

Facilitating co-existence: Spatial planning in the Gulf of Bothnia

Coexisting with ice – in a changing climate
C2B2 LivingLab North



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Swedish Agency
for Marine and
Water Management

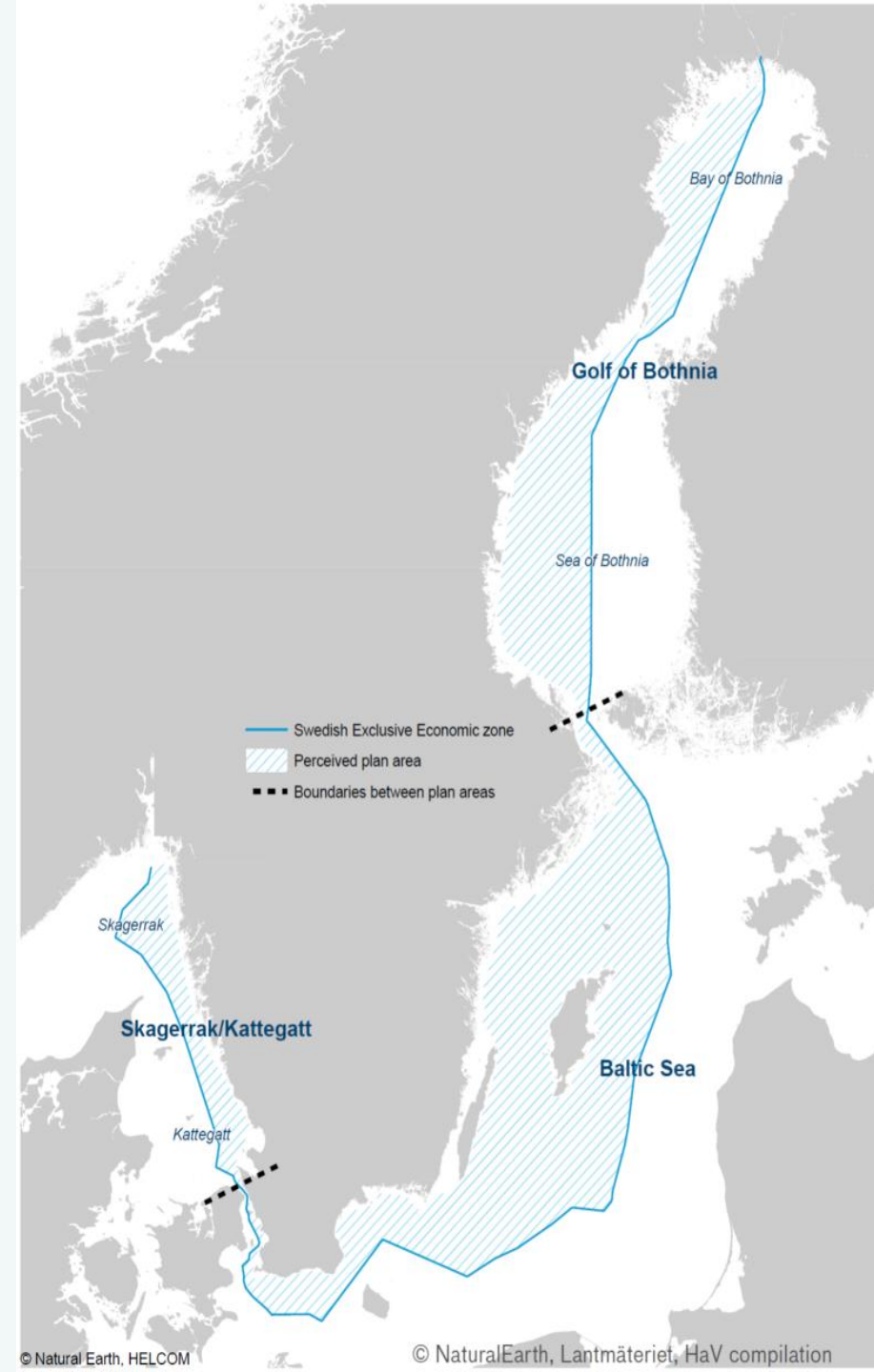
SwAM:s work related to spatial plans

- Marine Spatial Planning (MSP)
- Espoo-consultation
- Permits, referral body to government, courts
- Environmental Monitoring, Research
- Marine Strategy Framework Directive



Marine Spatial Planning in Sweden

- Three spatial plans:
Gulf of Bothnia, Baltic Sea and Skagerrak/Kattegatt
- One nautical mile (1852 m) from the baseline seawards incl. the Exclusive Economic Zone
- Objective is to contribute to sustainable development
- Plans are guiding for municipality comprehensive planning and in licensing
- Plans are adopted by the Government, developed by SwAM
- Government may adopt regulations prohibiting or limiting activities in destined geographical areas



MSP Proposal - Jan 2025

Strong focus on Energy extraction

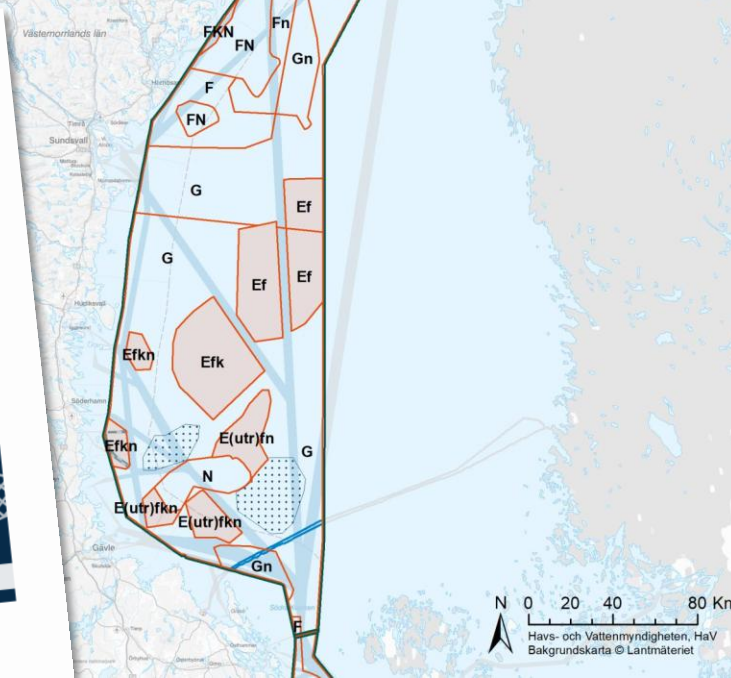
- » 24 areas for offshore wind
 - 14 areas fully or partially in the territorial sea. 20 % of the area fully inside territorial waters
 - 10 areas fully within the SEZ (80% of the total proposed area)
 - None in the Baltic Sea
- » With 100% of proposed area used - 150 TWh estimated annual production (gross value) (Swedish annual electricity use ~135TWh)
- » But...still a lot of uncertainties: Inclusion of safety distance to shipping, adjustment to defense, nature, possible vetoes from municipalities entail smaller area (and thus production)

Map 1. Plan map for the Gulf of Bothnia marine spatial planning area



Proposal for amended marine spatial plans for the Gulf of Bothnia, the Baltic Sea and Skagerrak/Kattegat

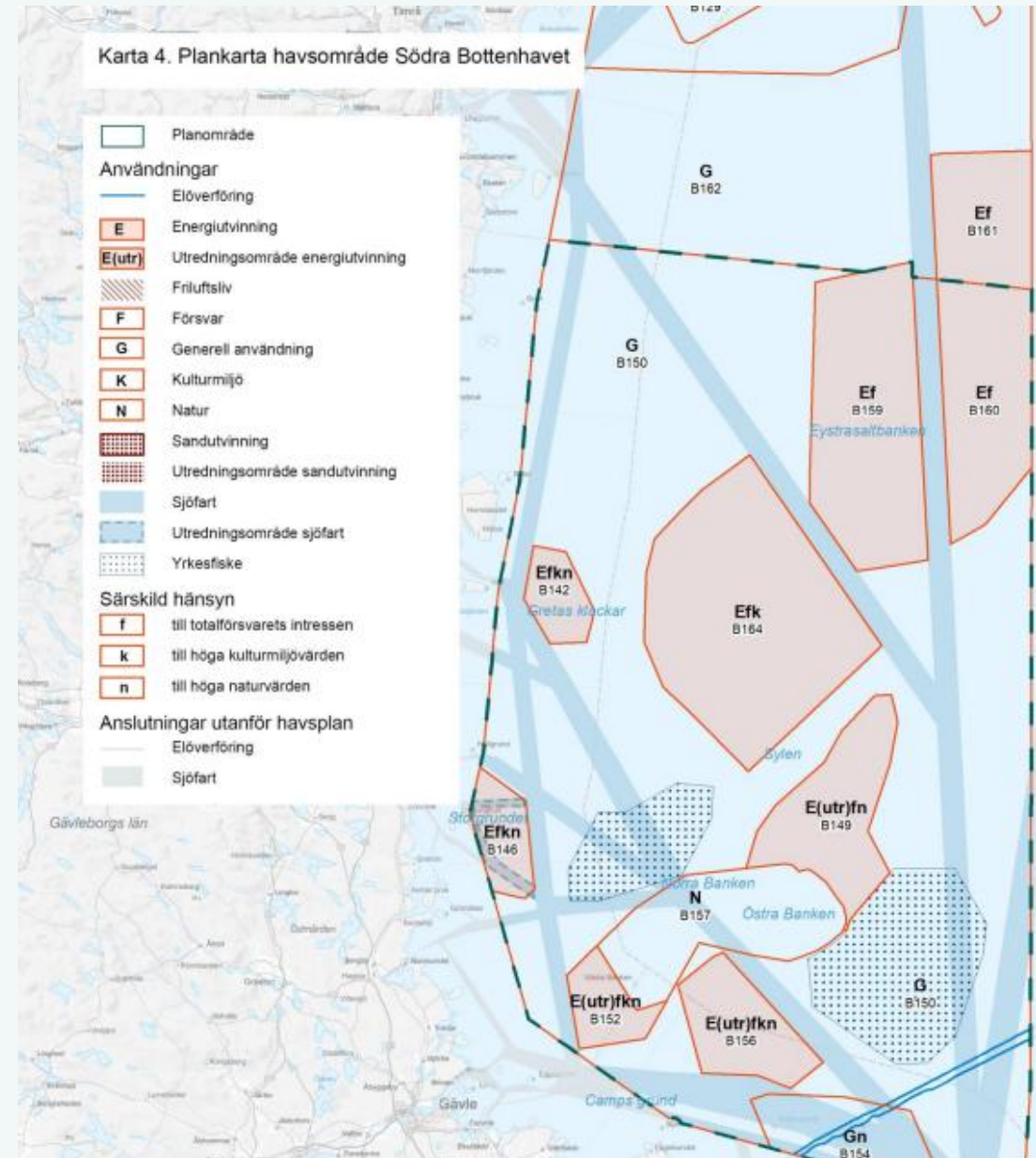
Proposal (ref. no. 00764-2022)



Proposal, January 2025

But also other adjustments during this second MSP process

- » New criteria and more areas with particular considerations to high culture heritage values
- » More areas with particular considerations to high nature values
- » Update of shipping routes



Impact assessment – aspects considered

Effects on population and health

- Population
- Health

Effects on protected animal or plant species and biological diversity

- Birds
- Bats
- Marine mammals
- Seabed environments
- Fish and fish spawning

Effects on soil, land, water, air, climate, landscape, buildings and cultural environment

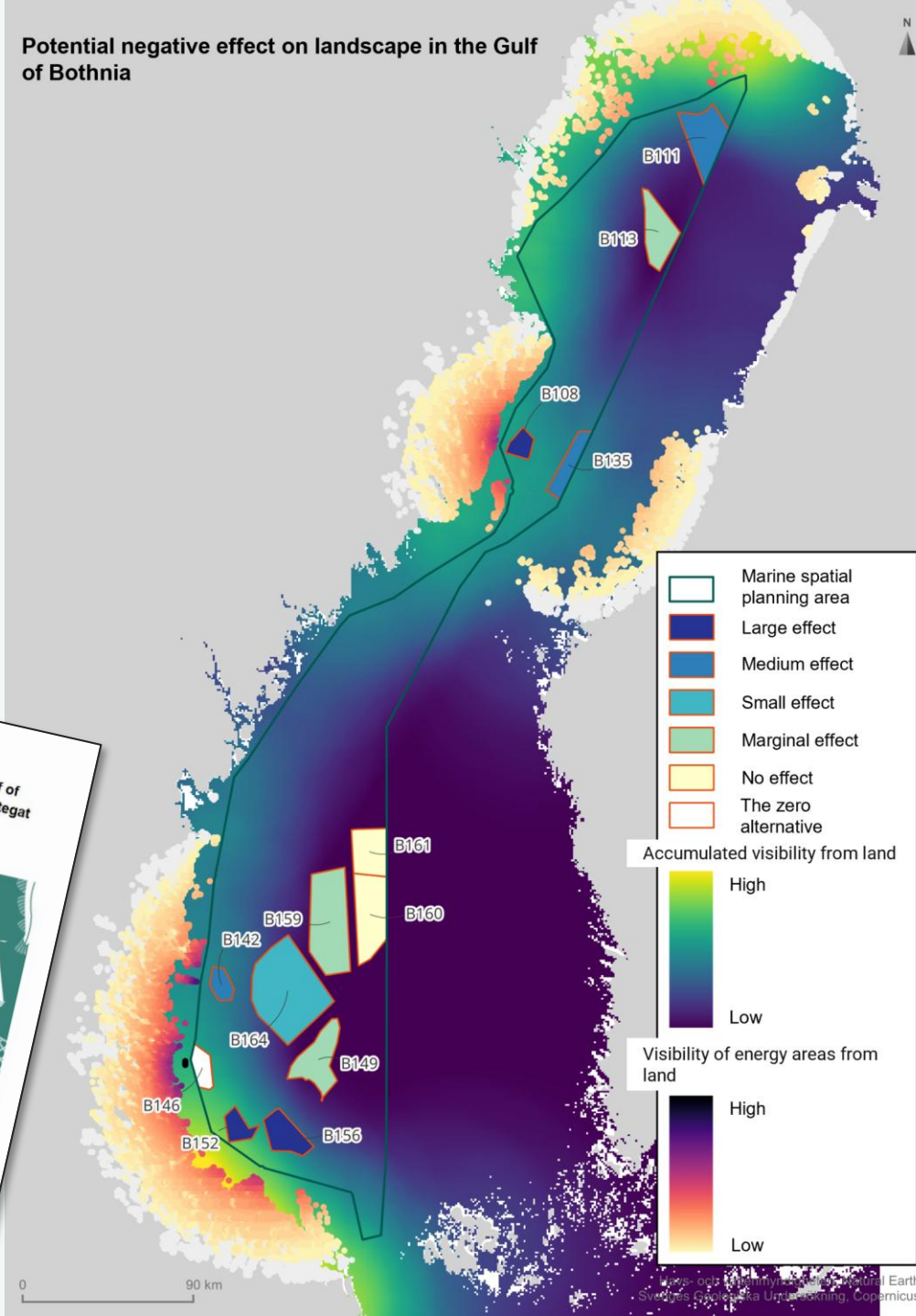
- Water and air
- Climate
- Landscape
- Cultural environment

Effects on the management of water, land and the physical environment in general

- Energy extraction
- Outdoor recreation
- Tourism
- National defense
- Shipping
- Commercial fishing
- Reindeer husbandry

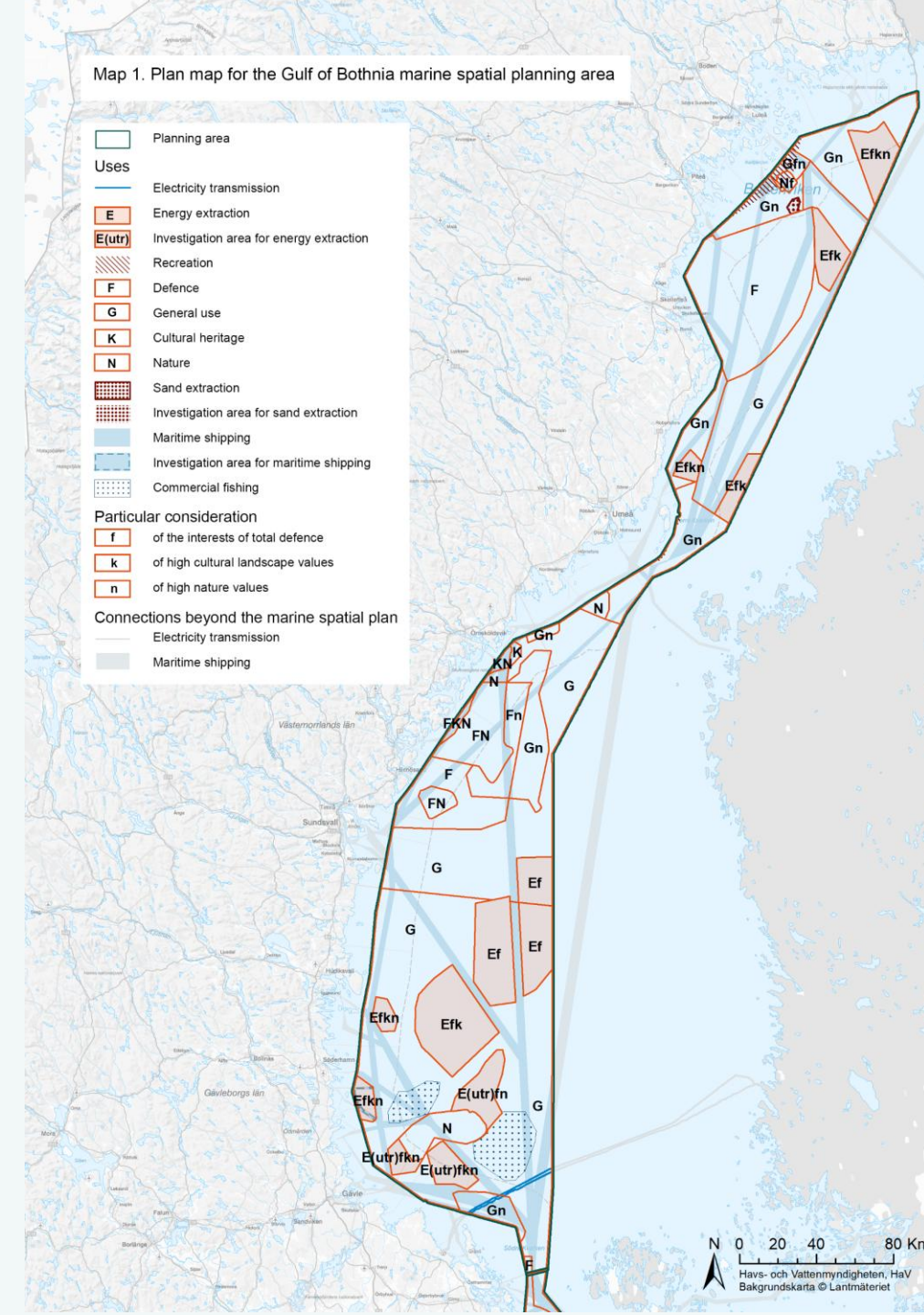


Potential negative effect on landscape in the Gulf of Bothnia



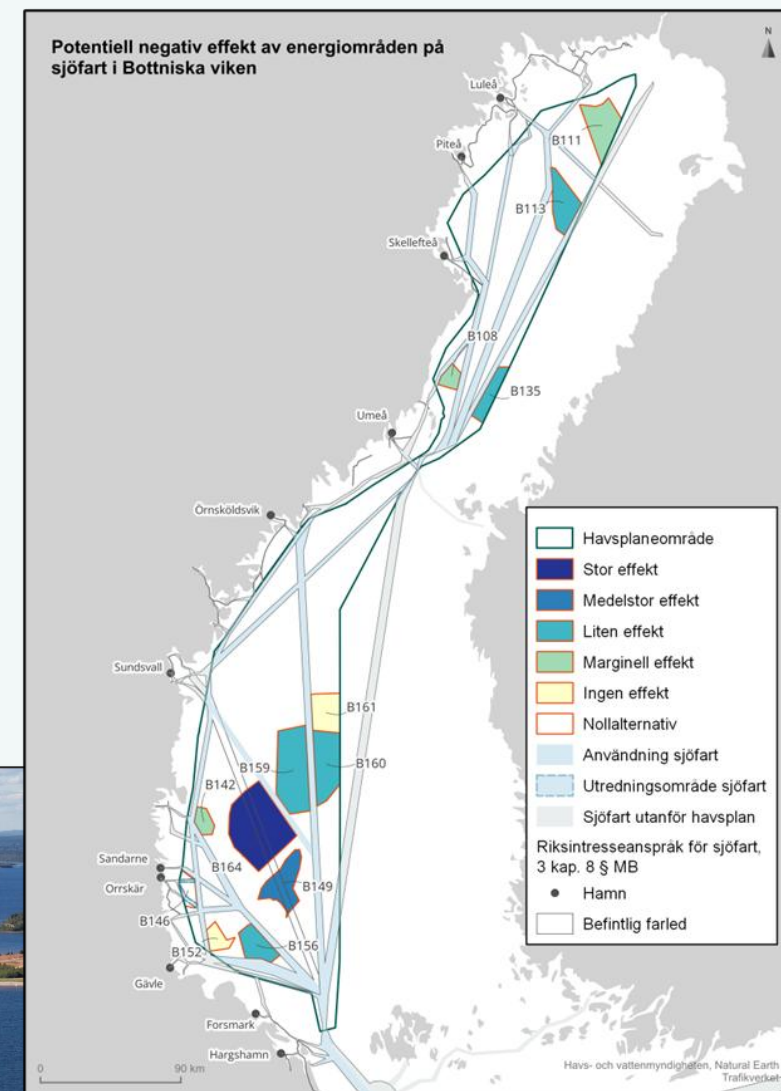
Gulf of Bothnia

- » 13 areas, 130 TWh yearly production
- » Investigation areas around Finngrunden due to migrating birds
- » Expanded special consideration to high nature values
- » Consideration to conditions for winter navigation demands action
- » Challenges:
 - Commercial fishing in the Gulf of Bothnia; pelagic trawls – no coexistence
 - Winter navigation
 - Migrating birds
 - Distance to coast



Shipping

- » Marine spatial plans do not provide guidance on specific safety distances to shipping, but distances will be required for all areas with the use energy extraction.
- » Several wind farms in the same marine area may pose a risk of cumulative impacts on the mobility and safety of shipping when the available space is limited. That risk shall be taken into account.



Offshore wind and winter navigation

- » Marine Spatial Plans based on summer routes.
- » During ice winters, icebreaking is carried out and often other areas than summertime are used for traffic.
- » There is a lack of comprehensive knowledge on how offshore wind energy affects ice formation, conditions for icebreaking and winter navigation.



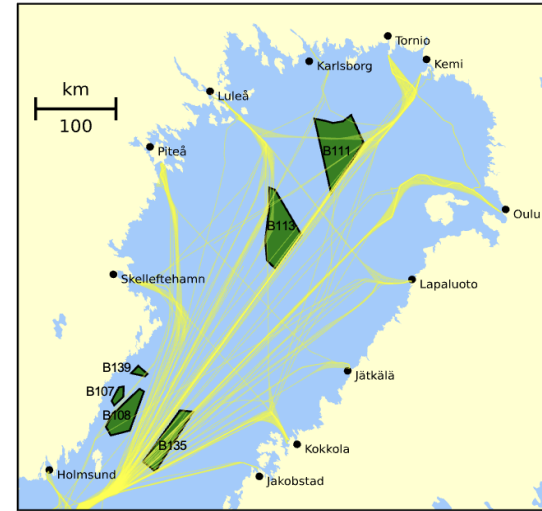
Foto: Sjöfartsverket

Offshore wind and winter navigation

- » Ice conditions and winter navigation makes spatial planning complicated.
- » Pre-study by Chalmers, shows the variety.

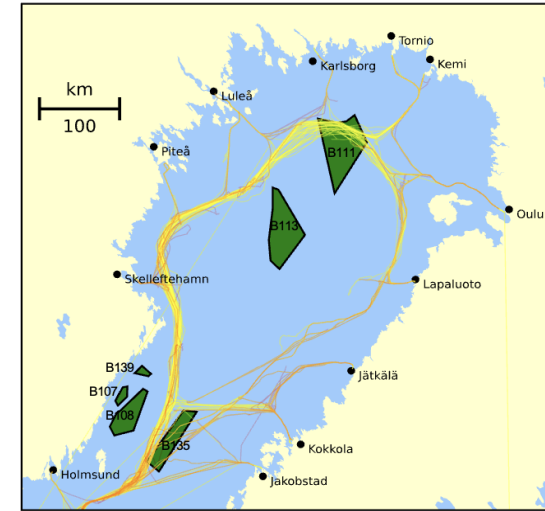
How can we take this into consideration in future planning?

Bay of Bothnia and The Quark
Ship Tracks
2023-07-15 to 2023-07-21



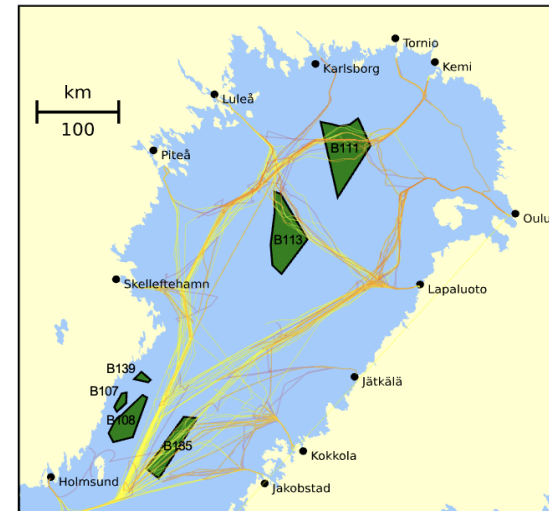
— Cargo, Tanker — Ice Breaker

Bay of Bothnia and The Quark
Ship Tracks
2023-04-01 to 2023-04-07



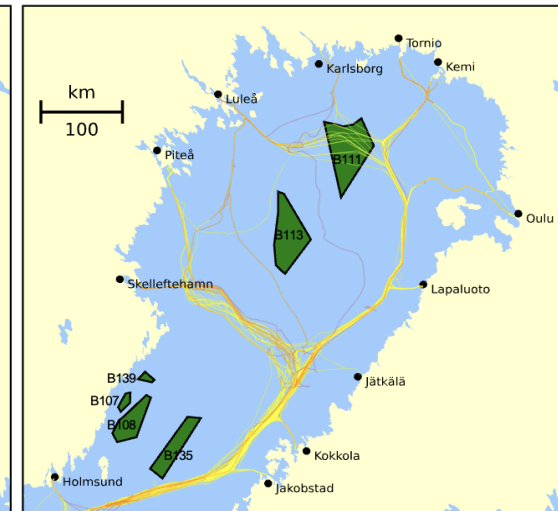
— Cargo, Tanker — Ice Breaker

Bay of Bothnia and The Quark
Ship Tracks
2023-03-08 to 2023-03-14



— Cargo, Tanker — Ice Breaker

Bay of Bothnia and The Quark
Ship Tracks
2023-04-15 to 2023-04-21



— Cargo, Tanker — Ice Breaker

The Swedish legal system - permits

» Processing of an application

- The Swedish Environmental Code
- Land and Environment Courts

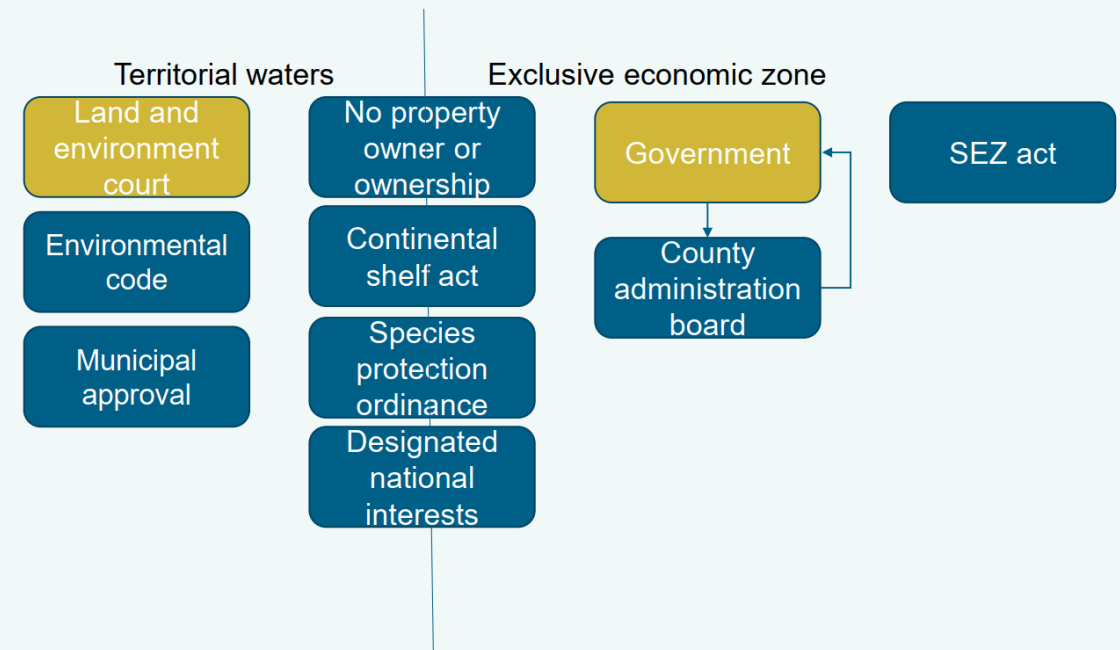
Or

- The Swedish Exclusive Economic Zone Act
- Government

Additional permits

- Continental Shelf Act (Act on the continental shelf)
- Natura 2000-permit

Regulatory framework



In the permit the required safety distances and the approved area for an OFW are specified.

Research

Offshore wind farms in coexistence with society and environment 2024-2028
(Environmental Research Fund)

WindSound - Underwater sound and vibration from operational offshore wind farm, national guideline development for the environmental impact and handling of national security aspects



Offshore wind energy and tourism co-existing in the sustainable blue economy: Holistic Assessment tool for informed decision-making



Environmental consequences of collisions between ships and offshore wind towers – ECSOW



Wind farms in marine ecosystems - towards a sustainable expansion in coexistence with conservation and fisheries (WIND4COCO)



Is it possible to ventilate and restore the Baltic sea as a by-product of clean and storable offshore wind energy? (BaltVent)



Mapping migration of bats across the Baltic Sea and methods to reduce collision with wind turbines



Swedish Agency for Marine and Water Management

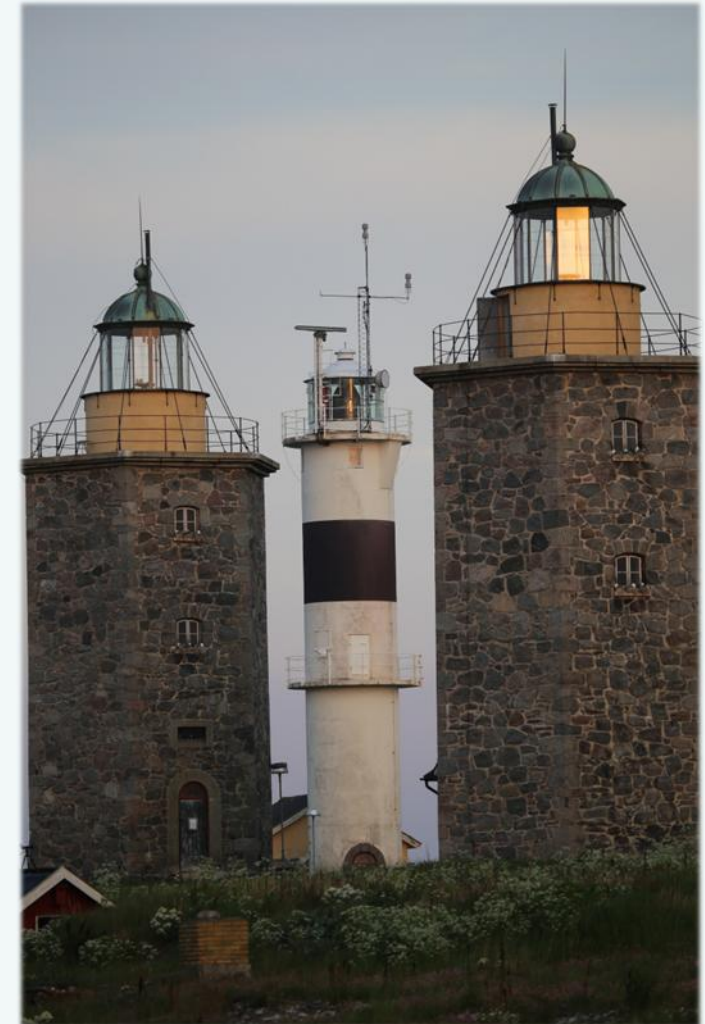


2005-2024/2025



Ongoing at SwAM

- » Marine cultural heritage values have been identified by the county administrative boards for the MSP-process. Further development of this material to be presented; report, GIS.
- » Seascape assessment/integrated landscape character assessment.
- » Framework for follow-up of Marine Spatial Plans.
- » Update of the process for national interest for outdoor recreation and national interest claims for recreation.



Havsplaneringskonferens 2026

- » Målgrupp
 - Länsstyrelser, kommuner och nationella myndigheter
- » September 2026
- » Lunch till lunch i Göteborg
- » Föreläsningar, workshops m.m.
 - Viss möjlighet att följa föreläsningar online
- » Aktuella exempel lokalt och internationellt, pågående arbete, presentationer av nya underlag m.m.
- » HaV i samarbete med Länsstyrelsen Västra Götaland
- » <https://www.havochvatten.se/hav-och-kustzonplanering-i-sverige>



Thank you!
Questions?



Proposal (January 2025)

» Documents

- Plan proposal
- Impact Assessment
- Report on consultations
- Planning conditions
- Letter of opinion

» Explorative and interactive online map

- Including planning evidence

Proposal:

[Proposals for amended marine spatial plans, 2025 - Marine Spatial Planning - Swedish Agency for Marine and Water Management](#)

The collage displays various documents from the proposal process. Key documents include:

- Förslag till ändrade havsplaner för Bottniska viken, Östersjön och Västerhavet** (2025-01-20): The main proposal document.
- Samrådsredogörelse** (2024-05-16): A report on consultations.
- Redogörelse för dialogen under arbetet med förslag till ändrade havsplaner** (2025-01-20): A report on the dialogue during the work.
- Havs och Vatten myndigheten** (2025-01-20): The official agency logo and name.
- Beslut och yttrande** (2025-01-20): A decision and statement.
- Bilaga planeringsförutsättningar** (2025-01-20): A report on planning conditions.
- Redogörelse för granskningsområdet** (2025-01-20): A report on the review area.
- Konsekvensbeskrivning av förslag till ändrade havsplaner för Bottniska viken, Östersjön och Västerhavet** (2025-01-20): A description of the consequences of the proposal.
- A response to received feedback from neighbouring countries and a summary of changes in the marine spatial plans and the impact assessment** (2025-01-20): A response to feedback from neighboring countries.

Swedish Agency for Marine and Water Management

