMMERCIAL) • (ARTISANAL) FISHING • (ARTISANAL) HUNTING
REGULATING	• WASTE TREATMENT • AIR PURIFICATION • CLIMATE REGULATION	• WASTE TREATMENT • AIR PURIFICATION
CULTURAL SERVICES /**NON MATERIAL**	• AESTHETIC INFORMATION • /INTERACTIONS/SEA/LANDSCAPE • CULTURAL HERITAGE AND IDENTITY • LEISURE FISHING AND HUNTING	• LEISURE FISHING AND HUNTING • RECREATION ACTIVITIES • CULTURAL HERITAGE AND IDENTITY

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Communication plan

Thank you for your attention !

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A link to the Nordic scoping study urn:nbn:se:norden:org:diva-4395