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

Proposal (ref. no. 00764–2022)

2025-01-20

Havs och Vatten myndigheten

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

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Proposals for amended marine spatial plans

Marine spatial planning is one of our most important tools for achieving the long-term sustainable development of our seas. The Swedish Agency for Marine and Water Management has drawn up proposals for amended marine spatial plans for the Gulf of Bothnia, the Baltic Sea and the Skagerrak/Kattegat, together with an impact assessment, through broad dialogue and collaboration with many different stakeholders. Two formal consultations have been carried out, consultations in autumn 2023 and a review in spring-summer 2024. Consultations on transboundary environmental impacts have also been carried out. A large number of comments have been received which have formed the basis for the development of the proposal. The proposal includes a consultation report in which all comments received from the review are answered.

The Swedish Agency for Marine and Water Management has drawn up the proposal within the scope of a government assignment on new or amended areas for energy extraction in marine spatial plans. The objective is to enable an additional 90 terawatt hours of annual electricity production at sea in addition to the planning in the current marine spatial plans (M2022/00276). The total target is 120 terawatt hours. The guidance on the use energy extraction in the marine spatial plans refers to offshore wind energy.

The starting point for planning for offshore wind energy has primarily been the report *Proposals for suitable energy extraction areas in the marine spatial plans .* (Energimyndigheten 2023) While the objective of enabling offshore wind energy has been an important starting point for the revised marine spatial plans, the planning encompasses many different values and interests with the overall aim of contributing to long-term sustainable development. The marine spatial plans shall contribute to achieving and maintaining good environmental status in the marine environment while using marine resources sustainably in order to develop marine industries.

Environmental, economic and social impacts are summarised in the plan proposal and presented in more detail in the document *Impact assessment of proposals for amended marine spatial plans for the Gulf of Bothnia, the Baltic Sea and the Skagerrak/Kattegat. Dnr 0764-2022.*

Gothenburg, January 2025

Anna Ledin

Director-General

Summary

The Government decides on three marine spatial plans – one for the Gulf of Bothnia, one for the Baltic Sea and one for the Skagerrak/Kattegat. The marine spatial plans provide guidance on the most suitable use of the sea. The marine spatial plans guide authorities, regions and municipalities in future decisions, planning and permit applications. Traders are also expected to be guided by the plans.

The marine spatial plans shall contribute to long-term sustainable development. They shall reconcile industrial policy objectives, social objectives and environmental objectives. The marine spatial plans shall contribute to achieving and maintaining good environmental status in the marine environment while using marine resources sustainably in order to develop marine industries.

The marine spatial plans provide guidance on the most suitable use. The use(s) specified in an area takes priority over other uses. In large parts of the sea, different uses can coexist if they adapt to each other. The marine spatial plans provide guidance on which use(s) take priority and which adaptation is needed. The marine spatial plans include ten uses:

• electricity transmission

• energy extraction

• recreation

• defence

• general use

• cultural environment

• nature

• sand extraction

• shipping

• commercial fishing;

The marine spatial plans also include investigation areas and areas where particular consideration should be given to the interests of total defence, to high cultural heritage values or to high nature values.

All sea uses are based on a suitability assessment based on location, characteristics of the location and needs. National and other public interests are taken into account in the assessment.

The consequences of marine spatial plans assessed from ecological, economic and social perspectives are summarised in the plan proposal, but presented in more detail in the document *Impact assessment of proposals for amended marine spatial plans for the Gulf of Bothnia, the Baltic Sea and the Skagerrak/Kattegat ref.no. 0764-2022.*

Marine spatial planning is based on laws, regulations and societal goals, and is based on evidence-based knowledge and the dialogue conducted with relevant stakeholders in the various stages of the planning process. Marine spatial planning also identifies the need for developed knowledge bases.

Reading instructions

You can read the plans as a document, but there is also a web map tool available including some of the information. The web maps are clickable and searchable, and can be zoomed in. The maps also include planning evidence.

www.havochvatten.se.

How the document is structured

The document is divided into seven parts and an annex. Part 1 is a background description on MSP. Part 2 is common to all three marine spatial plans and provides overall guidance and considerations. The same applies to part 6 on implications and consequences and part 7 with references and lists. Parts 3, 4 and 5 contain guidance and considerations for each marine spatial plan, i.e., for the Gulf of Bothnia, the Baltic Sea and the Skagerrak/Kattegat. The annex contains planning conditions for all marine spatial plans. The annex is available in Swedish.

Content

1. About marine spatial plans and the marine spatial planning process

1.1. Preparing proposals for marine spatial plans

On 10 February 2022, the Government adopted Sweden's first marine spatial plans for the Gulf of Bothnia, the Baltic Sea and the Skagerrak/Kattegat. In connection with the decision on the marine spatial plans, the Government also decided on a new assignment. The mission aims to develop new areas for energy extraction in the marine spatial plans to enable energy extraction at sea with an additional 90 terawatt hours of annual electricity production, in addition to the areas included in the adopted marine spatial plans (M2022/00276).

A first part of the assignment relating to documentation for new or changed areas for offshore energy extraction was delivered on 31 March 2023 by the Swedish Energy Agency (Energimyndigheten 2023). The development of the data was coordinated by the Swedish Energy Agency and was produced together with the Swedish Agency for Marine and Water Management, Svenska kraftnät, the Swedish Armed Forces, the Swedish Environmental Protection Agency, the Swedish National Heritage Board, the Swedish Maritime Administration, the Swedish Board of Agriculture and the Geological Survey of Sweden. The report is available on the Swedish Energy Agency's website.

The Swedish Agency for Marine and Water Management and the Swedish Energy Agency have in parallel had a related government assignment that produced a knowledge compilation on the possibilities and conditions for coexistence between offshore wind energy, commercial fishing, aquaculture and nature conservation. The assignment was reported on 28 February 2023 (Havs- och vattenmyndigheten 2023).

1.2. Marine spatial plans and their application

The purpose of marine spatial plans is to contribute to long-term sustainable development. The marine spatial plans provide guidance for the areas covered by a marine spatial plan to be used for the purpose or purposes for which they are most suitable.

National marine spatial planning is regulated in Chapter 4, Section 10 of the Environmental Code (1988:808) and the Marine Spatial Planning Ordinance (2015:400). Through this legislation, Sweden has also transposed the EU Marine Spatial Planning Directive (2014/89).

Overall

The national marine spatial plan includes three marine spatial plans – one for the Gulf of Bothnia, one for the Baltic Sea and one for the Skagerrak/Kattegat. The marine spatial plans cover Sweden's exclusive economic zone and public waters in the Swedish territorial sea from a

nautical mile beyond the baseline referred to in the Act (2017:1272) on Swedish Maritime Territory and Maritime Zones.

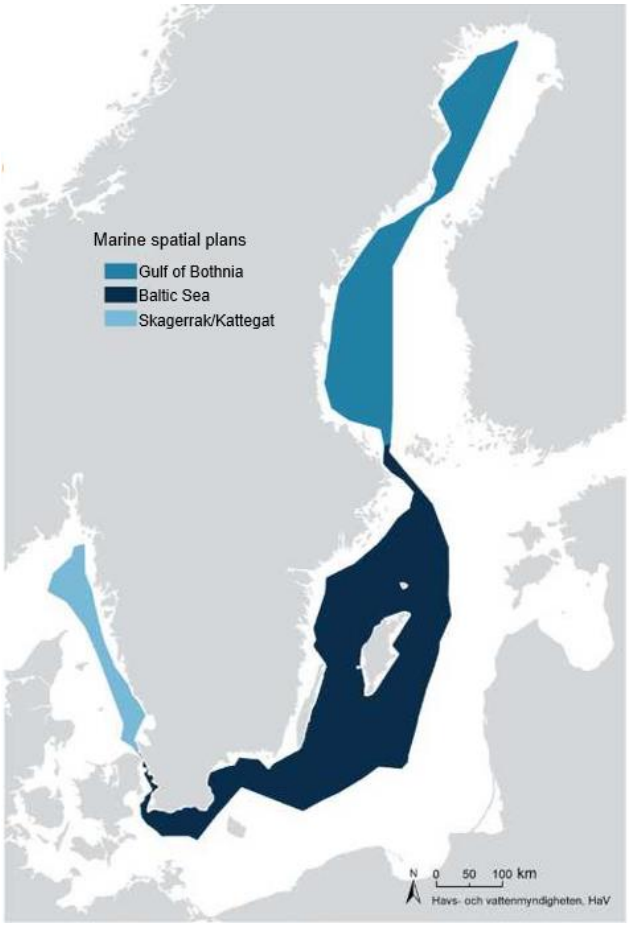


Figure 1.2-1 The three marine spatial plans

The marine spatial plans adopted by the Government provide guidance to authorities, regions and municipalities when planning and examining claims for the use of areas in the sea. The Government may issue regulations on such prohibitions or restrictions on activities and measures within a marine spatial plan area as are necessary to achieve the purpose of the plan.

A marine spatial plan provides guidance on the use of the areas covered by the marine spatial plan, for the purpose or purposes for which the areas are most suitable in view of their nature, location and the needs of society.

The purpose of marine spatial plans is to contribute to long-term sustainable development. The marine spatial plans combine economic, social and environmental objectives and contribute to:

- good environmental status of the marine environment is achieved and maintained
- the sustainable use of marine resources for the development of marine industries
- coexistence is promoted between different activities and uses

In the process of developing marine spatial plans, an ecosystem approach shall be applied.

According to the Marine spatial planning ordinance (2015:400), the Agency for Marine and Water Management must keep up to date with developments in the areas concerned and, if necessary, or at least every eight years, prepare revised proposals for marine spatial plans.

Marine spatial plans provide guidance at a strategic level

The marine spatial plan expresses the state's overall view of how marine areas should be managed. In accordance with the Marine Spatial Planning Ordinance, the marine spatial plan sets out the direction for the use of the marine area and sets out and describes national interest claims under Chapter 3 of the Environmental Code and other public interests of substantial significance The marine spatial plan also sets out how coexistence should work and how issues of incompatible uses should be resolved. Unlike the sectoral authorities' documentation and claims, such as national interest claims under Chapter 3 of the Environmental Code, the marine spatial plan is intended to express the state's view of how marine areas should be managed through a comprehensive and deliberate state view. The Government's decision on a marine spatial plan entails positions on how various public interests, including claims of national interest under Chapter 3 of the Environmental Code, are to be reported in the marine spatial plan. The Government's decision may therefore deviate from the claims and documentation presented by the various sectoral authorities (Prop. 2013/14:186 p.19). The guidance in the marine spatial plan does not mean that a national interest is finally decided, but provides an overall assessment for such a decision and the Government's view. What is of national interest is determined only when applying Chapter 3 of the Environmental Code, for example when assessing permits. Claims from the national interest authorities remain until the sectoral authority updates its national interest claims, even after the marine spatial plan has been decided.

The statutory provision on marine spatial planning is placed in Chapter 4 of the Environmental Code to be brought together with the other provisions on management of land and water resources, since marine spatial planning concerns the management of sustainable development regulated in Chapters 3 and 4 of the Environmental Code. The placement of marine spatial planning in Chapter 4 also makes it clear that marine spatial plans are such a planning basis that is needed to shed light on issues of water management and they are to form the basis for deciding cases and matters under the Environmental Code (Prop. 2013/14:186 p.17).

The considerations of the marine spatial plans are strategic and long-term. This means that marine spatial plans set out the direction for the use of the sea. In the marine spatial planning process, the suitability for different uses is assessed overall and on the basis of the planning data available or produced within the Marine spatial planning process. Based on this assessment, the marine spatial plan guides on the priorities for uses. In the event of a subsequent permit assessment, a more detailed project- and site-specific assessment of the use in an area is carried out. For example, it is reviewed whether an exploitation entails a risk of accidents, a risk to human health and safety, a risk of impact on the cultural environment, a risk of erosion, a risk of significant damage to a national interest, or a risk that environmental quality standards cannot be complied with.

In some cases, the achievement of the plan's objective of long-term sustainable development requires the development of marine management and associated regulations, or the Government to issue regulations prohibiting or restricting certain activities or measures. This may, for example,

involve regulation or other measures that facilitate the coexistence of different interests. In the case of measures relating to commercial fishing or shipping, agreements or decisions are in many cases required within the EU or the International Maritime Organization (IMO).

Marine spatial plans in permit assessment and planning

The marine spatial plans shall be guiding both permit applications and other matters under the Environmental Code. Each authority or municipality that applies the Environmental Code shall ensure that marine spatial plans are available in the case or matter when examining an activity or measure within the marine spatial plan area. In matters concerning new or changed use of a marine area, the Environmental Code shall apply. In interpreting what is the most suitable use under these provisions, marine spatial plans are indicative.

The marine spatial plans are also an indicative basis for certain permit applications under other laws where the Environmental Code's management provisions apply, such as the Act (1992:1140) on Sweden's exclusive economic zone, the continental shelf (1966:314) and the Act (1983:293) on the establishment, extension and demarcation of the public waterway and port. This is because the provisions of, inter alia, Chapters 3 and 4 of the Environmental Code shall also apply to the examination of cases and matters under the above-mentioned laws.

The county administrative board has an important role as it is responsible for the initiatives needed to ensure that planning and decision-making processes take account of Chapters 3 and 4 of the Environmental Code. When Chapters 3 and 4 of the Environmental Code are to be applied in the examination of a case or matter, the county administrative board shall, in particular, work to ensure that the national interests are met. In areas covered by an adopted marine spatial plan, the work of the county administrative board shall be based on the marine spatial plan in accordance with Section 3 of the Ordinance (1998:896) on the management of land and water areas. Thus, the adopted marine spatial plan is the starting point for the part of permitting or planning processes where national interest claims and good management come into play.

For new or changed use of a marine area, such as the establishment of wind energy or sand extraction activities, a number of different permits from several licensing authorities may be needed. In the annex on planning conditions, you can read briefly about the legal conditions under each interest.

The role of marine spatial plans in municipal and regional planning

In accordance with the Planning and Building Act (2010:900), municipalities are obliged to produce a comprehensive plan that sets out the direction for the long-term development of the physical environment for the entire municipality. Some regions are obliged to produce a regional plan that, among other things, sets out the basic features for the use of land and water areas that are important for the county. The Planning and Building Act, as well as the area of the municipality and the region, covers the territorial sea.

The marine spatial plan guides municipal and regional planning. According to the Planning and Building Act, the comprehensive plan must state how the municipality intends to take into account and coordinate the comprehensive plan with relevant national and regional objectives, plans and

programmes of importance for sustainable development within the municipality. The marine spatial plan is also indicative of how national interests are to be met in the planning, see earlier reference to Section 3 of the Ordinance (1998:896) on land and water management. The same applies in relation to regional plans.

In the area of the territorial sea where the national, regional and municipal plans overlap, all plans apply, in the Swedish exclusive economic zone only the marine spatial plan applies and in the coastal area the municipal comprehensive plan and regional plan apply where it exists.

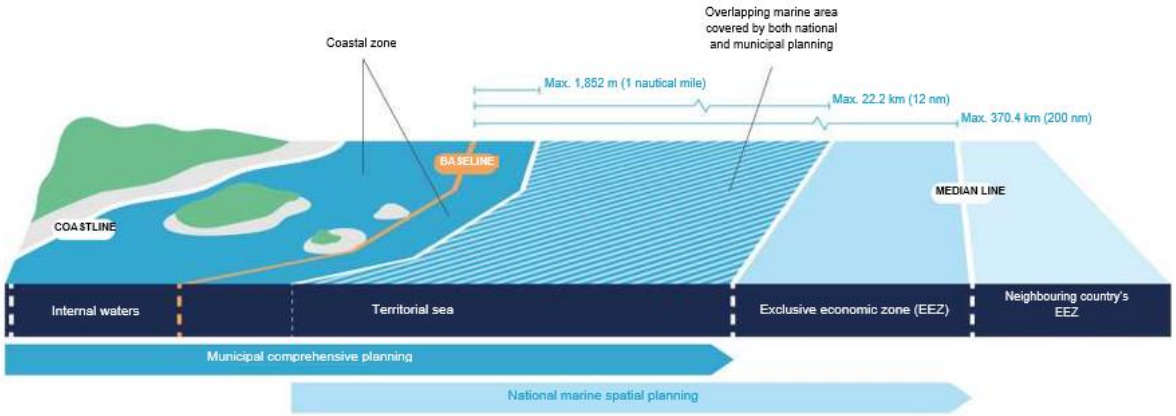


Figure 1.2-2 Concepts, boundaries and planning responsibilities. In the territorial sea, the state shares planning responsibilities with municipalities. In the economic zone, the state has sole planning responsibility

The interaction between marine spatial plans, regional plans and comprehensive plans is important for the good functioning of the link between sea and land. Regional and comprehensive plans are important for demonstrating regional and local considerations and claims that may be relevant to marine spatial planning.

Where a municipality has stated clear intentions regarding the future use of the marine areas covered by both a comprehensive plan and a marine spatial plan, they are weighed in on the decision on the marine spatial plan. In municipal reviews and in-depth reviews of comprehensive plans, marine spatial plans provide a comprehensive source of information on the state's view of future land and water use in the area. If the position of the marine spatial plan is outdated, for example if new knowledge has emerged since the plan was adopted, there may be reason for the municipality to deviate from the marine spatial plan in the comprehensive plan. The same applies in relation to regional plans.

The County Administrative Board has two formal tools in which it must pay particular attention to the municipalities in the comprehensive plan work if the municipality's view does not correspond to the view presented in the marine spatial plan.

- During the review period of a new or amended comprehensive plan, the county administrative board submits an audit opinion in accordance with Chapter 3, Section 16 of the Planning and Building Act. It shall state, inter alia, whether the municipality's proposal does not meet a national interest under Chapter 3 or 4 of the Environmental Code, whether

the proposal can contribute to non-compliance with an environmental quality standard under Chapter 5 of the Environmental Code, whether inter-municipal issues are not coordinated in an suitable manner, or whether a construction work is unsuitable with regard to health and safety. When assessing whether the plan proposal meets a national interest under Chapters 3 or 4 of the Environmental Code, the county administrative board for areas covered by a decided marine spatial plan shall be guided by the marine spatial plan (see reference above to Section 3 of the Ordinance on economic management).

- The County Administrative Board shall also report to the municipality on the national and inter-municipal interests that may have an impact on the topicality of the comprehensive plan pursuant to Chapter 3, Section 26 of the Planning and Building Act. The report shall be made during the second half of the period between two ordinary elections to the municipal council. The document states how these interests relate to the comprehensive plan and whether the county administrative board’s audit opinion in some respects no longer applies.

The same applies to regional plans.

The County Administrative Board monitors the national interests and must issue an opinion on the municipality's proposal for a detailed development plan when the municipality develops one, in accordance with the provisions of the Planning and Building Act. Even when a municipality draws up a detailed development plan, situations could arise where the detailed development plan does not correspond to the view of the future use of the water area presented in the marine spatial plan.

Possibility of examining new claims in marine spatial plans

New demands and needs are expected to continuously arise in the marine spatial plan areas. Such claims are dealt with in follow-ups and new proposals for marine spatial plans. Until new marine spatial plans are adopted, guidance shall be included in existing marine spatial plans to the extent relevant. If there is no direct guidance in the marine spatial plans, planning and decision-making can be based on the intentions of the marine spatial plans or on the best available knowledge.

Possibility to propose regulations

The Government may issue regulations prohibiting or restricting activities or measures within a marine spatial plan area, if this is necessary to achieve the purpose of the plan. Regulations or restrictions on the use of the planned area shall be those that are not covered by existing restrictions and prohibitions (according to Government Bill 2013/14:186, p. 21). Prohibitions and restrictions on certain uses may provide opportunities for other uses of the area. So far, no proposals for such regulations have been made. The authority considers that existing management is mainly able to capture what the marine spatial plans guide. Possibilities to provide for prohibitions or restrictions on activities or measures within a marine spatial plan area may in some cases be limited by international regulations such as the EU's Common Fisheries Policy.

1.3. Marine spatial planning process

Marine spatial planning is a broad process involving many actors in several stages. After the Government have adopted the marine spatial plans, they are applied and followed up in a recurring cyclical process.

Marine spatial plans are developed in collaboration

Marine spatial planning is an open process that provides opportunities for participation for those concerned at municipal, regional, national and international level. Industry and interest organisations, as well as research institutions, are also given the opportunity to participate and contribute with insight and knowledge.

At national level, cooperation takes place with central authorities and county administrative boards on strategic planning issues, the planning process and sectoral issues.

At regional and municipal level, the county administrative boards have an important role in coordinating national and municipal planning. Sweden's 14 coastal county administrative boards participate in the work for municipal participation and in other supportive work towards the municipalities. The county administrative boards of the counties of Kalmar, Västernorrland and Västra Götaland coordinate the work of the coastal county administrative boards concerned. The coastal county administrative boards also produce additional regional planning documentation, for example from municipalities and development actors, or internally from the county administrative board in matters within the county administrative board's areas of responsibility.

The municipalities contribute to the planning with documentation, comments and suggestions for improvement during the planning process. This is done not least through municipal spatial planning in both coastal areas and the part of the territorial sea that overlaps with national marine spatial planning. It helps to strengthen the link between sea and land and improves coordination between national and municipal planning.

Regional development strategies and regional plans form the basis of the planning work. Regions are involved in the marine spatial planning process.

Two-stage consultations

The process of developing marine spatial plans has several steps. Two formal consultation stages, consultation and a subsequent review consultation, take place before the Government decides on marine spatial plans in accordance with the Marine Spatial Planning Ordinance. This means that the draft marine spatial plans are made available so that those who wish can express their views. The comments received are assessed and form the basis for revised plan proposals. The formal dialogue stages contribute to broad participation and a democratic process.

The Agency for Marine and Water Management also carries out consultations with Sweden’s neighbouring countries in accordance with the Espoo Convention. The Espoo Convention concerns transboundary environmental effects.

To a large extent, the Marine spatial planning process also involves continuous dialogue and collaboration. This means, for example, reconciliations and dialogue with central authorities and county administrative boards on thematic and process-related issues.

A description of the consultation and opinion procedure can be found in the separate document Presentation of the dialogue in the work on proposals for amended marine spatial plans. The consultation and review report contains a summary of the comments received from the consultation and review, including the Agency for Marine and Water Management's comments on them.

Planning based on the ecosystem approach

According to the Marine spatial planning ordinance, an ecosystem-based approach is to be applied in the preparation of marine spatial plans. The ecosystem approach is a strategy for the conservation of nature values, sustainable use and equitable distribution of nature resources. This with the aim of ensuring that the use of ecosystems takes place within their boundaries(Havs- och vattenmyndigheten 2012).

The UN Convention on Biological Diversity (CBD) is one of the most important international foundations for the ecosystem approach. The Ecosystem Approach is based on the 12 Malawi Principles. The ecosystem approach is applied in marine spatial planning in a number of ways based on the Malawi principles (Havs- och vattenmyndigheten 2012). Some examples:

- Marine spatial planning is based on the social objectives set out in the overall interests of society. Collaboration and dialogue in the course of work makes it possible to capture perspectives from many different actors. Mainly related to Malawi Principle 1 - The interests of society determine the objectives of management and 10 - The ecosystem approach should integrate the conservation of biodiversity and its sustainable use.
- Marine spatial planning provides guidance at horizontal and strategic level with scope for planning at local and regional level. Municipalities and regions are given the opportunity to participate in national marine spatial planning, so that local and regional needs can be taken into account. Mainly related to Malawi Principle 2 - Governance should be decentralized to the lowest applicable level and involve all in order to balance local and public interests.
- Marine spatial planning is carried out in an open planning process with collaboration and dialogue based on municipal, regional, national and international perspectives. The process allows both collaboration in the day-to-day work and formal opportunities to gather views. Mainly related to Malawi Principle 2 - Governance should be decentralized to the lowest applicable level and involve all in order to balance local and public interests; 11 - The ecosystem approach should take into account all types of relevant information, including scientific and traditional and local knowledge, innovations and methods; and Principle 12 - The ecosystem approach should involve all relevant sectors of society; and scientific disciplines.

Assessment of impacts

Strategic Environmental Assessment (SEA) is a process aimed at integrating environmental aspects into plans or programmes in order to promote sustainable development. The fact that a marine spatial plan is subject to the requirement to carry out a strategic environmental assessment pursuant to Chapter 6, Sections 1–19 of the Environmental Code is apparent from the Environmental Assessment Ordinance. The work on strategic environmental assessment is documented in an impact assessment in the form of a single document for the three marine spatial plans.

The strategic environmental assessment of marine spatial plans is also based on the portal section of the Environmental Code. The Environmental Code shall be applied in such a way that:

- protection of human health and the environment from damage and nuisance, whether caused by pollution or other influences;
- valuable nature and cultural environments are protected and nurtured;
- preserving biodiversity;
- land, water and the physical environment are otherwise used in such a way as to ensure good long-term management from an ecological, social, cultural and socio-economic point of view, and
- re-use and recycling, as well as other management of materials, raw materials and energy, are promoted in order to achieve a circular economy.

The requirements mean that social and economic aspects also need to be included in a broad assessment of impacts. The impact assessment therefore includes social and economic effects, in addition to the environmental ones required under Chapter 6 of the Environmental Code.

A national delimitation consultation for the environmental assessment was held between 8 July and 10 October 2022. Sweden’s neighbouring countries have been notified under the Espoo Convention (1 December 2022 to 28 February 2023). Consultations on the draft plan and the environmental impact assessment were held with neighbouring countries under the same Convention from 28 November 2023 to 20 February 2024.

The impact assessment is part of the application of the ecosystem approach. It shall clarify environmental and other effects and guide planning to contribute to long-term sustainable development.

According to the Marine spatial planning ordinance, proposals for marine spatial plans must clearly state the implications and consequences of the use of the marine area in accordance with the plan.

Planning in cycles and follow-up of the plan

Marine spatial planning can be described as a recurring process that takes place in cycles over several years. Marine spatial planning takes several steps from gathering information and analysing the current situation to planning where marine spatial plans are the result of the

planning process. After that, the plans are applied and follow-up is carried out on an ongoing basis.

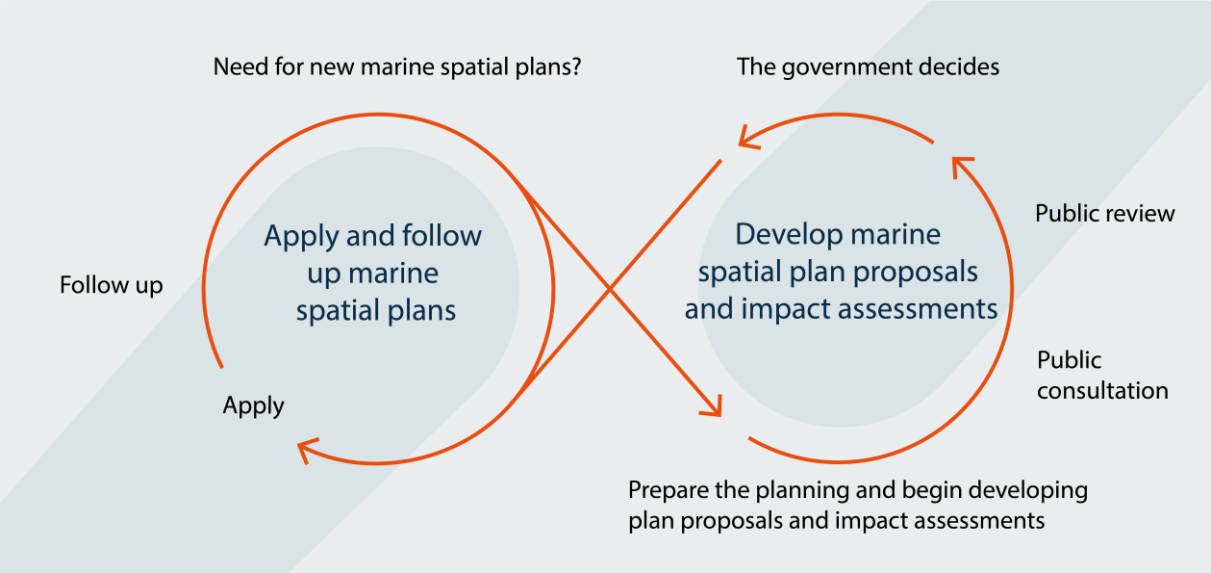


Figure 1.3-1 The overall marine spatial planning process in which marine spatial plans are developed for subsequent implementation and follow-up. If necessary, or at least every eight years, new plan proposals are drawn up. (Source: Swedish Agency for Marine and Water Management)

According to Section 21 of the Marine Spatial Planning Ordinance, the Agency for Marine and Water shall follow up the plans adopted and draw up new proposals for marine spatial plans if needed or at least every eight years. Preparedness is required to continuously take in, evaluate and use new knowledge in future marine spatial plans.

According to Chapter 6, Sections 16 and 19 of the Environmental Code, the Agency for Marine and Water Management shall monitor and evaluate the environmental impact of the plans in practice. The intention is to gain early knowledge of significant environmental impacts that have not been identified before, so that these impacts are stopped or reduced. The follow-up also aims to monitor the environmental impact that is expected and that has been described in the plan's environmental impact assessment.

A description of measures for monitoring and monitoring the significant environmental effects of implementing marine spatial plans can be found in the environmental impact assessment.

The Swedish Agency for Marine and Water Management is preparing a proposal for a framework for monitoring marine spatial plans in collaboration with, among others, county administrative boards and universities. The purpose of the framework is to guide the follow-up of marine spatial plans in order to facilitate and prepare the next planning round and to provide support to the Swedish Agency for Marine and Water Management to meet the legal requirements for follow-up.

The framework includes ongoing follow-up related to business intelligence and updating of planning conditions, such as changing claims or uses. Secondly, the framework includes in-depth follow-up where the focus is on application, goal achievement, consequences and analysis of the plan's timeliness.

During this planning round, ongoing follow-up is carried out within the framework of the planning process with the development of new plan proposals.

The in-depth follow-up focuses on:

- analysing the timeliness of the plan based on new or changed claims, conditions and uses
- answering questions on how the marine spatial plan is applied and how the guidance works
- assessing the impact of the plan and the achievement of its objectives;
- developing knowledge of the significant environmental impact of the plan.

1.4. Vision and goals

Vision – the sea in 2050

A marine spatial plan is future-oriented and will help shape the future we want to achieve. The target year of the marine spatial plans is 2040. At the same time, 2050 is used as a vision year to stimulate discussion and thoughts on the long-term perspectives of planning.

The marine spatial plans look ahead to 2050 and are based on a vision of how the sea is used, provided that the planning objectives are met. The vision represents the state that marine spatial plan will help to realize.

> *By 2050, we will use the sea through competitive, innovative and sustainable maritime industries. The sea has good environmental status and a rich biodiversity. We preserve and develop nature and cultural environments in the sea and make use of its ecosystem services. The management of the sea has contributed to slowing down climate change and we have adapted to changing circumstances. There are plenty of experience values and opportunities for recreation. Business and management of the sea work together and marine spatial plans contribute with a holistic view, foresight and predictability. By 2050, we will be living in peace and freedom in the Baltic Sea and North Sea regions.*

Planning objectives

The marine spatial plans shall integrate economic policy objectives, social objectives and environmental objectives. To support the implementation of the marine spatial planning process, there are ten planning objectives. The planning objectives are based on societal objectives, legislation, national strategies and other relevant evidence (*Figure 1.4-1 The planning objectives and some of the overall objectives and conditions that have been the starting* points for the formulation of the planning objectives*)*. Targets and strategies from the global to the national level are included, including the UN Sustainable Development Goals (SDGs) and EU strategies related to marine and maritime issues, environment, climate and energy. At national level, for example, strategies and objectives relating to marine environmental issues and various marine-related activities have been taken into account, as well as Sweden's environmental objectives.

The planning objectives were developed during the first planning round, but have been updated to some extent in this second planning round. The planning objectives consist of an overall

objective supported by the other nine objectives. These nine are divided into two groups with the headings *'create conditions for'* and 'create *preparedness for'.* Claims that are clear and extensive in the near term are grouped under *conditions*, while issues that, primarily in a longer perspective, are deemed to have extensive claims in the sea are grouped under *preparedness*. The objectives related to preparedness signal that marine spatial planning will take into account future needs and activities.

Overall objective:

- Contribute to a good marine environment and sustainable development.

Create the conditions for:

- Regional development, recreation and preservation of cultural values
- Marine green infrastructure and promotion of ecosystem services
- Sustainable shipping
- Good accessibility
- Energy transmission and renewable electricity generation in the sea
- Sustainable commercial fishing
- Defence and security.

Prepare for:

- Future mineral extraction and carbon storage
- Future establishment of sustainable aquaculture.

Overall objective: Contribute to good marine environment and sustainable development

The marine spatial plans shall provide overall spatial conditions to meet development needs and objectives of sustainable development, while contributing to the achievement and maintenance of a good marine environment.

Good marine environment is described above all in the national environmental quality objective *A Balanced Marine Environment Flourishing Coastal Areas and Archipelagos* and its specifications. Other environmental quality objectives are also relevant, such as *A Rich Diversity of Plant and Animal Life, Zero Eutrophication* and *A Non-toxic environment* that also captures how environmental problems from land and air have an impact on the sea. Good environmental status in accordance with the Marine Environment Regulation is one of the clarifications.

Sustainable development relates, among other things, to Sweden's marine strategy and to the EU's Green Deal, which includes, for example, the development of a sustainable blue economy.

Development is sustainable when we can meet our needs economically, environmentally and socially today, while at the same time providing the conditions for future generations to meet their needs. An important starting point for marine spatial planning is that sustainable development requires well-functioning ecosystems. In accordance with the ecosystem approach's holistic

perspective, the functions of the ecosystem are therefore considered from several time perspectives as well as direct, indirect and cumulative effects of claims in the sea.

An important starting point for marine spatial planning is to create the conditions for a limited climate impact in line with the environmental quality objective *"Reduced climate impact"* and to contribute to the climate transition.

Objective: Create conditions for regional development, recreation and preservation of cultural values

The marine spatial plans shall provide spatial conditions for sustainable development, good quality of life, equality and attractive environments regionally and locally. Different places and areas have different conditions for and perspectives on regional development. Marine spatial planning should therefore seek good conditions for local and regional development along the entire coastline.

The marine spatial plans shall contribute to the consideration of the landscape and create the conditions for the development of maritime industries and recreation. Outdoor life is of great importance for people's quality of life and health.

The marine spatial plans will also contribute to the preservation of cultural environments so that people continue to have access to and understand the country's historical development. Preserved cultural environments provide opportunities to experience the landscape, contribute to social sustainability and create attractive environments to live, visit and conduct activities in. Recreation, nature values and cultural environments on the coast and in the sea are often a prerequisite for tourism and quality of life in coastal communities, for the further development of commercial fishing through by-products and for other marine-related activities that in turn contribute to sustainable blue economy and employment.

Objective: Creating conditions for marine green infrastructure and promoting ecosystem services

The marine spatial plans shall contribute to healthy ecosystems and the development of ecosystem services. They shall support the establishment of new marine protected areas in accordance with national and international objectives and create the conditions for strengthening and maintaining representativeness, functionality and ecological links. Furthermore, the marine spatial plans shall contribute to maintaining the species and habitats protected at a favourable conservation status. Favourable conservation status is a term used to describe the conditions needed for a nature type, habitat or specific species to remain in place in the long term. The term is used for habitat types and species identified as being of particular value in the context of the European Natura 2000 network.

The marine spatial plans shall contribute to ensuring marine green infrastructure. By green infrastructure we mean an ecologically functional network of habitats and structures, nature areas and landscaped elements that are designed, used and managed in such a way that biodiversity is preserved and ecosystem services that are important to society are promoted throughout the landscape. whereas green infrastructure is an important prerequisite for the promotion of

ecosystem services; The plans will also contribute to securing pathways and migration routes in and between habitats in the marine environment, as well as migratory routes for birds. The marine spatial plans shall provide the basis for scientific studies and long-term monitoring of the marine environment.

Objective: Creating conditions for sustainable shipping

The marine spatial plans shall provide the conditions for ecologically, socially and economically sustainable shipping. This applies to both short-distance shipping and long-distance sea shipping. Marine transport is given sufficient space to grow, while marine spatial plans contribute to increased maritime safety with fewer accidents and reduced risks of oil or other discharges, as well as other disturbances. The marine spatial plans shall provide the conditions for efficient transport routes with low fuel consumption as well as the least possible environmental impact of shipping, especially in ecologically sensitive areas. Account shall be taken of the designation of the Baltic Sea as a Particularly Sensitive Marine area (PSSA) by the International Maritime Organization (IMO).

Objective: Create conditions for good accessibility

The marine spatial plans shall create the conditions for the development of maritime transport and other infrastructure and make the sea accessible to a broad public.

Good accessibility in the maritime transport system provides good conditions for keeping the transport infrastructure as a whole together, so that, for example, the transfer of goods from road and rail to shipping is facilitated. Preparedness shall be created for the development of physical infrastructure, such as future tunnels or bridges.

There shall continue to be good conditions for fishing vessels to reach and use the sea and ports necessary for fishing activities.

Spatial conditions shall be provided for the use of the sea for electronic communication infrastructure in the form of submarine cables and radio systems. Conditions must also be created to give people access to the sea for recreation. It can contribute to both public health and development in the hospitality industry.

Objective: Creating conditions for energy transmission and renewable energy production in the sea

The marine spatial plans will support work on integration and connection to the European electricity grid and provide the conditions for existing, planned and potential submarine cables for energy transmission within Sweden and between Sweden and other countries. This also applies to gas pipelines and cables for energy transmission from offshore energy production.

The marine spatial plans will contribute to creating the conditions for Sweden's future need for fossil-free energy extraction. In this, the planning will support Sweden's energy targets by creating the conditions for the expansion of offshore wind energy.

Preparedness shall be provided for other offshore energy production from other types of sources and marine spatial plans shall provide the conditions for testing new technologies in the area.

Objective: Creating the conditions for sustainable commercial fishing

Marine spatial plans shall contribute to environmentally sustainable, resource-efficient, innovative, competitive and knowledge-based fisheries within an ecosystem-based management that includes consideration of important habitats for both fish and other species. Well-managed fish stocks and fish habitats are a prerequisite for sustainable and competitive commercial fishing.

Particularly important is integration with coastal zone planning, where there are important fish habitats, namely spawning and nursery areas.

Objective: Creating the conditions for defence and security

The marine spatial plans will create the conditions for the defence of Sweden and Swedish interests in both the short and long term. Actors in both military and civil defence are given the opportunity to conduct their activities. Among other things, to conduct exercises under various conditions and other activities of importance to the military defense, such as signals intelligence. The marine spatial plans will also provide the conditions to meet the need for strategic supply of Sweden in peace, crisis and war.

Objective: Prepare for possible future extraction of minerals and for carbondioxide storage

Consideration should be given to the possibility of increased extraction of finite resources such as sand, gravel and other minerals, as well as carbon storage to counteract climate change. Extraction of oil and gas in Sweden's maritime territory or economic zone is not relevant.

Objective: Prepare for the future establishment of sustainable aquaculture

Marine spatial plans shall have spatial preparedness for the development of aquaculture and the potential for space-efficient use of the sea for sustainable production.

In terms of the development potential of aquaculture and increased research in this area, aquaculture outside the coastal zone may become relevant in a future that fits within the marine spatial planning framework 2040 and vision year 2050. Marine spatial planning should therefore take account of the fact that aquaculture may be relevant in marine spatial plans in the future.

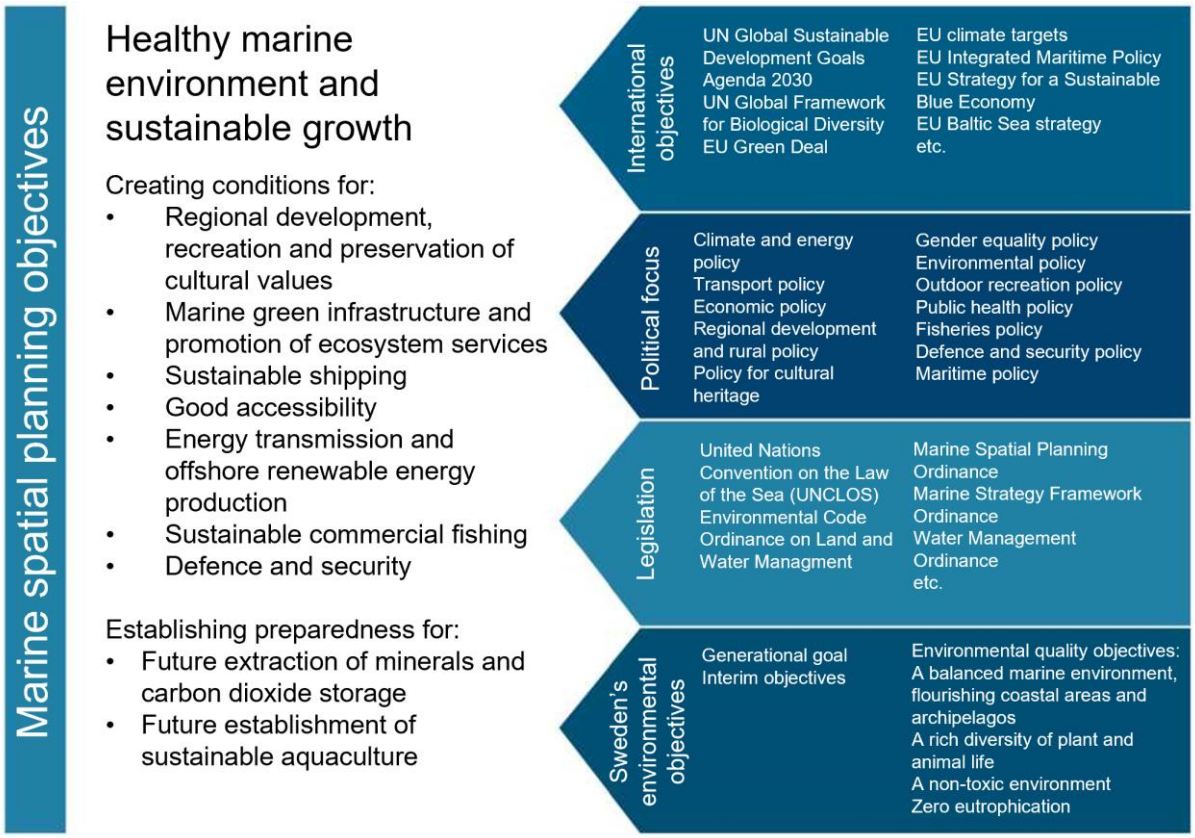


Figure 1.4-1 The planning objectives and some of the overall objectives and conditions that have been the starting points for the formulation of the planning objectives

2. Overall guidance on use and coexistence

The plan description and associated plan maps provide guidance on the use of the sea. The plan maps show the geographical areas for different uses and particular consideration. This part describes how the plan maps should be read as well as the meaning of uses and particular consideration. The section also provides guidance on how coexistence between different uses can work.

2.1. Principles for the assessment of the most suitable use and particular consideration

Holistic assessment

The considerations of the marine spatial plans are strategic and long-term. This means that the marine spatial plans guide the direction of the use of the sea and that the suitability for different uses is assessed overall, as described in section 1.2. The assessment is based on the planning data available and produced within the marine spatial process, including the assessment of uncertainties. There are continuing knowledge gaps and the need for developed data.

According to the Marine spatial planning ordinance, marine spatial plans must specify the use for the sea. The uses specified in the different geographical areas of the marine spatial plans are judged to be the most suitable, taking into account the nature and location of the areas and the needs that exist, and on the basis that they collectively contribute to the overall objectives of the plans as long-term sustainable development.

This means that assessments for individual areas must at the same time relate to assessments on a regional scale as well as for the entire marine spatial plan area and the three marine spatial plans taken together. To the extent possible, the assessments also relate to conditions prevailing on land, in neighbouring countries and abroad.

Use

The geographical delimitation of uses in marine spatial plans is based on one of the following three types of public interest:

- National interests under Chapter 4, Section 8 of the Environmental Code, i.e. Natura 2000 sites.
- National interest claims under Chapter 3 of the Environmental Code.
- Other public interests of substantial significance.

Areas of national interest under Chapter 4 of the Environmental Code

Areas of national interest are regulated in the geographically related management provisions in Chapter 4 of the Environmental Code. Areas with particularly high values in terms of nature and

cultural conservation, tourism and outdoor recreation are listed directly in Chapter 4. These areas are in their entirety of national interest under the Environmental Code and thus decided by the Swedish Parliament. Areas with particularly high values for tourism and outdoor recreation are listed in Chapter 4, Section 2 of the Environmental Code. Coastal and archipelago areas which have high conservation values and which are to be protected against the establishment of environmentally damaging installations are listed in Chapter 4, Section 3 of the Environmental Code (unbroken coast). Other coastal and archipelago areas that have high conservation values and where the establishment of environmentally damaging facilities may take place in places where similar activities already exist are listed in Chapter 4, Section 4 of the Environmental Code (Highly Developed Coasts). Several of our coastlines are covered by one or more overlapping national interests as described above. Since the values are primarily based on coastal areas and that in most cases its delimitation and description are not clearly defined for the marine spatial plan area, the uses of the marine spatial plan are not based on these values. However, the marine spatial plan is designed with these national interests in mind and uses within the marine spatial plan may need to be adapted based on the national interests' needs.

Natura 2000 sites are also of national interest under Chapter 4 of the Environmental Code. Activities or measures that may significantly affect such a nature area require a special permit assessment. The nature of the use of the marine spatial plan is based, inter alia, on Natura 2000 sites.

Areas covered by national interest claims under Chapter 3 of the Environmental Code

Areas covered by national interest claims are designated by authorities and are regulated in the operational management provisions in Chapter 3 of the Environmental Code. The areas concern both different conservation interests and areas that have been deemed important for development for a certain purpose, according to the authority responsible for the national interest claim in question. An area covered by a national interest claim shall, when deciding on a change of use or permit assessment under Chapter 3 of the Environmental Code, be protected against measures that may significantly damage the value of the area, significantly complicate the operation of a business or significantly complicate the creation or use of a facility, depending on the national interest claim. In order for the concept of ‘significant harm’ or ‘significant aggravation’ to be met, the measure must either have a lasting negative impact on the interest in question or, temporarily, have a very significant negative impact on it. Marine spatial planning does not assess whether the impact is significant enough to cause significant damage or significant aggravation.

Public interests of substantial significance

In general, public interests in spatial planning are land and water interests that contribute to the achievement of social objectives for economically, socially and environmentally sustainable development. What are public interests of *substantial significance* and which, according to the Marine spatial planning ordinance, must be accounted for in marine spatial plans, are considered at national level in the marine spatial planning process. One of the following shall be met for the interest in a geographical area in order to be considered as a public interest of substantial significance in marine spatial planning:

- It is of great national importance.

- Needed for important societal functions now or in the future.
- Needed to achieve great societal benefit.
- Necessary to fulfil Sweden's international obligations.
- Necessary to implement or maintain nationally or internationally important structures.

Overlapping public interests

In large parts of the sea, several public interests overlap. The marine spatial plan addresses overlapping public interests by providing guidance on coexistence between different uses where they are deemed compatible and suitable or by giving priority to the use(s) deemed most suitable where uses are deemed incompatible. The marine spatial plan can thus give priority to a use based on a national interest claim under Chapter 3 of the Environmental Code, even though there is another national interest claim in the same area. The marine spatial plan may thus also give priority to a use based on a public interest of substantial significance, despite the fact that there is a national interest claim under Chapter 3 of the Environmental Code in the same area (see Section 1.2). This may include, for example, national interest claims that are considered to be outdated or assessments to achieve the objectives of the plan.

The assessment of the marine spatial plan then provides guidance for subsequent planning and when the Environmental Code is applied, for example in permit applications. All existing national interest claims remain regardless of the marine spatial plan's guidance until the respective sectoral authority makes new decisions on its national interest claims. What can be affected is how existing national interest claims are taken into account in planning and licensing.

Particular considerations

The marine spatial plans specify areas where ishould be given to the interests of total defence, high cultural and nature values. Consideration refers to values that are important to preserve or strengthen in order for the sea to be used sustainably and is based on the same types of public interest as the uses. The need to specify specific considerations has been identified in the Marine spatial planning process as a complement to specifying uses for the purpose of coexistence. Comprehensive guidance on coexistence can be found in Section 2.4. The marine spatial plans do not specify what measures may need to be taken to meet specific considerations in a specific area. Suitable measures can be specified, if necessary, in permit assessment, planning or other management.

2.2. Plan maps presentation

The uses shown in the plan map have been deemed to be the most suitable and these take priority over other uses. Other uses in the area must be adapted to the conditions and needs of the specified uses in management, planning and permit assessment.

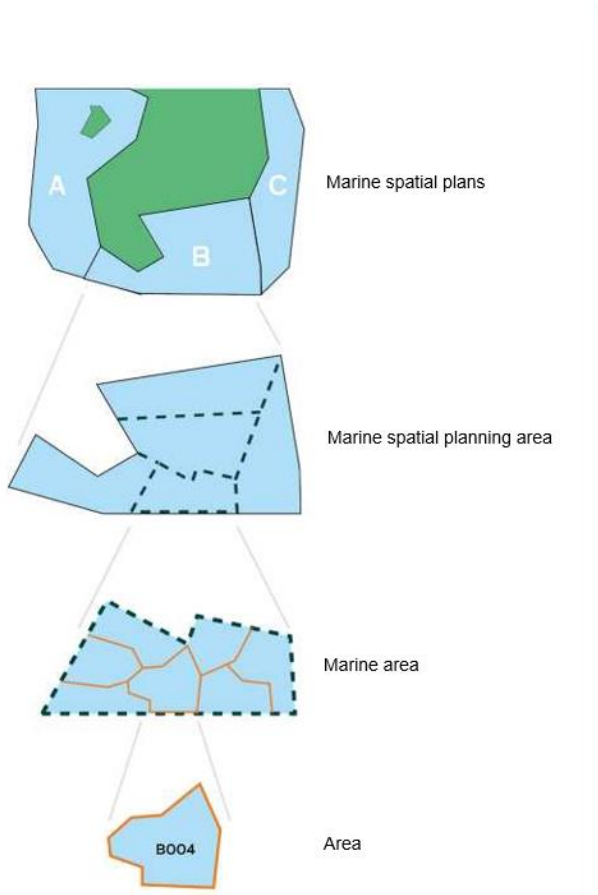
In many cases, multiple uses at the same location are indicated as the most suitable. These then have the same degree of priority over other uses. Where more than one use is indicated, coexistence is deemed possible. The uses that are deemed to coexist may need to adapt to each

other. Where the area of investigation is indicated, this entails that further investigation is needed to assess whether the specified use is the most suitable and whether coexistence is possible with other specified uses.

The marine spatial plan comprises all spaces within the plan area – the sea, the space above the sea level, the seabed and the subsoil. Please note that the demarcation between private water and public water is not fully investigated. Therefore, the delimitation of the plan areas to the coast may in reality differ from the delimitation shown in the maps of the marine spatial plan. According to Chapter 4, Section 10 of the Environmental Code, marine spatial plans shall cover Sweden's exclusive economic zone and the areas not included in real estate in the Swedish territorial sea outside the specific delimitation lines, one nautical mile from the baselines, as set out in the Act (2017:1272) on Sweden's territorial waters and maritime zones.

The plan maps shall be interpreted on the approximate scale between 1:700 000 and 1:1 000 000. The boundaries and markings for planning in the map are based on the strategic level of the marine spatial plans. The plan area maps (maps 1, 5 and 11) are on a scale of 1:2 300 000 in full A4, while the marine area maps (maps 2-4, 6-10 and 12-13) are on a scale of 1:1 000 000 in full A4.

In order to present the planning more clearly, each marine spatial plan area is divided into marine areas. The three marine spatial plans consist of ten marine areas. The division into marine areas has no legal significance.



FACT BOX: Priority guidance

The guidance on the most suitable use indicates the priority for uses. In addition, specific needs are identified in some areas. The guidelines in the marine spatial plans do not contain any prohibitions or binding restrictions.

Examples include the right of vessels to make their way regardless of what the marine spatial plans indicate, as long as there are no restrictions in the shipping regulations, the possibility to apply for permits for energy extraction in areas other than those specified in the marine spatial plans, consideration of nature and cultural values even where they are not specified in the marine spatial plans, and the fact that commercial fishing is carried out within larger areas than the use of the marine spatial plans and is regulated by the EU.

Figure 2.2-1 The marine spatial plans are divided into different types of areas.

Uses are reported in different ways in the plan map:

- The uses of energy extraction, investigation area for energy extraction, defence, general use, cultural environment and nature are presented with one letter and delimited by lines that form areas. Each area has a number, such as Ö200.
- The uses of electricity transmission, outdoor recreation, sand extraction, investigation area sand extraction, shipping, investigation area shipping and commercial fishing are delimited by their own geographical markings. These geographical markings usually extend over several of the numbered areas. The uses and the approaches that are important for the uses in management, planning and licensing are described below.

2.3. Guidance on the most suitable use and particular consideration

Electricity transmission

Recommendation indicating the most suitable use

Electricity transmission

Conditions for electricity distribution and transmission infrastructure shall be maintained. There must be good opportunities to maintain and maintain the infrastructure.

Needs

A prerequisite for achieving the national and European goals for energy and climate policy is that there are opportunities to better connect the electricity systems in Sweden and othervcountries in Europe. By linking the electricity grids between the countries around the Baltic Sea and the Skagerrak/Kattegat, conditions are created for a socio-economically efficient expansion of offshore wind farms.

Areas with national interest claims

Installations for energy distribution can be designated by the Swedish Energy Agency as being of national interest under Chapter 3, Section 8 of the Environmental Code. There are no national interest claims for energy distribution in the marine spatial plan areas. The Swedish Civil Contingencies Agency has designated all cables and stations in the electricity transmission network and the cables in the electricity distribution network between the mainland and Gotland and associated stations as areas of national interest because they are needed for total defence facilities, in accordance with Chapter 3, Section 9 of the Environmental Code, Civilian Section.

Areas with the use electricity transmission in the marine spatial plans

Areas indicated as using electricity transmission are based on Sweden's existing transmission network, which constitutes a public interest of substantial significance in the marine spatial plan areas. When areas are specified for the use of electricity transmission, this means guidance that the interest takes priority in planning and licensing in those areas. For troubleshooting and repairing submarine cables, there must be plenty of space for ships and equipment to carry out these operations. For this, a distance of at least 3 times the water depth or 300 meters is required.

Energy extraction

Recommendation indicating the most suitable use

E

Energy extraction

Area of energy extraction. Conditions for energy extraction shall be maintained. Infrastructure for distributing and transmitting electricity, stability on and under the seabed for possible foundation, as well as good accessibility for ships during construction, operation and maintenance shall be taken into account.

E(utr)

Investigation area for energy extraction

Area with good conditions for energy extraction where the area is subject to major uncertainties about the impact on other values or interests. Further investigation is required to determine whether the use of energy extraction is the most suitable. In the marine spatial plan,, investigate areas indicates the need for investigation of cumulative effects on bird migration routes and Natura 2000 sites.

Needs

According to the Energy Bill in 2024 (Regeringen 2024a), planning for electricity use in Sweden (Regeringen 2024a) should be based on a future need of at least 300 terawatt hours annually in 2045, approximately a doubling compared to electricity use at present. This will be implemented within an energy target that is 100 percent fossil-free. The agreement does not set a specific target for the expansion of wind energy in general or offshore wind energy specifically, but describes it as an important part of Sweden’s energy mix.

The government assignment that forms the basis for the amended proposals for marine spatial plans states that the objective is for the marine spatial plans to enable an additional 90 terawatt hours in annual production (M2022/00276). Together with previous planning, this means that the target is 120 terawatt hours.

Areas of national interest claims

The Swedish Energy Agency identifies areas of national interest for energy production, in this case wind energy, in accordance with Chapter 3, Section 8 of the Environmental Code. The Swedish Energy Agency has been commissioned (Regeringen 2024c) to review national interest claims for fossil-free energy production and distribution. The assignment must be reported to the Government Offices (Ministry of Climate and Business) no later than 25 October 2025.

Areas of public interest of substantial significance

In addition to the national interest claims, additional areas for energy extraction have been developed in an assignment where the Swedish Energy Agency coordinated nine other authorities(Energimyndigheten 2023). These areas are considered to be public interests of

substantial significance for the national production of renewable electricity. They contribute to the achievement of energy targets.

The areas have been identified on the basis of an overall assessment that takes into account whether the area has suitable conditions. These conditions refer to wind speed, sea depth and distance to baseline. As technology is changing at a rapid pace, areas were also identified that are not relevant in the near future, but that are deemed to be possible in the future. The areas have also been identified on the basis of the possibility of coexistence with other values and interests, as far as deemed reasonable.

Areas with the use energy extraction in the marine spatial plans

Areas with the use energy extraction refer to wind energy. They are based on areas of national interest and areas of public interest of substantial significance for wind energy that have been identified in the marine spatial planning process.

For several areas where there are national interest claims or of public interest of substantial significance for wind energy, the marine spatial plans indicate a different use. This is because the uses are deemed incompatible and priority is given to the other use, according to the marine spatial plans' guidance on the most suitable use.

When areas are specified for the use of energy extraction, this means guidance that the interest takes priority in planning and permit assessment in those areas. All areas specified for use energy extraction in marine spatial plans also include guidance on specific consideration. This may include particular consideration to the interests of total defence, high cultural heritage values or high nature values. In more detailed planning or licensing of energy extraction in these areas, these values and interests need to be taken into account in particular.

Enabling offshore wind energy means that there needs to be areas with different characteristics. The marine spatial plans therefore report both areas closer and further from the coast, as well as areas suitable for bottom-fixed foundations, and areas suitable for floating foundations. Such dispersal allows areas to be built on at different times and with different levels of economic risk.

Energy areas can be used for offshore wind energy in part or in full and for the period specified in a permit. In the permit assessment, more detailed studies are carried out, based on defined projects, to test suitability and assess the environmental impact. Conditions can be used to regulate how coexistence and environmental impacts are managed in order for the activity to be assessed as suitable.

Investigation areas for energy extraction in the marine spatial plans

Areas listed as investigation areas are areas where further investigation in planning or permit examination is required to determine whether the use of energy extraction is the most suitable. This means that more detailed analyses are needed to assess whether the use is compatible with any other interest or that Natura 2000 permits under Chapter 7, Section 28a, of the Environmental Code are required. Several energy extraction areas are indicated for investigation due to the need for a better understanding of how offshore wind energy in one area or in several

adjacent areas affects bird migration routes. The investigation areas are described under the respective marine areas in Parts 3 and 5.

Recreation

Recommendation indicating the most suitable use

Recreation

Area for recreation. Conditions for recreation shall be maintained by having nature and cultural environment areas of good quality that are accessible to the public and that contribute to experiences.

Needs

The overarching goal of the outdoor recreation policy is to support people's opportunities to spend time outdoors and exercise outdoor life on the basis of the right of public access. All people should have the opportunity to experience nature, well-being, social community and increased knowledge of nature and the environment. The development of recreation-related business activities can make recreation accessible to more people.

Areas with national interest claims

The Swedish Agency for Marine and Water Management and the Swedish Environmental Protection Agency identify areas of national interest for outdoor recreation, in accordance with Chapter 3, Section 6 of the Environmental Code, within their respective areas of responsibility. Only a few areas are designated within the marine spatial plans. These are mainly found in connection with the coasts and at certain offshore banks, i.e. shallow areas in the open sea. Along the coasts, within the baselines, there are many areas that are designated as national interests but are outside the marine spatial plan areas. The need to take account of these national interests may extend within the marine spatial plan areas.

Areas of national interest

Along the coast and in the marine area there are national interests for outdoor recreation in accordance with Chapter 4, Section 2 of the Environmental Code. At some coastal strips, they are demarcated so that they can be found within the marine spatial plan area. The need to take account of these areas of national interest may extend within the marine spatial plans.

Areas of public interest of substantial significance

This planning round does not identify areas of public interest of public significance for recreation. Additional data that improves the state of knowledge about outdoor recreation values within and in connection with marine spatial plans may form the basis for public interests of substantial significance in future planning.

Areas with the use recreation in the marine spatial plans

The areas with the use recreation are based on national interest claims for outdoor recreation in accordance with Chapter 3, Section 6 of the Environmental Code.

Areas designated for the use recreation entails guidance that the interest takes priority in planning and licensing in those areas.

Defence

Recommendation indicating the most suitable use

F

Defence

Area of defence activities covering maritime training areas as well as impact areas for installations outside the marine spatial plan areas. Prerequisites for defence activities shall be maintained.

f

Particular consideration to the interests of total defence

In this area, particular consideration shall be given to the interests of the total defence in the management, planning and licensing procedures. The risk of cumulative impacts of energy extraction on defence interests shall be taken into account.

Needs

Sweden's national defence consists of military defence and civil defence. The Swedish Armed Forces need training areas in the sea and in the coastal zone, without interference from physical or technical obstacles. For signals intelligence, there is a need for protection to counteract interference from other activities. Civil defence is in need of a functioning supply of goods and services. Fairways to strategic ports need to be kept free and conditions for offshore cables for electricity supply and communication need to be maintained.

Areas with national interest claims

For military defence, national interests are defined in and adjacent to the sea. The Swedish Armed Forces identify military areas of national interest claims in accordance with Chapter 3, Section 9 of the Environmental Code. Within marine spatial plans, they refer to maritime training areas.

Within the marine spatial plan areas, there are also national interest claims for the military part of the total defence that are covered by secrecy and for these are not reported geographical delimitation or function.

The Swedish Civil Contingencies Agency has decided that all lines and stations in the electricity transmission network and the lines in the electricity distribution network between the mainland and Gotland and their stations shall constitute areas of national interest claims on the grounds

that they are needed for total defence installations, civilian parts, in accordance with Chapter 3, Section 9 of the Environmental Code.

Areas of public interest of substantial significance

Areas of influence within the marine spatial plans for defence facilities (national interest claims for total defence) outside marine spatial plans are considered to constitute public interests of substantial significance as they are needed for the functions of the defence facilities.

Areas with the use defence in the marine spatial plans

Areas indicated as use defence are based on national interest claims within the marine spatial plan areas (sea training areas) and on influence areas for national interest claims located outside the marine spatial plan areas. When areas are specified for defence use, this means guidance that the interest takes priority in planning and licensing in those areas.

Areas with guidance on particular consideration to the interest of national defence

In areas where particular consideration is given to the interests of national defence, activities involving fixed installations need to consult with the Armed Forces on how facilities can be designed so that defence interests are not adversely affected.

Particular consideration to the interests of total defence may mean, among other things, that the location and design of a wind farm need to be adapted to defence interests. This also applies to other types of fixed installations and other uses. Particular consideration to the interests of the total defence may also mean that adaptation needs to take place when several energy areas combined can have an impact on the total defence. The risk of cumulative effects on defence interests must therefore be taken into account. This means that expansion within one energy area can affect the possibility of using another area specified in the plan with the use of energy extraction or investigation area energy extraction.

When particular consideration is given to the interests of total defence in areas of nature or general use, the consideration refers to restrictions on tall objects due to flight operations.

General use

Recommendation indicating the most suitable use

G

General use

Area where no particular use has priority. However, the uses of electricity transmission, recreation, sand extraction, investigation area sand extraction, shipping, investigation area shipping and commercial fishing that are delimited by their own geographical markings have priority where they are indicated.

Areas with the general use in the marine spatial plans

In areas designated as general use, there is a varying degree of overlap between other uses that are delimited by their own markings, such as electricity transmission, recreation, sand extraction, shipping or commercial fishing. These uses have priority where indicated.

Cultural environment

Recommendation indicating the most suitable use

K ***Cultural environment***

Area with a cultural or nature history environment. Cultural and nature history values must be preserved.

k ***Particular consideration to high cultural heritage values***

Within the area, particular consideration shall be given to high cultural heritage values in the management, planning and permit assessment.

Particular consideration to high cultural heritage values refers to the landscape's cultural-historical character and visual impact that changes the cultural-historical content but also includes consideration for ancient and cultural-historical remains on the seabed. Areas of impact may be larger than designated areas in marine spatial plans. The impact needs to be assessed on the basis of local conditions.

Values identified in the marine spatial planning process are listed by marine are in Parts 3, 4 and 5 of this document.

Needs

Together, the cultural environments will make it possible for present and future generations to take part of the landscape's historical dimension and thereby understand Sweden's development through the ages. According to the national cultural environment objectives, cultural environment work shall, among other things, promote a sustainable society with a diversity of cultural environments that are preserved, used and developed, and promote a holistic approach to the management of the landscape that means that the cultural environment is taken into account in the development of society.

Areas of national interest claims

The Swedish National Heritage Board identifies areas of national interest claims for the conservation of the cultural environment in accordance with Chapter 3, Section 6 of the Environmental Code. At present, no national interest claims have been identified in the marine spatial plan areas. On the other hand, there are national interest claims for cultural conservation in connection with or near the marine spatial plan areas that may be affected by activities at sea and therefore need to be examined under the Environmental Code. The need to take national interests into account may extend into the marine spatial plan areas.

Areas of national interest

National interests under Chapter 4 of the Environmental Code are geographically defined areas of national interest specified in the Environmental Code and thus decided by the Riksdag (parliament). These are national interests for unbroken coasts under Section 3 and high-exploited coasts under Section 4. In view of their nature and cultural values, the areas as a whole are of national interest and activities must not significantly damage the nature and cultural values of the areas.

Areas of public interest of substantial significance

In the marine spatial planning process, national interest claims alone are not considered sufficient to achieve the cultural environment objectives. Therefore, additional valuable cultural sites have been recognised or identified in the Marine spatial planning process as being of significant public interest.

World heritage sites are considered so valuable from a cultural or nature environmental point of view that they are of concern to all humanity. They are designated under the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Convention. The High Coast World Heritage Site, the Hanseatic City of Visby, the Meridian Arch of Struve, the agricultural landscape of Southern Öland and the Naval City of Karlskrona are adjacent to the marine spatial plan areas. The High Coast World Heritage Site is partly located within the marine spatial plan area of the Gulf of Bothnia. Activities at sea may affect the World Heritage Site's unique values of global interest and therefore an *Impact Assessment in a World Heritage context* may be required as part of an impact assessment.

Under Chapter 7, Section 9 of the Environmental Code, a county administrative board or a municipality may decide that an area is to be protected and managed as a cultural reserve. The intention is to enable the care and preservation of valuable cultural landscapes. At present, there are no cultural reserves within the marine spatial plan areas.

Landscape protection is protection introduced on the basis of Section 19 of the Nature Conservation Act in the version prior to 1 January 1975. The purpose of the protection is to protect large areas from major impact or change. The provisions in landscape protection areas apply until they are replaced by other forms of protection. Within the marine spatial plan areas there is landscape protection for an area at Öregrund and Östhammar and around Haparanda Archipelago.

Within a government assignment the coastal county administrative boards (Länsstyrelserna 2024) have identified areas of value for marine cultural heritage. The purpose of the planning evidence is to clarify which cultural values along Sweden's coastline that may be affected by the expansion of large-scale, offshore wind energy. The data thus handles a selection of valuable cultural environments. Most value areas are outside the area covered by the marine spatial plans, but have consideration needs that extend into the marine spatial plan area. Most of the value areas include one or more areas of national interest claim for the conservation of the cultural environment. Other documents that may be included as a basis for the designation of value areas include, for example, national interest under Chapter 4, Sections 3 and 4 of the Environmental

Code, World Heritage Sites, cultural reserves, ancient and cultural heritage sites and/or municipally designated cultural environments(Länsstyrelserna 2024).

In the marine spatial planning process, the areas described above are considered to be public interests of substantial significance for the cultural environment. Developed data and analyses that improve the state of knowledge about high cultural heritage values within and in connection with marine spatial plans may form the basis for public interests of substantial significance in future planning.

Areas with the use cultural environment in the marine spatial plan

The areas with guidance on the use cultural environment are based on areas with World Heritage Sites. At present, only one area of the High Coast World Heritage Site overlaps with the marine spatial plan area and is reported using the cultural environment, but several other World Heritage Sites along the coast of Sweden need consideration that extends into the marine spatial plan areas.

That areas are designated for the use cultural environment entails guidance that the interest has priority in planning and licensing in those areas.

Areas with guidance on particular consideration to the high culture values

In areas with particular consideration to high cultural heritage values, there may be special needs for measures in management, planning and permit examination. This may mean that measures are taken to minimise direct, indirect and cumulative damage to the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm. Areas of consideration may be larger than designated areas in marine spatial plans. In particular, cultural environments whose values are strongly linked to the need for a clear horizon may need to be considered over longer distances. The impact needs to be assessed on the basis of local conditions in future planning and permit processes.

The conditions for an establishment can only be fully assessed when it is clear how an intended establishment will manifest itself (height, location, design, design). Therefore, in the early planning phase of a national marine spatial plan, it is not possible to fully define the conditions for an establishment in the vicinity of a cultural environment, but this is something that is further clarified in subsequent processes at a regional and local level.

Particular consideration to high cultural heritage values is given in areas with the use energy extraction and investigation area energy extraction where these have a distance of 35 kilometres or less from national interest claims for cultural heritage conservation under Chapter 3, Section 6 of the Environmental Code or identified value areas for marine cultural heritage values in the coastal county administrative boards' documentation(Länsstyrelserna 2024). At this distance, offshore wind turbines are considered to be at risk of visually affecting (indirectly affecting) cultural environments on land. In cases where coastal counties have integrated consideration distances in designated value areas, particular consideration has mainly been given where direct overlaps exist between the value areas and proposed energy areas. Particular consideration to

high cultural heritage values is given in this planning round in relation to the use of energy extraction because offshore wind energy is considered to have a greater need for guidance based on the impact it can have on cultural heritage values that are often found in coastal and archipelago areas outside the marine spatial plan area.

The distance of 35 kilometres has been a starting point in the work to relate the indirect impact of wind energy areas on valuable cultural environments in marine spatial planning and is used as a general consideration distance. The distance is based on an assumed height of 350 metres to the highest point of the wind turbines. The distance has also been a starting point for assessing the coexistence of wind energy and the cultural environment within the framework of the work on the Swedish Energy Agency's joint government assignment on *Proposals for suitable energy extraction areas for marine spatial plans .* (Energimyndigheten 2023) Actual distances of consideration need to be assessed from a local perspective.

Nature

Recommendation indicating the most suitable use

N ***Nature***

Nature area. The area has nature values to be preserved and developed in order to ensure biodiversity and promote ecosystem services.

n ***Particular consideration to high nature values***

Within the area, particular consideration shall be given to high nature values in management, planning and permit assessment.

Values identified in the marine spatial planning process are listed by marine area in Parts 3, 4 and 5 of this document.

Needs

Biodiversity must be preserved. When the sea and its resources are being used, it must be done in a sustainable way, for present and future generations. Certain marine environments need special protection in relation to other activities. These needs may justify protection or other management and permit-granting measures to ensure reduced environmental impacts on marine ecosystem services such as fish production.

Viable marine environments enhance and secure access to ecosystem services. Coherent, representative and ecologically functional structures are important prerequisites for this. There is also a need for sustainable management of areas that are particularly important for marine ecosystems as the climate changes, so-called climate refugia.

A climate refuge is an area that may need special protection to preserve important plants and animals as the climate changes and their distribution decreases. Areas are often the more stable parts of a species' wider range that are expected to remain as salinity and temperature change. A climate refuge is considered important for the species to continue to exist in the marine area.

Read more in the report Basis for climate refugia in marine spatial planning 2017(Havs- och vattenmyndigheten 2017c).

Areas of national interest claims and of national interest

Three different national interests concern nature values in the sea:

- National interests under Chapter 4, Section 8 of the Environmental Code, i.e. Natura 2000 sites, are proposed by the county administrative board. The Swedish Environmental Protection Agency then reviews the selection and proposes areas to the Government. It is then the Government that decides to propose to the European Commission that these areas be included in the Natura 2000 network. Natura 2000 sites are part of marine site protection.
- National interest claims for nature conservation under Chapter 3, Section 6 of the Environmental Code are identified by the Swedish Agency for Marine and Water Management.
- National interest claims for commercial fishing relating to spawning and nursery areas under Chapter 3, Section 5 of the Environmental Code are identified by the Swedish Agency for Marine and Water Management.

Areas of public interest of substantial significance

In the marine spatial planning process, national interests and national interests alone are not considered sufficient to achieve good environmental status, preserve biodiversity, strengthen ecosystem services and protect important areas and species as the climate changes. Therefore, additional areas of high nature value have been recognised or identified in the marine spatial process and have been identified as essential public interests. The areas consist partly of already protected areas under Chapter 7 of the Environmental Code and partly of areas identified within the framework of the marine spatial planning process.

The areas of public interest of substantial significance for high nature values that have been identified in the marine spatial planning are based on a large amount of supporting information collected or produced by the Agency for Marine and Water Management (Havs- och vattenmyndigheten 2019). An update of the documentation was carried out by the coastal county administrative boards in autumn 2022. The data shows habitat types and species that are prevalent and representative for each marine spatial plan area. The assessment is based on the following criteria:

- The area constitutes the Marine Protected Area (MPA) under the regional marine environmental conventions HELCOM (Convention for the Protection of the Environment of the Baltic Marine area) and OSPAR (Convention for the Protection of the Marine Environment of the North-East Atlantic), but is not protected by Swedish legislation.
- The area has confirmed nature values or needs for consideration according to multiple bases. It concerns documentation relating to nature value mapping and environmental impact. It also includes data on areas important for species and ecosystems in a future changing climate, so-called climate refugia.

- The area has confirmed nature values or needs for consideration based on individual documentation. The evidence on which the assessment is based shows low uncertainty.
- The area has confirmed nature values of high originality. Originality is defined as areas with relatively low environmental impact while ecological values are high.
- The area is in a planning process to become a marine protected area such as Natura 2000 area, nature reserve or national park.

Marine nature reserves and national parks are considered to be of public interest of substantial significance. These areas are included in marine site protection along with Natura 2000 sites. Planned marine site protection of the Natura 2000 and marine nature reserves types is also of substantial public interest.

Some areas of public interest of substantial significance are currently not covered by existing site protection. Marine spatial plans help to draw attention to and strengthen potential ecological links between areas under marine protection and areas of public interest of substantial significance by identifying the latter. Planning thus strengthens the conditions for a coherent green infrastructure, through areas that are important for preserving ecosystem services.

Areas with the use nature in the marine spatial plans

The areas designated with the most suitable use nature are based on national interests under Chapter 4, Section 8 of the Environmental Code, i.e., Natura 2000 areas, national interest claims for nature conservation under Chapter 3, Section 6 of the Environmental Code, national interest claims for commercial fishing regarding spawning and nursery areas under Chapter 3, Section 5 of the Environmental Code, and national parks and nature reserves under Chapter 7, the Environmental Code. That areas are designated for the use nature, entails guidance that the interest takes priority in planning and licensing in those areas.

Nature values that need to be protected can also be found in other areas. This applies, for example, to species and habitats protected under the Habitats Directive or Birds Directive (92/43/EEC, 2009/147/EC).

Environmental monitoring stations or other installations are located at specific locations in the sea. Due to the scale of the marine spatial plans, the specific locations in the plan maps are not reported. However, the stations should be taken into account in planning, management and licensing.

Areas with guidance on particular consideration to the high nature values

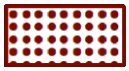
Areas designated with particular consideration to high nature values are based on identified public interests of substantial significance as described above. In areas with particular consideration to high nature values, there may be special needs for future measures in management, planning and permitting to ensure ecosystem services linked to the values, structures and conditions of the areas. Particular consideration of high nature values can mean, among other things, that activities are adapted to locations and time periods that minimize direct, indirect or cumulative damage to nature values. This may include, for example:

- that the Swedish Armed Forces, when planning their activities, consult with municipalities and county administrative boards on local conditions and adapt exercises and activities to locations and time periods so that high nature values are not damaged
- adaptation in design and technology of energy extraction facilities or adaptation of civil works and operations to specific periods of time
- introduction or extension of marine area protection
- fishing regulations relating to areas, gears or time for catching
- adaptation of speed, maximum draught or time of maritime traffic.

Nature values to consider can also be found in other areas. This applies, for example, to species and habitats protected under the Habitats Directive or birdss Directive.

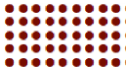
Sand extraction

Recommendation indicating the most suitable use



Sand extraction

Sand extraction area; Conditions for sand extraction and good availability for vessels during extraction shall be maintained.



Investigation area sand extraction

Area with good conditions for sand extraction where further investigation is required to determine whether the use of sand extraction is the most suitable use.

Needs

Removal of nature gravel on land shall be reduced as part of securing Sweden's groundwater and meeting the environmental quality objective *'Good quality groundwater'*. Nature gravel builds up many groundwater and drinking water reservoirs and often has high nature and cultural values. Crushed rock is the main replacement material for nature gravel in the effort to reduce the extraction of nature gravel. There are some applications, such as to the fine fraction in concrete, where it is currently costly or requires a lot of energy to produce replacement material from crushed rock and generates residues. In these applications, marine sand and gravel can replace nature gravel from land.

Marine sand and gravel can also be used to counteract the coastal erosion that occurs along some coastal sections in southern Sweden. The fact that the sand is extracted close to where it is to be used is beneficial in view of the costs and environmental effects of long journeys.

Areas of national interest claims

Findings containing valuable substances or materials can be identified as a national interest claim under Chapter 3, Section 7 of the Environmental Code. It is the Geological Survey of Sweden,

SGU, that can point out the claims of national interest. There are no national interest claims for sand in the marine spatial plan areas.

Areas of public interest of substantial significance

Based on a government assignment, the Geological Survey of Sweden has identified areas where there are opportunities for environmentally sustainable extraction of marine sand and gravel of the right quality. Environmental sustainability is assessed on several aspects: (Sveriges geologiska undersökning 2017)

- The area must not be too close to the coastline as this risks changes in sediment dynamics, which can cause increased coastal erosion.
- Sunlight exposed shallow biologically productive and sensitive areas shall be avoided.
- Biodiversity shall be preserved and ecosystems in and around the quarry shall not be affected to such an extent that the ability to deliver ecosystem services is lost or irreversibly reduced.

The identified areas are considered in the marine spatial planning process to be public interests of substantial significance as sand extraction in the sea is considered important in the work on climate adaptation, in order to achieve environmental quality objectives and for the supply of materials.

Areas for the use sand extraction in the marine spatial plans

The areas designated for the use sand extraction are based on areas of public interest of substantial significance identified in the marine spatial plan process. The areas designated as suitable for sand extraction in the marine spatial plans need to be further investigated in which parts of the areas such as sustainable extraction can be made possible, on the basis of the data produced by the Geological Survey of Sweden and the Swedish Agency for Marine and Water Management.

When areas are designated for use sand extraction, this means guidance that interest takes priority in planning and licensing in those areas. Areas need to be carefully evaluated, including physical, cultural and biological aspects, before a quarrying operation can take place. Continuous evaluation using suitable control programmes is also necessary.

Most of the area designated as areas for sand extraction in marine spatial plans is located in southern Sweden, where the consumption of nature gravel is high while the availability of nature gravel on land is limited. Southern Sweden is expected to continue to have expansionary construction. The marine conditions, relatively low transport costs to consumable areas and high costs for other substitute materials justify sand extraction as a use in parts of the marine areas. Another motive is the need for sand to counteract coastal erosion in southern Sweden.

Areas of the Marine spatial plans with an investigation area for sand extraction

In areas where sand extraction is expected to require a so-called Natura 2000 permit under Chapter 7, Section 28a of the Environmental Code, the area is designated as an investigation area for sand extraction.

Shipping

Recommendation indicating the most suitable use

Shipping

Area of particular importance for maritime transport. Conditions for shipping operations shall be maintained and road safety with sufficient room for manoeuvre shall be taken into account.

Investigation area for shipping

Area for further investigation to determine whether the use of shipping is the most suitable use

Needs

The overall transport policy objective is to ensure a socio-economically efficient and long-term sustainable transport supply for citizens and businesses throughout the country. Efficient, sustainable and high-capacity freight transport is a priority for the Government. Some of the objectives of the National Transport System Plan 2022-2033 are to promote the shift of freight from road to rail and maritime transport, to reduce the environmental impact of the transport sector and to create the conditions for the development of tomorrow's transport system. Shipping is of great importance for a functioning supply of goods and services to Sweden, which is also relevant for total defence.

Areas of national interest claims

The Swedish Transport Administration identifies areas of national interest claims for maritime transport in accordance with Chapter 3, Section 8 of the Environmental Code.

Areas of public interest of substantial significance

Routes that constitute particularly important links between Sweden and neighbouring countries are considered to be important public interests.

Areas with the use shipping in the marine spatial plans

The areas designated for the use shipping are based on national interest claims for transport and in the marine spatial planning process identified areas of public interest of substantial significance for shipping. Shipping is carried out in all marine areas. However, due to various factors, large parts of international traffic, in particular, with larger vessels, take place on certain demarcated routes. These lines are merely recommendations. Vessel traffic of very great importance to Sweden can occur and thus also occurs outside the routes indicated as use shipping in marine spatial plans.

That areas are designated for the use shipping entails guidance that the interest takes priority in planning and licensing in those areas. These areas represent the routes that are most important

for the maintenance and development of efficient, safe and accessible maritime transport, but do not limit shipping to these routes. Shipping as a whole has a much larger surface language than the route of the plan map in order to function well.

The fact that shipping has access to and uses other areas is a prerequisite for the routes identified in the marine spatial plans to have such a limited geographical area. Vessels have the right of innocent passage through the territorial sea under the law of the sea. International shipping is regulated in particular by the International Maritime Organization (IMO).

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.

In the Gulf of Bothnia there are special conditions in winter with thick and extensive sea ice. This affects the conditions for shipping, which needs large areas to ensure accessibility. This should be taken into account when establishing wind energy and other fixed installations at sea. There is a lack of comprehensive knowledge about how offshore wind energy affects ice formation, conditions for icebreaking and winter navigation.

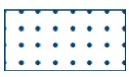
There shall be a safety distance between a wind farm and a shipping lane or fairway. The size of the safety distance depends on the traffic on the route, but also on the geographical conditions(Sjöfartsverket and Transportstyrelsen 2023). When designing the energy areas, planning the safety distance is generally included in the surface of the energy area. The safety distance is therefore not reported in the plan map. The location of the wind farm and the distance needed in an individual project are determined in the permit process for the wind farm. The marine spatial plan does not provide guidance on specific safety distances.

Areas with the use investigation area for shipping

Where there are areas with the use investigation area for shipping, it needs to be further investigated whether shipping is the most suitable use. It is indicated where more than one use has claims in the same area and more investigation of the needs of the uses in question on the spot is required before a decision on the most suitable use can be made. The national interest claim for shipping remains even if the national interest claim corresponds to the investigation area of shipping T he use investigation area for shipping is also indicated where there is insufficient evidence to delimit the closer route of use.

Commercial fishing

Recommendation indicating the most suitable use



Commercial fishing

Commercial fishing area. Conditions for engaging in commercial fishing shall be maintained. Good availability of commercial fishing vessels to ports and fishing areas suitable to seasonal and annual variations shall be taken into account.

Needs

Commercial fishing is a maritime industry with importance for food security and food production. Commercial fishing also creates land-based jobs in port operations and the processing industry, contributing to viable archipelago communities that maintain identity and cultural environment. Maintaining sustainable food production with food of high nutritional value is important for society. Fish from our local area makes a significant contribution to our food security. The needs require that good environmental status in the sea is achieved and maintained and that the ecosystem services on which fishing depends are ensured. Commercial fishing requires relatively large areas because different fishing methods and target species mean different fishing areas that change between different seasons, from year to year and over a longer period of time.

Areas of national interest claims

The Swedish Agency for Marine and Water Management identifies areas of national interest claims for commercial fishing in terms of catch areas and landing ports in accordance with Chapter 3, Section 5 of the Environmental Code. In 2024, the Swedish Agency for Marine and Water Management is working on a review and updating of ports with a national interest in commercial fishing.

Areas of marine spatial plans used for commercial fishing

The use of commercial fishing is mainly based on national interest claims regarding fishing areas. A small part of an area in the Skagerrak is based on public interest of substantial significance for commercial fishing.

National interest claims for commercial fishing regarding spawning and nursery areas are included in the use nature in the marine spatial plans. Potentially important areas for fish habitats outside areas of national interest claims are included in areas with guidance on particular consideration to high nature values.

The way in which commercial fishing is conducted and the gear used may change in the future, for example due to stock changes or technical development of gear. It may also be changed by the introduction of restrictions relating to a specific fishery or fishing method.

That areas are designated for the use commercial fishing entails means guidance that the interest takes priority in planning and licensing in those areas. Commercial fishing is also carried out in other areas and when assessing permits, it is therefore important to seek up-to-date information about fishing in the area in question.

Data and telecommunication cables

The laying of data and telecommunications cables, power cables, pipelines and gas pipelines shall be enabled where suitable. The operation and maintenance of data and telecommunications cables, power cables, pipelines and gas pipelines shall always be possible. This applies to the entire planning area. There are no areas specified for data and telecommunication cables in the marine spatial plans.

There is a lack of overall sector planning for data and telecommunications cables. Sites for the closure of such cables should be reconciled early in the design of cable laying to reduce conflicts with other claims.

Geological storage of carbon dioxide

It is estimated that there is significant carbon dioxide storage capacity in Sweden and within the Swedish exclusive economic zone (Sveriges geologiska undersökning 2016). However, more data and knowledge are needed before any areas for storage can be proposed in marine spatial plans.

Aquaculture

At present, there is no comprehensive national mapping of possible geographical development areas for aquaculture in the plan area. In the Swedish Board of Agriculture's and the Swedish Agency for Marine and Water Management's action plan for the development of Swedish aquaculture 2021-2026, a measure aims to facilitate the identification and planning of suitable areas for various forms of sustainable aquaculture(Jordbruksverket 2021). New planning data together with developed cultivation technology can in the long term contribute to better planning conditions for aquaculture in the plan area. At this stage, marine spatial plans create preparedness for aquaculture, but do not designate specifically demarcated areas dedicated to aquaculture.

2.4. Guidance on coexistence

Marine spatial plans shall promote coexistence between different activities and uses. The inclusion of coexistence in marine spatial plans creates flexibility and encourages activities for mutual adaptation and development. Coexistence can also lead to synergies. The considerations below aim to guide how coexistence can work and explain how marine spatial plans relate to coexistence between the different uses listed. They are grouped under two headings depending on the degree of alignment usually deemed necessary for coexistence – some alignment and more alignment. For example, in order for coexistence to work, certain activities may need to be regulated further or specific conditions imposed by licensing authorities. It may also involve special regulations that may be needed to achieve the purpose of the marine spatial plans and which the Government decides on pursuant to Chapter 4, Section 10, second paragraph, of the Environmental Code.

Coexistence between uses can be deemed to be possible in one place while in another it is not deemed to work. Similarly, coexistence can be assessed as possible from an overall perspective but not within the time horizon of planning or in a specific location (co-location). When applications are deemed not to be able to co-exist within a geographical area, an interest is given priority.

Figure 2.4-1 Example of how coexistence can look like in the plan map. The plan map shows coexistence by overlapping uses. In the Ö222 area, the uses defence (F), nature (N), recreation (lines) and shipping (darker blue fields) coexist.

Where coexistence may require some adaptation

Defence and shipping

Marine spatial plans indicate the coexistence of defence and shipping. Shipping can often be carried out without restriction within a maritime training area. During defence exercises, a naval training area may need to be temporarily intercepted.

Defence and commercial fishing

Marine spatial plans indicate the coexistence of defence and commercial fishing. Commercial fishing can often be carried out without restriction in a defence area. During defence exercises, a naval training area may need to be temporarily intercepted. However, defence exercises can affect the resources of commercial fishing through fishing mortality and impact on spawning and nursery areas.

Cultural environment and nature

The marine spatial plans indicate the coexistence of the cultural environment and nature. Cultural environments are often well integrated into nature. Conservation efforts, such as the management of marine litter and the removal of lost fishing gear, can damage ancient remains if carried out with careless methods. Wrecks can in some cases constitute a cultural value while at the same time having a negative impact on the environment.

Cultural environment and recreation

The marine spatial plans indicate the coexistence of the cultural environment and recreation. Cultural environments are often part of the values that form the basis of outdoor life or make an area attractive to visitors. This contributes to synergies, but a high intensity of visits can also have a negative impact on the cultural environment. There is great value in making cultural heritage available underwater, including for divers. However, diving and other outdorr activity such as sport fishing and boating, can pose a risk of damaging the cultural environment underwater.

Nature and recreation

The marine spatial plans indicate the coexistence of nature and recreation. Nature is often part of the values that form the basis of outdoor life or make an area attractive to visitors. This contributes to synergies, but a high intensity of visits can also have an impact on nature values. Exploitation of scenic sites for tourism activities, as well as recreational fishing and noise from recreational boats, personal watercraft and other activities, may conflict with nature conservation interests.

Recreation and sand extraction

Sand extraction can have a negative impact on nature values, which in turn can change the conditions for outdoor recreation. At the same time, increased traffic when removing the sand can negatively affect the conditions for recreation. However, sand extraction, and therefore transport, usually takes place during limited periods.

Recreation and commercial fishing

The marine spatial plans indicate the coexistence of recreation and commercial fishing. Commercial fishing forms the basis for coastal fishing communities that are attractive for recreation. Conflicts of interest may exist between recreational fishing and commercial fishing if one wants to fish in the same place with gear that does not work together or through competition of the fishing resource.

Sand extraction and shipping

The marine spatial plans indicate the coexistence of sand extraction and shipping. Sand extraction can generate some traffic and create obstacles to the accessibility of shipping. However, sand extraction takes place during limited periods, which means that the impact is limited.

Maritime transport and commercial fishing

Marine spatial plans usually indicate the coexistence of shipping and commercial fishing. Commercial fishing with mobile gear often works with some adaptation in marine areas, but can sometimes be made more difficult by intensive vessel traffic or traffic separation.

Where coexistence may require more adaptation

Energy extraction and defence

Energy extraction and defence interests are difficult to combine in many areas, as wind farms can have a major impact on the Swedish Armed Forces' facilities and operations. Wind energy installations can affect the Swedish Armed Forces' fixed and airborne systems as well as underwater sensors by causing acoustic disturbances and blockages and reflections of the electromagnetic signals used by radar systems and radio links. The high altitudes and obstacle lighting of wind turbines can also have a negative impact on aviation.

In neighbouring countries, it has been possible to combine defence interests with energy extraction by other means, either by banning energy extraction in limited areas, by technological solutions or by combining interests(Odell et al. 2022).

For all energy areas, the marine spatial plan gives particular consideration to the interests of total defence.

Energy extraction and cultural environment

Offshore energy installations can have a negative impact on cultural heritage and landscapes. The effect can also occur at night in the dark due to obstacle lighting. Large-scale wind farms near the coast may dominate a site and thereby affect the values that show important historical events and that previously gave the site its character. Installations such as foundations or cables on the seabed can have a negative impact on ancient monuments if the bottom is not examined carefully and adaptations are made. In the construction phase, the impact area on the seabed can be significantly larger than the actual exploitation area. Permits from the county administrative board may be required for activities that risk affecting ancient monuments. Archaeological investigation and examination may be required. These can contribute to an increased knowledge of marine cultural heritage values.

Localisation and adaptation measures such as height and obstacle lighting in the design of energy facilities can limit negative impacts. In areas of national interest under Chapter 4, Section 3 of the Environmental Code, wind energy subject to a permit is not permitted, with the exception of Öland. In such areas, marine spatial plans do not specify energy extraction.

Energy extraction and nature

The assessment of the possibility of coexistence is made from a holistic perspective that also takes into account the cumulative effects of energy areas or other planned activities in the vicinity from a long-term perspective. When granting a permit for an activity that may have a significant impact on a Natura 2000 site, an assessment shall be made as to whether the activity complies with the provisions of Chapter 7, Sections 28b-29 of the Environmental Code. Permit assessment takes place at a more detailed level than MSP's comprehensive assessments.

Energy extraction in the form of offshore wind farms can have a negative impact on birds and bats, mammals and the sea floor environment. During the construction phase, underwater noise usually arises from piling and traffic that can negatively affect wildlife. During the operational phase, noises occur that may affect wildlife. The plant itself may be an obstacle to birds or bats. During the decommissioning phase, underwater noise usually arises from work and traffic, which can have a negative impact on wildlife. Cables and anchoring along the bottom can damage valuable nature environments, and electrical cables that generate electromagnetic fields can affect marine organisms to varying degrees. At the same time, wind turbines can be artificial reefs that create protected feeding grounds for fish.

More knowledge is needed if wind energy installations can affect hydrography. According to model studies, offshore wind energy can affect the vertical mixing of the water in the Baltic Sea(Arneborg et al. 2024). Offshore wind energy can use various protective measures to reduce

the impact on nature values. Examples include demand-based obstruction lighting, location and design adaptations, noise-reducing measures for civil works and seasonal adaptations for construction, operation and decommissioning. Such measures may lead to the possibility of coexistence.

Energy extraction and recreation

Energy establishments can affect the experience values that exist in the landscape. This may involve the influence of sound, light and shadows from wind turbines and visual impact on the landscape in the form of, for example, an unobstructed view of the horizon being broken. Energy areas can reduce the availability of marine areas that are attractive from the point of view of outdoor life. Energy areas can at the same time be landmarks and tourist destinations. Recreational fishing can be negatively affected by reduced availability of fishing areas while wind turbines can constitute artificial reefs that create good conditions for fish. Localisation and adaptation measures such as height and obstacle lighting in the design of energy facilities can limit negative impacts.

Energy extraction and sand extraction

Energy extraction with wind turbines may need a stable foundation for foundations. In sand extraction, sand is sucked or dug up from the bottom, the stability of which then changes. Sand extraction is also dependent on transport accessibility. In the marine spatial plans, energy extraction and sand extraction areas are not overlapping.

Energy extraction and shipping

In essence, in the marine spatial plans, energy extraction and shipping lanes are not overlapping. The interest given priority depends on which of the uses is judged to be most suitable in the specific location and whether the needs are judged to be met elsewhere. In several places, the accessibility of shipping is considered to be ensured in nearby areas, provided that sufficient safety distances are available.

In several cases, it is possible to adapt the design of the wind farms in such a way that the accessibility and safety of shipping is not adversely affected. However, shipping cannot usually pass through an area with fixed installations such as a wind farm if the area is small or the turbines are dense. Sea cables can affect the possibilities for emergency anchorage and therefore come into conflict with shipping, especially in busy shipping lanes. There is also a special need for improved knowledge regarding the impact of offshore wind energy on ice formation and conditions for icebreaking and winter navigation in the Gulf of Bothnia.

Energy extraction and commercial fishing

Offshore wind energy makes navigation and commercial fishing in the area more difficult. Floating wind energy is not expected to coexist with commercial fishing. Installation of bottom-fixed foundations makes it difficult to use both active and passive tools to different degrees. Pelagic commercial fishing is not considered to be able to coexist with bottom-fixed foundations. Adaptation of the wind farm design or fishing gear may affect the possibilities for coexistence. International examples have shown a reduction in fishing even in adapted wind farms.

Developments in both legal and technical matters are needed to promote coexistence (Havs- och vattenmyndigheten 2023).

Defence and cultural environment

Marine spatial plans usually indicate the coexistence of defence and cultural environments. In the sea, defence activities can entail the risk of negative impact on cultural relics and cultural landscapes on the seabed. Defence facilities can at the same time form part of the cultural-historical heritage of the coast.

Defence and nature

Marine spatial plans usually indicate the coexistence of defence and nature. In cases where coexistence is deemed unsuitable, an interest is given priority. If the site is a Natura 2000 site, the Environmental Code's rules on activities in Natura 2000 sites apply. Defence activities can involve traffic, noise, blasting and other activities that risk having a negative impact on nature values. Military naval activities may need to be adapted so that damage to nature values is minimised.

Defence and outdoor life

The marine spatial plans mainly indicate the coexistence of defence and recreation. Defence activities can involve noise, traffic, blasting, detonation and other activities that risk having a negative impact on outdoor life. Activities can sometimes be aligned to reduce negative impacts.

Defence and sand extraction

In essence, the marine spatial plans do not specify the coexistence of defence and sand extraction. Defence activities involving, for example, ammunition residues may render the sand unfit for extraction.

Cultural environment and sand extraction

Ancient and cultural-historical remains on the seabed can be adversely affected by sand extraction, which involves changing the seabed. Permits from the county administrative board may be required for activities that risk affecting ancient monuments. Archaeological investigation and examination may be required.

Cultural environment and shipping

The marine spatial plans indicate the coexistence of the cultural environment and shipping. Maritime transport has given rise to several of the cultural environments that we have today, as well as ancient remains in the form of wrecks. Vessel routes and shipping lanes that are heavily trafficked can mean emissions, changed landscapes and dredging that negatively affect cultural values. Shipping can lead to erosion that exposes, grinds and transports away exposed parts of a remnant. Shipping can also cause shallow remains to be damaged by anchors or ship hulls. Increased knowledge and information about remnants can reduce the risk of such damage.

Cultural environment and commercial fishing

Commercial fishing is in many cases an industry that has contributed to valuable cultural environments, such as fishing communities that are part of the cultural heritage. Fishing with active gears such as trawling can negatively affect cultural remains on the seabed. Increased knowledge and information about remnants can reduce the risk of such damage.

Nature and sand extraction

Marine spatial plans usually indicate the coexistence of nature and sand extraction where it is assessed that such coexistence may be possible. When granting a permit for an activity that may have a significant impact on a Natura 2000 site, an assessment will be made of whether the activity is compatible with the provisions of Chapter 7, Sections 28b-29 of the Environmental Code. Permit assessment takes place at a more detailed level than MSP's comprehensive assessments. Sand extraction can affect the nature values found in an area, especially if they are concentrated in the bottom environment. The fact that extraction is local, takes place within short periods of time and is carried out with relatively gentle technology can limit the impact.

Nature and shipping

Marine spatial plans usually indicate the coexistence of nature and shipping. Shipping can put pressure on nature in the form of underwater noise, dredging, erosion, emissions and oil spills. At the same time, maritime transport, if optimised, can represent a climate-efficient means of transport compared to other means of transport. Maritime routes may need to be adapted to reduce the impact on nature values and maritime safety needs to be ensured to avoid accidents.

Nature and commercial fishing

Marine spatial plans usually indicate the coexistence of nature and commercial fishing. Fishing can have a major impact on marine ecosystems, primarily on the species intended to be caught, but also on other species and habitats that may need to be protected. Commercial fishing carried out with active gears such as bottom trawls or involving by-catch of protected and threatened species can have a negative impact on nature values. In some cases, commercial fishing does not have an impact, and there are often opportunities to adapt fishing methods so that the impact on nature values is limited. Adaptation of fishing methods is a common measure in fisheries management's regulatory work, but there are also many other ways of adapting commercial fishing to the needs of nature conservation. In some cases, fishing is not allowed.

Recreation and shipping

The marine spatial plans mainly indicate the coexistence of recreation and shipping. Shipping is in many cases an industry that has contributed to environments that are attractive to visit. Shipping can also contribute to good accessibility. However, ship routes that are heavily trafficked can cause disturbances such as noise and emissions or constitute barriers to, for example, recreational fishing and pleasure boating.

Sand extraction and commercial fishing

Marine spatial plans usually indicate the coexistence of sand extraction and commercial fishing. Sand extraction affects the bottom environment, which in turn can affect fish habitats and thus the fish stocks used by commercial fishing. However, the impact is usually local and limited in time, which in some cases may allow for adaptation, for example by avoiding periods when the area is important for the fish, such as during spawning.

3. Gulf of Bothnia: Guidance and considerations

General information about the marine spatial plan area

Here is a summary of the main features of the planning for the marine spatial plan area. The direction of use and considerations for the marine areas of the marine spatial plan area are also reported.

The plan map shall be interpreted on the approximate scale between 1:700 000 and 1:1 000 000. The boundaries and markings in the map reflect the strategic level of the marine spatial plans.

The laying of data and telecommunications cables, power cables, pipelines and gas pipelines shall be enabled where suitable. The operation and maintenance of data and telecommunications cables, power cables, pipelines and gas pipelines shall always be possible. This applies to the entire planning area.

There are three marine areas in the Gulf of Bothnia:

• Gulf of Bothnia

• Northern Bothnian Sea and North Kvarken

• South Bothnian Sea.

Renewable electricity production

The marine spatial plans will contribute to achieving the society's goal of 100 per cent fossil-free electricity production by 2040. The conditions for energy production in the form of wind farms in the Gulf of Bothnia differ to some extent from other marine spatial plan areas. Conflicts of interest with nature and commercial fishing are generally lower and shipping is also less intense in these marine areas. The Bothnian Bay receives ice winters every year and even in so-called mild ice winters, sea ice is formed in principle throughout the marine area. This affects the conditions for shipping, which needs large areas and access to alternative shipping routes to ensure accessibility. Fixed installations such as wind farms therefore pose a particular challenge for winter navigation, as they risk limiting the flexibility considered necessary for accessibility. This shall be taken into account when establishing wind energy and other fixed installations at sea. Wind conditions are slightly worse in the Gulf of Bothnia compared to the Baltic Sea and the Skagerrak/Kattegat, but still generally good. In some areas of the Gulf of Bothnia, however, there is such strong competition between wind farms and other uses, such as various nature values or defence interests, that coexistence is not deemed achievable.

The starting point for the planning has been updated data for new or changed areas for energy extraction in the marine spatial plans (Energimyndigheten 2023). The planning of energy extraction areas is based on an overall assessment of how the marine spatial plan can best contribute to achieving the energy targets. Areas with energy extraction are proposed both in the lake and in more coastal areas. A total of 13 energy extraction areas or investigation areas for energy extraction areas are listed in the Gulf of Bothnia. Some proposed areas are affected by Natura 2000 legislation, which means that wind farms can only be allowed there if they do not risk

damaging or disturbing the habitats that the site is intended to protect or cause disturbance to the species to be protected that could significantly hamper the conservation of the species in the site. Three of the proposed energy extraction areas in the Gulf of Bothnia are designated as research areas. This is due to uncertainties about the impact of wind energy on bird migration routes.

Close to the coast beyond the boundaries of the marine spatial plan, offshore wind energy at a limited extent may be suitable. Smaller, coastal establishments need to be assessed from a local perspective. Due to the overall scale of the marine spatial plan, energy extraction is not assessed for very small areas.

When developing energy, particular consideration shall be given to the interests of total defence. Proposed areas with the use energy extraction in the Gulf of Bothnia entail the risk of cumulative effects on the interests of total defence. This risk shall be taken into account, which may limit the extent of the development, collectively or in individual areas. In all proposed areas of energy use, particular consideration is therefore given to the interests of total defence. With the exception of four energy areas, particular consideration is given to high cultural heritage values in all energy areas. The values are based on places on land and ancient and cultural remains on the seabed that can be affected by installations at sea. In some of the areas, particular consideration is also given to high nature values. This means that there is a special need for future measures in management, planning and licensing to ensure ecosystem services linked to the values, structures and conditions of the areas.

Good conditions for different activities

The Gulf of Bothnia is the marine spatial plan area that is the least affected by human impact, while the environmental status still needs to be improved in order to achieve good environmental status. There are large areas with high outdoor and nature values and good conditions for various activities. Many large and important industries are located and developed in northern Sweden, which use the sea route for their transport. In large parts of the Gulf of Bothnia, there are areas with good conditions for fossil-free energy extraction in the form of offshore wind energy. There is an area in the northern Gulf of Bothnia that may be suitable for the extraction of sand. Sweden's total defence has interests in the marine spatial plan area, including a naval training area in the northern Bothnian Sea and impact areas in the Bothnian Bay for activities on land.

Many activities in the Gulf of Bothnia are considered to work well together, i.e. they can coexist. Sometimes, however, coexistence has to be regulated in order to work. For example, areas may be intercepted during defence exercises or rules on how vessels, such as fishing vessels, may operate in fairways that are part of traffic separation systems. Such regulations do not take place through the marine spatial plan, but can be found in other legislation. Adaptations and coexistence solutions between winter navigation and large-scale offshore energy production need to be developed.

World Heritage Sites, small-Scale fisheries and valuable Nature

The High Coast World Heritage Site is a nature world heritage site with mainly geological values where the land uplift and ice age characterized the landscape. Together with the Kvarken Archipelago on the Finnish side, they form a geological whole and a cross-border World Heritage Site. The high coast is well visited by tourists all year round, but mainly in the summer, when tour

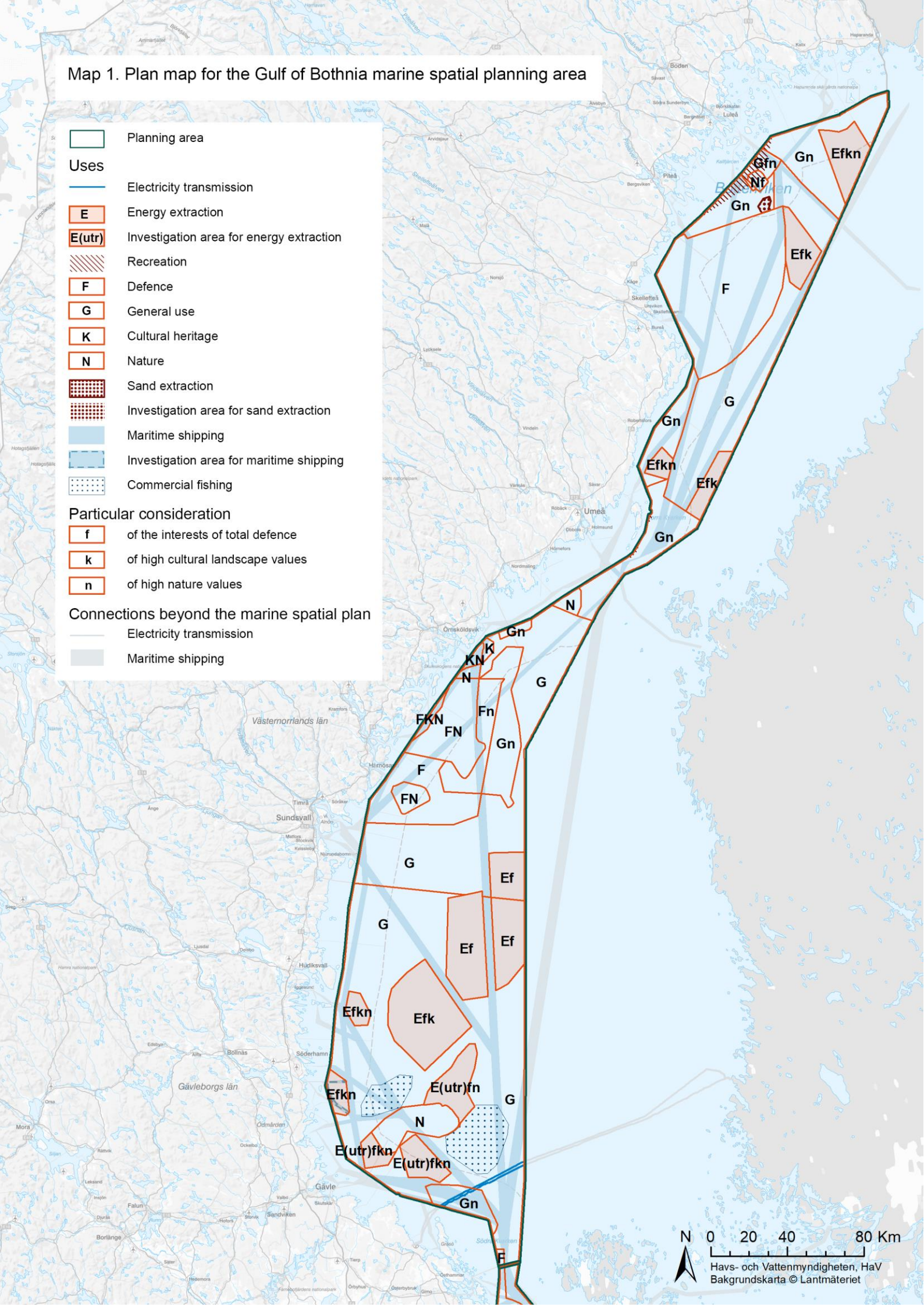
boats and pleasure boats come to the ports in the area. In early autumn, the fermented Baltic herring (surströmming in Swedish) premiere takes place, which attracts many visitors.

Commercial fishing in the Gulf of Bothnia is sparse in the outer sea but more frequent in the coastal waters. There are areas with use commercial fishing in the Southern Bothnian Sea, where the largest concentration of Swedish commercial fishing in the marine spatial plan area is found. Fishing may be affected by proposed energy areas. Commercial fishing in the plan is based solely on fishing from Swedish vessels, but also extensive Finnish fishing is conducted. Swedish and Finnish fisheries often coincide geographically. In the areas affected by national interest claims for commercial fishing in the Gulf of Bothnia's marine spatial plan area, no overlapping energy areas are proposed.

There are large areas with high nature values and several of them are nature reserves, Natura 2000 area or national interest claims for commercial fishing related to spawning and nursery area for fish. These are designated as nature use in the marine spatial plan. In addition to these, there are areas of high nature value that need particular consideration in order to continue to contribute to valuable ecosystem services. Other operations need to pay particular consideration to the high nature values. There are bord routes across the marine spatial plan area. The plan area It houses shallow areas for foraging seabirds. In the Bothnian Bay there is a unique population of seals where the population is stable, but the species has been exposed to environmental toxins and the reproduction rate is weakened.

Reindeer herding is carried out along the coast and in the archipelago outside the boundaries of the marine plan area of the Gulf of Bothnia, and there are several areas of national interest claims for reindeer husbandry. On the coast there are reindeer pastures that can be affected by land and water claims outside the marine spatial plan area linked to uses in the marine spatial plan, but also indirectly through the influence of light and sound.

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



3.1. Bothnian bay

Energy extraction

In the Bothnian Bay, there are good conditions for energy extraction, while the need for electricity is high, partly due to major industrial investments. There are four energy extraction areas in the Bothnian Bay

In the northernmost part of the Gulf of Bothnia there is an area with energy use, Southeast Malören (B111) which is partly located in the territorial sea within the municipality of Kalix and partly in the exclusive economic zone. Bottom-fixed foundations are possible considering the depth, During ice winters, the area is used for icebreaking and ship traffic to Swedish and Finnish ports (Ringsberg et al. 2024) and the impact on winter navigation needs to be taken into account. The area is designated with particular consideration to the interests of the total defence and particular consideration to high nature values regarding both fish spawning and seals occurring in the area. The area is also designated with particular consideration to to high cultural heritage values. The coastal and archipelago area includes the cultural environments Malören, Sandskär and Haparanda archipelago with well-preserved fishing villages as well as lighthouse and pilot sites (Länsstyrelserna 2024). The Haparanda Archipelago is also a national park and is covered by landscape protection. Several areas are also covered by national interest claims for cultural heritage conservation. Cultural and historical remains on the seabed can be directly affected and need to be taken into account. In the area, measurement activities need to be taken into account in the national pelagic environmental monitoring.

In the open sea outside Piteå, Southeast Svalan and Falkens Grund (B113) there is an area with use of energy extraction. The area has been adapted in the northern part with reference primarily to the potential impact on winter navigation. In the area, mainly floating foundations are suitable with regard to depth, but bottom-fixed foundations may be relevant in the area in the future. During ice winters, the area is used for icebreaking and ship traffic to Swedish and Finnish ports (Ringsberg et al. 2024) and the impact on winter navigation needs to be taken into account. The area is defined with particular consideration to the interests of total defence. The area is also subject to particular consideration to high cultural heritage values. At Rödkallen located in the archipelago, the cultural environment includes a well-preserved fishing village as well as lighthouse and pilot site (Länsstyrelserna 2024) which is also a national interest claim for the cultural environment conservation.

In area B112 there is a public interest of substantial significance for wind energy. Energy extraction is not indicated as use taking into account an overall impact on the cultural environment, outdoor life, winter navigation and nature values linked to the presence of ringed seals. In the area there are national interest claims for shipping and public interest of substantial significance for nature. In the coastal and archipelago there is a national interest in moving outdoor life, a national interest in outdoor life and conservation of the cultural environment, as well as a general interest of substantial significance for the cultural environment. Outdoor recreation interests extend into the area.

Outside Piteå and Luleå there are both national interest claims and public interest of substantial significance for wind energy (B104, B105). An area of influence for the defence extends into the

marine area and there are national interest claims for shipping and public interest of substantial significance for sand extraction and nature. In the coastal and archipelago area, there is national interest in outdoor recreation and national interest claims for outdoor life as well as national interest claims and public interest of substantial significance for cultural heritage conservation. Energy extraction is not indicated as use because it is deemed not to be compatible with the other uses in the marine area and with an overall consideration of coastal and nature values linked to the presence of seals. Is a

In the southern part of the Bothnian Bay marine area, there an area with the use energy extraction in coastal region (B108) and in the open sea (B135).

Rata Storgrund is a coastal area located in Robertsfors municipality. The area is considered to have good conditions for the establishment of offshore wind. In the area, bottom-fixed foundations are judged suitable to the depth. Part of area B108 consists of an area (with the same number B108) for energy extraction in the previously adopted marine spatial plan for the Gulf of Bothnia in 2022(Regeringen 2022a). The area is defined with particular consideration to the interests of total defence. The area is also defined with particular consideration to high nature values, which includes fish spawning area and reef environment, as well as bat and bird area. Rata Storgrund (B135) is a larger area located in the exclusive economic zone outside Robertsfors and Umeå municipalities. The area is considered to have good conditions for the establishment of energy extraction. In most of the area, it is considered suitable to have bottom-fixed foundations taking into account the depth. The area is defined with particular consideration to the interests of total defence. During ice winters, the area is used for icebreaking and ship traffic to Swedish and Finnish ports (Ringsberg et al. 2024) and the impact on winter navigation needs to be taken into account. Areas B108 and B135 are both subject to particular consideration to high cultural heritage values. In the coastal and archipelago area are Holmögadd, Holmön-Stora Fjäderägg, Ängesön and Ratan with communication environments, coastal and archipelago environments and ancient relic environments(Länsstyrelserna 2024). These areas are also covered by national interest claims for cultural heritage conservation. Cultural and historical remains on the seabed can be directly affected and need to be taken into account.

Within B106 there are several national interest claims and areas of substantial significance for wind energy. Energy extraction is not indicated as use in view of the overall impact on the cultural environment, outdoor life, shipping and nature values. Within the marine spatial plan there are national interest claims for shipping. In the coastal and archipelago there are national interest claims and public interest of substantial significance for the cultural environment as well as national interest claims for outdoor life. There are also important bird migration routes nearby.

Recreation

In the northern part of the marine area, the entire coast is covered by national interest for outdoor recreation and national interest claims for recreation. The national interest and the national interest claim extend into the marine spatial plan area. The marine spatial plan specifies the use of recreation (B102-B105, B112). The coast of Lövånger is also covered by national interest claims for outdoor life. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective. Any wind energy installation will have a visual impact on the area.

Defence

The marine spatial plan indicates the use of defence at the Tåme firing range in Skellefteå municipality, as it has an impact area that extends into the marine spatial plan area (B105). Particular consideration to the interests of the total defence is given at the air training area at Kallax (B102–B103), where a smaller part of a stop area for high objects extends into the marine spatial plan area. When developing energy, particular consideration shall be given to the interests of total defence. Particular consideration to the interests of total defence is therefore given for all areas with the us energy extraction (B108, B111, B113, B135).

Cultural environment

Areas of national interest for cultural conservation are located along the coast and in the archipelago outside the boundary of the marine spatial plan area. Marine cultural heritage values have been identified by the county administrative boards and can be found both in the archipelago landscape in the northern part of the Bothnian Bay and along the coasts further south. The cultural environments include fishing villages, ancient sites, communication environments and coastal and archipelago environments. (Länsstyrelserna 2024) In the northern part of the marine area there are, among other things, Haparanda Archipelago and Malören with well-preserved fishing villages and many ancient remains associated with fishing and seal hunting. The Haparanda Archipelago is also covered by landscape protection. Further south there are coastal and archipelago environments with fishing villages such as Småskären and Brändöskär and Uddskär. There are also lighthouse and pilot sites such as Rödkallen, Pite-Rönnskär, Bjuröklubb and Ratan. There are wrecks and ancient and cultural-historical remains on the seabed in large parts of the marine area, which requires consideration in the event of any impact on the seabed.

The marine spatial plan gives particular consideration to high cultural heritage values in all four energy areas (B108, B111, B113, B135). Consideration distances to value areas, relevant national interest claims and World Heritage sites need to be assessed from a local perspective, such as indirect impact on cultural heritage values of energy extraction in coastal areas. This may mean that measures are taken to minimise direct, indirect and cumulative impacts on the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm.

Nature

The marine spatial plan indicates the use nature for the area Marakallen outside Luleå (B103), which is protected by Natura 2000. Particular consideration to high nature values is given in the far north (B111, B112) where the consideration refers to fish spawning and ringed seals, and in parts of Luleå and Piteå municipalities (B102, B104) where the consideration refers to birds, fish spawning and seals. Particular consideration to high nature values is also given along the coast from Rata Storgrund up to Bjuröklubb (B106, B108) where the consideration refers to bird and bat areas, reef environments and fish play areas. Almost the entire national interest claim for nature conservation at Kinnbäcksfjärden is located outside the marine spatial plane area. A smaller part of the national interest goes into the marine spatial plan area B105. The national interest is met, but depending on the overall scale of the marine spatial plan, it does not constitute use in the marine spatial plan. The is stable winter ice in the Bothnian Bay. The ice forms the basis for

photosynthesizing algae and ringed seals need the ice for the cuts to survive. As climate change reduces the spread of compact drift ice, the northern parts of the Gulf of Bothnia are becoming increasingly critical. Climate refugia for seals have been identified in close proximity to the marine spatial plan area along parts of the northern coast (Havs- och vattenmyndigheten 2017c).

Sand extraction

The marine spatial plan specifies the use of sand extraction along the outskirts of Luleå municipality's outskirts on the foundations of Svalan and Falken (B104). From a risk point of view, sand extraction is not considered suitable in the adjacent area that extends into the impact area of the Tåme firing range (B105). Sand extraction needs to take special account of high cultural heritage values such as wrecks and ancient and cultural remains on the seabed.

Shipping

The marine spatial plan specifies the use of shipping in the open sea and into ports within the marine area (B102-B106, B112-B113, B136). Several important ports, including Skellefteå and Luleå, are located along the coast of the Bothnian Bay and maritime traffic is important for industry in northern Sweden.

The inlets to the ports are often long and run through the shallow archipelago. Account must be taken of continuous land uplift.

In the Gulf of Bothnia there are special conditions in winter with thick and extensive sea ice. This affects the conditions for shipping, which needs large areas and access to alternative shipping routes to ensure accessibility. During ice winters, icebreaking is carried out and often other areas than summertime are used for vessel traffic, such as B111, B113, B135 (Ringsberg et al. 2024). Claims for large sea surfaces for fixed installations such as wind farms therefore pose a particular challenge for winter navigation, as they risk limiting the flexibility considered necessary for accessibility. This shall be taken into account when establishing wind energy and other fixed installations at sea. There is a lack of comprehensive knowledge on how offshore wind energy affects ice formation, conditions for icebreaking and winter navigation (Swedish Maritime Administration, 2022). The plan map shows the most important shipping routes, not the shipping's entire need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment (Sjöfartsverket och Transportstyrelsen 2023).

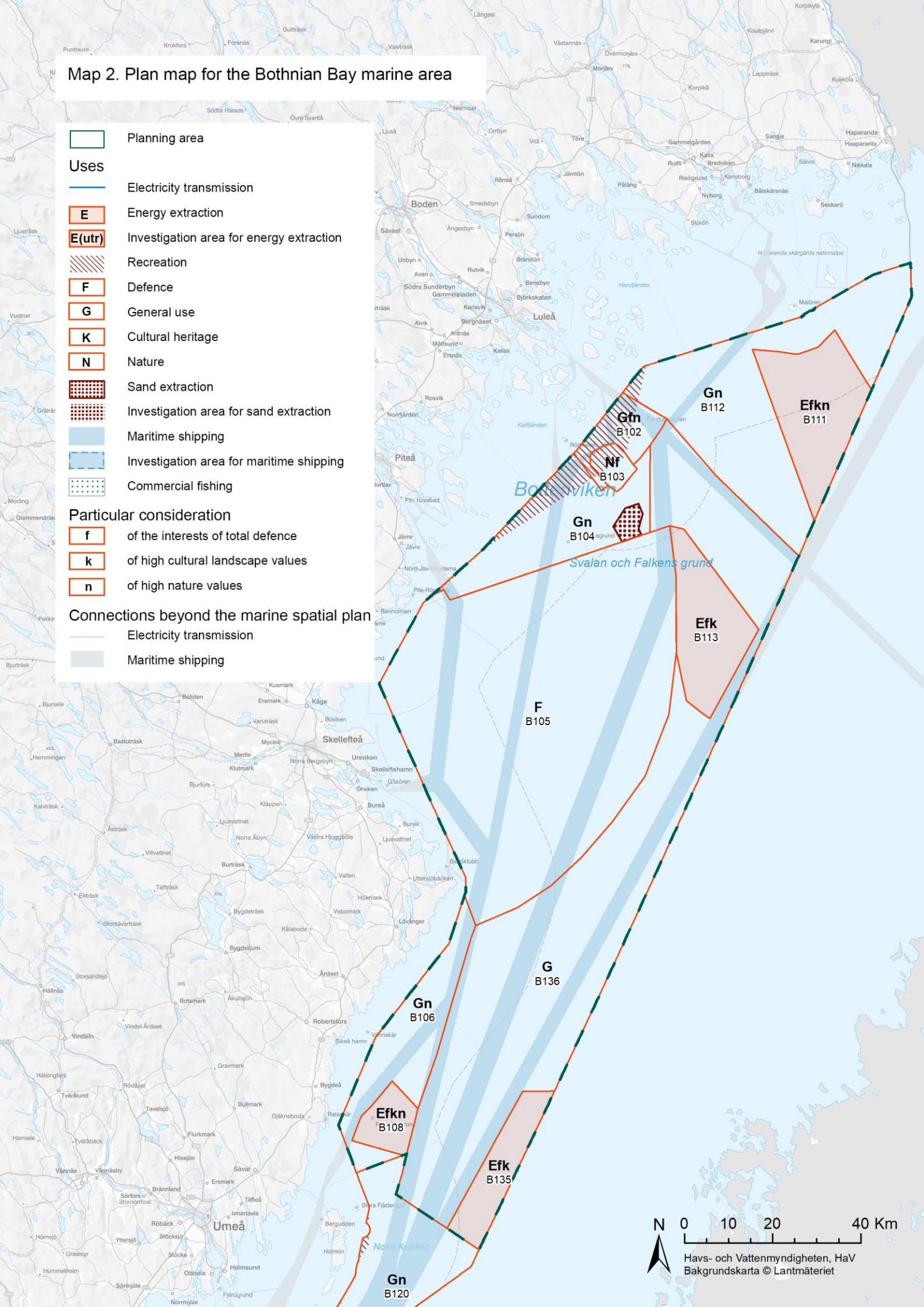
Several wind farms in the same marine area may pose a risk of cumulative impacts on the mobility and safety of shipping when the available space is limited. That risk shall be taken into account.

Commercial fishing

Commercial fishing is sparse in the open sea of the Bothnian Bay. Most of the fishing is carried out with passive gear and close to the coast. Autumn fishing for vendace for roe is economically significant. This fishing takes place near the coast with active gear and mainly outside the marine

spatial plan area. In energy area B111, measuring activities within the national pelagic environmental monitoring needs to be taken into account.

Map 2. Plan map for the Bothnian Bay marine area



Area table Gulf of Bothnia

Table 1 Area table Bothnian Bay

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
B102	Recreation General use Shipping	The interests of total defence High nature values: Ringed seal. Fish spawning. Birds.	
B103	Recreation Nature Shipping	The interests of total defence	
B104	Recreation General use Sand extraction Shipping	High nature values: Ringed seal. Fish spawning. Birds. Reef environment.	Energy extraction is not indicated as use. The marine spatial plan does not specify the use of energy extraction because it is not considered to be able to co-exist with defence, sand extraction and shipping here. Claims of national interest and public interest of substantial significance for wind energy overlap with claims of national interest for shipping and areas of influence for total defence. Public interest of substantial significance for wind energy overlaps with an area of influence for total defence and public interest of substantial significance for sand extraction.
B105	Recreation Defence Shipping		Defence and shipping are given priority over energy extraction and sand extraction. The marine spatial plan gives priority to the use of defence and shipping over energy and sand extraction. The uses are not expected to co-exist here. Public interest of substantial significance for sand extraction overlaps with national interest claims for shipping and the area of influence for the total defence. National interest claims for wind energy overlap with national interest claims for shipping and the area of influence for total defence.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
B106	General use Shipping	High nature values: Fish spawning. Bats. Birds. Reef environment	Energy extraction is not indicated as use. Energy extraction is not indicated as use taking into account the overall impact on outdoor life, cultural environment, nature values and shipping. Several national interest claims and areas of substantial significancefor wind energy as well as national interest claims for shipping are in the area. In the coastal and archipelago there are national interest claims and public interest of substantial significance for the cultural environment as well as national interest claims for outdoor life. There are important bird migration routes nearby.
B108	Energy extraction	The interests of total defence High cultural heritage values: Fishing village. Communication environment. Coastal and archipelago environment. High nature values: Fish spawning. Bats. Birds. Reef environment;	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B111	Energy extraction	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. Communication environment. Coastal and archipelago environment. High nature values: Ringed seal. Fish spawning.	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B112	Recreation General use Shipping	High nature values: Fish spawning. Ringed seal.	Energy extraction is not indicated as use. Energy extraction is not indicated as use taking into account the overall impact on recreational and cultural heritage values on the coast, winter navigation and nature values linked to the presence of seals. National interest claims for shipping and public interest of substantial significance for wind energy and nature exist in the area. In the coastal and archipelago there is a national interest for outdoor recreation, a national interest

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			claims for recreation and conservation of the cultural environment, as well as a general interest of substantial significance for the cultural environment. Outdoor life interests extend into the area.
B113	Energy extraction Shipping	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. Communication environment.	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B135	Energy extraction	The interests of total defence High cultural heritage values: Fishing village. Communication environment. Coastal and archipelago environment.	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B136	General use Shipping		Energy extraction is adapted to shipping. Energy extraction is not indicated as use taking into account winter navigation conditions. Claims of national interest for shipping and public interest of substantial significance for wind energy.

3.2. Northern Bothnian Sea and North Kvarken

Energy extraction

In the North Bothnian Sea and the Northern Kvarken there are good conditions for energy extraction, especially in the southern parts of the marine area.

The North-East Eystrasalt Bank (B161) is an area with the use energy extraction that is located in the exclusive economic zone outside Sundsvall municipality and is part of a larger area (B160) that extends into the marine area of the Southern Bothnian Sea. The area is considered to have good conditions for the establishment of offshore wind. In the western part of the area, floating foundations are suitable with due to depth and in the eastern part it is possible with bottom-fixed foundations. The area is considered to be a public interest of substantial significance for wind energy and is generally considered to have a relatively low degree of conflict with other interests. The area is defined with particular consideration to the interests of total defence.

Outside Sundsvall, in area B162 there is public interest of substantial significance for wind energy. Energy extraction is not indicated as use with regard to an overall assessment of energy extraction potential and the impact on cultural environment and outdoor recreation values on the coast.

Recreation

At the High Coast there is a national interest for outdoor recreation adjacent to the marine spatial plane area. Within the planning area south and east of the Holm Islands (B120) there are national interest claims for recreation. Any wind energy establishment north of the Holm Islands gives a visual impact in the area (See Energy extraction for marine area Bothnian Bay). Possibility of coexistence with other uses and consideration distances need to be assessed from a local perspective

Defence

The marine spatial plan specifies the use of defence for the naval training area Härnön, which extends from the coast through the territorial sea into the Swedish exclusive economic zone, and for the impact area for Skärsviken firing range (B123, B127–B129, B132). When developing wind energy, particular consideration shall be given to the interests of the total defence. Particular consideration to the interests of total defence is therefore given for all areas with the use energy extraction (B161).

Cultural environment

The High Coast's World Heritage Site with unique cultural and nature environments extends into the sea. Along the shoreline of the High Coast there is a concentration of stranded remnants from continuous human activity for 7000 years. (Riksantikvarieämbetet 2017) For these areas, the marine spatial plan indicates the use of the cultural environment (B130-B132). On the Finnish side is the Kvarken Archipelago World Heritage Site. The high coast is also covered by national interest unbroken coast.

Areas of national interest for cultural conservation are located along the coast outside the boundary of the marine spatial plan area.

Marine cultural heritage values have been identified by the county administrative board and are located in the northern part of the marine area around the Holm Islands and along the coasts outside Örnsköldsvik, Härnösand and Sundsvall further south. The dominant cultural environments are ancient sites, communication environments and fishing villages, but there are also production environments. (Länsstyrelserna 2024) In the northern part of the marine area there are, among other things, the value areas Holmön and Stora Fjäderägg, Ängesön and Holmögadd, which include both remote areas with known wrecks as well as lighthouses and communication environments. Holmön and Stora Fjäderägg also include national interest claims for cultural heritage conservation. In addition to the High Coast area, there are also value areas in the southern part of the coastal area outside Härnösand and Sundsvall that include ancient sites with coastal cairns as well as wreck areas and fishing villages. There are wrecks and ancient and cultural-historical remains on the seabed, which requires consideration in the event of impact on the seabed.

Consideration distances to value areas, relevant national interest claims and World Heritage sites need to be assessed from a local perspective, such as indirect impact on cultural heritage values of energy extraction in coastal areas. This may entail that measures are taken to minimise direct, indirect and cumulative effects on the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm.

Nature

The marine spatial plan indicates the use of nature in several areas from the Farmer and the Southeast quarries in the north to the Wait a Little Foundation in the south. Sydostbrotten (B122) is covered by both the Natura 2000 area and the nature reserve Örefjärden-Snöanskärgården. On the High Coast there are national interest claims for nature conservation (B126–B127, B131–B132). Wait a minute basis (B129) covered by Natura 2000. The foundation has been classified as one of the most valuable offshore banks in the Gulf (Naturvårdsverket 2006) of Bothnia .

Particular consideration to high nature values is given outside Holmön (B120) and Vallinsgrundet (B118), which have reef environments, fish play areas and the presence of birds and mammals. The area at Holmön (B120) also serves as a migration route for birds of prey. (Hansson 2019) Particular consideration to high nature values is also given for Ulvödjupet (B123, B165). The deep and relatively untouched bottoms of Ulvödjupet are a unique deep area that has a vibrant bottom fauna community characterized by ice sea relics. As a whole, the marine area is characterised by low use and the environmental impact is therefore relatively low with high originality (Havs- och vattenmyndigheten 2018b). The Natura 2000 site Holmöarna and overlapping nature reserves and national interest claims for nature conservation are mainly located in the coastal zone, but a smaller part extends into the marine spatial plan area's boundary with Holmöarna and the coast (B120). The national interest claim is accommodated, but due to the scale of the marine spatial plan, the use nature is not indicated in the plan map.

Shipping

The marine spatial plan specifies the use shipping for several shipping routes to and from Northern and South Kvarken (B120, B123, B126-B132, B162, B165). Several important ports are located along the coast of the North Bothnian Sea. Maritime traffic is important both to the coast and south via the South Kvarken to the Baltic Sea and north via the Northern Kvarken to both Swedish and Finnish ports in the Bothnian Bay. Because the winter ice is weather dependent and moves in an unpredictable way, shipping needs large areas and alternative routes within the Gulf of Bothnia. This shall be taken into account when establishing wind energy and other fixed installations at sea. There is a lack of comprehensive knowledge on how offshore wind energy affects ice formation, conditions for icebreaking and winter navigation (Swedish Maritime Administration, 2022).

The Northern Quark, which connects the Bothnian Bay with the Bothnian Sea, is very important for the industry in the north. Through North Kvarken, shipping is conducted for safety reasons in a traffic separation system (TSS) because the passage is narrow and shallow, which gives shipping limited room for manoeuvre. Across Kvarken, between Umeå and Vaasa in Finland, European route 12 runs via ferry line and has maritime use in the plan. Umeå municipality's comprehensive plan points out a reserve for the future fixed connection between Umeå and Vaasa. The Finnish marine spatial plan identifies this route and Finland intends to investigate a functional connection. There is currently no national traffic planning for such a connection on the Swedish side.

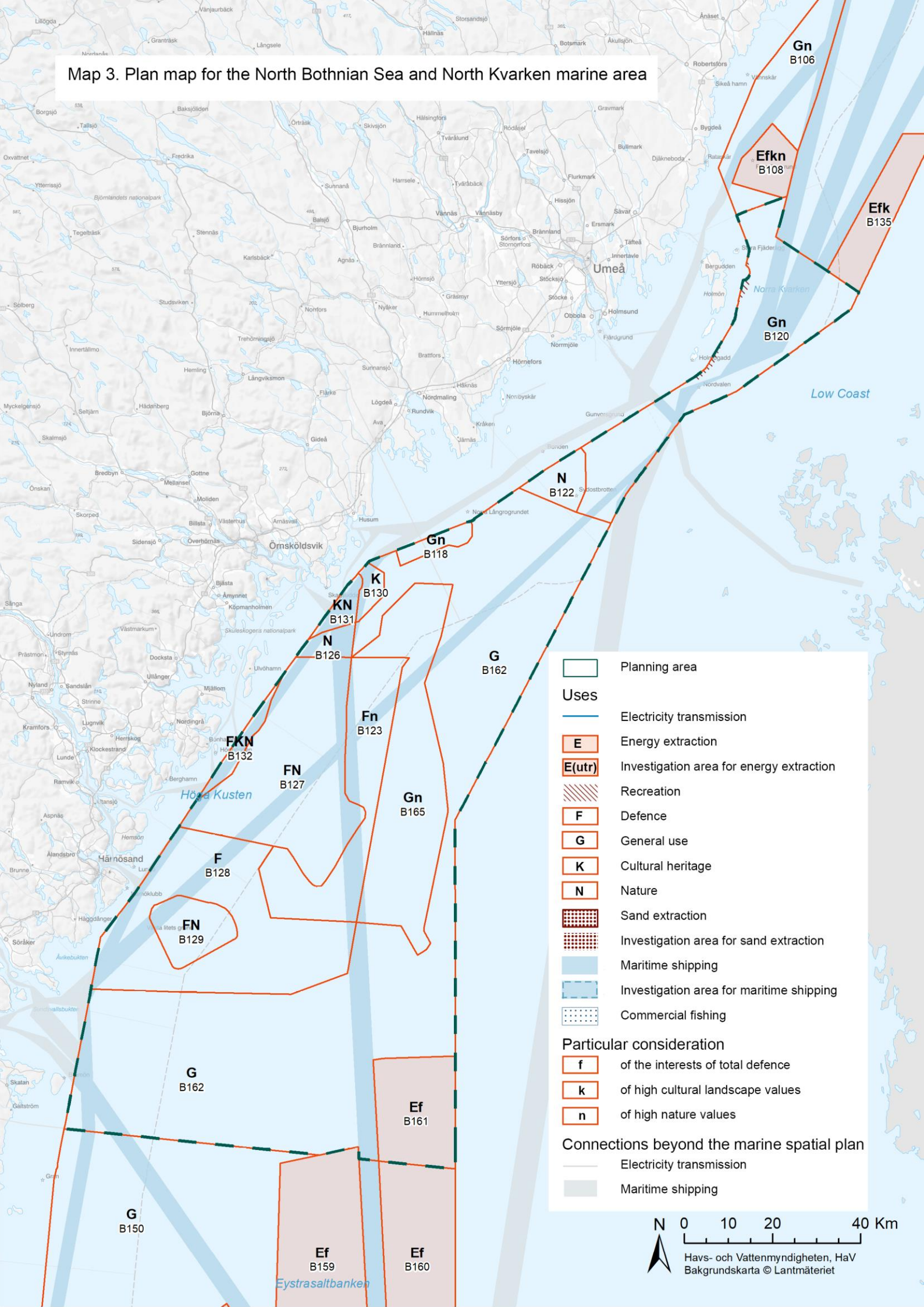
The plan map shows the most important shipping routes, not the shipping's entire need for space. There must be a safety distance adjacent to the shipping lanes. Marine spatial plans do not provide guidance on specific safety distances to shipping, but distances will be required for all areas with the use energy extraction. The distance shall be adapted to local conditions according to risk assessment (Swedish Maritime Administration, Swedish Transport Agency, 2023).

Several wind farms in the same 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.

Commercial fishing

Fishing is limited, with passive gear close to the coast. Some pelagic fishing takes place in the south.

Map 3. Plan map for the North Bothnian Sea and North Kvarken marine area



Area table Northern Bothnian Sea and North Kvarken

Table 2 Area table Northern Bothnian Sea and Northern Kvarken

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
B118	General use	High nature values: Mammals. Fish spawning. Birds. Reef environment;	
B120	Recreation General use Shipping	High nature values: Mammals. Fish spawning. Birds. Reef environment;	
B122	Nature		
B123	Defence Shipping	High nature values: Deep soft bottom. reef environment.	
B126	Nature Shipping		
B127	Defence Nature Shipping		
B128	Defence Shipping		
B129	Defence Nature Shipping		
B130	Cultural environment Shipping		
B131	Cultural environment Nature Shipping		
B132	Defence Cultural environment Nature Shipping		
B161	Energy extraction	The interests of total defence	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B162	General use Shipping		Energy extraction is not indicated as use. Energy extraction is not indicated as use based on an assessment of the energy extraction potential and taking into account outdoor recreation and cultural environment values on the coast. There is a public interest of substantial significance for wind energy in the area. In the coastal area there are national interest claims and public interest of substantial significance

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			for the cultural environment as well as national interest claims for recreation.
B165	General use Shipping	High nature values: Deep soft bottom. reef environment.	

3.3. Southern Bothnian Sea

Electricity transmission

Electricity transmission consists of two transmission grid cables (FennoScan) that run from the area at Forsmark in Sweden to Finland. (B150, B154)

Energy extraction

In the Southern Bothnian Sea there are several shallow areas and good wind conditions, which means that there are good conditions for energy extraction in the area as a whole. In the Southern Bothnian Sea there are five areas with the use energy extraction and where three investigation areas for energy extraction.

The East Eystra Salt Bank (B160) is located in the exclusive economic zone and is part of a larger area that extends into the marine area of the North Bothnian Sea and the Northern Kvarken. The area is considered to be of public interest of substantial significance for wind energy. In most of the area, bottom-fixed foundations are suitable due to depth, with the exception of the southern part. The area is defined with particular consideration to the interests of total defence. The area is considered to have a relatively low degree of conflict with nature, recreation, cultural environment and fishing.

The open sea area Eystrasaltbanken (B159) is located in the exclusive economic zone outside Nordanstig and Hudiksvall municipalities. The area is considered to be a public interest of substantial significance for wind energy and is specified with particular consideration to the interests of the total defence. Area B159 has been adapted to the west to take account of commercial fishing. In the area, bottom-fixed foundations are suitable due to the depth. The area is considered to have a relatively low degree of conflict with nature, recreation and cultural environment.

The open sea area north Sylen (B164) is located in an exclusive economic zone and is considered to be a public interest of substantial significance for wind energy. The south-eastern part of the area is indicated as an energy extraction area in the previously adopted marine spatial plan 2022 for the Gulf of Bothnia (Regeringen 2022a). Within the area there are also national interest claims for shipping (see heading shipping). In most of the area, bottom-fixed foundations are suitable due to depth. The area has been adapted to the west with regard to the accessibility of shipping and recreational and cultural values on the coast. The area is defined with particular consideration to the interests of total defence. The area is also specified with particular consideration to high cultural heritage values, which primarily relate to the western parts towards land. Cultural environments on the coast include the Agö-Kråkö Archipelago and Bålsö-Kuggörarna with coastal and archipelago environments, fishing villages and ancient sites (Länsstyrelserna, 2024). These areas are also covered by national interest claims for cultural heritage conservation. There are also underwater environments along the coast that can be directly affected and need to be taken into account in any establishment.

Gretas Klackar (B142) is a more coastal area outside Hudiksvall municipality. The area is listed as an energy extraction area in the previously adopted marine spatial plan for the Gulf of Bothnia in 2022 (Regeringen 2022a) and is covered by a national interest claim for wind energy. In the

area, bottom-fixed foundations are suitable due to the depth. The area is defined with particular consideration to the interests of total defence. The area is also subject to particular consideration to high cultural heritage values. Cultural environments on the coast include Agö-Kråköarkipelagen, Bålsö-Kuggörarna and Skärså – Prästgrundet with coastal and archipelago environments, fishing villages and archaeological sites (Länsstyrelsen 2024). These areas are also covered by national interest claims for cultural heritage conservation. There are also underwater environments along the coast that can be directly affected and need to be taken into account in any establishment. The area is also listed with particular consideration to high nature values, which includes mammal area, fish spawning area, bird area and reef environments.

At Storgrundet (B146) there is a licensed project for the establishment of wind energy and national interest claims for wind energy. The area is listed as an energy extraction area in the previously adopted marine spatial plan for the Gulf of Bothnia 2022 (Regeringen 2022a). In the field of energy, there is also an investigation area for shipping, which requires further investigation for coexistence (See the heading Investigation area for shipping). In the area, it is possible with bottom-fixed foundations taking into account the depth. The area is designated with particular consideration to the interests of total defence and particular consideration to high nature values relating to mammal area, fish spawning area and reef environment. The area is also subject to particular consideration to high cultural heritage values. Cultural environments on the coast include fishing villages, fairway environments and sawmill communities (Länsstyrelserna 2024). There are underwater environments along the coast that can be directly affected and need to be taken into account in any establishment.

Within Västra Bank and Finngrundet (B157) there are several national interest claims. The western, northern and eastern parts of Finngrunden are covered by national interest claims for wind energy. There is an important shipping route through the area covered by national maritime interest claims. At Finngrunden there is a spawning and nursery area for fish, which is a national interest claim for commercial fishing. Natura 2000 sites have been established on banks to protect valuable habitats. In the area Västra Bank and Finngrundet (B157), energy extraction is not indicated as a use because it is not considered to be compatible with nature and shipping. The investigation area for energy extraction at Västra Finngrundet in the previously decided marine spatial plan for the Gulf of Bothnia (Regeringen 2022a) has been deleted. This is because changing conditions mean that several other areas of energy extraction are deemed to be more suitable from a holistic perspective.

At Campsgrund in the south, there are uses that are not deemed compatible (B150). Within the marine spatial plan area, there are parts of national interest claims for wind energy in Tierps and Älvkarleby municipalities and national interest claims for shipping and defence interests. Energy extraction is not indicated as use.

Investigation areas for energy extraction

In the Southern Bothnian Sea, three areas are listed as the investigation area for energy extraction (B149, B152, B156). The fact that they are designated as investigation areas is due to the fact that there are considerable uncertainties regarding the potential cumulative effects of the areas on bird migration routes in the event of an offshore wind energy expansion.

Norr Finngrundet (B149) is partly covered by national interest claims for wind energy. In other parts, the area is considered to be of significant public interest for wind energy. Parts of the area are listed as energy extraction areas in the previously adopted marine spatial plan for the Gulf of Bothnia 2022 (Regeringen 2022a). Within the area there are national interest claims for shipping. Energy extraction and shipping are not deemed to be compatible here and energy extraction is indicated as the most suitable use (see heading Maritime). The area has been adapted to take account of commercial fishing. In the area, bottom-fixed foundations are suitable taking into account the depth. The area is designated with particular consideration to the interests of the total defence and particular consideration to high nature values relating to the fish spawning area, reef environment and bird area for resting and wintering seabirds.

Utknallen (B152) is a more coastal area outside Gävle. The area is covered by a national interest claim for wind energy and is listed as an energy extraction area in the previously adopted marine spatial plan for the Gulf of Bothnia 2022(Regeringen 2022a). The area is designated with particular consideration to the interests of total defence and particular consideration to high nature values relating to bird areas for resting and wintering seabirds. The area is also subject to particular consideration to high cultural heritage values. Cultural environments on the coast include fishing villages, fairway environments and industrial environments (Länsstyrelserna 2024). There are underwater environments along the coast that can be directly affected and need to be taken into account in any establishment.

Syd Finngrunden (B156) is part of Älvkarleby, Tierp and Östhammar municipalities. Parts of the area are in the exclusive economic zone. The area is considered to be of the public interest of substantial significance for wind energy The area has been adapted to take account of commercial fishing. The area is designated with particular consideration to the interests of total defence and particular consideration to high nature values relating to bird areas for resting and wintering seabirds. The area is also subject to particular consideration to high cultural heritage values. Cultural environments on the coast include fishing villages, fairway environments and industrial environments(Länsstyrelserna 2024). Underwater environments along the coast can be directly affected and need to be taken into account in any establishment.

Recreation

In the coastal area there are shallow archipelagos with genuine fishing villages. Within the municipalities of Hudiksvall and Östhammar, among others, there are national interest claims for recreation in the vicinity of the marine spatial plan area. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective. Any wind energy installation will have a visual impact on the area.

Defence

Within Östhammar municipality, the use of defence is indicated due to an area of influence with a special need for freedom from obstacles (B153).

When developing energy, particular consideration shall be given to the interests of total defence. The many energy extraction areas in the Southern Bothnian Sea entail the risk of cumulative effects on the interests of total defence. This risk shall be taken into account, which may limit the extent of the development, collectively or in individual areas. Particular consideration to the

interests of total defence is therefore given for all energy areas in the Southern Bothnian Sea (B142, B146, B149, B152, B156, B159 - B160, B164).

Cultural environment

The coast in the south, at Gräsö towards South Kvarken, is covered by a highly developed coastline of national interest. Areas of national interest for cultural conservation are located along the coast outside the boundary of the marine spatial plan area. One area at Öregrund and Östhammar is a landscape conservation area. Along the coast there is also a historic sailing route, Sankt Olav, which stretches from Åland to Trondheim.

Marine cultural heritage values have been identified by the county administrative boards and can be found along the entire coast of Gävleborg and Uppsala counties. The predominant cultural environments in the area are fishing villages, archaeological sites and communication environments (Länsstyrelserna 2024). There are also elements of industry environments and sawmill communities. Along the coast there is a large proportion of cultural environments below the surface in sinking areas with concentrations of wrecks classified as ancient remains and protected under the Cultural Environment Act (1988:950). These require consideration in the event of impact on the seabed.

In the Southern Bothnian Sea, several energy areas are listed with particular consideration to high cultural heritage values (B142, B146, B152, B156, B164).

Consideration distances to value areas, relevant national interest claims and World Heritage sites need to be assessed from a local perspective, such as indirect impact on cultural heritage values of energy extraction in coastal areas. This may mean that measures are taken to minimise direct, indirect and cumulative effects on the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm.

Nature

The marine spatial plan includes areas with the use nature on Finngrunden's three banks (B157) where there are Natura 2000 areas. At Finngrunden there are wintering areas for seabirds. The banks are the northernmost outpost of wintering long-tailed duck, which is a threatened species in Sweden. There is also a national interest claim for commercial fishing that relates to spawning and nursery area for fish that extends over Finngrunden. In the area Västra Bank and Finngrundet (B157), energy extraction is not deemed to be able to coexist with nature and shipping, which are listed as uses (see heading Energy extraction).

On the coast of Nordanstig there is a national interest claim for nature conservation. Part of the national interest overlaps with the seal protection area Lillgrund. A smaller part of the national interest and the seal protection area extends into the marine spatial plan area (B150). The national interest claim is met, but depending on the overall scale of the marine spatial plan, it is not marked as use nature in the plan map.

The marine spatial plan gives particular consideration to high nature values on other offshore banks in the marine area, such as Greta's heels (B142) and Storgrundet (B146) where there are reef environments, fish spawning and mammal areas. Also, Östra Finngrunden (B149) where

high nature values consist of reef environment, fish spawning and bird area. In the areas Utknallen (B152), Argos Grundkallegrund (B154) and Syd Finngrunden (B156) particular consideration is given to high nature values because they lie within an important bird range. Birds range also affects Östra Finngrunden (B149).

The areas for energy extraction around Finngrunden (B149, B152, B156) are listed as investigation areas because there are considerable uncertainties about the potential cumulative effects of the areas on bird migration routes in the event of an offshore wind energy expansion.

Shipping

Shipping is indicated for several shipping routes to and from Södra Kvarken (B150, B153, B154, B157). Several important ports are located along the coast of the South Bothnian Sea. Maritime traffic in the marine area is crucial for many industries with destinations both along their own coast and in the rest of Sweden and Finland. Shipping needs large areas and alternative routes because the winter ice is weather dependent and moves in an unpredictable way within the Gulf of Bothnia. This shall be taken into account when establishing wind energy and other fixed installations at sea. There is a lack of knowledge about how offshore wind energy affects ice formation, conditions for icebreaking and winter navigation (Swedish Maritime Administration, 2022).

The plan map shows the most important shipping routes, not the shipping's total need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance shall be adapted to local conditions according to risk assessment (Swedish Maritime Administration, Swedish Transport Agency, 2023).

In the area Västra Bank and Finngrundet (B157), energy extraction is not deemed to be able to coexist with nature and shipping, which are listed as uses (see heading Energy extraction).

A shipping route covered by a national interest claim for shipping passes through one of the areas with the use energy extraction (B164) and one of the investigation areas for energy extraction (B149). Energy extraction is indicated as use and shipping is adapted in accordance with the assessment in the previously decided marine spatial plan for the Gulf of Bothnia 2022 (Regeringen 2022a). The assessment is that access to the ports of the southern Norrland coast remains, although traffic may need to go more eastwards than before. The plan thus caters for both wind energy and shipping interests.

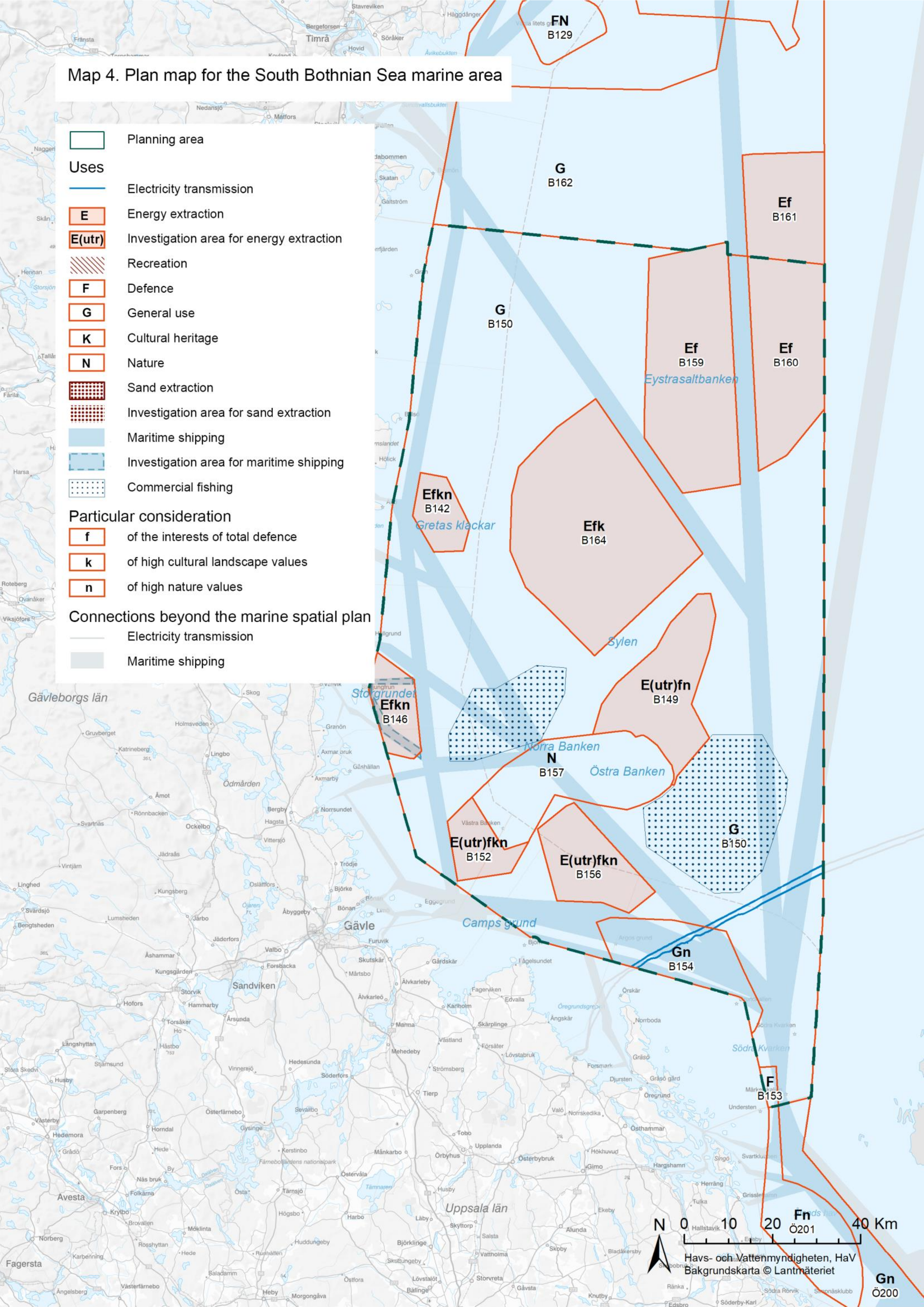
Several wind farms in the same marine area may pose a risk of cumulative impacts on the mobility and safety of shipping when the available space is limited. That risk shall be taken into account.

Investigation area for shipping

The marine spatial plan specifies the maritime investigation area at the inlets to Ljusne and Vallvik at Storgrundet (B146, B150). In order to achieve coexistence with the field of energy production (B146), shipping needs to be investigated. Adaptation may then need to take place for both shipping and energy extraction.

Commercial fishing

There is coastal fishing that characterizes many of the smaller coastal communities and is mostly conducted with passive gear inside and outside the coastal band. At times, intensive pelagic fishing takes place mainly around the offshore banks and in the south-eastern parts of the marine area. The Southern Bothnian Sea has three areas of national interest for commercial fishing. Finngrunden has a spawning and nursery area for fish. This area is partly covered by Natura 2000 and the entire area is listed as use nature in the marine spatial plan. West and east of Finngrunden there are two fishing areas that represent a national interest for commercial fishing. These are covered by the use of commercial fishing (B150). In the eastern area there is also a public interest of substantial significance for wind energy. Energy extraction is not considered to be able to coexist with commercial fishing here and is not indicated as use. In addition to Swedish fishing, extensive Finnish fishing is also carried out in the area (Rantanen, Helminen, och Nature Resources Institute Finland 2023).



Map 4. Plan map for the South Bothnian Sea marine area
Planning area
Uses
Electricity transmission
E
Energy extraction
E(utr)
Investigation area for energy extraction
Recreation
F
Defence
G
General use
K
Cultural heritage
N
Nature
Sand extraction
Investigation area for sand extraction
Maritime shipping
Investigation area for maritime shipping
Commercial fishing
Particular consideration
f
of the interests of total defence
k
of high cultural landscape values
n
of high nature values
Connections beyond the marine spatial plan
Electricity transmission
Maritime shipping
FN B129
G B162
Ef B161
G B150
Ef B159
Ef B160
Eystrasaltbanken
Efkn B142
Gretas klackar
Efk B164
Sylen
E(utr)fn B149
Storgrundet
Efkn B146
Norra Banken
N B157
Östra Banken
E(utr)fkn B152
E(utr)fkn B156
G B150
Camps grund
Gn B154
Södra Kvarken
F B153
Fn Ö201
Gn Ö200
Gävleborgs län
Uppsala län
Gävle
Sandviken
Timrå
N
0 10 20 40 Km
Havs- och Vattenmyndigheten, HaV
Bakgrundskarta © Lantmäteriet

Area table Southern Bothnian Sea

Table 3 Area table Southern Bothnian Sea

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
B142	Energy extraction	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. Communication environment. Coastal and archipelago environment. production environment; Recreational environment. High nature values: Mammals. Fish spawning. Reef environment; Birds.	
B146	Energy extraction Investigation area for shipping	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. Communication environment. Coastal and archipelago environment. Cultivation landscape. production environment; Recreational environment. High nature values: Mammals. Fish spawning. Reef environment;	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B149	Investigation area for energy extraction	The interests of total defence High nature values: Fish spawning. Birds. Reef environment; Particularly low environmental impact.	Energy production takes priority over shipping. The coexistence of shipping and energy extraction may require adaptations. Shipping is indicated as use in the nearby area instead (B150) because it is not deemed to be able to coexist with energy extraction here. Shipping adapted in accordance with the assessment in the previously decided marine spatial plan for the Gulf of Bothnia (Government 2022). In the area there are national interest claims for wind energy and shipping. Conditions for winter navigation need to be taken into account.
B150	Electricity transmission General use Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. The coexistence of shipping and energy extraction may require adaptations. At west Eystrasaltbanken the area with the use energy extraction (B159) has been adjusted with regard to commercial fishing. Public interest of

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			substantial significance for commercial fishing and wind farms overlaps. At Camp's bank, energy extraction is not indicated as use because it is not deemed to be able to coexist with shipping and the interests of the total defence presently. In the area there are national interest claims for shipping and wind energy. At Sydost Finngrundet, the marine spatial plan to give priority to the use of commercial fishing over energy extraction, as the uses are not deemed to be able to coexist here. National interest claims for commercial fishing and public interest of substantial significance for wind energy overlap. At west of Utsjöområde north Sylen the area with the use energy extraction (B164) has been adjusted with regard to recreation and cultural environment values on the coast as well as accessibility for shipping. In the area there is a public interest of substantial significance for wind energy. In the immediate area there are national interest claims for shipping and in the coastal and archipelago area there are national interest claims for outdoor life as well as national interest claims and public interest of substantial significance for cultural heritage conservation. Conditions for winter navigation need to be taken into account.
B152	Investigation area for energy extraction	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. Communication environment. Coastal and archipelago environment. Cultivation landscape. production environment; Recreational	The coexistence of shipping and energy extraction may require adaptations.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
		environment. High nature values: Birds.	Conditions for winter navigation need to be taken into account.
B153	Defence Shipping		
B154	Electricity transmission General use Shipping	High nature values: Mammals. Fish spawning. Birds. Reef environment.	
B156	Investigation area for energy extraction	The interests of total defence High cultural heritage values: Fishing village. Communication environment. Coastal and archipelago environment. High nature values: Birds.	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B157	Nature Shipping		Nature and shipping are given priority over energy extraction. The marine spatial plan gives priority to the uses of nature and shipping over energy production. The uses are not expected to co-exist here. Natura 2000 and national interest claims for shipping and wind farms overlap.
B159	Energy extraction	The interests of total defence	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account.
B160	Energy extraction	The interests of total defence	The coexistence of shipping and energy extraction may require adaptations. Conditions for winter navigation need to be taken into account

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
B164	Energy extraction	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. Communication environment. Coastal and archipelago environment.	Energy production takes priority over shipping. The coexistence of shipping and energy extraction may require adaptations. Shipping is indicated as use in the nearby area instead (B150) because it is not deemed to be able to coexist with energy extraction here. Shipping adapted in accordance with the assessment in the previously decided Marine spatial plan for the Gulf of Bothnia (Government 2022). National interest claims for shipping and public interest of substantial significance for wind energy overlap. Conditions for winter navigation need to be taken into account.

4. Baltic Sea: Guidance and considerations

General information about the marine spatial plan area

Here is a summary of the main features of the planning for the marine spatial plan area. The direction of use and considerations for the marine areas of the marine spatial plan area are also reported.

The plan map shall be interpreted on the approximate scale between 1:700 000 and 1:1 000 000. The boundaries and markings in the map are reflect the strategic level of the marine spatial plans.

The laying of data and telecommunications cables, power cables, pipelines and gas pipelines shall be enabled where suitable. The operation and maintenance of data and telecommunications cables, power cables, pipelines and gas pipelines shall always be possible. This applies to the entire planning area.

There are five marine areas in the Baltic Sea:

• Northern Baltic and South Kvarken

• Central Baltic

• South-Eastern Baltic Sea

• Southern Baltic Sea

• South-West Baltic Sea and Øresund.

Renewable electricity production

The marine spatial plans will contribute to achieving the society's goal of 100 per cent fossil-free electricity production by 2040. The conditions for wind energy in the Baltic Sea differ between different marine areas. Common to all areas is that the technical possibilities for offshore wind energy are good, in terms of wind speed and depth. Shipping is intensive throughout the Baltic Sea. The military component of total defence takes up large areas, both on the basis of open and non-open interests. Near land there are many valuable cultural environments and areas for outdoor recreation. The southwestern, southern, south-eastern and central Baltic Seas have great nature values, including birds, mammals and valuable bottom habitats.

The Swedish Armed Forces have indicated that the possibilities for coexistence are lower in the Baltic Sea than in the other marine spatial plan areas (Energimyndigheten 2023). In order to increase opportunities for coexistence, efforts are needed both from the Swedish Armed Forces and other actors, both in terms of technological development but also in the process of planning and licensing offshore wind energy(Odell et al. 2022). The starting point for the planning has been updated data for new or changed areas for energy extraction in the marine spatial plans(Energimyndigheten 2023). Based on the assessment made by the Government regarding the impact of offshore wind energy on the Swedish Armed Forces' ability to cope with the changed security situation, no additional areas with the use energy extraction are currently

(Klimat- och näringslivsdepartementet 2024; Regeringen 2024b) specified in the draft marine spatial plan than those in the adopted plan (Regeringen 2022a).

The marine spatial plan provides guidance on three areas for energy extraction in the Baltic Sea, two of which are reported in the plan map. In the third area, the interest of energy extraction is accommodated, but this is not reported in the plan map due to scale. Of the three sites, two activities are in place and the third one has a permit. The two active areas are coastal, and the licensed area is located in the open sea.

When developing energy, particular consideration shall be given to the interests of total defence. In all areas of energy production, particular consideration is therefore given to the interests of total defence. Two out of three areas in the Baltic Sea give particular consideration to high cultural heritage values. The values are based on places on land and ancient and cultural remains on the seabed that can be affected by installations at sea. In one area, particular consideration is also given to high nature values. This means that there is a special need for future measures in management, planning and licensing to ensure ecosystem services linked to the values, structures and conditions of the areas.

Competition between uses

There are high nature values in the marine spatial plan area, which affects the future establishment of wind energy and sand extraction. The activities are assessed as possible, but in several cases, there are requirements for assessment under Natura 2000 legislation.

Operational oil spills from shipping south of Gotland have a negative impact on the population of algae. Sea traffic can also affect harbour porpoises through noise. One way to reduce the impact may be to redirect traffic, but there may also be other solutions. Making changes to any part of the transport system is complex and can have consequences in other parts of the transport system. The impact of shipping on the nature environment and the measures that may be suitable to reduce the negative impact of shipping need to be further investigated, and therefore the marine spatial plan specifies an investigation area for shipping both south and north and east of Gotland. Algae and harbour porpoises can also be negatively affected by wind energy.

Nature and people

The Baltic Sea's marine spatial plan area has high nature values and attractive habitats for people. Coastal and archipelago landscapes are widely used for recreation and there are high cultural values both in the coastal strip and in the sea.

There are large areas of high nature value in the marine spatial plan area and several of them are nature reserves or Natura 2000 areas that use nature in the marine spatial plan. In addition to these, there are areas where activities need to take particular consideration to high nature values.

While there are good conditions for various activities, the environment in the Baltic Sea needs to be improved in order to achieve good environmental status. For example, there are large areas of dead sea bottoms due to lack of oxygen. In the Baltic Sea there are marine mammals such as harbour porpoises and seals, as well as spawning and nursery areas for several fish species. For harbour porpoises, the population size is critically low in the Baltic Sea and the situation for fish is strained and severe. There are important bird routes across the Baltic Sea. The offshore banks

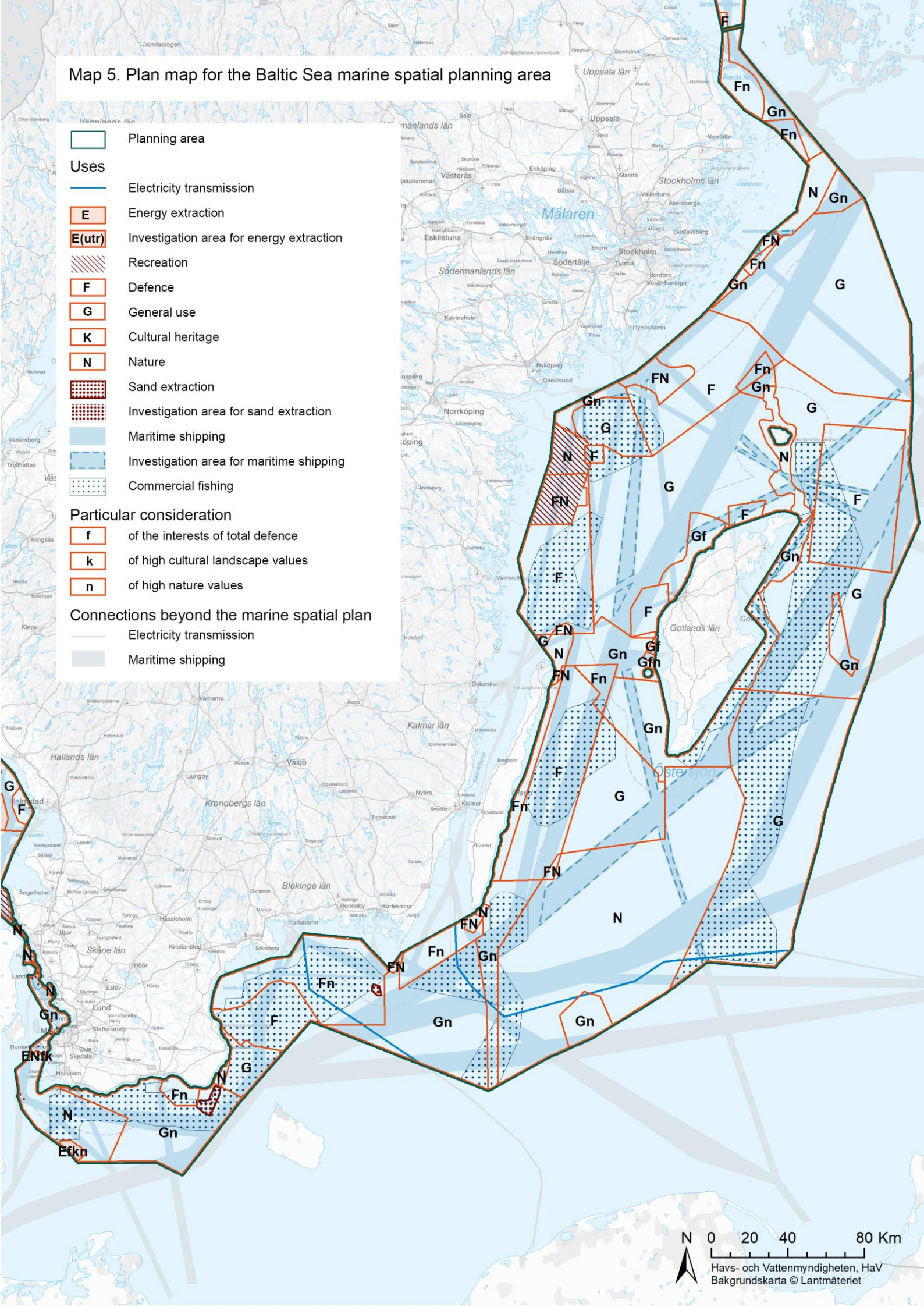
are valuable with sea bottom habitats and are of great importance as wintering areas for seabirds. In the case of breeding and wintering birds, some groups of these birds do not achieve good environmental status.

Industry and shipping that ties together the region

The Baltic Sea is of great importance for international trade and is therefore also one of the most intensively trafficked areas in the world. The many shipping routes link the countries together and contribute to the goal of linking the Baltic Sea region through the transport of people and goods. With this starting point, shipping routes extending from Sweden's neighbouring countries into the Swedish exclusive economic zone have been identified as public interests of substantial significance and listed as maritime use.

In the marine spatial plan area there are areas that may be possible for extraction of sand and there are good technical conditions for offshore energy extraction. Commercial fishing takes place on very large areas and fishing areas also change between different years and over a longer period of time. Therefore, the area for the use of commercial fishing is widespread in the marine spatial plan. The development of the stock situation is crucial for fishing opportunities. The situation is difficult for, among other things, the cod stock in the Baltic Sea.

Map 5. Plan map for the Baltic Sea marine spatial planning area



4.1. Northern Baltic and South Kvarken

Energy extraction

The northern Baltic Sea has good wind conditions for offshore wind energy, while electricity demand is high due to consumption in the Mälardalen region. In the area there are five national interest claims for wind energy. During the marine spatial process, five areas deemed to be public interests of substantial significance for wind energy. The marine spatial plan does not specify any areas with the use energy extraction in the Northern Baltic Sea and the South Kvarken.

One national interest claim is outside the Swedish Highlands, (Ö203, Ö214) and one outside Nämdö (Ö507). In several areas along the coast from Norrtälje to Oxelösund there are national interest claims for wind energy (Ö208, Ö210 – Ö211, Ö504). The Marine spatial plan does not provide guidance on energy extraction in any of these areas because it is deemed not to be compatible with defence interests. Within the naval training area Nåttarö (Ö504) and Landsortsdjupet (Ö210) there is an open national interest claim for the total defence. The marine spatial plan does not provide guidance on energy extraction in these areas. National interest claims for energy extraction in the marine area are not considered to be compatible with the interests of total defence and are not indicated as use.

In the sea area east of Stockholm (Ö204), there are four public interests of substantial significance for wind energy. Sydost Svenska Högarna is an area suitable for bottom-fixed foundations. Northeast Gotska Sandön and east Nynäshamn and east of Almagrundet it is suitable with floating foundations due to depth. The Government has rejected the projects that overlapped with the public interests of substantial significance for wind energy due to conflict with the interests of total defence (Klimat- och näringslivsdepartementet 2024). The marine spatial plan does not guide any of these areas as the use energy extraction, as energy extraction is not considered to be compatible with the interests of total defence in the Baltic Proper at present (Regeringen 2024b)

There is a public interest of substantial significance for for wind energy at Gustaf Dalén and southeast of Gustaf Dalén (Ö208, Ö211). The marine spatial plan does not guide energy extraction in the area because it is not considered to be compatible with defence interests and nature conservation. The area is close to the coast and is of great importance for breeding, wintering and resting seabirds that are considered to be of general interest of substantial significance for nature conservation.

Based on the Government’s decision to reject all applications for offshore wind farms in the marine area, the overall assessment is that there are currently no conditions for the use energy extraction apart from existing permits in the Baltic Proper due to the interests of total defence (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

Recreation

The marine spatial plan specifies the use recreation outside parts of the Östergötland archipelago (Ö208, Ö211). The guidance on the use recreation is based on national interest claims for recreation.

In the Stockholm archipelago there are high cultural, outdoor and nature values. Across the South Kvarken, it forms, together with the Åland archipelago and the west coast of Finland, a unique stretch of shallow archipelagos. The Stockholm archipelago is one of Sweden's most visited with many nature harbours and marinas. Outdoor life and recreational shipping are extensive. Recreational boat traffic often travels both to and from the Gulf of Bothnia in the north, the archipelagos of Gryts and Sankt Anna in the south, to Gotland and across the Åland Sea.

At the entire coastline from Östhammar and south in the marine area and around Gotland, there are national interest claims for outdoor life outside the marine spatial plane area and national interest outdoor recreationt hat goes into the marine spatial plane area. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective.

Defence

The marine spatial plan specifies the use of defence along large parts of the coastline in the marine area due to national interest claims for total defence and areas of influence. Väddö shooting range is located in Norrtälje municipality at South Kvarken, with associated impact area out over the sea (Ö201). The marine spatial plan also specifies the use of defence for impact areas at Söderarm and Korsö firing ranges in the municipalities of Norrtälje and Värmdö (Ö202, Ö206 to Ö207). In Stockholm's southern archipelago, the Utö shooting range and sea training area Nåttarö extends from the coast through the territorial sea into the Swedish exclusive economic zone outside the municipalities of Värmdö, Haninge and Nynäshamn (Ö210, Ö504-Ö505).

In the event of an energy expansion, particular consideration shall be given to the interests of the total defence. The Government has rejected 13 projects in the Baltic Proper due to conflict with the interests of total defence(Klimat- och näringslivsdepartementet 2024).

Cultural environment

The entire stretch of coastline in the marine area is covered by highly developed coastline of national interest. Areas of national interest for cultural conservation are located along the coast towards land, outside the marine spatial plan area.

Marine cultural heritage values have been identified by the County Administrative Board and can be found along the coast and in the archipelago area outside the counties of Stockholm and Södermanland. These include communication environments and coastal and archipelago environments, but there are also lighthouse environments such as Söderarm, Svenska Högarna and Hävringe (Länsstyrelserna 2024). There are also wrecks and ancient and cultural-historical remains on the seabed in the immediate area, which requires consideration in the event of any impact on the seabed. The need for consideration distances to the value areas, relevant national interest claims and World Heritage Sites needs to be assessed from a local perspective.

Nature

The marine spatial plan indicates the use of nature in three areas around the Stockholm archipelago, where there are national interest claims for nature conservation (Ö203, Ö206,

Ö210). The area at Norrtälje municipality also includes a planned marine nature reserve (Ö203). Just outside the marine spatial plan area (Ö504), a marine national park is planned in the archipelago.

The marine spatial plan gives particular consideration to high nature values in several areas. The Åland Sea (Ö200-Ö201) is a foraging area for birds. It is also a migratory route for birds of prey. (Hansson 2019) In the Åland Sea there are also unique oxygenated deep areas, migratory salmon and viable cod stocks. North and southeast of the Swedish Highlands there are four areas with potential climate refugia for blue mussels. These are four of the eight identified areas in the Baltic Sea (Havs- och vattenmyndigheten 2017c). Climate refuge is safeguarded through particular consideration to high nature values (Ö200, Ö202, Ö207, Ö214). In the area Öst Svenska Högarna (Ö214) there are also high nature values in the form of mammal and bird area and reef environments. Along the southwest of the marine area, particular consideration is given to high nature values as there is a reef environment and a spawning and mammal area (Ö211). There are high nature values in the form of reef environments west of Stockholm's southern archipelago (Ö207, Ö507). North of the Copper Stones there is a bird area (Ö505).

Some national interest claims for nature conservation that are mainly located in the coastal zone extend into the marine spatial plan area. Due to the overall scale of the marine spatial plan, they are not marked as use nature in the marine spatial plan. This applies, among other things, at Simpnäsklubb (Ö200-Ö202) and west of Hävringe in Nyköping municipality (Ö211).

Shipping

The marine spatial plan specifies the use of shipping in routes both in the lake and towards ports on the coast (Ö200-Ö204, Ö206-Ö208, Ö210-Ö211, Ö214, Ö504-Ö505). The shipping routes are also part of the Baltic Sea's larger traffic system with connections to the Gulf of Finland, Åland and the Baltic States. In order to connect shipping routes from Stockholm to Latvia, the use shipping to the east of the easternmost (deepest) fairway in the Swedish exclusive economic zone (Ö204) is included. The narrow water area of South Kvarken is the passage between the North Baltic Sea and the Bothnian Sea. In order to make the waters safe, there is a system of traffic separation that is located both in Sweden and in Finland. The passages to Lake Mälaren via the Södertälje Canal into Stockholm, the road into the Port of Oxelösund and the Port of Stockholm Norvik are other important routes for maritime use in the marine area. The plan map shows the most important shipping routes, not the shipping's total need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. Distance adapted to local conditions following risk assessment (Sjöfartsverket och Transportstyrelsen 2023)

Investigation area for shipping

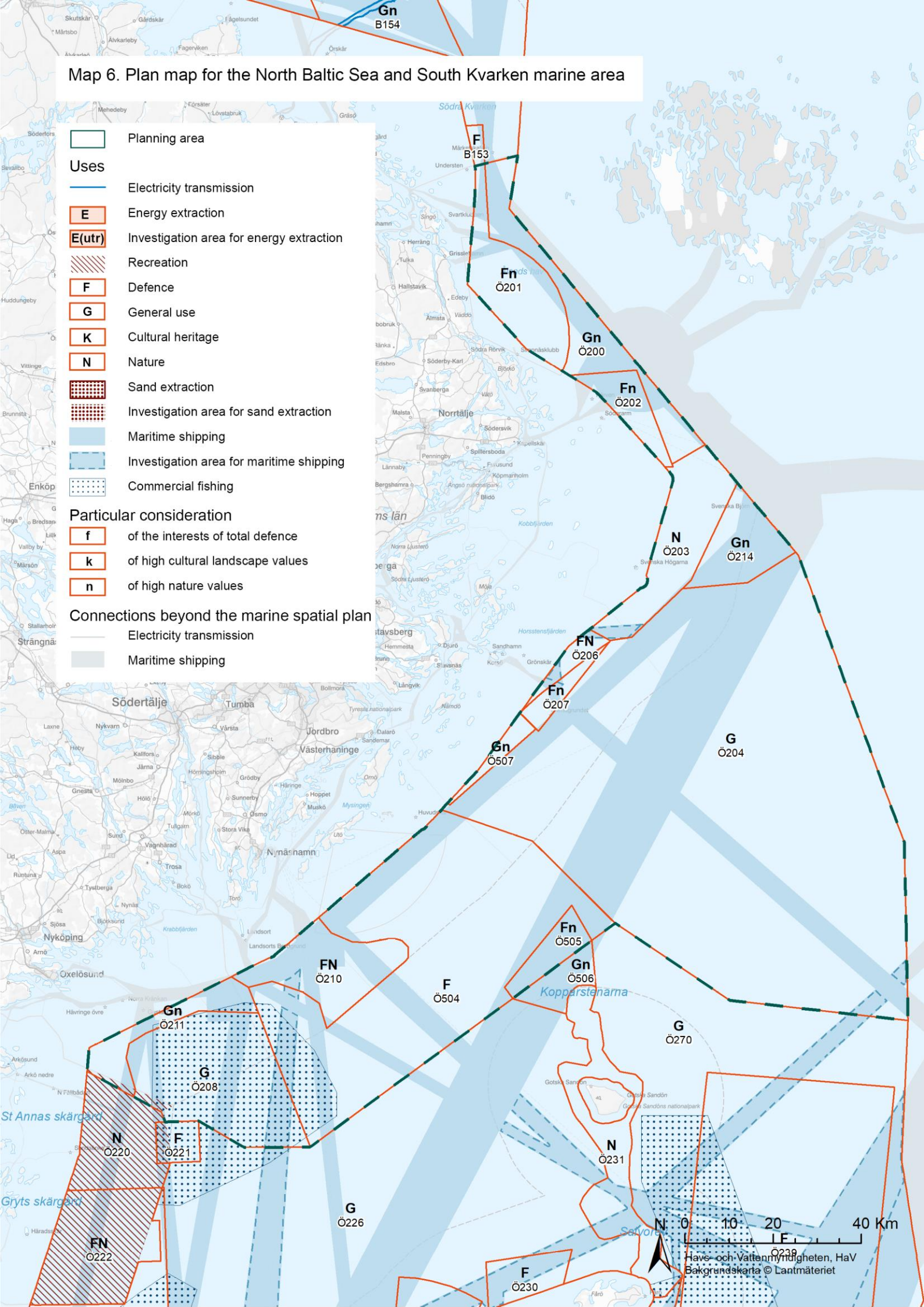
Horsstensleden is a possible future fairway through the Stockholm archipelago into the port of Stockholm. The intended route is not located in the marine spatial plan area, but connects through two national interest claims for shipping to the traffic system in the marine spatial plan area (Ö206-Ö207 and Ö203-Ö204, Ö206). Horsstensleden is not included in the National Transport Infrastructure Planning 2022-2033 (Regeringen 2021). It is outside the legal mandate of the national marine spatial planning to consider whether the intended fairway outside the

marine spatial plan area is suitable. However, the marine spatial plan should take height for it because in the future it may be suitable to have a new fairway towards Stockholm. For this reason, the connections are marked as an investigation area for shipping.

From Nynäshamn there is a route towards Gdansk in Poland. This route corresponds to an investigation area for shipping (Ö208, Ö210, Ö504). Also, around Gotland, in the marine areas of the Central Baltic Sea and the South-Eastern Baltic Sea, the marine spatial plan indicates an investigation area for shipping. See more under the heading ‘Investigation area for shipping” in the section on the Central Baltic Sea and the South-Eastern Baltic Sea t marine areas.

Commercial fishing

In the entire Northern Baltic Sea from Värmdö municipality and south, as well as in a smaller area in the South Kvarken, pelagic fishing is conducted, which concerns fishing for herring and sprat in the open sea. The use commercial fishing is indicated in the southern part of the marine area (Ö208, Ö211, Ö504).


Map 6. Plan map for the North Baltic Sea and South Kvarken marine area
Planning area
Uses
Electricity transmission
E Energy extraction
E(utr) Investigation area for energy extraction
Recreation
F Defence
G General use
K Cultural heritage
N Nature
Sand extraction
Investigation area for sand extraction
Maritime shipping
Investigation area for maritime shipping
Commercial fishing
Particular consideration
f of the interests of total defence
k of high cultural landscape values
n of high nature values
Connections beyond the marine spatial plan
Electricity transmission
Maritime shipping
Gn B154
F B153
Fn Ö201
Gn Ö200
Fn Ö202
N Ö203
Gn Ö214
FN Ö206
Fn Ö207
Gn Ö507
G Ö204
Fn Ö505
Gn Ö506
FN Ö210
F Ö504
Gn Ö211
G Ö270
G Ö208
N Ö220
F Ö221
N Ö231
G Ö226
FN Ö222
F Ö230
F Ö239
Södra Kvarken
Koppärstenarna
St Annas skärgård
Gryts skärgård
Norrtälje
Södertälje
Nyköping
Oxelösund
Nynäshamn
0 10 20 40 Km
Havs- och Vattenmyndigheten, HaV
Bakgrundskarta © Lantmäteriet

Area table Northern Baltic Sea and South Kvarken

Table 4 Area table Northern Baltic Sea and South Kvarken

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö200	General use Shipping	High nature values: Mammals. Birds. High originality. Climate refuge for blue mussels. Reef environment.	
Ö201	Defence Shipping	High nature values: Birds.	
Ö202	Defence Shipping	High nature values: Mammals. Birds. High originality. Climate refuge for blue mussels. Reef environment,	
Ö203	Nature Shipping Investigation area for shipping		Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there is a national interest claim for wind energy.
Ö204	General use Shipping Investigation area for shipping		Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there are several public interests of substantial significance for wind energy.
Ö206	Defence Nature Shipping Investigation area for shipping		
Ö207	Defence Shipping Investigation area for shipping	High nature values: Mammals. High originality. Climate refuge for blue mussels. Reef environment;	

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö208	Recreation General use Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there are national interest claims and public interest of substantial significance for wind energy.
Ö210	Defence Nature Shipping Investigation area for shipping		Defence takes priority over energy extraction. The marine spatial plan gives guidance on the priority for use defence over energy extraction, as the uses are not deemed to be able to coexist here. In the area there are national interest claims for total defence and wind energy.
Ö211	Recreation General use Shipping Commercial fishing	High nature values: Mammals. Birds. Reef environment.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with nature and the interests of total defence at present. In the area there are national interest claims for wind energy as well as public interest of substantial significance for wind energy and nature.
Ö214	General use Shipping	High nature values: Mammals. Birds. Climate refuge for blue mussels. Reef environment.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			considered to be able to coexist with the interests of total defence at present. There is a national interest in wind energy in the area.
Ö504	Defence Shipping Investigation area for shipping Commercial fishing		Defence takes priority over energy extraction. The marine spatial plan gives guidance on the priority for use defence over energy extraction, as the uses are not deemed to be able to coexist here. In the area there are national interest claims for wind energy and total defence.
O505	Defence Shipping	High nature values: Birds.	
Ö507	General use	High nature values: Reef environment.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. There are national interest claims for wind energy in the area.

4.2. Central Baltic Sea

Energy extraction

The Central Baltic has good wind conditions for offshore wind energy. In the area there is a part of a national interest claim for wind energy. During the marine spatial planning process, seven areas deemed to be public interests of substantial significance for wind energy have been identified. The marine spatial plan does not specify any areas that use energy extraction in the Central Baltic Sea.

In Östergötland's archipelago there is part of a national interest claim for wind energy (Ö220), however energy extraction is not deemed to be able to co-exist with the interests of total defence in the Baltic Proper at present (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

In the area northwest of Gotland (Ö226) there are two public interests of substantial significance for wind energy Both areas are suitable for floating foundations. The coastal area northwest of Gotland is considered to have a relatively low degree of conflict with recreation, cultural environment and nature. In southern Nielsengrund, measurement activities are carried out within the national pelagic environmental monitoring. The area can also have a visual impact on nearby cultural environments in case of offshore wind installations. No areas with the use energy extraction are included, as wind energy installations is not considered to be compatible with the interests of total defence in the Baltic Proper at present (Regeringen 2024b). A project which did not overlap with a national interest claim or a public interest of substantial significance for wind energy in the area has been rejected (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

Northeast of Gotska Sandön there is a public interest of substantial significance for wind energy (Ö270). The area is located within an area of national interest for outdoor recreation and in the vicinity of an area with a national interest claim for recreation In order to preserve the area's values of undisturbedness and untouchedness, the marine spatial plan does include an area with the use energy extraction. Also, the marine spatial plan does not include any area with the use energy extraction, except already permitted areas, as energy extraction is not considered to be compatible with the interests of total defence in the Baltic Proper at present (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

In the Eastern Baltic – Stockholm to East Gotland (Ö270) there are four additional public interests of substantial significance for wind energy. Two of these, Klint's bank and southeast Fårösund are suitable for bottom-fixed foundations. The two areas South Klint Bank and Northeast Sea Training area Sankt Olof are suitable for floating foundations. Three of the areas overlap with national interest claims for commercial fishing. Since commercial fishing on the site is mainly pelagic, it is not considered that energy extraction can coexist with commercial fishing. Three of the areas are coastal and may have a potential impact on cultural heritage values. One of the areas overlaps Klints Bank, a climate refuge for blue mussels (Ö233). As energy extraction is not considered to be compatible with the interests of total defence in the Baltic Proper at present (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b, he marine spatial plan for the Baltoc Sea does not include any area with the use energy extraction, except already permitted areas,

Considering the Government’s decision to reject all applications for offshore wind farms in the Baltic Sea proper including this marine area, the overall assessment is that there are currently no preconditions for including areas with use using energy extraction in addition to existing permits in the Baltic Proper due to the interests of total defence (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

Recreation

The marine spatial plan specifies the use of recreation outside parts of the Östergötland archipelago (Ö220-Ö222). The guidance on the use recreation is based on national interest claims for recreation. Outdoor life and recreational boating are extensive, and valuable areas can be found along the entire coast at Gryt's and Sankt Anna's archipelagos to Northern Öland and around Gotland.

The coast from Västervik municipality and south as well as the coast around Gotland, outside the marine spatial plane area, is covered by national interest outdoor recreation. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective wind energy. The area is within the area of national interest outdoor recreation and close to the area with national interest claims for recreation. Gotska Sandön is unique in Sweden with its isolated, solitary location that offers views of the unbroken horizon and without noise and light disturbances. In order to preserve the area's values of undisturbedness and untouchedness, and because of defence interests in the Baltic Proper, energy extraction is excluded from area Ö270.

Defence

There are several areas in the Central Baltic designated with the use defence. Along the mainland coast are the marine military training areas Sandsänkan (Ö221) and Urban, which extend through the territorial sea into the Swedish exclusive economic zone outside the municipalities of Valdemarsvik, Västervik and Oskarshamn (Ö222–Ö224). South of Visby out into the territorial sea, defence is indicated as the area is an impact area for Tofta firing range (Ö228). A little further north is the marine military training area Fårö (Ö230). Sankt Olof (Ö239) is located east of Gotland and Fårö. The marine spatial plan gives particular consideration to the total defence interests of parts of the west coast of Gotland due to the stop area for high objects for Visby Airport (Ö229, Ö278, Ö289).

In the event of any offshore wind installation, particular consideration shall be given to the interests of the total defence.

Cultural environment

Areas of national interest for cultural conservation are located along the coasts on the mainland and on Gotland outside the boundaries of the marine spatial plan area and on Gotska Sandön.

Outside the marine spatial plan area there is national interest for unbroken coastline that covers both the east and west sides of Öland and runs along the coast from Västervik to Arkösund in the north. Coasts around Gotland outside the marine spatial plan area are of national interest for

high-exploited coasts. The Hanseatic city of Visby is located outside the boundary of the marine spatial plane area.

Marine cultural heritage values have been identified by the county administrative board and are found around large parts of the coast and marine area of Gotland, at the coastal areas of Östergötland and Kalmar counties and Öland's northern cape and surrounding marine area (Länsstyrelserna 2024). The cultural environments are mainly archaeological sites, communication environments and coastal and archipelago environments. There are wrecks and ancient and cultural-historical remains on the seabed, which requires consideration in the event of impact on the seabed. The need for consideration distances to the value areas, relevant national interest claims and World Heritage Sites needs to be assessed from a local perspective.

Nature

The marine spatial plan indicates the use nature in several areas, mainly along the mainland coast and north of Gotland. Areas along the coasts of Östergötland and Kalmar counties are covered by national interest claims for nature conservation (Ö220, Ö222, Ö224–Ö225, Ö234). The area at Gotska Sandön and Salvorev is covered by Natura 2000 and several other nature protections such as nature reserves and HELCOM MPA (Marine Protected Area) (Ö231). There are national interest claims for nature conservation that are mainly located in the adjacent coastal zone, but that extends just into the marine spatial plan area, including in Västervik municipality (Ö223). National interest claims are accommodated, but due to the overall scale of the marine spatial plan, they are not marked as use nature in the marine spatial plan.

At the marine military training area Sandsänkan in the Östergötland archipelago (Ö221) there are national interest claims for total defence and in the western part of the area there is a small part of national interest claims for nature conservation. The area where national interests overlap is small in scale compared to the geographical scale of the plan map and is therefore not marked in the plan map using the UN. Defence activities should be conducted in such a way as to avoid negative impacts on the nature values that form the basis of national interest claims for nature conservation.

Several areas in the Central Baltic Sea are listed with particular consideration to high nature values. The areas of Southern Gotland (Ö500), Eastern Gotland (Ö296) and Copper Stones (Ö506) are given particular consideration to high nature values due to birds. Klint's bank (Ö233) is a potential climate refuge for blue mussels and has high nature values due to the fish play area and bird area. Also west of Gotland, around Stora Karlsö (Ö289, Ö291), the marine spatial plan indicates particular consideration to high nature values as the area is important for birds such as common guillemots and razor bill. A migratory bird path runs through the area and constitutes the main migration route for a large number of species native to the northern parts of western Russia and north-eastern Scandinavia.

Shipping

The marine spatial plan specifies the use shipping on several shipping routes within the Central Baltic Sea (Ö220-Ö226, Ö228-Ö229, Ö231, Ö233-Ö235, Ö239, Ö270, Ö278, Ö289, Ö291, Ö506). Several important ports are located along the coast. Maritime traffic is important with traffic both to the mainland coast, to Gotland and further north or south, as well as to Swedish

and foreign ports around the Baltic Sea. A shipping route that extends from the Gulf of Riga and connects to the deep waterway east of Gotland in the Swedish exclusive economic zone is a public interest of substantial significance. The route is marked as maritime use (Ö270).

The plan map shows the most important shipping routes, not the shipping's total need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment(Sjöfartsverket och Transportstyrelsen 2023).

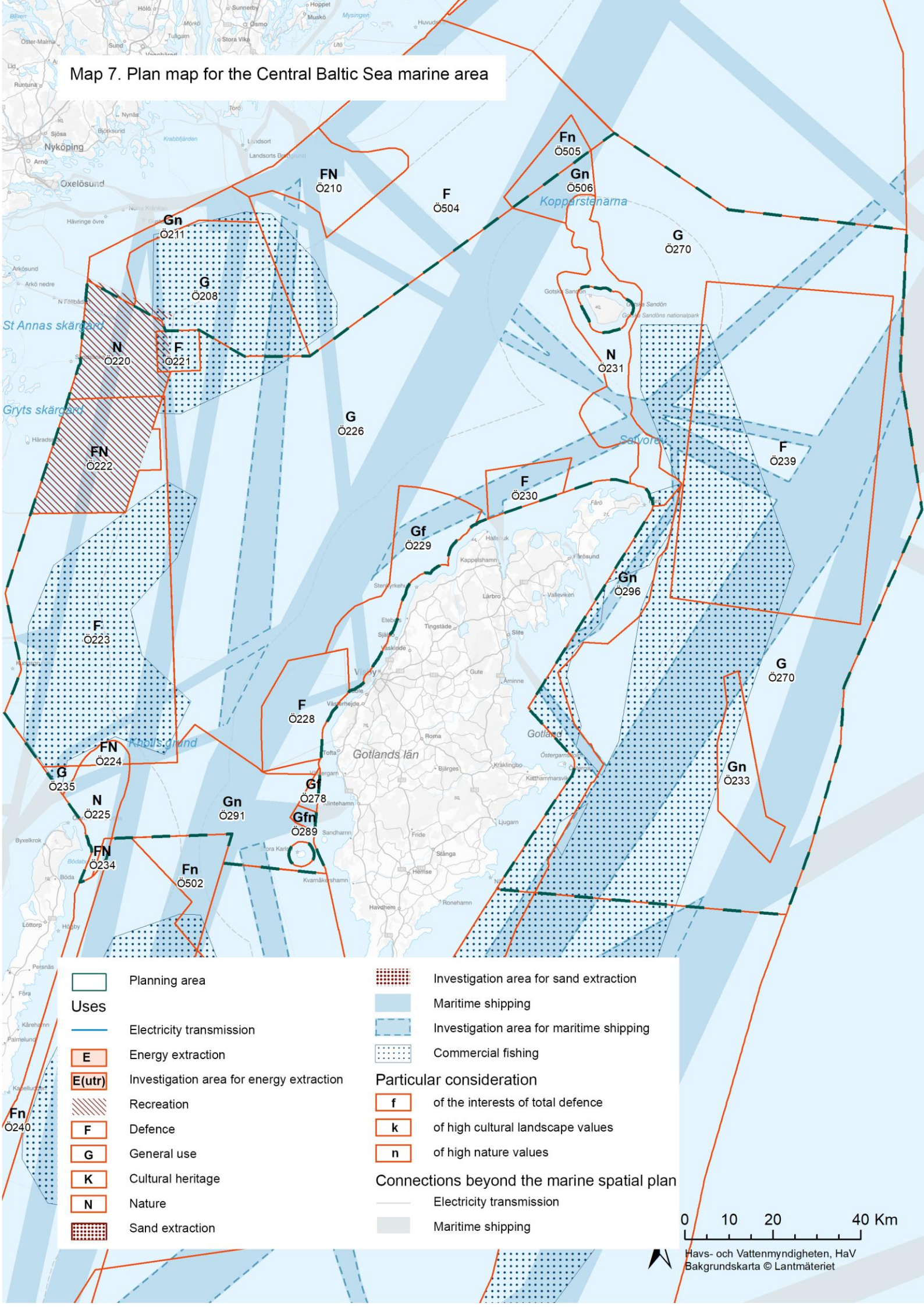
Investigation area for shipping

There are two passages for sea traffic crossing Salvorev, between Fårö and Gotska sandön, (Ö226, Ö229-Ö231, Ö233, Ö239, Ö270). The area has very high nature values: Among other things, there is the red-listed species long tailed duck here. An investigation by the Swedish Agency for Marine and Water Management (2017b) shows that seabirds are adversely affected by operational oil spills from ships. The need to investigate the impact of shipping in the area around Salvorev and what measures may be suitable to reduce the negative impact of shipping is closely linked to the need for investigation in the more heavily trafficked area around Hoburgs bank south of Gotland. In addition to the long-tailed duck, the impact of shipping on harbour porpoises also needs to be investigated. The harbour porpoise is a strictly protected species under the Habitats Directive and is adversely affected by noise from maritime traffic. The Baltic Sea harbour porpoise population is classified as endangered. The overall effect of this needs to be further investigated and for the ship routes across Salvorev the plan therefore indicates the use investigation area for shipping. Also, a shipping route east of Gotland and the fairway into Slite (Ö270, Ö296), as well as two routes from Nynäshamn towards the Gulf of Riga and Poland (Ö226, Ö291), are part of the maritime investigation area that may affect shipping in the Central Baltic Sea. Read more about this in the section on shipping in the South-Eastern Baltic Sea.

Commercial fishing

The plan indicates the use commercial fishing adjacent to the maritime boundary towards the coast (Ö221, Ö223, Ö226, Ö235) and east of Gotland (Ö231, Ö233, Ö239, Ö270, Ö296). The use corresponds to national interest claims for commercial fishing. Commercial fishing is widespread in the Central Baltic Sea. Most fishing in the Central Baltic Sea is pelagic fishing involving herring and sprat, and is carried out throughout the lake. Some fishing with passive gear takes place towards the coast.

National interest claims for commercial fishing overlap with public interest of substantial significance for wind energy in two areas of energy (Ö233, Ö271). Pelagic fishing and wind farms are not considered to be able to coexist in the same place.


Map 7. Plan map for the Central Baltic Sea marine area
Fn Ö505
Gn Ö506
Koppartenarna
FN Ö210
F Ö504
Gn Ö211
G Ö270
G Ö208
St Annas skärgård
N Ö220
F Ö221
N Ö231
Gryts skärgård
G Ö226
Salvorev
FN Ö222
F Ö239
F Ö230
Gf Ö229
Gn Ö296
F Ö223
G Ö270
F Ö228
Gotland
Gotlands län
FN Ö224
G Ö235
Gf Ö278
Gn Ö233
N Ö225
Gn Ö291
Gfn Ö289
FN Ö234
Fn Ö502
Fn Ö240
Planning area
Uses
Electricity transmission
E Energy extraction
E(utr) Investigation area for energy extraction
Recreation
F Defence
G General use
K Cultural heritage
N Nature
Sand extraction
Investigation area for sand extraction
Maritime shipping
Investigation area for maritime shipping
Commercial fishing
Particular consideration
f of the interests of total defence
k of high cultural landscape values
n of high nature values
Connections beyond the marine spatial plan
Electricity transmission
Maritime shipping
0 10 20 40 Km
Havs- och Vattenmyndigheten, HaV
Bakgrundskarta © Lantmäteriet

Area table Central Baltic Sea

Table 5 Area table Central Baltic Sea

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö220	Recreation Nature Shipping		Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there are national interest claims for wind energy.
Ö221	Recreation Defence Shipping Commercial fishing		
Ö222	Recreation Defence Nature Shipping		
Ö223	Defence Shipping Commercial fishing		
Ö224	Defence Nature Shipping		
Ö225	Nature Shipping		
Ö226	General use Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there are two public interests of substantial significance for wind energy.
Ö228	Defence Shipping		
Ö229	General use Shipping Investigation area for shipping	The interests of total defence	
Ö230	Defence Investigation area for shipping		
Ö231	Nature Shipping		

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
	Investigation area for shipping Commercial fishing		
Ö233	General use Shipping Investigation area for shipping Commercial fishing	High nature values: Fish spawning. Birds. Climate refuge for blue mussels.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there is a public interest of substantial significance for wind energy.
Ö234	Defence Nature Shipping		
Ö235	General use Shipping Commercial fishing		
Ö239	Defence Shipping Investigation area for shipping Commercial fishing		Defence takes priority over energy extraction. The marine spatial plan gives guidance on the priority for use defence over energy extraction, as the uses are not deemed to be able to coexist here. In the area there are national interest claims for total defence as well as a public interest of substantial significance for wind energy.
Ö270	General use Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. At Nordost Gotska Sandön, energy extraction is not indicated as use because it is not deemed to be able to coexist with outdoor life. In the area there is a national interest for outdoor recreation and several public interests of substantial significance for wind energy. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present.
Ö278	General use Shipping	The interests of total defence	

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö289	General use Shipping	The interests of total defence High nature values: Birds.	
Ö291	General use Shipping Investigation area for shipping	High nature values: Birds.	
Ö296	General use Investigation area for shipping Commercial fishing	High nature values: Birds.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with the interests of total defence at present. In the area there is public interest of substantial significance for wind energy.
Ö506	General use Shipping	High nature values: Birds.	

4.3. South-Eastern Baltic Sea

Electricity transmission

The use electricity transmission is corresponding on the transmission cable NordBalt that passes through the marine area (Ö248, Ö254, Ö258, Ö263). It connects to Nybro in Sweden and to Klaipeda in Lithuania.

Energy extraction

The South-Eastern Baltic Sea has good wind conditions for offshore wind energy and there is a great need and demand for electricity. The many offshore banks have both good wind conditions and suitable depths for offshore wind turbines. At the same time, there are very high nature values. In the area there are four national interest claims for wind energy. During the Marine spatial planning process, seven areas deemed to be of significant public interest for wind energy have been identified. The marine spatial plan does not specify any areas of energy use in the South-Eastern Baltic Sea.

The outermost eastern and western parts of Norra Midsjöbanken and part of Södra Midsjöbanken are covered by national interest claims for wind energy. There are also public interests of substantial significance for wind energy in two areas at Norra Midsjöbanken. Both banks, in addition to a part of Södra Midsjöbanken, are covered by a Natura 2000 area and site protection under HELCOM (MPA). The marine spatial plan does not provide guidance on energy extraction in the areas of Hoburgs bank and Midsjöbankarna (Ö248, Ö254). The overall nature interest has been given priority over the public interest of substantial significance for wind energy, mainly with reference to the high risk of impact on harbour porpoises. In the area, the county administrative board has rejected a Natura 2000 application, but the decision has not yet become final, as it has been appealed. The Government has rejected the permit application adjacent to Södra Midsjöbanken due to conflict with the interests of the total defence (Klimat- och näringslivsdepartementet 2024). The marine spatial plan does not include areas with the use of energy extraction, as energy extraction presently is not considered to be compatible with the interests of total defence (Regeringen 2024b).

At Kårehamn (Ö240, Ö503) there are national interest claims for both wind energy and total defence. In some parts of the area there is an existing wind farm. The installation is limited in extent and due to the overall scale of the marine spatial plan, energy extraction is not indicated on the plan map, but the interest is accommodated. National interest claims for wind energy also exist outside the current wind farm. Conditions for a future generational change in the area need to be assessed in a permit process. In an overall assessment based on a basis from the Government Offices, the Government states that no energy areas are deemed to be able to coexist with the interests of total defence in the Baltic Sea(Regeringen 2024b).

In the marine area southeast of Gotland (Ö263) there are two public interests of substantial significance for wind energy. In the area south-east of the Hoburg bank, the depth is suitable only for floating wind turbines. The East Hoburg Bank area is suitable for bottom-fixed foundations. The area overlaps with national interest claims for commercial fishing. Offshore wind energy and pelagic fishing are deemed no to be able to coexist.

The marine spatial plan does not include areas with the use of energy extraction, as energy extraction presently is not considered to be compatible with the interests of total defence (Regeringen 2024b).

In the areas southwest Gotland and south Gotland (Ö274, Ö500) there is a public interest of substantial significance for wind energy. The area is an important migratory route for birds between Öland and Gotland and further east. The area is also close to the coast and can affect cultural environments on land and under water. The marine spatial plan does not provide guidance on energy extraction in the ar ea. In the area south-west of Hoburg, one project has been rejected by the government (Klimat- och näringslivsdepartementet 2024). The marine spatial plan does not include any of areas with the use of energy extraction, as energy extraction presently is not considered to be compatible with the interests of total defence (Regeringen 2024b).

Based on the Government’s decision to reject all applications for offshore wind farms in the marine area, the overall assessment is that there are currently no conditions for using energy extraction in addition to existing permits in the Baltic Proper due to the interests of total defence (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

Recreation

Recreation including pleasure boating is extensive in parts of the South-Eastern Baltic Sea. There are several areas that are covered by national interest claims for recreation outside the marine spatial plan area in the coastal areas around Gotland and Öland. The coast around Gotland is of national interest for outdoor recreation. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective.

Defence

Use defence is specified for the marine military training area Hanö and Martin located outside Öland (Ö234, Ö240, Ö250, Ö252, Ö502-Ö503). The Martin training area extends from the coast through the territorial sea into the Swedish exclusive economic zone outside Borgholm and Mörbylånga municipalities. The northernmost part of the Hanö maritime training area lies within the territorial sea south of Öland. In the event of an energy expansion, particular consideration shall be given to the interests of the total defence.

Cultural environment

Along the coast of Öland there is a national interest for unbroken coast and at the coast of Gotland there is national interest for highly exploited coast. Southern Öland's agricultural landscape has been designated a World Heritage Site by UNESCO due to its cultural history and geology. Southern Öland is also covered to a large extent by landscape appearance protection. There are several areas that are covered by national interest claims for cultural conservation outside the boundaries of the marine spatial plan area in the coastal areas around Gotland and Öland.

Marine cultural heritage values have been identified by the county administrative board. Within the Southeast Baltic Sea are the value areas Hoburgsrev-Heligholmen-Faludden in the southern

part of Gotland including parts of the marine area, Källa-Persnäs coastal areas on northern Öland including parts of the marine area and Two outposts (Utklippan and Öland southern cape) along the coast and the marine area on Öland's eastern coast down towards Utklippan lighthouse in the south. The value areas Öland's northern cape and Fröjel-Ekstа-Karlsöarna also extend into the marine area (Länsstyrelserna 2024). The predominant cultural environments are coastal and archipelago environments, agricultural landscapes, archaeological sites and communication environments. There are also wrecks and ancient and cultural-historical remains on the seabed in large parts of the marine area, which requires consideration in the event of any impact on the seabed.

The need for consideration distances to the value areas, relevant national interest claims and World Heritage Sites needs to be assessed from a local perspective.

Nature

The marine spatial plan describes the use of nature in a large area that extends from the southern tip of Gotland at Hoburgen via Hoburgs bank to Norra Midsjöbanken and Södra Midsjöbanken (Ö254) and a smaller adjacent area (Ö250). They are covered by Natura 2000 sites and have very valuable nature. In large parts, the environmental impact is low and the marine environment can be considered relatively original (Havs- och vattenmyndigheten 2018b). The nature values consist valuable sea bottom habitats, reproduction area of the endangered Baltic harbour porpoise and the most important wintering areas for the long-tailed duck. Both species are red-listed according to the Swedish Species Information Center’s assessment. In addition, the harbour porpoise is subject to strict species protection under the Habitats Directive. For the Baltic Sea population, only about 500 individuals remain, which is why it is seen as critically endangered. There are also feeding areas for alder and other birds, as well as a spawning area for fish in the area. The banks in the marine are indicated as potential climate refugia for several species, which indicates that the ecological importance of the area may be very high in the future (Havs- och vattenmyndigheten 2017b). Kalmar County Administrative Board has proposed that the Natura 2000 site be expanded to include Ö248.

The marine spatial plan indicates the use of nature at the southern tip of Öland (Ö252–Ö253) where there is a marine nature reserve.

The marine spatial plan gives particular consideration to high nature values in several areas along the coasts and in connection with areas with nature protection where there are also important nature values (Ö240, Ö248, Ö258, Ö500-Ö502). A migratory bird path runs through the area and constitutes the migration route for a large number of species native to the northern parts of western Russia and north-eastern Scandinavia.

Shipping

Use of shipping is specified for several shipping routes within the marine area (Ö240, Ö248, Ö250, Ö254, Ö258, Ö263, Ö274, Ö500, Ö502-Ö503). In the South-Eastern Baltic Sea, maritime traffic is important, with extensive traffic to both foreign and Swedish ports. West of Gotland, traffic is mainly with Swedish destinations, while international traffic to and from the Gulf of Finland and the Baltics dominates south and east of Gotland(Havs- och vattenmyndigheten 2017a). Two shipping routes, which extend from ports in the Baltic States (Ventspils and

Klaipeda, respectively) and connect to the deep waterway southeast of Gotland in the Swedish economic zone, constitute public interests of substantial significance. The routes are indicated as use shipping (Ö254, Ö263). The plan map shows the most important shipping routes, not the shipping's entire need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment(Sjöfartsverket och Transportstyrelsen 2023).

Investigation area for shipping

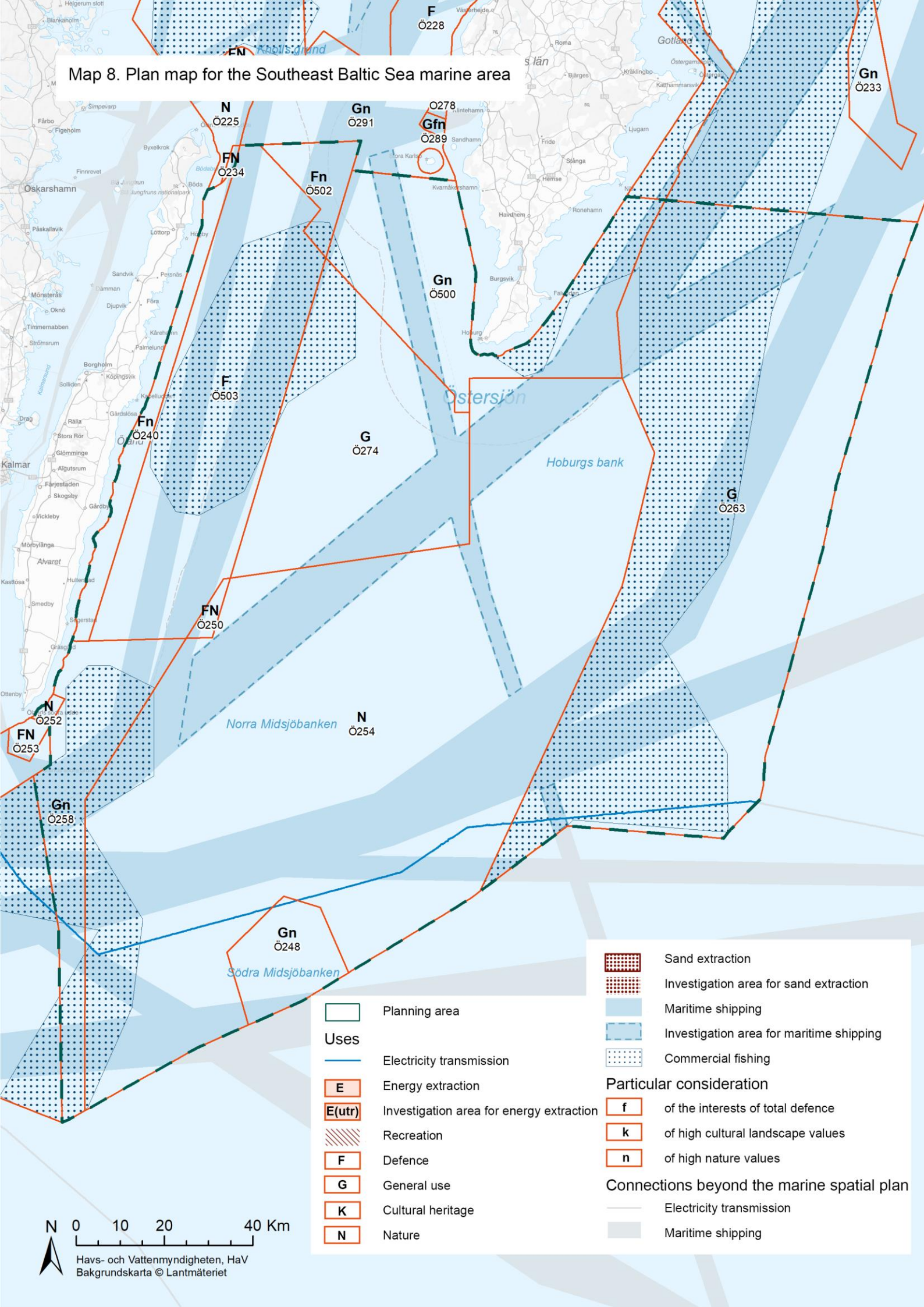
The plan specifies the maritime investigation area for a route from Gdansk in Poland to Nynäshamn (Ö254, Ö263, Ö274, Ö500). The marine spatial plan also specifies the marine area between Norra Midsjöbanken and Hoburgs bank (Ö254, Ö274, Ö500). The area has very high nature values for the red-listed species harbour porpoise and long-tailed duck, which is also covered by Natura 2000. Investigations show that the long-tailed duck population is negatively affected by operational oil spills from ships and that harbour porpoises are disturbed by noise from ship routes(Havs- och vattenmyndigheten 2016, 2018a). From a nature conservation point of view, there is reason to investigate the impact of shipping on the nature environment and what measures may be suitable to reduce the negative impact of shipping.

Several areas in the South-Eastern and Central Baltic Seas are directly or indirectly affected by the problems described above. Possible measures could affect traffic flows through the deep water route located south of the Hoburgs bank - Northern Midsjöbanken route and north of the South Midsjöbanken route, as well as the routes west and east of Gotland and routes in our neighbouring countries.

Before a final decision is taken on the shipping routes, the problem needs to be investigated. An investigation needs to include, among other things, analysis of the environmental impact of maritime traffic and various types of measures, as well as socio-economic consequences for transport and the shipping industry nationally and internationally, as well as other consequences resulting from measures. Most changes in shipping require decisions to be made internationally, such as route changes, and thus need international support and be compatible with international law, including the law of the sea.

Commercial fishing

The use commercial fishing is reported in several larger areas (Ö254, Ö258, Ö263, Ö274, Ö500, Ö502-Ö503). Commercial fishing is widespread in the South-Eastern Baltic Sea, but is nowadays rarely conducted on the offshore banks. Cod fishing has mostly been carried out in the south-western parts of the marine area with trawl fishing in the open sea and passive fishing closer to the coast. Pelagic fishing for herring and sprat is carried out in large parts of the lake, but not on the banks. Certain fishing with passive gear is carried out off the coast of Öland.


Map 8. Plan map for the Southeast Baltic Sea marine area
N Ö225
Gn Ö291
Gfn Ö289
Ö278
Gn Ö233
FN Ö234
Fn Ö502
Gn Ö500
F Ö503
Fn Ö240
G Ö274
Hoburgs bank
G Ö263
FN Ö250
N Ö252
FN Ö253
N Ö254
Norra Midsjöbanken
Gn Ö258
Gn Ö248
Södra Midsjöbanken
Östersjön
Oskarshamn
Kalmar
Öland
Gotland
Planning area
Uses
Electricity transmission
E Energy extraction
E(utr) Investigation area for energy extraction
Recreation
F Defence
G General use
K Cultural heritage
N Nature
Sand extraction
Investigation area for sand extraction
Maritime shipping
Investigation area for maritime shipping
Commercial fishing
Particular consideration
f of the interests of total defence
k of high cultural landscape values
n of high nature values
Connections beyond the marine spatial plan
Electricity transmission
Maritime shipping
N
0 10 20 40 Km
Havs- och Vattenmyndigheten, HaV
Bakgrundskarta © Lantmäteriet

Area table South-Eastern Baltic Sea

Table 6 Area table South-Eastern Baltic Sea

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö240	Defence Shipping	High nature values: Mammals. Birds. Reef environment. Particularly low environmental impact.	Defence takes priority over increased energy production. The marine spatial plan guides the priority for use of defence over extended energy extraction, as it is not considered to be able to co-exist here. Defense co-exists with existing wind energy plant. National interest claims for total defence and wind farms overlap.
Ö248	Electricity transmission General use Shipping	High nature values: Mammals. Birds. Climate refuge for blue mussels. Planned area protection. Reef environment.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with nature here due to a high risk of impact on porpoises or with the interests of the total defence at present. Public interest of substantial significance for nature conservation and national interest claims for wind energy are in the area.
Ö250	Defence Nature Shipping		
Ö252	Nature		
Ö254	Electricity transmission Nature Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not considered to be able to coexist with nature here due to a high risk of impact on porpoises or with the interests of the total defence at present. Natura 2000, claims of national interest and public interest of substantial significance for wind energy are located in the area.
Ö258	Electricity transmission General use Shipping Commercial fishing	High nature values: Mammals. Fish spawning.	Energy extraction is not indicated as use.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			Energy extraction is not indicated as use as it is not deemed to be able to coexist with nature here with reference to a high risk of impact on porpoises or with the interests of the total defence at present. Natura 2000, claims of national interest and public interest of substantial significance for wind energy are located in the area.
Ö263	Electricity transmission General use Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. Energy use is not indicated as use as it is not deemed to be able to coexist with the interests of total defence at present. In the area there are national interest claims for commercial fishing and public interests of substantial significance for wind energy.
Ö274	General use Shipping Investigation area for shipping Commercial fishing		Energy extraction is not indicated as use. Energy use is not indicated as use as it is not deemed to be able to coexist with the interests of total defence at present. In the area there is a public interest of substantial significance for wind energy.
Ö500	General use Shipping Investigation area for shipping Commercial fishing	High nature values: Birds.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not deemed to be able to coexist with the interests of total defence at present or with nature. There is a general interest of substantial significance for nature conservation and for wind energy in the area.
Ö502	Defence Shipping Commercial fishing	High nature values: Birds.	

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö503	Defence Shipping Commercial fishing		Defence takes priority over increased energy production. The marine spatial plan guides the priority for use of defence over extended energy extraction, as it is not considered to be able to co-exist here. Defense co-exists with existing wind energy plant. National interest claims for total defence and wind farms overlap.

4.4. Southern Baltic Sea

Electricity transmission

The use of electricity transmission corresponds to two transmission cables connecting Sweden to Lithuania and Poland. The NordBalt cable runs between Sweden and Lithuania. It connects to Nybro in Sweden and to Klaipeda in Lithuania (Ö247, Ö259). SwePolLink is the second transmission cable in the marine area and it connects Karlshamn with Slupsk in Poland (Ö259, Ö508).

Energy extraction

In the southern Baltic Sea, there are good wind conditions for offshore wind energy and the need is great due to the high demand for electricity in southern Sweden. Offshore banks and coasts have both good wind conditions and suitable depths for offshore wind turbines. There are two national interest claims for wind energy near the coast in the municipalities of Kristianstad, Sölvesborg and Karlshamn. During the Marine spatial planning process, two areas deemed to be of substantial public interest for wind energy have been identified. The marine spatial plan does not specify any areas that use energy extraction in the Southern Baltic Sea.

In the area Norra Hanöbukten (Ö508) a permit for a previous wind energy project has expired. In the area there are also national interest claims for total defence. The Marine spatial plan does not provide guidance on energy extraction in the area. Energy extraction is not considered to be compatible with the interests of total defence.

In area Ö508 in the municipalities of Sölvesborg and Karlshamn, there is part of another national interest claim for wind energy. In the area there are also national interest claims for total defence. The Government has rejected an application for wind energy in the area on the grounds that national interest claims for total defence take priority over national interest claims for wind energy pursuant to the Government Decision of 2016. The marine spatial plan does not provide guidance on energy extraction in the area. The use is deemed incompatible with the interests of total defence (Ö508).

In the area of Syd Utklippan and Öland there are two public interests of substantial significance for wind energy (Ö259). One of the areas overlaps with the use commercial fishing. The uses are deemed to be able to co-exist as fishing has been conducted with bottom trawls. The more northern area overlaps with a submarine cable for the transmission grid, which requires that consultations with Svenska kraftnät be initiated in good time. The area can also affect high cultural heritage values. The area is also close to the World Heritage Sites Karlskrona and Södra Öland, which are designated as World Heritage Sites by UNESCO. In the area there are also vulnerable mammals and fish spawning. The marine spatial plan does not guide any of these areas as the use of energy extraction, as energy extraction is not considered to be compatible with the interests of total defence in the Baltic Proper at present (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b). The planning that overlaps with the offshore area south Utklippan has had its permit application rejected by the Government in an overall assessment based on conflict with the interests of the Armed Forces(Klimat- och näringslivsdepartementet 2024).

Based on the Government’s decision to reject all applications for offshore wind farms in the marine area, the overall assessment is that there are currently no conditions for the use energy extraction in addition to existing permits in the Baltic Proper due to the interests of total defence (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

Recreation

There is an area with the use recreation off the city of Karlskrona (Ö260). The area corresponds national interest claims for recreation. Recreation including pleasure boating, are important in the Southern Baltic Sea. Along the coast, outside the marine spatial plan area, there are several areas that are covered by national interest claims for recreation. The coast in the western parts of Hanö Bay, Simrishamn and Sölvesborg are of national interest for recreation. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective.

Defence

Defence is assigned as a use in large parts of the marine area (Ö247, Ö253, Ö260, Ö264, Ö508). Karlskrona Naval Port is one of Sweden's largest and most important naval bases. The Ravlunda and Rinkaby artillery ranges have impact areas in the sea off the municipalities of Simrishamn, Kristianstad and Sölvesborg. Sea training area Hanö is located in the territorial sea and Swedish exclusive economic zone in Hanö Bay and south of Öland.

At Utklippan (Ö260) the coexistence is indicated between defence, nature, recreation and shipping. In the northern part of the area there are national interest claims for total defence. Within the area there are also national interest claims for nature conservation and a marine nature reserve.

The defence activities should be conducted so that negative impacts is avoided on the nature values that form the basis of the marine nature reserve.

Cultural environment

The entire coastline is covered by a national interest of a high-exploited coastline. Areas of national interest for cultural conservation are located along the coast outside the boundaries of the marine spatial plan area, including in Karlshamn and Karlskrona city. The naval city of Karlskrona is also designated a World Heritage Site by UNESCO as it is one of the best preserved navy bases in Europe.

Marine cultural heritage values have been identified by the county administrative board. Within the Southern Baltic Sea is the value area Two outposts (Utklippan and Öland's southern cape) along the coast and the marine area on Öland's eastern coast down towards Utklippan lighthouse in the south that is characterized by the development of shipping for at least the last 1000 years. There is also the value area Haväng, which is located on the coast north of Stenshuvud National Park and where there are, among other things, prehistoric submarine landscapes. The value area Ystad-Kåseberga-Sandhammaren also extends into the marine area in the southwest. The predominant cultural environments in the identified value areas are coastal and archipelago environments, archaeological sites and communication environments. There are wrecks and

ancient and cultural-historical remains on the seabed, which requires consideration in the event of impact on the seabed. For example, within the plan area in Hanöbukten and at additional locations off the coast of Skåne and Blekinge, there are preserved stone age landscapes on the seabed.

The need for consideration distances to the value areas, relevant national interest claims and World Heritage Sites needs to be assessed from a local perspective.

Nature

The marine spatial plan indicates the use nature in several places in the Southern Baltic Sea. Utklippan (Ö260) is covered by a marine nature reserve, a national interest claim for nature conservation and an existing HELCOM MPA area. Kiviksbredan off Kristianstad (Ö508) has been proposed by the County Administrative Board of Skåne County via the Swedish Environmental Protection Agency as an area to be included in the marine Baltic region of the Natura 2000 network. The area is proposed with reference to the species harbour porpoise, grey seal and harbour seal, as well as the sandbanks and reef habitat types. The matter is currently being prepared by the Government Office. South of Simrishamn municipality (Ö268) runs a coastal strip of high nature values covered by national interest claims for nature conservation.

The marine spatial plan indicates the use of nature at the southern tip of Öland (Ö252–Ö253) where there is a marine nature reserve. Therefore, in order to promote and ensure ecosystem services, particular consideration is given to high nature values for several areas. Outside Karlskrona (Ö247) particular consideration must be shown to reef environments and mammal areas, and further out i to fish spawning and mammal areas with particularly high environmental impact (Ö259). In Hanöbukten there are, among other things, red-listed harbour porpoises of the endangered Baltic Sea population, which are also found in the Swedish Armed Forces' marine training area (Ö508). In the same area, the plan gives particular consideration to high nature values for spawning grounds, mammals and birds, as well as climate refuge for the three species mussel, bladderwrack and herring. In the north-western corner of Hanö Bay, there are additional areas identified as climate refugia for these three species (Havs- och vattenmyndigheten 2017c).

Sand extraction

The marine spatial plan indicates the use sand extraction off Utklippan (Ö508). The area is located in a regional environment with expansive built development and municipal interests in coastal restoration and climate adaptation measures. There are also high nature values that must be taken into account, which places high demands on coexistence. The area is an important habitat for cod and future extraction needs to show consideration to the cod spawning periods in order not to risk negative impacts.

Sand extraction needs to take special account of high cultural heritage values such as wrecks and ancient and cultural remains on the seabed. Marine cultural heritage values have been identified by the County Administrative Board(Länsstyrelserna 2024). The value area Two outposts (Utklippan and Öland's southern cape) includes, among other things, ancient sites.

Shipping

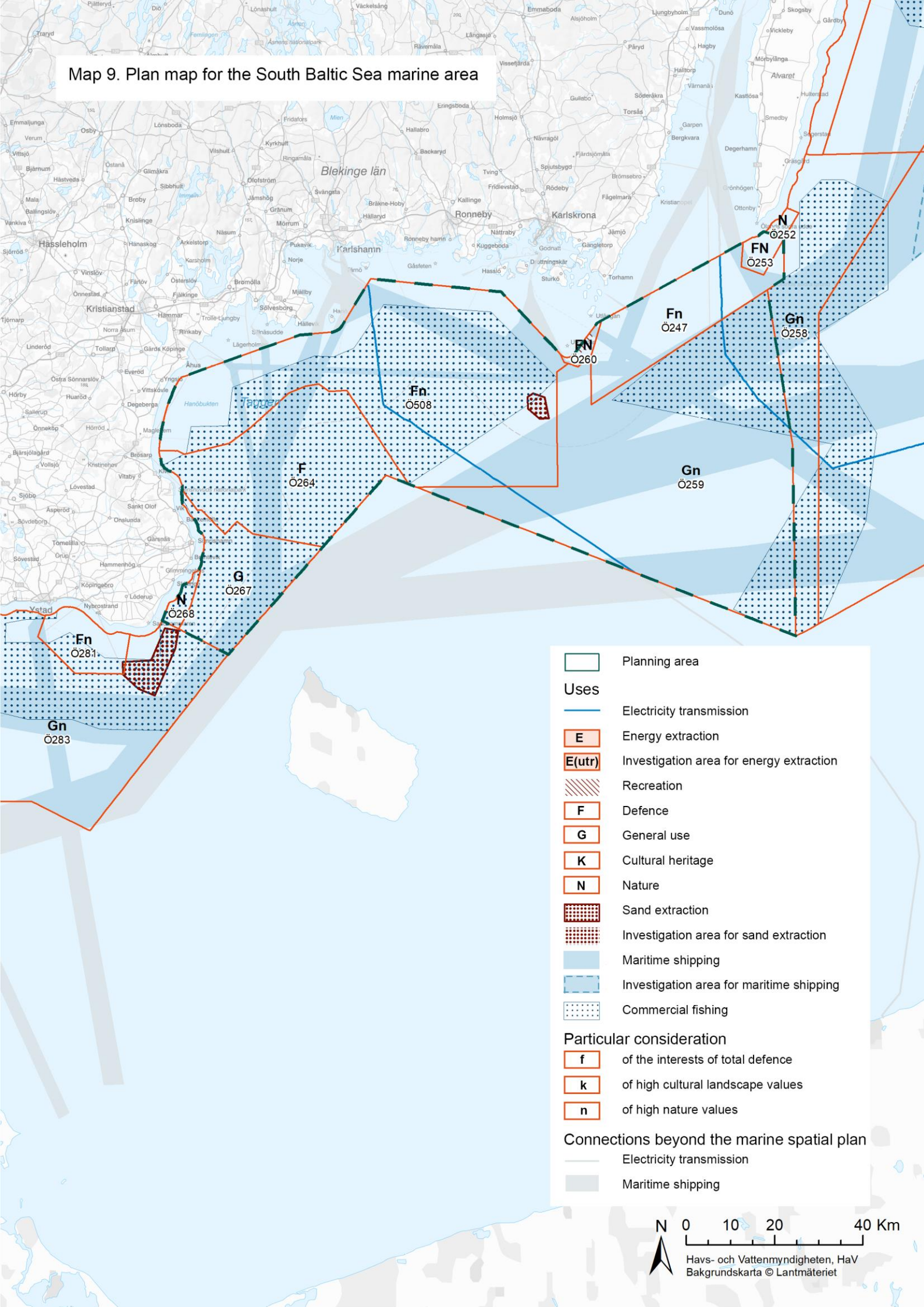
The use shipping is assigned to shipping routes through the area (Ö247, Ö253, Ö259-Ö260, Ö264, Ö267, Ö508). The busiest shipping route in the Baltic Sea passes through the Southern Baltic Sea in a system of traffic separation along the southern coast of Sweden from the Sound or from Gedser between Denmark and Germany, via the Bornholmsgatt to southern Öland. A deep shipping lane also begins here for certain vessels upon passing eastwards through the Baltic Sea. Maritime traffic goes partly in to the coast, but mainly further towards both Swedish and foreign ports.

The plan map shows the most important shipping routes, not the shipping's tentire need for space. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment(Sjöfartsverket och Transportstyrelsen 2023).

Commercial fishing

Commercial fishing is assigned to most areas because commercial fishing is widespread in the Southern Baltic Sea (Ö259, Ö264, Ö267-Ö268, Ö508). The use corresponds to national interest claims for commercial fishing. Commercial fishing for cod has mostly been conducted with trawls in the outer sea, but also with passive gear closer to the coast. Commercial pelagic fishing for herring and sprat takes place in the open sea. Other fishing with passive gear is carried out to different extents along the coast and in Hanöbukten. In the area, fishing is also carried out by fishers from other EU countries.

Map 9. Plan map for the South Baltic Sea marine area



Area table Southern Baltic Sea

Table 7 Area table Southern Baltic Sea

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö247	Electricity transmission Defence Shipping	High nature values: Mammals. Reef environment.	
Ö253	Defence Nature Shipping		
Ö259	Electricity transmission General use Shipping Commercial fishing	High nature values: Mammals. Particularly high environmental impact.	Energy extraction is not indicated as use. Energy use is not indicated as use as it is not deemed to be able to coexist with the interests of total defence at present. There are two public interests of substantial significance for wind energy in the area.
Ö260	Recreation Defence Nature Shipping		
Ö264	Defence Shipping Commercial fishing		
Ö267	General use Shipping Commercial fishing		
Ö268	Nature Commercial fishing		
Ö508	Electricity transmission Defence Sand extraction Shipping Commercial fishing	High nature values: Mammals. Fish spawning. Birds. Climate refuge for blue mussels. Climate refuge for bladderwrack. Climate refuge for herring.	Defence takes priority over energy extraction. The marine spatial plan guides the priority for use defence over energy extraction because the uses are not deemed to be able to coexist here. In the area there are national interest claims for total defence and wind energy.

4.5. South-West Baltic Sea and Öresund

Electricity transmission

Electricity transmission is available in the northern Øresund (Ö294). The use corresponds to the Öresund cables, two 400 kV cable connections between Kristinelund in Sweden and Skibstrupgård in Denmark.

Energy extraction

In the southwestern Baltic Sea and Öresund there are good wind conditions for offshore wind energy and the need is great due to the high demand for electricity in southern Sweden. Coastal and offshore banks have good wind conditions and good depth conditions for bottom-based wind turbines. There are two national interest claims for wind energy in the marine area. Four areas of substantial public interest for wind energy have been identified During the marine spatial planning process four areas of substantial significance for wind energy have been identifies.

Lillgrund (Ö287) is Sweden's largest existing offshore wind farm. In the event of a change to the wind turbines at Lillgrund, the approach area to Copenhagen Airport Kastrup needs to be taken into account. The area is subject to particular consideration to the interests of total defence. The area is also subject to particular consideration to high cultural heritage values that should be taken into account in the event of a change in the area. The area relates to the value areas Falsterbo peninsula and Landskrona-Pilhaken-Ven where the cultural environments include communication environments, fishing villages and ancient monuments (Länsstyrelserna 2024). These areas are also covered by national interest claims for cultural heritage conservation. The cultural environments concerned also include underwater environments along the coast. The marine area between Sweden and Denmark is an important migratory route for birds. The marine spatial plan sets out the coexistence between the usesf energy extraction and nature. Conditions for generational renewal of the existing windfarm need to be assessed in a future permit process. Further energy extraction is not considered to be compatible with the interests of total defence in the Baltic Proper at present (Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

At Krieger's Flak (Ö285) there are good conditions for offshore wind energy. In the area there is a permit-granted wind energy project where most of the project area is covered by a national interest claim for wind energy. A smaller part of the authorised area overlaps with a Natura 2000 site. The area is subject to particular consideration to the interests of total defence. The area is also subject to particular consideration to high cultural heritage values. This mainly concerns the value area Falsterbo peninsula where the cultural environments include fishing village, coastal and archipelago environment and ancient sites(Länsstyrelserna 2024). The area is also covered by national interest claims for cultural heritage conservation. The cultural environments also include underwater environments along the coast that need to be taken into account in any establishment.

Syd Sandhammaren till Kullagrund (Ö283) contains a national interest claim as well as three areas of public interest of substantial significance for wind energy, one of which overlaps with the national interest claim. All areas can be built with bottom-fixed foundations. The conditions for wind energy are favourable and the cumulative environmental impact is assessed to be low in the

areas furthest from land. The area southwest of Ystad and the area southeast of Ystad are both located in the Swedish exclusive economic zone. Both areas can be built with bottom-fixed foundations. The conditions for wind energy are favourable and the cumulative environmental impact is assessed to be low. The coastal area can be built on bottom-fixed foundations. All areas can have an impact on high cultural heritage values onshore, as well as migration routes for birds. Establishment in the neighbouring country can thus affect the potential of the Swedish energy area and needs to be taken into account when using the area. The Government has rejected permit applications that overlap with public interests of substantial significance to the south, such as Skåne, due to conflict with the interests of the total defence. (Klimat- och näringslivsdepartementet 2024) The marine spatial plan does not guide any of these areas as the use of energy extraction, as energy extraction is not considered to be compatible with the interests of total defence at present (Regeringen 2024b)

Within Öresund (Ö299) there is an area of public interest of substantial significance for wind energy within Malmö and Kävlinge municipality. In the area, a planned marine protection area has been given priority over public interest of substantial significance for wind energy.

Based on the Government’s decision to reject all applications for offshore wind farms in the marine area, the overall assessment is that there are currently no conditions for further use of energy extraction in the Baltic Proper due to the interests of total defence(Klimat- och näringslivsdepartementet 2024; Regeringen 2024b).

If offshore wind energy farms are established, particular consideration shall be given to the interests of total defence in all areas.

Recreation

The marine spatial plan assigns the use recreation to the area around Ven (Ö292, Ö299) where there are national interest claims for outdoor recreation. Valuable coastal landscapes stretch along western and southern Skåne. In the Øresund there is extensive recreational fishing and tour boat fishing. Recreation and pleasure boating are important in the entire marine area. Several areas of national interest for outdoor recreation are located outside the marine spatial plan area, especially along the southern and western coasts of Skåne. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective.

Defence

The marine spatial plan assigns the use defence to the impact area in the sea at the Kabusa firing range in Ystad municipality (Ö281). A small part of an impact area for the total defence at Falsterbonäset is included in the area covered by the marine spatial plan (Ö284). Due to the overall scale of the marine spatial plan, defence interests are not reported on the plan map. The national interest claim for total defence is accommodated because the defence interest and the uses indicated by the marine spatial plan are deemed to coexist. When developing energy, particular consideration shall be given to the interests of total defence. Particular consideration to the interests of total defence is given for all areas with the use energy extraction (Ö285, Ö287).

Cultural environment

The entire coastline is covered by national interest of high-exploited coastline. Several areas of national interest for cultural conservation exist along the entire coast outside the marine spatial plan area. A small part of the national interest claim for cultural heritage conservation at Falsterbonäset extends into the area covered by the marine spatial plan (Ö284). Due to the overall scale of the marine spatial plan, interest is not reported on the plan map. The national interest in cultural heritage conservation is accommodated, as the interest and uses stated in the marine spatial plan are deemed to coexist.).

Marine cultural heritage values have been identified by the county administrative board. Two major value areas are identified within and adjacent to the marine area, the Falsterbo peninsula and Ystad-Kåseberga-Sandhammaren. These value areas include several different cultural environments such as fishing villages, coastal and archipelago environments and ancient sites. Here you will find, among other things, the well-known stone ship (ship setting) Ale Stenar and the characteristic Falsterbonäset. There are also wrecks and ancient and cultural-historical remains on the seabed in large parts of the marine area, which requires consideration in the event of any impact on the seabed.

Particular consideration to high cultural heritage values is given for both energy extraction areas in the South-West Baltic Sea and the Sound (Ö285, Ö287). Consideration distances to the value areas and relevant national interest needs to be assessed from a local perspective, such as indirect impact on cultural heritage values of energy extraction in coastal areas. This may mean that measures are taken to minimise direct, indirect and cumulative impacts on the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm.

Nature

The entire coastline is covered by national interest of high-exploited coastline. The marine spatial plan indicates the use nature in several areas. For the area that stretches from the open sea at eastern parts of Trelleborg municipality through Falsterbonäset to the southernmost part of Öresund, the use relates two Natura 2000 sites and national interest claim for nature (Ö284). The eastern part of the area is covered by the Natura 2000 site Sydvästskånes utsjövatten, which was established in 2016 for the protection of harbour porpoises. The north-western parts of the area are covered by national interest claims for nature and a large part of the Natura 2000 site Falsterbo Peninsula/Falsterbo-Foteviken, which is protected under both birdss Directive and the Habitats Directive. A marine nature reserve, Måkläppen – Limhamnströskeln, is also located in the area, which together hosts large and unique bird values and has a geology that gives rise to an unparalleled sand migration area in Sweden. The existing wind farm Lillgrund (Ö287) is within the national interest for nature and where the marine spatial plan indicates coexistence between the use of energy extraction and nature.

The area north of Ven in Öresund (Ö292) includes a Natura 2000 area for harbour porpoises and important eelgrass beds, the municipal nature reserve Knähaken and national interest claims for commercial fishing, which refers to spawning area. Lundåkrabukten (Ö290) includes national interest claims for commercial fishing relating to a spawning area for fish, as well as the nature

reserve Lundåkrabukten. Off Helsingborg there is the marine nature reserve Grollegrund (Ö294). There is also an important migratory route for birds of prey. (Hansson 2019)

The marine spatial plan gives particular consideration to high nature values in the Sound (Ö299) where there are associated high values of importance for conservation and developed ecosystem services. These are enhanced by the presence of mammals, birds, valuable bottom habitats and fish spawning grounds. At the same time as the nature values are high, the impact of human activities is great. The new marine nature reserve Flädierev is located in the coastal area outside Bjärred and overlaps with the marine spatial plan area (Ö299). The overlapping part of the nature reserve is too small to be illustrated in the plan map, but affects a smaller area at the inner level border.

South of Skåne, particular consideration is given to high nature values in Syd Sandhammaren to Kullagrund and Kabusa firing range (Ö281, Ö283). There is a large bird migration across the area and the place is considered valuable for cod spawning. Particular consideration to high nature values in the area also harmonizes with the German marine spatial plan which includes a particularly important bird corridor from Rügen to Skåne. East of Ystad there are valuable reefs for fish play as well as an important bird and mammal area.

Sand extraction

South of Ystad (Ö281, Ö283) there is a public interest of substantial significance for sand extraction. It corresponds to an area with the use of sand extraction. Previously, there were permits for sand extraction until 2021. The sand was used for beach replenishment and extraction has taken place in the years 2011, 2014, 2017 and 2020 (Ystads kommun 2023). Monitoring shows that oversedimentation of previous traces from extraction takes place through the geological processes in the area(Sveriges geologiska undersökning 2018). Sand extraction needs to take particular consideration of high cultural heritage values such as wrecks and ancient and cultural remains on the seabed. Marine cultural heritage values have been identified by the county administrative board (Länsstyrelserna 2024). The value area Ystad-Kåseberga-Sandhammaren includes ancient sites and other values.

Investigation area for sand extraction

Off Falsterbo (Ö284) there is an investigation area for sand extraction in the exclusive economic zone. Suitability for sand extraction has been assessed for parts of an investigation area and is reported in the report Conditions for extraction of marine sand and gravel in Sweden (Sveriges geologiska undersökning 2017). The proposed sand extraction area at Falsterbo coincides with the westernmost parts of the Natura 2000 site Sydvästskånes utsjövatten. The Natura 2000 site has been established to strengthen the protection of the Belt Sea population and the Baltic Sea harbour porpoise population respectively. The high geographical mobility of the harbour porpoise has resulted in a relatively large Natura 2000 site. The overall assessment in the marine spatial plan is that coexistence with sand extraction may be possible based on extraction being proposed on the outskirts of the Natura 2000 area The seasonal variations of the harbour porpoise, together with the fact that the environmental impact of sand extraction is expected to arise in a limited area for a limited period of time, strengthen the possibility of coexistence between the uses of nature and sand extraction. Sand extraction needs to be adapted to Natura 2000 protection. An activity or measure that may significantly affect a site protected under Chapter 4,

Section 8 of the Environmental Code, i.e., Natura 2000, always requires a special permit assessment.

To the east of this area is the Natura 2000 site Falsterbo Peninsula-Foteviken, which is also a marine nature reserve and part of the national interest for nature conservation. In this area located in the territorial sea and outside the sand extraction investigation area, sand extraction is identified as an activity posing)a risk of harm (Länsstyrelsen i Skåne län 2005 . In the report *Prerequisites for the extraction of marine sand and gravel in Sweden*(Sveriges geologiska undersökning 2017), it is assessed that sand extraction may be possible in an exclusive economic zone outside the Natura 2000 site Falstebohalvön-Foteviken. In the exclusive economic zone there are ecologically valuable sites where ground vegetation and mussel banks occur as well as where it is found in postglacial sand and gravel. The assessment is that sand extraction may be possible west and southwest of these sites.

The sand extraction area at Falsterbo is located within an area with designated traffic separation for shipping. Interests can coexist. The traffic estimated to result from sand extraction is considered low(Sveriges geologiska undersökning 2017, 2018). Existing levels of maritime traffic mean that sand extraction represents a negligible addition to the noise impact.

For the two sand extraction areas, there is a potential impact on commercial fishing, which at Falsterbo is also amplified by cumulative environmental effects from Danish extraction in the Sound. The impact is considered to be limited if low-impact extraction methods are used and if extraction is carried out at times when fish are not spawning (Swedish Geological Survey, 2017).

In case of sand extraction, particular consideration should be taken to high cultural heritage values such as wrecks and ancient and cultural remains on the seabed. Marine cultural heritage values have been identified by the county administrative board (Länsstyrelserna 2024). The value area Falsterbo Peninsula includes, among other things, ancient sites.

Shipping

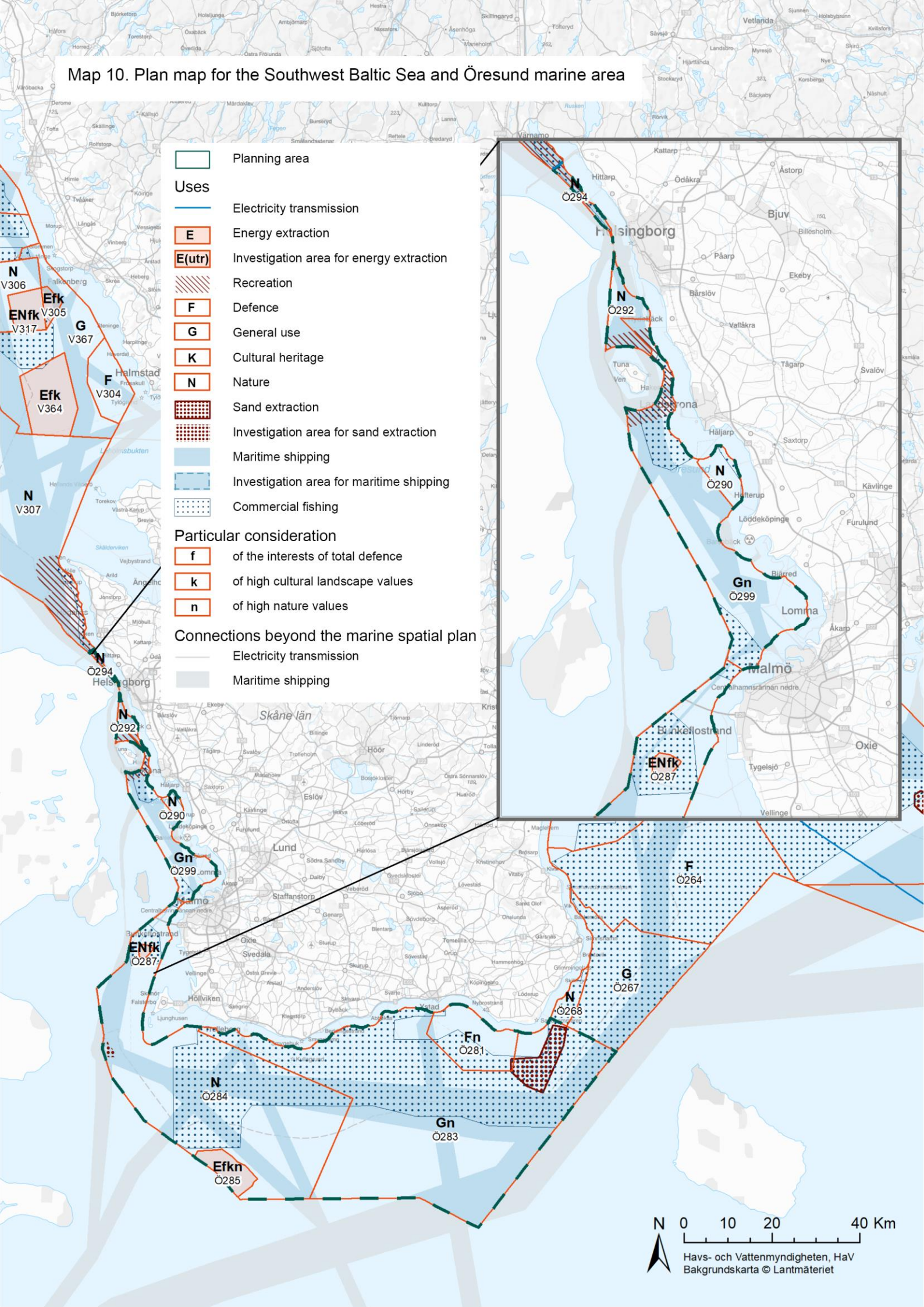
The use shipping is assigned to shipping routes through the marine area (Ö281, Ö283-Ö284, Ö292, Ö294, Ö299). The busiest shipping route in the Baltic Sea runs through the South-West Baltic Sea in a system of traffic separations along the south coast of Sweden from Öresund via Falsterbo in Vellinge municipality or from Gedser, between Denmark and Germany, to Bornholmsgattet. Maritime traffic continues towards both Swedish and foreign ports. Öresund is one of the few routes to the Baltic Sea for large vessels. The plan map shows the most important shipping routes, not the shipping's entire need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment(Sjöfartsverket och Transportstyrelsen 2023).

Commercial fishing

Commercial fishing is widespread and therefore the marine spatial plan indicates the use commercial fishing in a large part of the marine area (Ö281, Ö283-Ö284, Ö290, Ö294, Ö299). The use corresponds to national interest claims for commercial fishing. Commercial fishing for

cod has been conducted mainly with trawl in the open sea, but also with passive gear in the Öresund. Pelagic commercial fishing for herring and sprat is carried out throughout the open sea. Other fishing with passive gear is carried out to varying degrees along the coast. In the Öresund bottom trawling is not allowed, and there is only a fishing with passive gear.

Map 10. Plan map for the Southwest Baltic Sea and Öresund marine area



Area table South-West Baltic Sea and Öresund

Table 8 Area table South-West Baltic Sea and Öresund

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
Ö281	Defence Sand extraction Shipping Commercial fishing	High nature values: Birds. Reef environment.	
Ö283	General use Sand extraction Shipping Commercial fishing	High nature values: Fish spawning. Birds.	Energy extraction is not indicated as use. Energy extraction is not indicated as use because it is not deemed to be able to coexist with the interests of total defence at present or with shipping. In the area there are national interest claims for shipping and wind farms as well as public interest of substantial significance for wind energy.
Ö284	Nature Investigation area for sand extraction Shipping Commercial fishing		Sand extraction is adapted to nature. Public interest of substantial significance for sand extraction overlaps with Natura 2000 site. Sand extraction should be adapted to nature values, for example in terms of time period and location of abstraction. See further text under Sand Mining, South-West Baltic Sea above.
Ö285	Energy extraction	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. Trading venue. Coastal and archipelago environment. Coastal/shipping society. High nature values: Mammals. Birds. Reef environment.	
Ö287	Energy extraction Nature	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. the defence environment; Trading venue. Communication environment. Coastal and archipelago environment. Coastal/shipping society. urban environment;	Energy production takes priority over commercial fishing. The marine spatial plan indicates that the use of energy extraction is given priority over commercial fishing because the uses are not deemed to be able to co-exist here. There is a wind farm in the area. The needs of commercial fishing are met in the surrounding area. General interest of substantial significance for wind energy.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			overlaps with national interest claims for commercial fishing.
Ö290	Nature Commercial fishing		
Ö292	Recreation Nature Shipping		
Ö294	Electricity transmission Recreation Nature Shipping Commercial fishing		
Ö299	Recreation General use Shipping Commercial fishing	High nature values: Birds.	Nature takes priority over energy production. Energy extraction is not indicated as use because it is not deemed to be able to co-exist with nature values in the area. There is a general interest of substantial significance for nature conservation and wind farms in the area. Area protection is planned.

5. Skagerrak and Kattegat: Guidance and considerations

General information about the marine spatial plan area

Here is a summary of the main features of the planning for the marine spatial plan area. The direction of use and considerations for the marine areas of the marine spatial plan area are also reported.

The plan map shall be interpreted on the approximate scale between 1:700 000 and 1:1 000 000. The boundaries and markings in the map are clear based on the strategic level of the marine spatial plans.

The laying of data and telecommunications cables, power cables, pipelines and gas pipelines shall be enabled where suitable. The operation and maintenance of data and telecommunications cables, power cables, pipelines and gas pipelines shall always be possible. This applies to the entire planning area.

There are two marine areas in the Skagerrak/Kattegat:

• Northern Skagerrak/Kattegat

• Southern Skagerrak/Kattegat

Renewable electricity production

The marine spatial plans will contribute to achieving the society's goal of 100 per cent fossil-free electricity production by 2040. The conditions for offshore wind energy are good in the Skagerrak/Kattegat. However, there is great competition for space in the Skagerrak/Kattegat, including commercial fishing and shipping.

The starting point for the planning has been updated data for new or changed areas for energy extraction in the marine spatial plans (Energimyndigheten 2023). The planning of energy extraction areas is based on an overall assessment of how the marine spatial plan can best contribute to achieving the energy targets in terms of the needs of wind energy and other interests. Areas for energy extraction are proposed both in the territorial sea and in the exclusive economic zone. A total of nine areas with the use energy extraction or investigation area for energy extraction are listed. Some proposed sites are affected by Natura 2000 legislation, which entails that wind farms can only be allowed there if they do not risk damaging or disturbing the habitats that the site is intended to protect or cause disturbance to the species to be protected that could significantly hamper the conservation of the species in the site. Two energy extraction areas in the Skagerrak/Kattegat are designated as investigation areas, E(utr). The reasons are uncertainties about the impact of wind energy on migratory birds or that the establishment of wind energy requires what is known as a Natura 2000 permit. There are four offshore wind permits that have not yet been realised.

When developing energy, particular consideration shall be given to the interests of total defence. Proposed areas with the use energy extraction in the Skagerrak/Kattegat entail the risk of cumulative effects on the interests of the total defence. This risk shall be taken into account, which may limit the extent of the development, collectively or in individual areas. In all areas where energy is used, particular consideration is therefore given to the interests of total defence. With the exception of one energy area, particular consideration is given to high cultural heritage values in all energy areas. The values are based on places on land and ancient and cultural remains on the seabed that can be affected by installations at sea. In three areas, particular consideration is also given to high nature values. This means that there is a special need for future measures in management, planning and licensing to ensure ecosystem services linked to the values, structures and conditions of the areas.

Close to the coast beyond the boundaries of the marine spatial plan, offshore wind energy may be suitable at a limited extent. Due to the overall scale of the marine spatial plan, energy extraction is not assessed below a certain size. Smaller, coastal establishments need to be assessed from a local perspective.

High nature and cultural heritage values and a national park under the surface

There are large areas of high nature value in the marine spatial plan area and several of them are nature reserves and Natura 2000 sites. The Skagerrak/Kattegat is also home to Kosterhavet National Park, where nature conservation is primarily related to underwater environments.

In the Skagerrak/Kattegat there are marine mammals such as harbour porpoises and seals as well as spawning and nursery areas for several fish species. There are two very important routes for spring migrating birds of prey and other species crossing the area. It also houses shallow areas of international importance for wintering seabirds. The area is also an important link and passage for birds moving north-south between marine areas.

Along the coasts adjacent to the marine spatial plan area and in the archipelago, there are also several areas with high cultural heritage values. Value areas in the coast are characterized by the development of fishing and shipping over the years and that these have long been the main industries for the population along the Skagerrak/Kattegat. Several cultural environments also include stories about the development of coastal agriculture and archipelago settlements over time. The marine area also includes cultural-historical landscapes below the surface characterized by sunken bays and settlements as well as historical marine battlefields.

Many activities

There are attractive areas for people in many places within the marine spatial plan area of the Skagerrak/Kattegat. Along the entire coast, recreation and tourism are important. Pleasure boating is extensive with important routes along the coasts and to Denmark.

Maritime traffic is extensive throughout the plan area, even near the coast. A significant part of the traffic to and from the Baltic Sea passes through the Skagerrak/Kattegat and the Sound and there are several ports on the west coast with great importance for Swedish foreign trade. There is extensive regulation with traffic separation for shipping in the Skagerrak/Kattegat. The marine

spatial plan follows designated national interest claims. The claims are supplemented by a shipping route that constitutes a public interest of substantial significancein the northern Skagerrak.

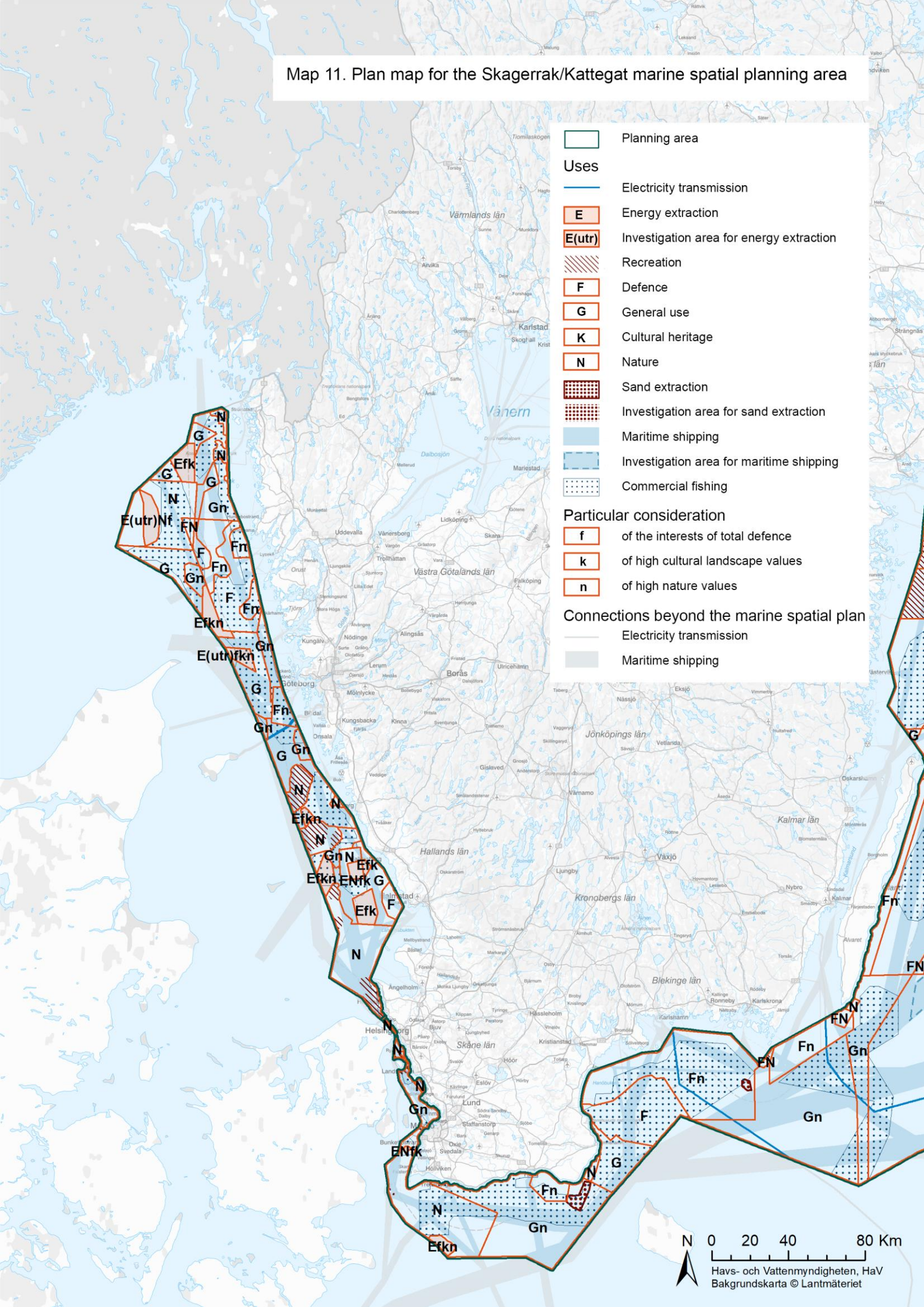
Sweden's total defence has interests in the marine spatial plan area, including marine training areas.

There is extensive commercial fishing in the Skagerrak/Kattegat for both fish and shellfish caught with different types of gear. Commercial fishing is extensive in terms of value and geography, and to some extent varies from year to year and over a longer period of time. Therefore, the area for the use of commercial fishing is large in the marine spatial plan. The planning of energy extraction areas has taken into account the potential cumulative impact on commercial fisheries. In one case, energy extraction is indicated as the most suitable use as commercial fishing is deemed not to be able to coexist with energy extraction.

While there are good conditions for various activities, the environmental situation in the Skagerrak/Kattegat needs to be improved in order to achieve good environmental status.

Many activities work well together in the planning area. Coexistence is often regulated. This may, for example, involve areas being intercepted during defence exercises or rules on how ships may operate in shipping lanes that are part of traffic separation systems.

Map 11. Plan map for the Skagerrak/Kattegat marine spatial planning area



5.1. Skagerrak

Energy extraction

In the Skagerrak/Kattegat there are good conditions for wind energy with high wind speeds. It is deep which requires floating foundations. From north of Gothenburg and south, it is shallower and possible with bottom-fixed foundations.

The area North Bratten and the North Koster Sea (V352) in the exclusive exclusive economic zone and the territorial sea to the west of the Koster Sea National Park are designated as an energy extraction areas. The area is considered to be of public interest of substantial significance for wind energy. The western part of the public interest of substantial significance for wind energy is not included in area V352 in view of the overall impact on commercial fisheries. The part not included is part of area V351. Area V352 is indicated with particular consideration to the interests of the total defence. The area is also subject to particular consideration to high cultural heritage values. At Koster, Väderöarna (islands) and Ramsvikslandet there are coastal and archipelago environments, fairway environments and communication environments (County Administrative Board 2024). The Koster value area also includes several national interest claims for cultural conservation and a marine national park. Underwater environments along the coast can be directly affected and need to be taken into account in any establishment.

The area V357 along westwards from Tjörn in the EEZ is indicated with the use energy extraction. The area includes a project with permit for the establishment of wind energy in accordance with the Act on Swedish Exclusive Economic Zone. In area V357 there is both public interest of substantial significance for wind energy and national interest claims for commercial fishing. The area is suitable for floating wind turbines. Therefore, it is not considered possible to conduct fishing with active gear in the area if offshore wind energy is established. In view of the need for fossil-free electricity production and an assessment of the overall impact on fishing for Northern prawn and Norway lobster in the Skagerrak/Kattegat, energy extraction is indicated as the most suitable use. If several areas nearby are realised, there is a risk of cumulative effects on bird migration routes. Particular consideration to high nature values is also given due to birds. The area is also subject to particular consideration to high cultural heritage values. In the coastal and archipelago area there is Västra Orust and Marstrand - Pater Noster with fairway environments, fortress and scan environment and ancient monument environments(Länsstyrelserna 2024). Underwater environments along the coast can be directly affected and need to be taken into account in an establishment. The area is also specified with particular consideration to the interests of total defence.

In and around area V356 and V348 there is extensive commercial fishing for northern shrimp There is also a public interest of substantial significance for wind energy that overlaps with national interest claims for commercial fishing. The area is suitable for floating wind turbines. Therefore, it is not considered possible to conduct fishing with active gear in the area if offshore wind energy is established. In view of the importance of the area for northern shrimp fishing, commercial fishing is indicated as the most suitable use.

In area V320 there is both a national interest claim for defence and a public interest of substantial significance for wind energy. The uses are not deemed to co-exist and defence is indicated as the

most suitable use. In area V358 there are two public interests of substantial significance for wind energy and part of a national interest claim for commercial fishing. In view of the cumulative impact on commercial fisheries, the use of energy is not indicated.

Investigation areas for energy extraction

The area Northwest Bratten (V360) is designated as the investigation area for energy extraction. In the area there is a public interest of substantial significance for wind energy and shipping. The area has been adapted to the commercial fishing carried out in the area. Vessel traffic is expected to be able to travel in a north-south direction east of the area. Wind farms are therefore given priority over shipping. The site is designated as an investigation area because it is located within the Bratten Natura 2000 site. This entails that a special permit assessment is required in accordance with Chapter 7, Section 28a of the Environmental Code, a so-called Natura 2000 assessment. The area is also specified with particular consideration to the interests of total defence.

The area Northwest Öckerö (V359) is designated as an investigation area for energy extraction with particular consideration to total defence interests and high nature values. Uncertainties in the impact on bird migration routes lead to the area being designated as an investigation area. In area V359 there is part of a public interest of substantial significance for wind energy as well as national interest claims for commercial fishing throughout the part located in the territorial sea and a small part in the exclusive economic zone. Coexistence requires adaptation. The eastern part of the public interest of substantial significance for wind energy is not included in area V359 in view of the overall impact on commercial fisheries. The area is also subject to particular consideration to high cultural heritage values. The area largely overlaps with the North Kattegat value area, which includes a large number of ship remnants from the two world wars that can be directly affected and need to be taken into account in any establishment. Particular attention to high cultural heritage values also includes the value areas Känsö, Västra Orust and Marstrand - Pater Noster where the cultural environments include, among other things, fairway environments, fortress environments and ancient relic environments (Länsstyrelserna 2024).

Recreation

Recreation and pleasure boating are extensive throughout the marine area, often to and from Norway and Denmark. The Bohuslän archipelago is an area with extensive tourism and there are many nature harbours and marinas. The coast outside the marine spatial plan area in the northern part of the Skagerrak/Kattegat, to the north of Lysekil, is of national interest for outdoor recreation. The entire coastline outside the marine spatial plan area is covered by national interest claims for outdoor recreation. Any wind energy installation can have a visual impact in the area. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective.

Defence

The marine spatial plan assigns the use defence to the Skagen military training area, which extends from Sotenäs in the north to Tjörn in the south, across the entire territorial sea and in the exclusive economic zone (V320-V322, V336, V339, V347). Further south, almost entirely within

the municipality of Gothenburg, the military training area Känsö is located, partly within the area V319 (indicated with the use defence)

In area V320 there is both a national interest claim for defence and a public interest of substantial significance for wind energy. The uses are not deemed to co-exist and defence is indicated as the most suitable use.

When developing energy, particular consideration shall be given to the interests of total defence. Particular consideration to the interests of total defence is therefore indicated for all areas with energy extraction.

Cultural environment

The coast along the southern part of the northern part of Skagerrak/Kattegat is covered by a highly developed coastline of national interest. The northern stretch of coastline is covered by national interest unbroken coastline. Areas of national interest for cultural conservation are located along the coast outside the marine spatial plane area, including lighthouse environments and a larger area around Gothenburg's southern archipelago.

Marine cultural heritage values have been identified by the county administrative board and are found along the entire coastline and in one case also mostly within the marine area (value area Norra Kattegatt). The predominant cultural environments are fairway environments, coastal and archipelago environments and archaeological sites. There are also defence environments and coastal/shipping communities. (Länsstyrelserna 2024) The value area North Kattegat is characterized by ship remains from the two world wars. This requires consideration in the event of an impact on the seabed.

The marine spatial plan gives particular consideration to high cultural heritage values in three energy extraction areas (V352, V357, V359). Consideration distances to the value areas and relevant national interest needs to be assessed from a local perspective, such as indirect impact on cultural heritage values of energy extraction in coastal areas. This may mean that measures are taken to minimise direct, indirect and cumulative effects on the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm.

Nature

The marine spatial plan indicates the use of nature in many parts of the marine area. In the west is the Natura 2000 site Bratten (V336, V360, V366). In parts of Bratten's Natura 2000 site, there are fishing-free zones where it is prohibited to engage in commercial fishing activities to protect vulnerable bottom habitats.

Around the Koster Islands, use of nature at Strömstad (V344) and Tanum (V349) is specified in areas with national parks, nature reserves and Natura 2000.

In several areas, particular consideration shall be given to high nature values (V319, V321, V324, V339, V347, V348, V350, V357). In some cases, this refers to areas where site protection is planned in all or part of the areas. Around the Väderöarna (islands) and Svabergsgrunden, preliminary studies for the establishment of marine nature reserves have been initiated due to

high values of rare sea bottom environments. An important migratory route for birds of prey stretches from Skagen towards the Bohus coast.

Shipping

The marine spatial plan specifies the use of shipping in large parts of the marine area (V319-V324, V339, V344, V347-V351, V353, V356, V358, V366), with several shipping routes from Oslo to the Southern North Sea and towards the coast and out past Skagen towards the Skagerrak/Kattegat. In areas V360 there is public interest of substantial significance for both wind farms and shipping. The uses are not considered to be able to co-exist. North-South shipping is expected to move eastwards. Therefore, the use shipping in a north-south route through areas V348, V351, V356 and V366 is reported.

Routes from the Baltic Sea extend through the Öresund, Kattegat and Skagerrak, and further into the world's oceans. Sweden also has routes to Denmark and Norway. Gothenburg and Lysekil are home to two of Sweden's largest ports.

In Northern Bohuslän, a joint comprehensive plan specifies an area for activities between two sea routes (V350) in the municipalities of Tanum and Sotenäs. The area is specified in the marine spatial plan as general use with particular consideration to high nature values. When establishing any operations, consideration of maritime safety issues is important. The plan map shows the most important shipping routes, not the shipping's total need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment (Sjöfartsverket och Transportstyrelsen 2023).

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.

Commercial fishing

Commercial fishing is extensive in the Skagerrak/Kattegat and is a use in a large part of the marine area (V318-V321, V323-V324, V336, V339, V344, V347-V349, V350-V351, V353-V354, V356, V358, V366). Northern shrimp fishing is carried out extensively in the northern part of the area. Fishing for Norway lobster is conducted throughout the marine area except along the west. Fishing areas are more stable than in other fisheries. Closer to the coast, there is creel fishing for Norway lobsters. Fishing with passive gear takes place to different extents throughout the area, slightly more intense in the south. Pelagic fishing is conducted from Sotenäs and south.

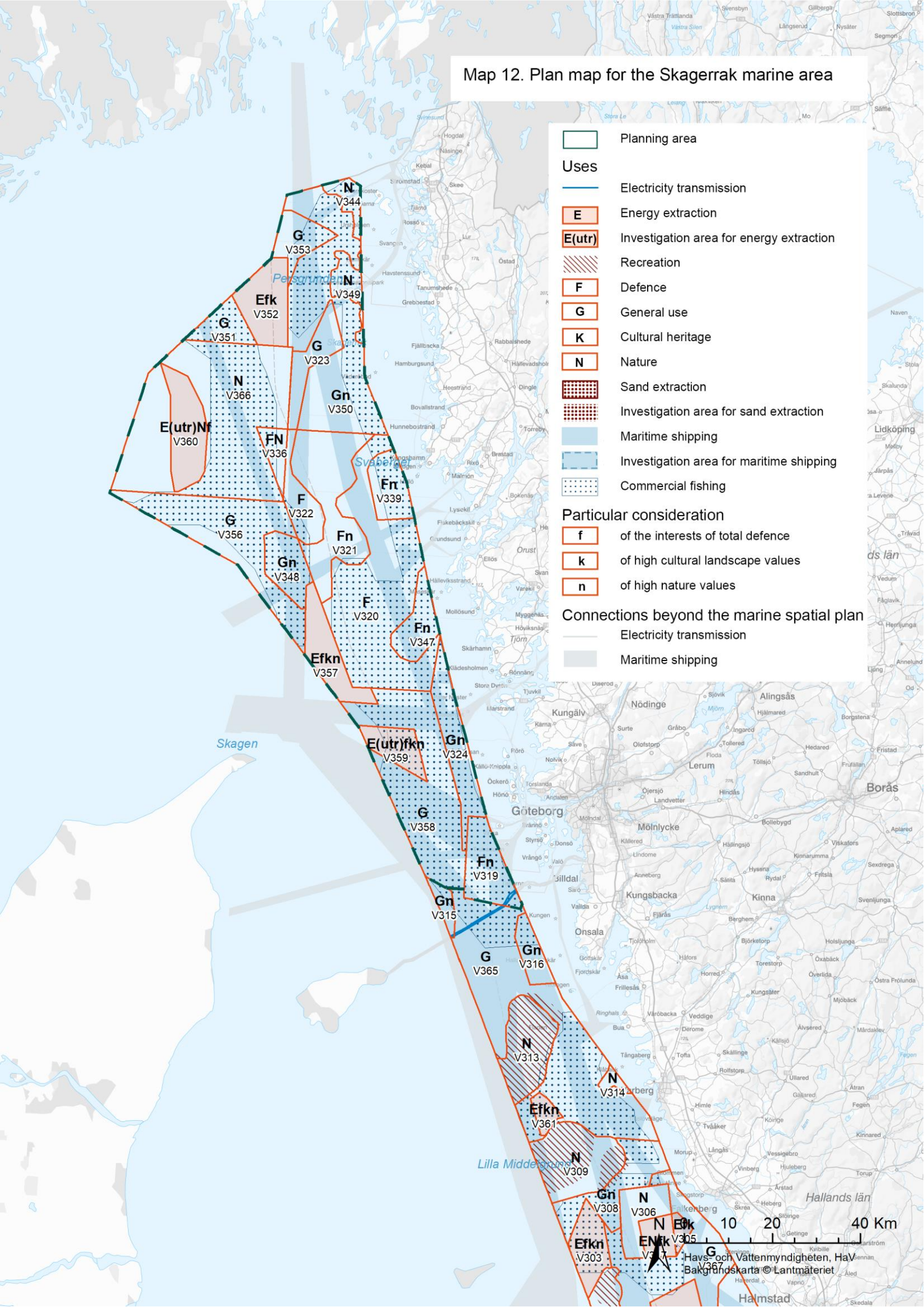
Within and around V356 there is extensive commercial fishing for Northern prawn. There is also a public interest of substantial significance for wind energy that overlaps with national interest claims for commercial fishing. The area is suitable for floating wind turbines. Therefore, it is not considered possible to conduct fishing with active gear in the area if offshore wind energy is established. In view of the importance of the area for shrimp fishing, commercial fishing is indicated as the most suitable use.

An area of public interest of substantial significance for wind energy overlaps with a public interest of substantial significance for commercial fisheries in area V351. Commercial fishing is defined as use taking into account the cumulative impact on commercial fishing.

In area V358 there is part of a national interest claim for commercial fishing and two public interests of substantial significance for wind energy. In view of the cumulative impact on commercial fisheries, the use of energy is not indicated.

West (23-38 nautical miles) of the island of Måseskär there is a dumping area with 28 vessels containing chemical warfare agents to an unknown extent. The guidance of the marine spatial plan is that commercial fishing is not a suitable use in this dumping area. Environmentally hazardous substances have leaked into the marine environment and at the same time there is active trawl fishing in the vicinity of the wrecks. Trawls and otters in contact with the seabed tear up sediments and spread the substances over a wider geographical area. Data from studies show that degradation products from chemical warfare agents are found in food fish and crustaceans in the area. All in all, this means that commercial fishing should not be carried out in the immediate area. The area is geographically small in relation to the geographical scale of the plan map and is therefore not marked in the plan map.

Map 12. Plan map for the Skagerrak marine area



Area table Northern North Sea

Table 9 Area table Northern North Sea

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
V319	Electricity transmission Defence Shipping Commercial fishing	High nature values: Soft bottom with sea pens. Reef environment.	
V320	Defence Shipping Commercial fishing		Defence takes priority over energy extraction. The marine spatial plan guides the priority for use of defence over energy extraction. The uses are not expected to co-exist here. In the area there are national interest claims for total defence and public interest of substantial significance for wind energy.
V321	Defence Shipping Commercial fishing	High nature values: Soft bottom with sea pens. Planned area protection. Reef environment.	
V322	Defence Shipping Commercial fishing		
V323	General use Shipping Commercial fishing		
V324	General use Shipping Commercial fishing	High nature values: Mammals. Fish spawning. Reef environment.	
V336	Defence Nature Commercial fishing		
V339	Defence Shipping Commercial fishing	High nature values: Soft bottom with sea pens. Planned area protection. Reef environment.	
V344	Natur Shipping Commercial fishing		
V347	Defence Shipping Commercial fishing	High nature values: Mammals. Fish spawning. High originality. Reef environment.	
V348	General use Shipping Commercial fishing	High nature values: Mammals. Fish spawning. Particularly high environmental impact.	Commercial fishing takes priority over energy production. The MSP provides guidance on the priority for commercial fishing over energy extraction. The uses are not expected to co-exist here. In the area there are national interest claims for commercial fishing and general interest of substantial significance for wind energy.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
V349	Nature Shipping Commercial fishing		
V350	General use Shipping Commercial fishing	High nature values: Soft bottom with sea pens. Planned area protection. Reef environment.	
V351	General use Shipping Commercial fishing		Commercial fishing takes priority over energy production. The MSP provides guidance on the priority for commercial fishing over energy extraction. The uses are not expected to co-exist here. In the area there are national interest claims for commercial fishing and general interest of substantial significance for wind energy and commercial fishing.
V352	Energy extraction	The interests of total defence High cultural heritage values: Prehistoric environment. Communication environment. Coastal and archipelago environment. Cultivation landscape.	
V353	General use Shipping Commercial fishing		
V356	General use Shipping Commercial fishing		Commercial fishing takes priority over energy production. The MSP provides guidance on the priority for commercial fishing over energy extraction. The uses are not expected to co-exist here. In the area there are national interest claims for commercial fishing and general interest of substantial significance for wind energy.
V357	Energy extraction	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. the defence environment; Communication environment. Coastal and archipelago environment. Coastal/shipping society. production environment; urban environment; High nature values: Birds.	Energy production takes priority over commercial fishing. The marine spatial plan provides guidance on the priority for the use of energy extraction over commercial fishing. The uses are not expected to co-exist here. In the area there are national interest claims for commercial fishing and general interest of substantial significance for wind energy.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
V358	General use Shipping Commercial fishing		Commercial fishing takes priority over energy production. The MSP provides guidance on the priority for commercial fishing over energy extraction. The uses are not expected to co-exist here. In the area there are national interest claims for commercial fishing and two public interests of substantial significance for wind energy.
V359	Field of inquiry energy extraction Commercial fishing	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. the defence environment; Coastal and archipelago environment. Coastal/shipping society. production environment; urban environment;	Coexistence between commercial fishing and energy production requires adaptation. In the area there are national interest claims for commercial fishing and general interest of substantial significance for wind energy
V360	Field of inquiry energy extraction Nature	The interests of total defence	Energy production is adapted to nature. An activity or measure that may significantly affect a Natura 2000 site always requires a special permit assessment in accordance with Chapter 7, Section 28a of the Environmental Code.
V366	Nature Shipping Commercial fishing		Commercial fishing takes priority over energy production. The MSP provides guidance on the priority for commercial fishing over energy extraction. The uses are not expected to co-exist here. In the area there is a public interest of substantial significance for commercial fishing and wind energy.

5.2. Kattegat

Electricity transmission

Electricity transmission corresponds to the two parallel transmission grid cables Konti-Skan 1 and Konti-Skan 2 that run between Lindome in Sweden and Vester Hassing in Jutland, Denmark. Two cable connections for 400 kV between Kristinelund in Sweden and Skibstrupgård in Denmark, the so-called Öresund cables are located at the border between the marine spatial plan area Skagerrak/Kattegat and the Baltic Sea. They are listed in area Ö294 in the marine area Öresund in the Baltic Sea Marine spatial plan.

Energy extraction

In the marine area there are good conditions for wind energy with high wind speeds. The depth allows for bottom-fixed foundations. The transmission network on land is well developed since the Ringhals nuclear power plant is located on the coast of Halland. In the Southern North Sea, five areas are specified using energy extraction (V303, V305, V317, V361, V364).

Area North Lilla Middelgrund (V361) is located west of the city of Varberg and includes a project that has been granted a permit under the Act on Swedish Exclusive Economic Zone. The area is considered to be of general interest of substantial significance for wind energy and overlaps with national interest claims for commercial fishing. An establishment of wind energy is considered to be able to coexist with commercial fishing if the activities are adapted to each other. The area is defined with particular consideration to the interests of total defence. The area is also subject to particular consideration to high nature and cultural heritage values. The nature values refer to birds, including razorbill. In terms of cultural environment, a number of value areas are located along the coast of Halland where the cultural environments include, among other things, fairway environments, recreational environments, fishing villages, coastal and archipelago environments, and fortress and scanning environments(Länsstyrelserna 2024). These areas are also covered by national interest claims for cultural heritage conservation. There are also underwater environments that can be directly affected and need to be taken into account in any establishment. East of area V361 there is a public interest of substantial significance and national interest for commercial fishing. In order to reduce the cumulative impact on commercial fisheries, energy extraction is not specified in the area located in area V365.

The area Norr Rödebanke (V303) located west of Falkenberg and includes a project with a permit for the establishment of wind energy according to the Act on Swedish Exclusive Economic Zone. The area is considered to be of general interest of substantial significance for wind energy and overlaps with national interest claims for commercial fishing. An establishment of wind energy is considered to be able to coexist with the national interest in commercial fishing if the activities are adapted to each other. The area is defined with particular consideration to the interests of total defence. The area is also subject to particular consideration to high nature and cultural heritage values. The nature values refer to seabirds and migratory birds of prey. In terms of cultural environment, a number of value areas are located along the coast of Halland where the cultural environments include, among other things, fairway environments, recreational environments, fishing villages, coastal and archipelago environments, and fortress environments

(Länsstyrelserna 2024). These areas are also covered by national interest claims for cultural heritage conservation.

In the territorial sea in the area Southeast Morup Bank (V305) located outside Falkenberg, there is a project with a permit for the establishment of wind energy. In the part of area V305 that is not covered by the licensed project, there is instead a public interest of substantial significance for wind energy and a small part of a larger national interest claim for commercial fishing. A future establishment of wind energy is expected to coexist with the national interest in commercial fishing if the activities are adapted to each other. The area is also subject to particular consideration to high cultural heritage values. This includes several value areas along the coast of Halland, including fairway environments, recreational environments, fishing villages, coastal and archipelago environments, and fortress and scanning environments (Länsstyrelserna 2024). These areas are also covered by national interest claims for cultural heritage conservation. The cultural environments concerned also include underwater environments that can be directly affected and need to be taken into account in any establishment.

The area Syd Morups bank (V317) is located west of the area of the project with permit for the establishment of wind energy outside Falkenberg in V305. Area V317 is indicated with the use nature and energy extraction and is included in the previously decided marine spatial plan for the Skagerrak/Kattegat in 2022 (Regeringen 2022a). The area is considered to be a public interest of substantial significance for wind energy that overlaps with a national interest claim for commercial fishing related to spawning grounds. Provided that the establishment of wind energy does not harm the spawning area for fish, coexistence is considered possible in area V317. The area is also designated with particular consideration to high cultural heritage values. This includes a number of value areas along the coast of the county Halland where the cultural environments include fairway environments, recreational environments, fishing villages, coastal and archipelago environments, and fortress and scanning environments (Länsstyrelserna 2024). These areas are also covered by national interest claims for cultural heritage conservation. There are also underwater environments that can be directly affected and need to be taken into account in any establishment.

On Stora Middelgrund, which is located in the north-western part of area V307, there is a national interest claim for wind energy, in Sweden's exclusive economic zone. In the southern part of the bank there is a national interest claim for outdoor recreation. The area is located in a Natura 2000 site, which places special demands on energy extraction if coexistence is to be possible. The conservation values consist of valuable bottom habitats as well as porpoises and seabirds. The Government has rejected an application for the establishment of a wind farm at the bank. The County Administrative Board has rejected the application for a Natura 2000 permit under Chapter 7, Section 28a of the Environmental Code. There is some overlap with the fairway in the eastern part of the area. For these reasons, energy extraction is not indicated as a use.

In area West Halmstad (V364) in the municipality of Halmstad there is a public interest of substantial significance for wind energy. The area is indicated with the use energy extraction. National interest claims for commercial fishing overlap to a small extent with V364. Commercial fishing is carried out in the area as a whole. The area is also designated with particular consideration to high cultural heritage values. This includes several value areas along the coast of Halland and the coast of the northwest Scania with fairway environments, recreational environments, fishing villages and coastal and archipelago environments (Länsstyrelserna 2024).

These areas are also covered by national interest claims for cultural heritage conservation. The area is coastal and adaptation of the area may be determined on the basis of local and regional needs.

There is a public interest of substantial significance for wind energy in area V367about 4-6 km from Skrea beach. On the coast near the wind farm area is an area of national interest for outdoor life and area of national interest for outdoor recreation. Energy extraction is not indicated as use due to outdoor recreation and cultural environment values on the coast. A small part of the public interest of substantial significance for wind energy is located in area V304. Energy extraction is not listed in area V304 due to outdoor recreation and cultural heritage values on the coast.

In area V367 south of area V317 there is a public interest of substantial significance for wind energy. In order to reduce the cumulative impact on commercial fishing and cultural and recreational values in the coastal environment, the use of energy extraction in the area is not specified.

When developing energy in the Southern North Sea, particular consideration shall be given to the interests of total defence in all energy areas. Several wind farms entail the risk of cumulative effects on the interests of total defence. This cumulative risk shall be taken into account, which may limit the extent of the development, collectively or in individual areas.

Recreation

The marine spatial plan assigns the use recreation to some of the valuable offshore banks (V307-V309, V313, V365, V367) and an area from Kullen and south towards Öresund (V307) that is covered by national interest claims for outdoor recreation. The offshore banks are also covered by Natura 2000, and recreational fishing has been restricted by regulation. For example, on parts of the offshore banks Fladen (V313), Lilla Middelgrund (V309) and Stora Middelgrund (V307) and in the southern Kattegat (V307), recreational fishing is prohibited for conservation reasons. Recreation and recreational fishing are otherwise extensive, both along the coast and on the offshore banks. Important passages for pleasure boat traffic run between Sweden and Denmark, including to Læsø (island). Large parts of the coast, outside the marine spatial plan area, are also of national interest for outdoor recreation. The possibility of coexistence with other uses and consideration distances needs to be assessed from a local perspective.

There is a public interest of substantial significance for wind energy about 4-6 km from Skrea beach (V367). On the coast there is an area of national interest claim for recreation, Skrea strand- Tylösand based on criteria such as tranquility and untouchedness. On the coast there is also an area of national interest for outdoor recreation. The establishment of wind energy has a major visual impact on experience values in an area that is used by many people. Energy extraction is not indicated as use taking into account high outdoor and cultural heritage values on the coast.

Defence

Outside Halmstad, the marine spatial plan assigns the use defence to the impact area of the Ringenäs firing range (V304).

When developing energy, particular consideration shall be given to the interests of total defence. Particular consideration to the interests of total defence is given for all areas where energy is used.

Cultural environment

The entire coastline is covered by national interest of high-exploited coastline. Areas of national interest for cultural conservation are located along the coast outside the marine spatial plan area, such as Kullaberg-Krapperup south of Ängelholm, Träslövsläge south of Varberg and lighthouse environments such as Nidingen and Tylön lighthouses.

Marine cultural heritage values have been identified by the county administrative boards and are located both along the coastline and within the marine spatial plan area. The dominant cultural environments are coastal and archipelago environments, archaeological sites, fairway environments and recreational environments. There are also castles and military environments. (Länsstyrelserna 2024)

The value area Stora Middelgrund, which is located within the marine area as a whole, is characterized by the fact that the cultural environment values in this area are below the surface in the form of sunken bays and settlements. The value area Laholmsbukten towards the coast is also characterised by the fact that the cultural heritage values are mainly below the surface. This requires consideration in the event of an impact on the seabed. At the far southeast, the value areas Bjärehalvön and Kullahalvön extend into the marine spatial plane area. The value areas refer to coastal communities including fishing villages, ancient relics, recreational environment and fairway environment. The lighthouse here is a dominant feature of the landscape.

The marine spatial plan gives particular consideration to high cultural heritage values in all five energy areas in the Southern North Sea (V303, V305, V317, V361, V364). Consideration distances to the value areas and relevant national interest needs to be assessed from a local perspective, such as indirect impact on cultural heritage values of energy extraction in coastal areas. This may mean that measures are taken to minimise direct, indirect and cumulative effects on the cultural environment and may consist of specific requirements for the location and design of wind farms or through specific requirements during the construction phase of a wind farm.

Nature

The marine spatial plan indicates the use nature for a large area in the Southern Kattegat (V307) covered by Natura 2000, the nature reserve Skånska Kattegatt and national interest claims for nature conservation on the lake bank Rödebanke and Stora Middelgrund in the north and at Hallands Väderö east. Nature use is also indicated for Morup's bank (V306), Lilla Middelgrund (V309) and Fladen (V313), which have high nature values and constitute Natura 2000 areas in parts of the areas. Lilla Middelgrund (V309) and Fladen (V313) are also covered by national interest claims for nature conservation and the area around Morup's bank constitutes a national interest claim for a spawning area for fish (V306, V317). Balgö outside Varberg (V314) is a Natura 2000 site.

On the offshore banks there are high values for mainly birds and harbour porpoises, important spawning areas for fish and valuable bottom environments. The Swedish Environmental

Protection Agency has identified the offshore banks Fladen and Lilla Middelgrund as particularly valuable (Naturvårdsverket 2006).

The marine spatial plan gives particular consideration to high nature values in five areas in the Southern North Sea (V303, V308, V315–V316, V361). High nature values are also found outside the Swedish territorial sea and economic zone. An important migratory route for birds stretches from Denmark towards the coast of Halland.

Shipping

The marine spatial plan indicates s the use of shipping in large parts of the Southern North Sea (V304-V309, V313, V315-V316, V365, V367) in routes from north to south and into the ports along the coasts, both on the Swedish and Danish sides. The use shipping includes areas of national interest for shipping which include areas with traffic separation systems required for safe shipping. Maritime traffic is important and extensive because the route through the Kattegat is one of the few routes into the Baltic Sea for large vessels. In the south, outside Stora and Lilla Middelgrund, there is the choice of Öresund or Stora Belt, both of which limit the height and depth of the vessels. The Great Belt Bridge limits the height.

The other route into the Baltic Sea is the Kiel Canal, which imposes restrictions on the width, length and depth of the vessels. In order to ensure safe navigation through the shallow waters of the Southern North Sea, there is a traffic separation system for traffic north of Skagen and a shipping route closer to the Swedish coast for traffic between Skagen and Öresund.

The plan map shows the most important shipping routes, not the shipping's entire need for surfaces. There must be a safety distance adjacent to the shipping lanes. 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. The distance is adapted to local conditions following risk assessment(Sjöfartsverket och Transportstyrelsen 2023).

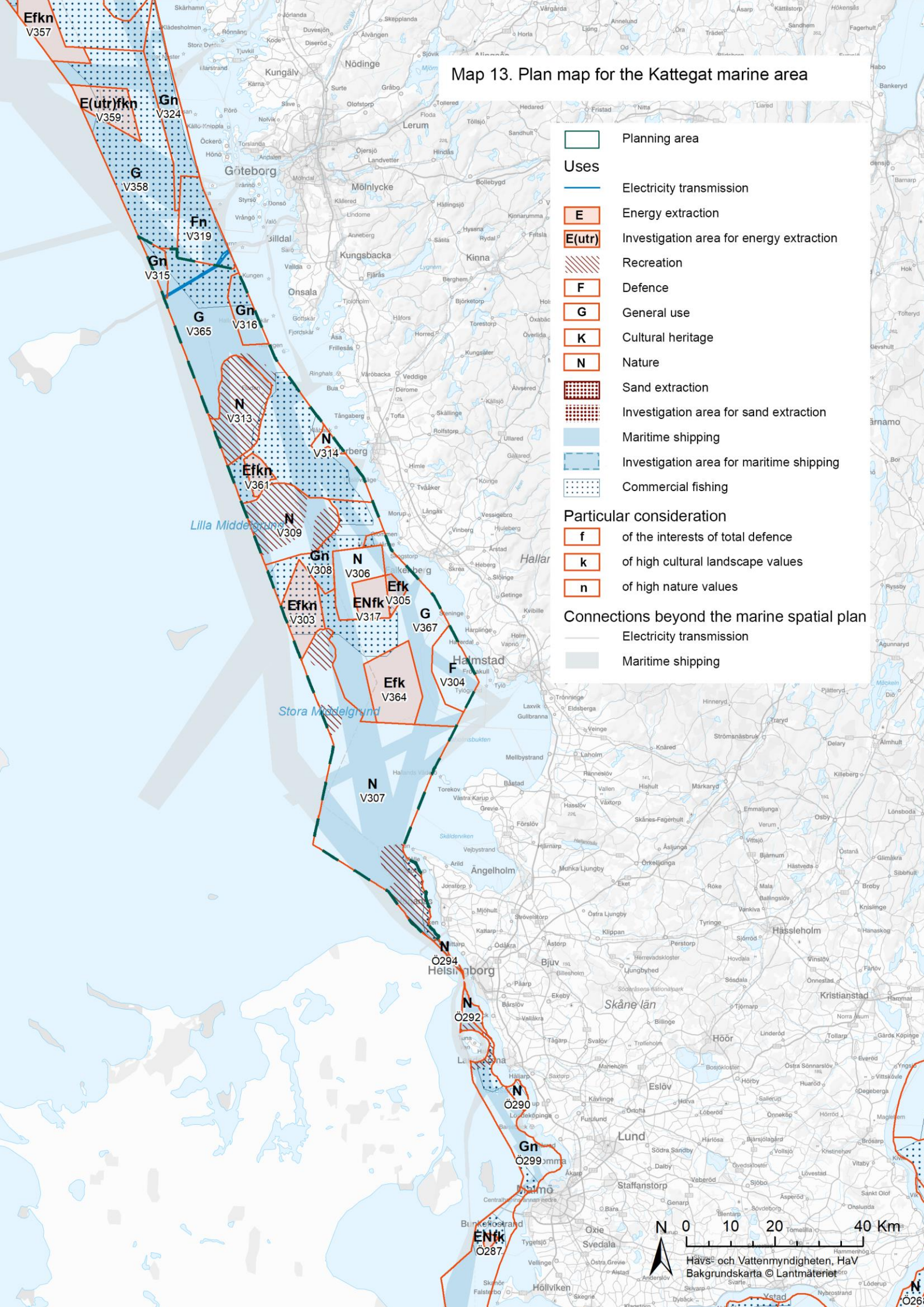
Several wind farms in the same marine area may pose a risk of cumulative impacts on the mobility and safety of shipping when the available space is limited. That risk shall be taken into account.

Commercial fishing

The marine spatial plan indicates the use of commercial fishing in large parts of the Southern North Sea (V303, V305, V307-V308, V313, V315-V316, V361, V364, V365, V367). The use corresponds to the delimitation of national interest claims for commercial fishing catch areas Important spawning grounds for cod in the central and southern parts of the Southern North Sea are covered by areas where the marine spatial plan indicates use nature.

Commercial fishing is widespread in the southern Skagerrak/Kattegat but also highly regulated, including fully and partially closed to both commercial and recreational fishing. For example, fishing is prohibited on parts of the offshore banks Fladen (V313), Lilla Middelgrund (V309) and Stora Middelgrund (V307) and in the southern Kattegat (V307) for conservation reasons. In the marine area, fishing is mainly conducted for Norway lobster and pelagic fish. Cages are used to a lesser extent to fish for Norway lobster and lobster closer to the coast. Fishing with passive gear takes place to different extents throughout the area.

In area V365 there is a public interest of substantial significance and national interest for commercial fishing. In order to reduce the cumulative impact on commercial fisheries, energy extraction in the area is not specified.


Map 13. Plan map for the Kattegat marine area
Planning area
Uses
Electricity transmission
E Energy extraction
E(utr) Investigation area for energy extraction
Recreation
F Defence
G General use
K Cultural heritage
N Nature
Sand extraction
Investigation area for sand extraction
Maritime shipping
Investigation area for maritime shipping
Commercial fishing
Particular consideration
f of the interests of total defence
k of high cultural landscape values
n of high nature values
Connections beyond the marine spatial plan
Electricity transmission
Maritime shipping
Efkn V357
E(utr)fkn V359
Gn V324
G V358
Fn V319
Gn V315
G V365
Gn V316
N V313
N V314
Efkn V361
N V309
Gn V308
N V306
Efk V305
Efkn V303
ENfk V317
G V367
F V304
Efk V364
N V307
N Ö294
N Ö292
N Ö290
Gn Ö299
ENfk Ö287
Lilla Middelgrund
Stora Middelgrund
Göteborg
Kungälv
Nödinge
Lerum
Mölnlycke
Kungsbacka
Onsala
Halmstad
Ängelholm
Helsingborg
Hässleholm
Kristianstad
Skåne län
Lund
Malmö
Eslöv
Höör
Staffanstorp
Oxie
Svedala
Trelleborg
Ystad
0 10 20 40 Km
Havs- och Vattenmyndigheten, HaV
Bakgrundskarta © Lantmäteriet

Area table Kattegat

Table 10 Area table Kattegat

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
V303	Energy extraction Commercial fishing	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. the defence environment; Communication environment. Coastal and archipelago environment. production environment; Recreational environment. urban environment; High nature values: Birds.	Coexistence between commercial fishing and energy production requires adaptation. In the area there is a public interest of substantial significance for wind energy and national interest claims for commercial fishing.
V304	Defence Shipping		Defence takes priority over energy extraction. The marine spatial plan guides the priority for use of defence over energy extraction. The uses are not expected to co-exist here. Energy extraction is not specified with regard to recreational and cultural heritage values on the coast. There is a part of a public interest of substantial significance for wind energy in the area. In the coastal area there is a national interest in outdoor recreation and a national interest in outdoor recreation and conservation of the cultural environment.
V305	Energy extraction Shipping Commercial fishing	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. the defence environment; Communication environment. Coastal and archipelago environment. production environment; Recreational environment. urban environment;	Energy production takes priority over shipping. The marine spatial plan provides guidance on the priority for the use of energy extraction over shipping. The applications are not considered to be able to co-exist here (in the case of a wind energy installation). National interest claims for wind energy overlap to a small extent with national interest claims for shipping.
V306	Nature Shipping		
V307	Electricity transmission Recreation Nature Shipping Commercial fishing		Nature and shipping are given priority over energy extraction. The marine spatial plan guides the priority for nature use and shipping over energy extraction. The uses are not expected to co-exist here. National interest claims for wind

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
			energy overlap with national interest claims for shipping, nature conservation and Natura 2000 area.
V308	Recreation General use Shipping Commercial fishing	High nature values: Birds. Planned area protection. Reef environment.	Energy extraction is adapted to the given state. After adaptation of energy extraction in zone V303, energy extraction is not specified in zone V308. In the area there is a public interest of substantial significance for wind energy.
V309	Recreation Nature Shipping		
V313	Recreation Nature Shipping Commercial fishing		
V314	Nature		
V315	Electricity transmission General use Shipping Commercial fishing	High nature values: Mammals. Fish spawning. Reef environment. Particularly high environmental impact.	
V316	General use Shipping Commercial fishing	High nature values: Mammals. Fish spawning.	
V317	Energy extraction Nature	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. the defence environment; Communication environment. Coastal and archipelago environment. production environment; Recreational environment. urban environment;	Energy production is adapted to nature. Coexistence is considered possible if wind farms are adapted to the spawning area for fish. See text belonging to the heading Marine area Kattegat, Energy extraction section. General interest of substantial significance for wind energy overlaps with national interest claims for commercial fishing spawning grounds.
V361	Energy extraction Commercial fishing	The interests of total defence High cultural heritage values: Village or church environment. Fishing village. Prehistoric environment. the defence environment; Manor or castle environment. Communication environment. Coastal and archipelago environment. production environment; Recreational environment. urban environment;	Coexistence between commercial fishing and energy production requires adaptation. In the area there is a public interest of substantial significance for wind energy and national interest claims for commercial fishing.

Area	Applications	Particular considerations	Priority or special adaptation for coexistence
V364	Energy extraction Commercial fishing	The interests of total defence High cultural heritage values: Fishing village. Prehistoric environment. the defence environment; Communication environment. Coastal and archipelago environment. Coastal/shipping society. production environment; Recreational environment. urban environment;	
V365	Electricity transmission Recreation General use Shipping Commercial fishing		Commercial fishing takes priority over energy production. The MSP guides the priority for the use of commercial fishing over energy extraction as the use of commercial fishing is deemed to be more suitable. National interest claims for commercial fishing overlap with public interest of substantial significance for wind energy west of Varberg.
V367	General use Recreation Shipping Commercial fishing		Energy extraction not indicated as use The MSP guides the priority for the use of commercial fishing over energy extraction as the use of commercial fishing is deemed to be more suitable. Energy extraction is not indicated as use taking into account outdoor recreation and cultural heritage values on the coast. There are national interest claims for commercial fishing and two areas of public interest of substantial significance for wind energy north and northwest of Halmstad. In the coastal area, there is a national interest in outdoor recreation, a national interest in outdoor recreation and conservation of the cultural environment, and a general interest of substantial significance for conservation of the cultural environment. National interest in outdoor recreation extends into the marine area.

6. Implication and consequences

6.1. Implication

National overall planning

Spatial planning means that society's various goals shall be integrated into a sustainable whole, where the spatial context is made visible and decided in a planning document. A plan shall provide stability in the form of predictability of future use, while at the same time allowing flexibility for managing changing external factors, developed knowledge bases and the development of new technologies. National marine spatial planning is a relatively new form of spatial planning in Sweden, where the holistic perspective has to relate to ongoing sector planning and management. The marine spatial plan shall also integrate economic objectives, social objectives and environmental objectives. Conflicting objectives that concern the use of the sea are clarified when different societal objectives are given a spatial expression.

Marine spatial planning differs in some aspects from land use planning, in terms of flow and dynamics of use, as well as in relation to claims and different levels of planning, from the local perspective to the international. In national marine spatial planning, planning and presentation have been developed in such a way as to provide guidance to marine spatial plans at the appropriate level. The description of designations for use and consideration in marine spatial plans is an expression of this. The marine spatial plans provide guidance on which functions and values need to be preserved and developed, so that guidance to authorities, municipalities and operators provides flexibility in relation to changing conditions in the future. At the same time as marine spatial plans provide guidance on which uses and which functions should take priority in a particular area, management and measures can be adapted in the future.

Different levels of planning

National marine spatial planning is comprehensive and at an overall level; in municipal spatial planning, more detailed planning is carried out close to land and along the coast. Many activities take place in the coastal zone, which is part of municipal and regional planning, but not in national marine spatial planning. Cities and regions have extensive possibilities in planning local and regional development. There is also potential for joint further development of planning between municipal, regional and national levels to strengthen the land-sea perspective.

In national marine spatial planning, Sweden also cooperates with neighbouring countries. International cooperation includes method development, joint planning documents and monitoring of marine spatial plans. Sweden also strives for a functional coherence with the marine spatial plans of neighbouring countries. By functional we mean that the planning does not counteract the planning of neighbouring countries.

Coexistence

In many respects, marine spatial plans give the priority for uses already underway in the sea. The coexistence of different activities in the same place may be regulated and already established, but a developed management is needed for more operations to be accommodated and for the

values that should be preserved to be maintained and developed. For the expansion of offshore wind energy to be possible there must be new solutions for coexistence with other operations.

The conditions for coexistence between offshore wind energy, commercial fishing, aquaculture and nature conservation vary between the different activities and how the activities are carried out in different locations. Opportunities for coexistence can be increased through active dialogue between different actors and operators, stronger guidance and guidance on how coexistence should work, increased knowledge of, for example, the impact on nature and maritime safety, and the development of technical and site-specific solutions (Havs- och vattenmyndigheten 2023). The conditions for coexistence between defence and energy production have proved challenging in the marine spatial planning process and permit procedures for offshore wind energy. The Swedish Agency for Marine and Water Management shares the view expressed in FOI's report that efforts are needed from several actors, both in terms of technological development but also in the process of planning and permitting offshore wind energy, in order to increase opportunities for coexistence(Odell et al. 2022).

Use of the sea

Renewable energy

Energy extraction is a relatively new use of the sea that requires marine spatial planning. There are good technical conditions for offshore wind energy in Sweden's marine areas. There is also great interest in investing in permit applications and studies.

Between Sweden and neighbouring countries there are several connections for electricity transmission. The transmission network is the base for the use electricity transmission in the marine spatial plan.

The Swedish Agency for Marine and Water Management has drawn up this proposal within the framework of a government assignment on amended areas for energy extraction in marine spatial plans. The assignment's objective is to enable an additional 90 terawatt hours of annual electricity production at sea in addition to the planned production contained in the previously adopted marine spatial plans (Regeringen 2022b). The total target is 120 terawatt hours. The use energy extraction refers to offshore wind energy. According to the assignment, the Skagerrak/Kattegat marine spatial plan area, as well as the northern, central and south-eastern Baltic Seas marine areas should be prioritized geographically (Regeringen 2022b).

The starting point for planning for offshore wind energy has primarily been the basis for new or changed areas for energy extraction in the marine spatial plans (Energimyndigheten 2023).

The Swedish Armed Forces have indicated that it would better as for coexistence with military defence interests if the areas for offshore wind energy are located in the Skagerrak/Kattegat and the Gulf of Bothnia rather than in Baltic Sea (Energimyndigheten 2023). Based on the assessment made by the Government regarding the impact of offshore wind energy on the Swedish Armed Forces' ability to cope with the changed security situation(Klimat- och näringslivsdepartementet 2024; Regeringen 2024b), no additional areas with the use energy extraction are listed in the draft marine spatial plan, than those already included the adopted in plan for the Baltic Sea. An area in the adopted plan for the Baltic Sea has also been removed.

At the same time as the planning process is ongoing, planning for offshore wind energy takes place in and outside the Swedish marine spatial plan areas. The interest in planning within the Swedish marine spatial plan areas is significantly greater than the objective of the assignment, and thus also takes place outside the areas proposed in the marine spatial plan.

Proposals and objectives

The draft marine spatial plans identify 24 areas for the use of energy extraction. Of these, five are areas of investigation. 10 of the areas are listed in Sweden's exclusive economic zone and 14 of the areas are wholly or partly located in the territorial sea. Areas in the territorial sea and the exclusive economic zone account for 20 per cent and 80 per cent respectively of the total area with the use energy extraction in the proposal.

The total area of the areas amounts to about 7700 km^2 of which 1100 km^2 are located in the Skagerrak/Kattegat, about 6,600 km^2 in the Gulf of Bothnia and about 80 km^2 in the Baltic Sea. As a percentage, energy areas make up about 11 per cent of the Skagerrak/Kattegat, 17 per cent of the Gulf of Bothnia and 0.1 per cent of the Baltic Sea's plan areas. Altogether, the areas make up about 6 per cent of the area of the marine spatial plans.

In order to assess the potential for electricity production, assumptions are made about:

- a power density of 5 MW/km^2
- 4000 full load hours per year

Power density is a term for the installed power on a surface. Assuming that each turbine has a power of 20 MW, the power density of 5 MW/ km^2 means that the turbines are two kilometers apart. Full load hours are a measure of efficiency and are calculated as annual production divided by installed power, which then indicates how many hours of production at full power are required to reach the annual production. These two values together give a value with estimated production per area. The marine spatial plans use the same assumptions as in the Swedish Energy Agency's planning documents (Energimyndigheten 2023). An analysis of the projects that have applied for permits at the time of publication of the proposal shows that the applications have spread in terms of power density and full load hours, which largely assume higher values. This implies that projects during the permit process may present a different production than what the marine spatial plan does.

Theoretically, the proposed energy areas and investigation areas for energy extraction in the draft marine spatial plan to provide about 150 TWh of annual production if fully utilised.

However, the assessment is that permits for energy extraction will not be applied for or given in all or all parts of the areas specified for energy extraction due to several uncertainties.

Uncertainties about which areas, and to what extent the areas can be utilised relate to the total defence military interests, nature protection and overall, cumulative impact on nature values, adaptation to commercial fishing and winter navigation, and municipal endorsement in the territorial sea. Other aspects are consideration of the cultural environment, recreation and landscape values. Willingness to invest and profitability are also crucial for wind energy to be realised in the end, as well as the possibility to connect to the transmission grid as well as the development of coexistence solutions.

The need for safety distances between wind farms and ship routes will affect the extent of the expandable areas. An overall assessment is that around 15-20% of the planned area energy extraction areas will be needed to accommodate safety distances.

Based on the goal of enabling a total of 120 TWh of annual electricity production, the entire surface area needs to be realised, which cannot be seen as realistic.

For the areas that are investigation areas, the impact on other interests such as bird migration routes and conservation values in Natura 2000 areas needs to be specifically investigated in the further planning or application processes. As marine spatial plans are indicative and based on broad considerations, this entails that not all areas for energy extraction in marine spatial plans should be utilised or utilised in their entirety. The fact that the marine spatial plans provide guidance on priority paves the way for future decisions. In permit processes, energy projects are tested against the functions and values to be preserved, including values in Natura 2000 sites. Requirements for adaptation are then set in relation to, among other things, local conditions and planned activities. In all energy extraction areas particular consideration shall be given to the interests of total defence and in several areas particular consideration shall be given to high nature or cultural environmental values.

Shipping, commercial fishing and defence

The marine spatial plans provide good conditions for the future development and increase of international trade and increasing transport of goods and people by sea both between countries around the Baltic Sea and to and from ports beyond the Baltic Sea. The marine spatial plans thus contribute to the Baltic Sea Strategy's goal of increasing prosperity and connecting Baltic Sea region, but also to transport policy goals that transport should be shifted from road to sea and rail. The use of shipping has, with a few exceptions, also been adapted to the planning of shipping in Sweden's neighbouring countries. The Baltic Sea marine spatial plan’s guidance imply that maritime traffic and shipping routes around Gotland be investigated on the basis that the environmental impact of shipping needs to be reduced, especially negative impact on birds and harbour porpoises, while at the same time we need to have an efficient, climate-smart and safe traffic system. Safety distances are defined within the wind energy permitting process; the marine spatial plan does not contain site-specific guidance on safety distances. In the Gulf of Bothnia marine spatial plan, there are special conditions when there are thick and extensive ice coverage, especially in the northern parts. This affects the conditions for shipping, which needs large areas and access to alternative shipping routes to ensure accessibility. Fixed installations such as wind farms therefore pose a particular challenge for winter navigation, as they risk limiting the flexibility considered necessary for accessibility. This shall be taken into account when establishing wind energy and other fixed installations at sea.

The marine spatial plans reflect the social objectives of continuing and developing commercial fishing by providing guidance on the priority for commercial fishing in important fishing areas. Through areas with nature use and particular consideration to high nature values, marine spatial plans contribute to the conditions for sustainable fish stocks that provide future development of commercial fishing. Commercial fishing generally coexists well with other activities such as shipping and military training activities. Commercial fishing is affected by the establishment of wind energy. Adaptation of both fishing activities and wind energy may be necessary. Based on

current knowledge, fishing with active gear is considered to be very difficult or impossible to conduct in areas with floating wind turbines.

The ambition has been to reduce the future negative impact on commercial fishing from the establishment of offshore wind energy. In view of the Swedish Energy Agency's proposal for areas for energy extraction (Energimyndigheten 2023), several areas have been deleted or reduced in size due to the need for accessibility for commercial fishing. In an area in the Skagerrak/Kattegat, the guidance implies that wind farms are given priority over commercial fishing. Commercial fishing and floating foundations for wind turbines are not expected to coexist. There are also areas with the use commercial fishing where there is an overlap with the use energy extraction in the marine spatial plans. The assessment is that coexistence may be possible because the depth allows bottom-fixed foundations, but coexistence is managed in the permit process and in subsequent design. Adaptation can have an impact on fishing, but also on the establishment of wind energy.

Both shipping and commercial fishing are mobile activities that need large areas. For shipping, the plan maps show the routes that are of particular importance for maintaining the transport function. Maritime traffic can use all areas that do not have direct restrictions, which is also a prerequisite for the designated routes to have such a limited geographical area. Vessel traffic of very great importance to Sweden can occur and thus also occurs outside the routes marked for shipping in the marine spatial plan maps.

For commercial fishing, the plan maps show important catch areas. However, fishing can to take place in other areas, in accordance with current fishing regulations. For future claims from other businesses, precise location and site use needs to be analyzed in a more detailed planning. Balancing needs to be done on the basis of the aspect that the functions of fishing and shipping should be maintained.

Prerequisites for defence and security are expressed in marine spatial plans through the use of defence that includes maritime training areas and the impact areas needed for facilities on land. Security is a prerequisite for the development of society, both for the environment and business as well as social welfare. Sweden's military geographical situation and the deteriorating security situation in the immediate area also means that the defence interest is expressed in marine spatial plans by allowing energy extraction to stand back in the Baltic Proper (see under the heading Renewable energy above). During the marine spatial planning process, the Swedish Armed Forces analysed about 40 energy areas from the consultation proposal, with the conclusion that a certain expansion can take place without causing damage to the Armed Forces' functions, provided that it takes place in the right place and under the right conditions. In the current marine spatial planning process, it has not been possible to use this data to assess the most suitable use in marine spatial plans, as it risks disclosing information that could cause significant harm to total defence or otherwise to national security. The Swedish Armed Forces' claims are thus not fully known in the marine spatial planning process.

Sand extraction

The marine spatial plan indicates the use sand extraction in four areas, three of which have not previously been sand extraction. The extraction of marine sand contributes to meeting society's need for sand for shore feeding as part of climate adaptation and for construction. Material supply from Swedish marine areas is an alternative to imports from other countries. The areas that have

been identified are those that are deemed to be the most suitable in terms of nature values, biological and geological factors, technical characteristics and sediment dynamics. The detailed distribution of the areas reported in the plan map should be determined only in a permit assessment. The planning documents describe the precautions that are required to enable quarrying operations to take place with a minimised negative impact.

Cultural heritage and recreation

Cultural heritage that is taken into account in marine spatial planning consists partly of cultural-historical remains in the sea and partly cultural environments along the coast. The marine spatial plans draw attention to the risk of both direct, indirect and cumulative impacts on cultural heritage values. The marine spatial plans state that particular consideration shall be given to high cultural heritage values in areas designated for energy extraction that are deemed to have an impact on cultural heritage that is mainly located in the coastal zone. The location and delimitation of energy extraction areas has in some cases been adapted based on an assessment of several factors including valuable cultural environments. Mainly however, the marine spatial plan's guidance on the cultural environment is a guidance on which energy extraction areas that need to be investigated in relation to the culture environment, what the values consist of where further information can be found and that these values need to be taken into account in further planning and permit assessment. Coastal county administrative boards have developed planning evidence (Länsstyrelserna 2024) for the marine cultural environment that has been used to strengthen guidance in marine spatial plans.

There is a continued need for a comprehensive planning evidence on recreational values, relating to how the use of the sea interacts with local, regional and national outdoor values and what significance these have for marine spatial planning. In addition to this, there is a need to highlight the social values that the cultural environment and recreation in the coastal and marine area provide in terms of health and well-being.

Strengthening ecosystem services

A marine spatial plan is one of several instruments in the marine and water environment management that will help us achieve the environmental quality objectives and good environmental status of the sea. Generally, it is about balancing interests to ensure that we provide the conditions for the ecosystem services from the sea that we humans need. To a large extent, employment and development in various industries depend on the ocean's ecosystem services, such as food, experiences and oxygen.

The marine spatial plans provide guidance on areas with the use nature based on existing area protection, national interest claims for nature conservation and national interest claims for commercial fishing related to spawning and nursery areas.

The marine spatial plans’ guidance also includes a new way of steering towards the development of valuable ecosystem services, in addition to established forms of nature protection, to the benefit of many interests. Guidance on particular consideration to high nature values draws attention to the nature values that all ocean management and activities need to take into account, not least in view of the need for resilience, i.e. resilience in the context of ongoing climate change. In this way, good environmental status of the sea is also achieved and maintained.

The marine spatial plan also provides guidance on particular consideration to high cultural heritage values, which is a way of considering cultural environments that are mainly outside, but that can be affected by activities within, the marine spatial plans.

The guidance on particular consideration concerns planning and licensing, but is also addressed to the work on the development of marine management. The areas listed are the basis for management with the aim that the relevant authorities, together with the sectors concerned, work further on the designated areas, to see if specific measures need to be taken so that particular consideration is taken of the high nature and cultural values. The intention is also to guide actors to plan activities and activities, in time and space and with the possibility of adapting to changing conditions, so that they, within their own resources, contribute to the ocean's ecosystem services.

6.2. Consequences

Summary

The impact assessment describes the impact of the proposed marine spatial plan on environmental, social and economic aspects linked to the state of the sea, maritime industries and maritime interests. The assessments are carried out at an overall level in accordance with the Environmental Code’s rules on strategic environmental assessment. The focus is on assessing direct and indirect effects and impacts in the short and long term linked to the plan’s guidance on the most suitable use and particular consideration. Assessments are made for each marine spatial plan, the Gulf of Bothnia, the Baltic Sea and the Skagerrak/Kattegat. An overall assessment is also carried out jointly for the three marine spatial planning areas and an assessment of the significance of the plan in relation to relevant plans, programmes and strategies.

In the impact assessment, there is a strong focus on assessing the impact from the proposed energy areas. New proposals for energy areas are the main difference from the agreed marine spatial plans. It is also the focus of the government assignment from 2022 to expand the area for offshore energy production in order to achieve an objective of enabling an annual electricity production of 120 TWh in the territorial sea and exclusive economic zone.

Overall assessment of the impact of offshore wind energy

Transboundary and cumulative impacts

In the territorial seas and exclusive economic zones of Sweden and neighbouring countries, human activity is continuously increasing. Planned offshore wind energy is expected to account for a sharp increase in the short and medium term, in Sweden and in neighbouring countries. Therefore, consideration needs to be given to the risk of cumulative effects of mainly offshore wind energy, but also other activities. The energy areas in the plan proposals can contribute to cumulative effects in the Gulf of Bothnia and the Skagerrak/Kattegat. No new energy areas are proposed in the Baltic Sea, and therefore no new contributions to cumulative effects in the marine spatial plan area are follows.

The risk of cumulative effects is particularly high in areas with a high concentration of energy areas where there are high nature values and ecological links of international importance, such

as migratory birds and harbour porpoises. The impact on the cultural environment and landscape is also important in cases where energy expansion is visible from neighbouring countries' coastlines. Cumulative effects may also occur in relation to shipping where energy establishment can increase the risk of incidents and reduce maritime safety. When it comes to fishing, there is extensive foreign fishing in all Swedish marine areas and offshore wind energy can affect the conditions for several fleets. Offshore wind energy in Swedish marine areas can also affect other countries' defence-related activities and vice versa. Cross-border interactions on cumulative effects are necessary to assess cumulative impacts from a sea basin perspective.

Gulf of Bothnia

The marine spatial plan’s guidance in the Gulf of Bothnia has implications for the marine environment and biodiversity. Ecological aspects that risk being negatively affected by proposed energy areas include the ringed seal, which is dependent on ice in order to reproduce and rear its pups. There are uncertainties regarding the effect of offshore wind energy on the conditions for ice formation. The risk of impact on migrating salmon is considered to be limited if energy establishment in shallow coastal areas is avoided. The impact on the bottom environment is expected to be small, as well as the impact on fish and spawning grounds. For migratory birds in particular, the plan proposal entails potentially major negative effects in connection with proposed energy areas at Finngrunden. Even wintering birds can be negatively affected in this area. The area areas with particular consideration to high nature values has been expanded in the plan proposal, with a special focus on birds, seals and bottom habitats. This is expected to have positive effects on the protection of biodiversity and contribute to a network of green infrastructure.

For impacts related to climate, water and air, the assessment is that the marine spatial plan guidance has a major positive effect in that it guides increased opportunities for renewable energy production that can replace energy types that generate greenhouse gas emissions. However, the expansion of energy areas may mean changes in the steaming distances for shipping and commercial fishing. The effect of increased mileage is difficult to assess on the basis of available information. Both offshore wind energy construction and sand extraction can lead to local impacts in the form of clouding and dispersal of sediments, but the assessment is that this does not affect the marine environment in the long term.

In terms of impact on landscapes, cultural environments and recreation, several energy areas risk visually affecting national interests, world heritage sites and coastal areas with landscape protection, such as Haparanda Archipelago, the High Coast and Hornslandet. Energy areas within a distance of 35 kilometres from cultural sites have been designated ‘k’ for particular consideration of high cultural heritage values, which indicates that particular consideration should be given to visual impact when establishing energy in these areas.

The plan proposal for the Gulf of Bothnia has the potential to provide energy production of approximately 130 TWh per year. The Gulf of Bothnia is expected to connect mainly to bidding zones 1 and 2 and the supply of electricity production is needed for energy transition, primarily for industry. Energy establishment also leads to positive indirect employment effects. However, the proposed energy expansion affects other interests in the marine area. In the Gulf of Bothnia there are both Swedish and Finnish commercial fishing whose access to fishing areas can be affected. The impact on commercial fishing is negligible in the Bothnian Bay and North Kvarken, and

medium-sized in the Southern Bothnian Sea. Indirect effects may occur in value chains linked to the fisheries processing industry and landing ports. Shipping is affected partly by a slightly longer mileage in the changed fairway in the Southern Bothnian Sea, and partly by the potential impact on navigation and maritime safety of the increased presence of fixed installations that offshore wind farms would entail. The plan indicates that safety distances should be established when designing and permitting energy areas in order to minimise collision risks. The potential impact on ice formation is an uncertainty factor for winter navigation in the Gulf of Bothnia.

Baltic

The plan does not provide guidance on more energy areas in the Baltic Sea than the existing or already licensed wind farms. This means that the plan's guidance on energy extraction does not contribute to negative effects on the nature environment, cultural environment, recreation, tourism, shipping, fish and commercial fishing in the plan area.

At the same time, this means that a large potential for energy extraction is not exploited. A large contribution to renewable and fossil-free energy in southern Sweden is lacking, as well as the potential climate benefit an establishment would have provided space for. Limited guidance on energy extraction and energy areas in the plan area is negative for the wind industry, including wind energy project companies and affected sectors. New electricity production in the Baltic Sea is expected to connect mainly to bidding zones 3 and 4. In order to achieve this goal, Sweden's offshore wind energy must be realised with a higher concentration in other marine spatial plan areas.

Investigation areas for shipping around Gotland as well as sand extraction areas remain from the adopted marine spatial plan.

Skagerrak/Kattegat

The plan proposal for the Skagerrak/Kattegat contains energy areas in important migratory routes for birds and bats. This poses a high risk of negative impacts. The risk of cumulative effects is high as several of the energy areas with projects that have received permits are assessed to have a negative effect on birds. Realisation of the energy areas would have a cumulative negative effect on harbour porpoises in both the northern and southern parts of the Skagerrak/Kattegat. Negative effects on bottom environments are considered to be limited if nature values are taken into account in the design. A potential positive local net effect may arise if energy use replaces bottom trawling in areas especially in the Skagerrak. However, the impact on commercial fishing may mean an intensification of fishing in adjacent accessible areas with increased pressure in them.

For impacts related to climate, water and air, the assessment is that the marine spatial plan guidance has a great positive effect in that it guides on increased opportunities for renewable energy production that can replace fossil fuels and also fuels in the long term, which would lead to lower levels of air emissions. However, the expansion of energy areas may mean changes in steaming distances for commercial fishing, with the risk of some increase in emissions as a result. The construction of offshore wind energy can lead to local impacts in the form of clouding and dispersal of sediments, but the assessment is that this does not affect the marine environment in the long term.

The west coast has high values from a cultural environment and recreation point of view. A large number of areas of national interest and national interest claims for the cultural environment and outdoor life can be found along the coast. The plan's proposals for energy areas, particularly in Halland, are expected to have a major negative effect on these interests, with a risk of impact on the tourism industry. In the Skagerrak, the energy areas are located further out from the coast but, on the other hand, include large areas in the marine area.

The marine spatial plan for the Skagerrak/Kattegat guides potential energy extraction of about 20 TWh per year, which would constitute an important addition of fossil-free electricity to parts of western Sweden. The electricity production is only considered to be able to connect to bidding zones 3 and 4. The potential impact on shipping in the Skagerrak/Kattegat is estimated to be relatively small, both for Swedish and international shipping. The plan indicates that safety distances should be established when designing and permitting energy areas in order to minimise collision risks.

Energy areas were adjusted according to the planning consultation taking into account national interest claims for commercial fishing and fishing operations. Overall, the impact on commercial fishing of the energy areas in the marine spatial plan for the Skagerrak/Kattegat is considered to have a potential major impact on commercial fishing in the plan area, primarily in the case of northern shrimp fishing, as well as bottom trawling for Norway lobster and fish. This includes the effects of areas with licensed wind farms. The impact on commercial fishing can also have second-round effects on value chains, self-processing, the processing industry, affected landing ports and municipal interests.

Environmental objectives and the EU Marine Strategy for the Marine Environment Directive

The marine spatial plans' guidance is considered to make both positive and negative contributions to Sweden's national environmental objectives. The environmental quality objectives where the plan has the greatest positive effect are *"Limited climate impact".* By creating the conditions for an increased establishment of offshore wind energy in the Swedish territorial sea and Swedish exclusive economic zone, there is potential to replace fossil energy production and, in the long term, fossil fuels with an alternative that does not generate greenhouse gases. The environmental quality objectives where the plan has the greatest negative effect are *Sea in balance and living coast and archipelago, A rich plant and animal life,* and *Good built environment.* Offshore wind affects marine nature environments both during construction and the operational phase, which risks negatively affecting ecosystems and threatening biodiversity, such as birds and marine mammals. The landscape is also affected by offshore wind energy, as well as cultural environments and areas that are important for recreation. For the environmental quality objectives *Fresh air and Non-toxic environment,* marine spatial plans have a marginal effect in that guidance on energy use can affect local emissions, both positively and possibly negatively as driving distances change. The marine spatial plans' guidance on sand extraction can lead to local impacts on the marine environment, and lead to the dispersion of pollutants from sediments.

The marine spatial plans are assessed in relation to the Swedish Marine Environment Regulation and the EU Marine Strategy Framework Directive to be able to affect the descriptors for biodiversity (seabirds, marine mammals), alien species, seabed integrity, hydrographic conditions

and underwater noise. It is possible to limit the impact on the marine environment by introducing conditions and consideration measures, but there are several uncertainties linked to the extensive deployment of offshore wind energy. Uncertainties include potential risks of hydrographical changes and consequential effects, effects on ice formation, outcomes of consideration measures and opportunities for coexistence.

Relation of the marine spatial plans to the National Strategy for Sustainable Regional Development throughout the country 2021 – 2030 and its priorities:

Equal opportunities for housing, work and welfare throughout the country:

- *High quality of life with good and attractive habitats* - By guiding about areas for use recreation and cultural environment, as well as consideration and adaptation for nature and cultural landscapes, the marine spatial plan affects the strategy's priority related to promoting nature and cultural landscapes, stay in nature, the right of public access and outdoor life.
- *Good spatial planning* - Through the plan's guidance on the most suitable use and particular consideration, marine spatial plans contribute to a long-term and balanced balance between different societal interests. Thus, the marine spatial plans contribute to the strategy's priority of promoting a sustainable social structure, reduced climate impact, conservation of biodiversity and ecosystem services in a changing climate, and that the interests of total defence are taken into account.

Innovation and renewal as well as entrepreneurship and entrepreneurship across the country:

- *A competitive, circular and bio-based, climate and environmental sustainable economy* - The plan's guidance on energy in two of the marine spatial plans contributes to the strategy's priority on the deployment, production and use of renewable energy that is important for regional energy supply and sustainable regional development.
- The plan’s guidance on the use of commercial fishing contributes to the same priority by taking into account the conditions for commercial fishing.

Accessibility throughout the country through digital communication and the transport system

- *Accessibility through sustainable transport systems* - The plan's guidance on shipping and other uses contributes to the priority through maritime transport supply that is significant for people and businesses across the country. The priority also highlights the importance of coordination between activities and transport infrastructure at local, regional and national level.

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Map figures created by the Swedish Agency for Marine and Water Management

Figure 1.2-1
Overview and figures. Swedish Agency for Marine and Water Management, HaV. 2019.

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