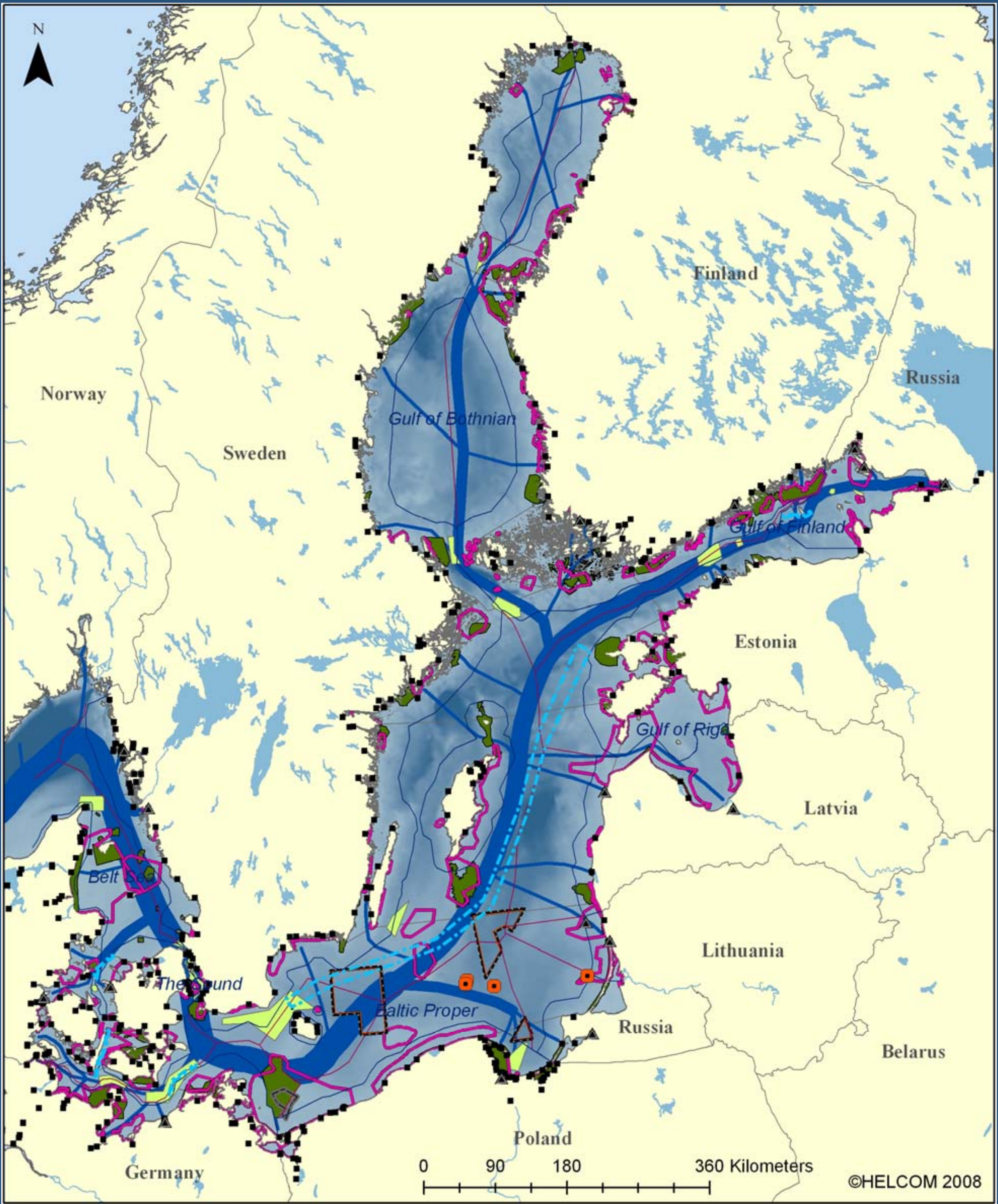
Background information for the HELCOM Baltic Sea Action Plan Stakeholder Conference 2008



Helsinki Commission

4 March 2008, Helsinki, Finland

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1 Introduction

Broad scale marine spatial planning is part of an ecosystem approach to management of human activities as it, apart from separating conflicting uses, is based on an integrated approach (by taking into account cumulative and cross-boundary effects) and the identification of areas, based on environmental parameters, where human activities are allowed/restricted/ not allowed to be carried out. Marine spatial planning has been used around the world as a one tool to protect the biological diversity of the marine environment and sensitive marine resources from overuse as well as to separate conflicting uses.

At present, approximately 6.5% of the Baltic Sea is covered by Baltic Sea Protected Areas (BSPAs). The World Summit on Sustainable Development, and subsequently the Convention on Biological Diversity, have adopted a global target for 10% of all marine ecological regions to be effectively conserved by 2012.

Climate change is a global issue which has gained an important role in international environmental politics since the adoption of the 1992 United Nations Framework Convention on Climate Change. The subsequent 1997 Kyoto Protocol commits developed countries to reduce their greenhouse gas emissions by 2012 to a total cut of at least 5% against the baseline of 1990. Renewable energies such as wind power, solar energy, hydropower and biomass can play a major role in, not only tackling global warming, but also addressing energy security, because they are not depletable and produce less greenhouse gas emissions than fossil fuels.

In 2007, EU member states committed to a binding target to have 20% of the EU's overall energy consumption coming from renewable resources by 2020. The EU Strategic Energy Technology Plan acknowledges that wind energy is a key technology to meet the 20% renewables target, meaning that there is a growing need to build new wind energy parks also in the Baltic Sea region.

Different forecasts indicate that there is a lot of potential for exploiting offshore wind energy.

Dredging of a ship lane. Photo: Metsähallitus 2007

2 The fictive case study

Aim

This "game" is based on a fictive case, which incorporates existing information with a hypothetical scenario. The main aim of this activity is to illustrate to the participants of the Conference, although in a simplistic way, the problems that marine spatial planners face when trying to balance nature conservation needs and other uses of the marine environment.

While playing the game, group members need to consider all the background information provided and participants should attempt to take into account the various interests of different stakeholder groups.

The fictive aspect of the game requires the groups to plan the location of

1. One large (or several small) wind energy park(s) equalling 20 gigawatts and
2. Additional future BSPAs in order to achieve the international 10% protection target.

Materials

Actual background data is provided to each group in the form of one large map with fixed parameters such as, existing BSPAs, offshore installations (oil rigs) and harbours and oil terminals along the coastline. Additional information is given in this document including information about shipping routes, important areas for nature (BSPAs, proposed BSPAs, important bird areas, UNESCO Biosphere Reserves and fisheries closure areas), shore type, mean annual wind speed, wave height, ice coverage and dumped chemical munitions. Besides this background information document each group will have at their "group station":

1. One sheet of "sticker paper" that represents the total amount of protected area that needs to be cut and "added" to the Baltic Sea in order to reach the 10% marine protected area target.
2. Stickers of wind turbines representing wind energy parks of different sizes, adding up to a total of 20 gigawatts.

Tasks

1. Each group should jointly come up with a proposal of how to manage/divide the marine area use for protected areas and offshore wind energy parks.
2. Each group must use up the whole sheet of "protected area sticker paper" by cutting it up into appropriate sizes and pasting it onto suitable places on the background map. The group must also place the wind turbines, in suitable size clusters, in appropriate places.

Photo: http://blog.thismagazine.ca/archives/Wind-turbine.jpg

During this process, the following issues should be considered and/or discussed:

- Evaluate the pros and cons of various proposed sites by taking into account the additional information provided on important bird areas, shipping traffic density, and fisheries closure areas, etc.
- Consider the main conflicts between different stakeholders in specific areas
- Consider potential economic and/or environmental impacts in the proposed wind energy park sites
- Propose how to mitigate negative impacts (possible compensation?)
- Additional issues to discuss
    - How can different uses be valued and/or prioritised?
    - How should environmental (biological and geographical) and socio-economical concerns be balanced/priorities?
    - Conservation interests
    - Re-creational values
    - Commercial interests

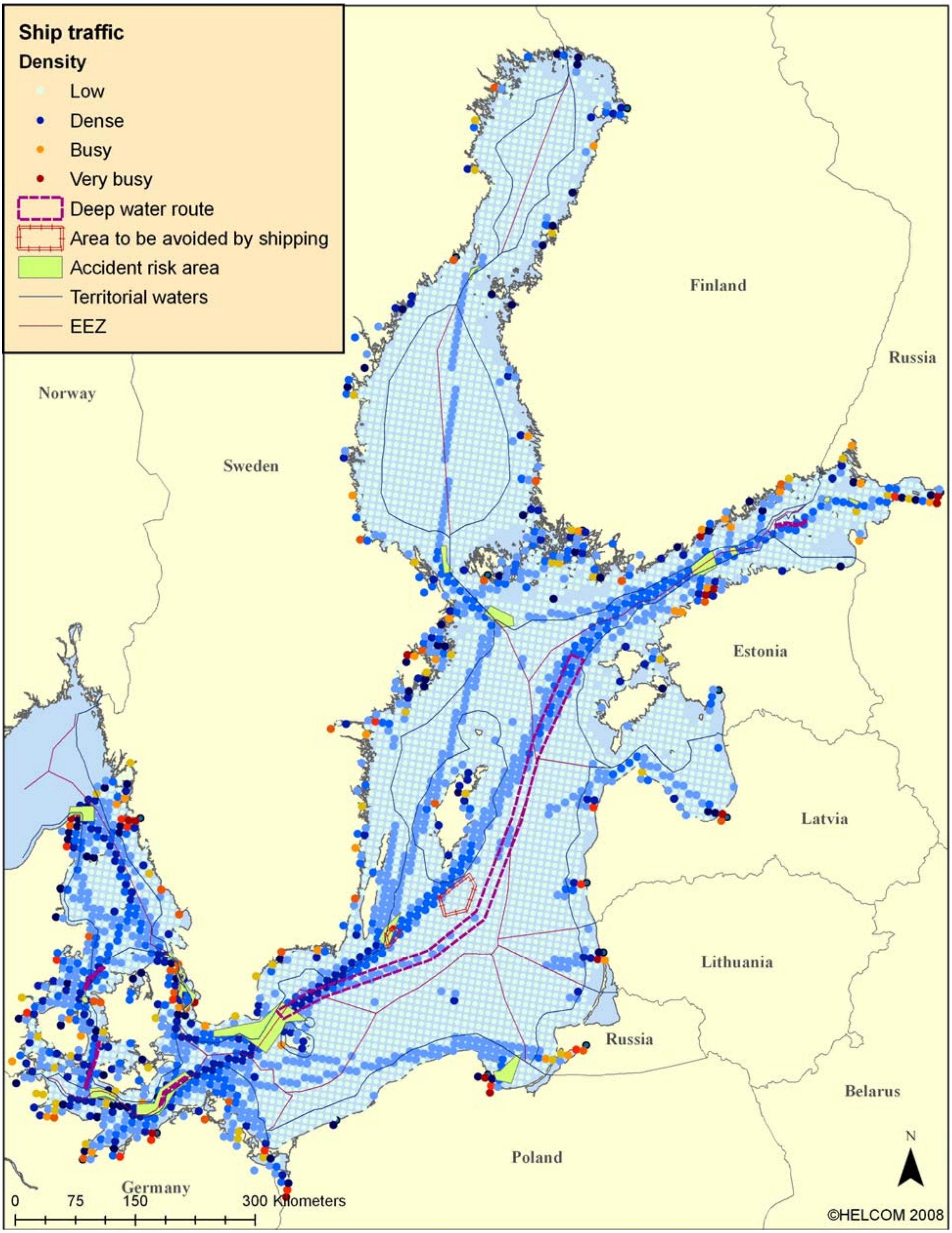
Outcome/discussion

The main purpose of the activity is to get a feel for the complexity and challenges involved in marine spatial planning. The final phase will be carried out in a panel discussion manner between the group leaders and the moderator. Nevertheless, group participants will also have a possibility to comment on the activity and their experience.

3 Background information maps

3.1 Shipping traffic

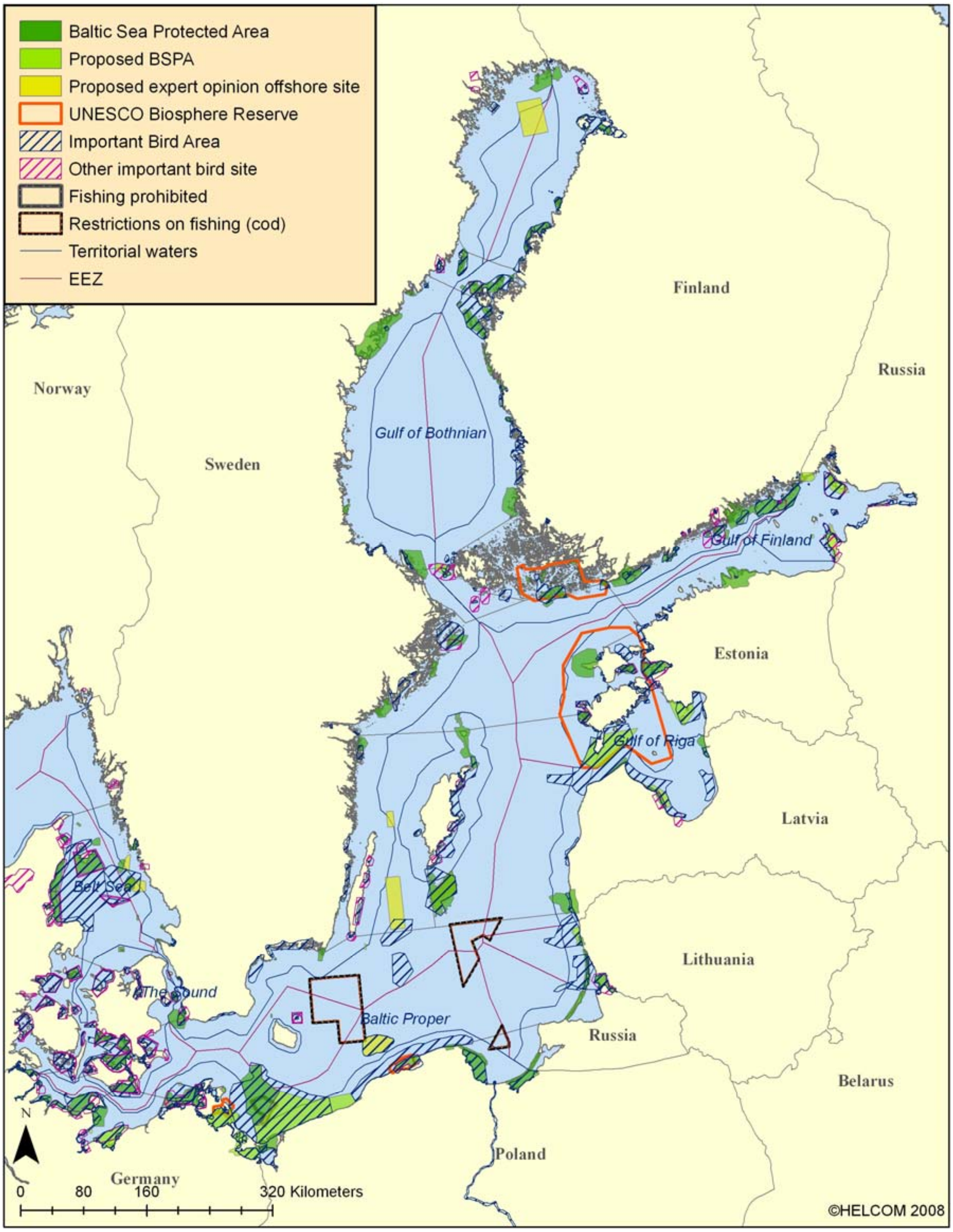
This shipping traffic data is based on data collected from AIS during March 2006 showing the average density of ship traffic during one month (number of ships/hour). This data indicates the main shipping lanes in the Baltic Sea. Additionally the map shows accident risk areas, areas to be avoided by shipping, deep water routes (recommendations by IMO), territorial waters and exclusive economic zones.



3.2 Important areas for nature

This map shows the Baltic Sea Protected Areas (BSPAs), proposed BSPAs (HELCOM Recommendation 15/5 on the system of coastal and marine Baltic Sea Protected Areas) and additional important offshore areas proposed by experts (Hägerhäll and Skov, 1998). Additionally the map shows UNESCO Biosphere Reserves, important bird areas and areas where fishing is either prohibited or restricted (cod).

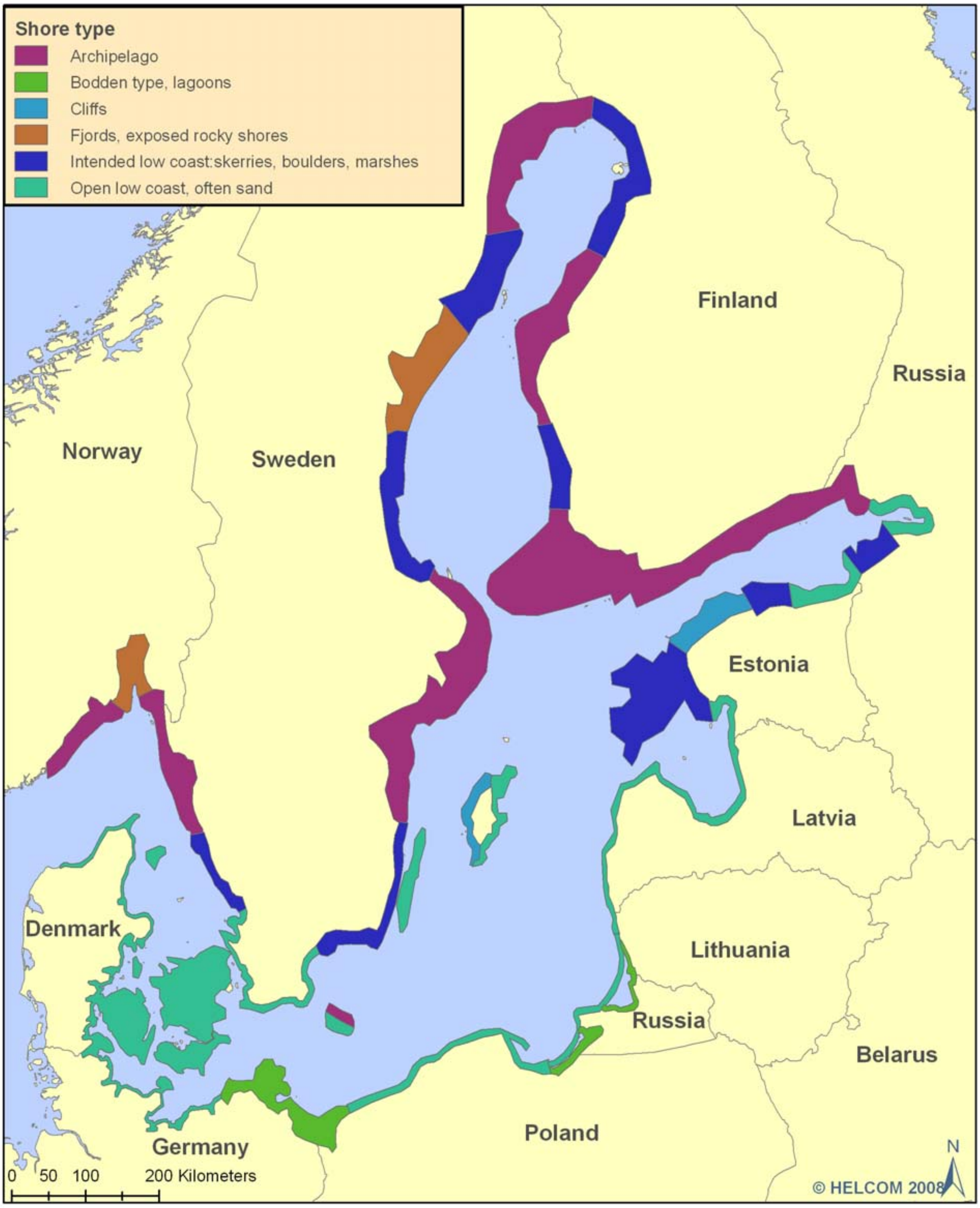
At present, approximately 6.5% of the Baltic Sea is covered by Baltic Sea Protected Areas (BSPAs). The World Summit on Sustainable Development, and subsequently the Convention on Biological Diversity, have adopted a global target for 10% of all marine ecological regions to be effectively conserved by 2012.



3.3 Shore types

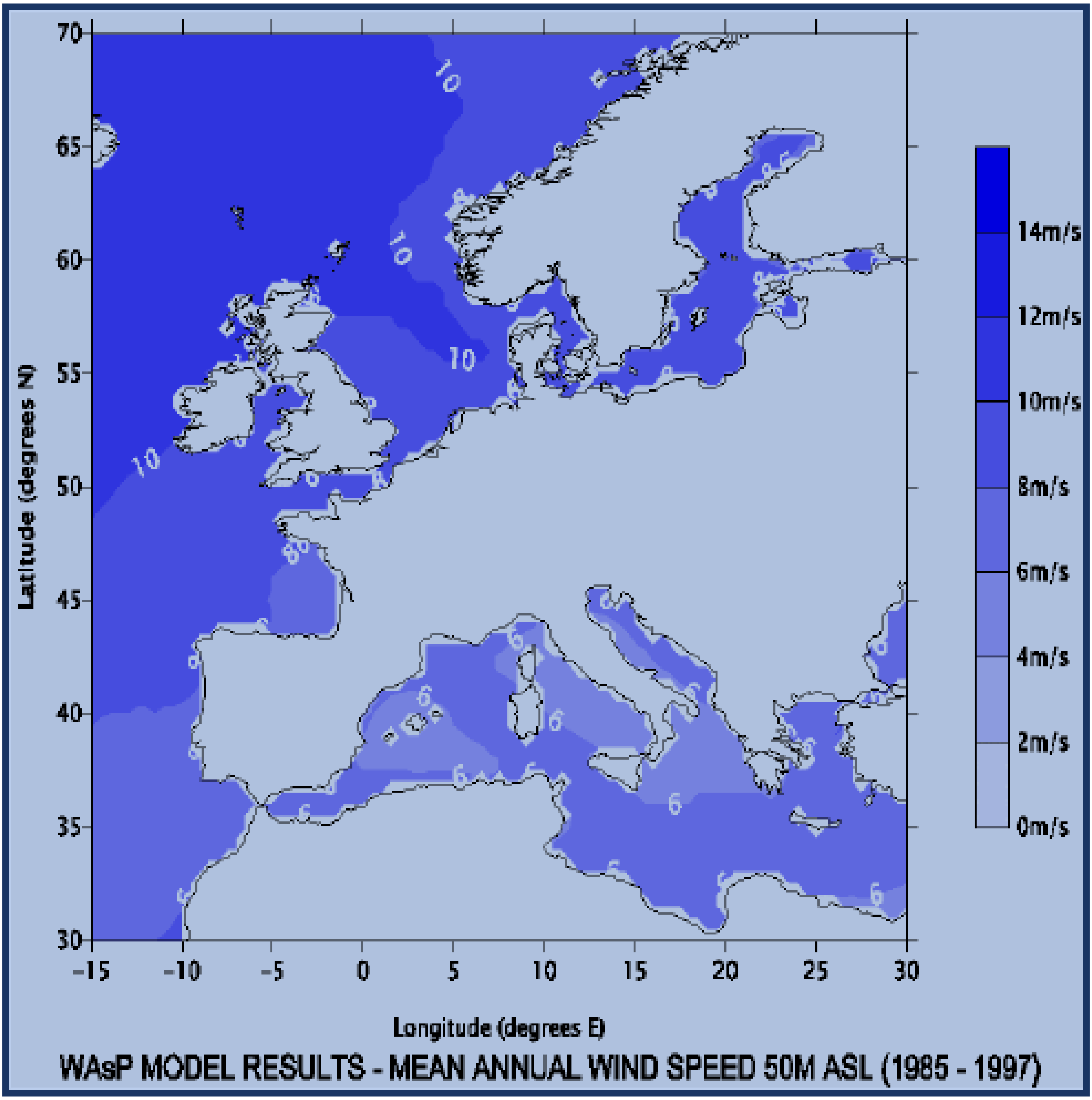
This map shows the shore types covering the shores of the Baltic Sea and Kattegat, and are classified according to the major type of the coast that they cover. The six major coast types used are: archipelago coast, fjord, cliff coast, open low coast, intended low coast, and lagoon and bodden type coast.

The source of the dataset is: 'Baltic Pipeline System: Environmental Impact on the Baltic Sea' by Tacis services DG IA, European Commission. (p.24)



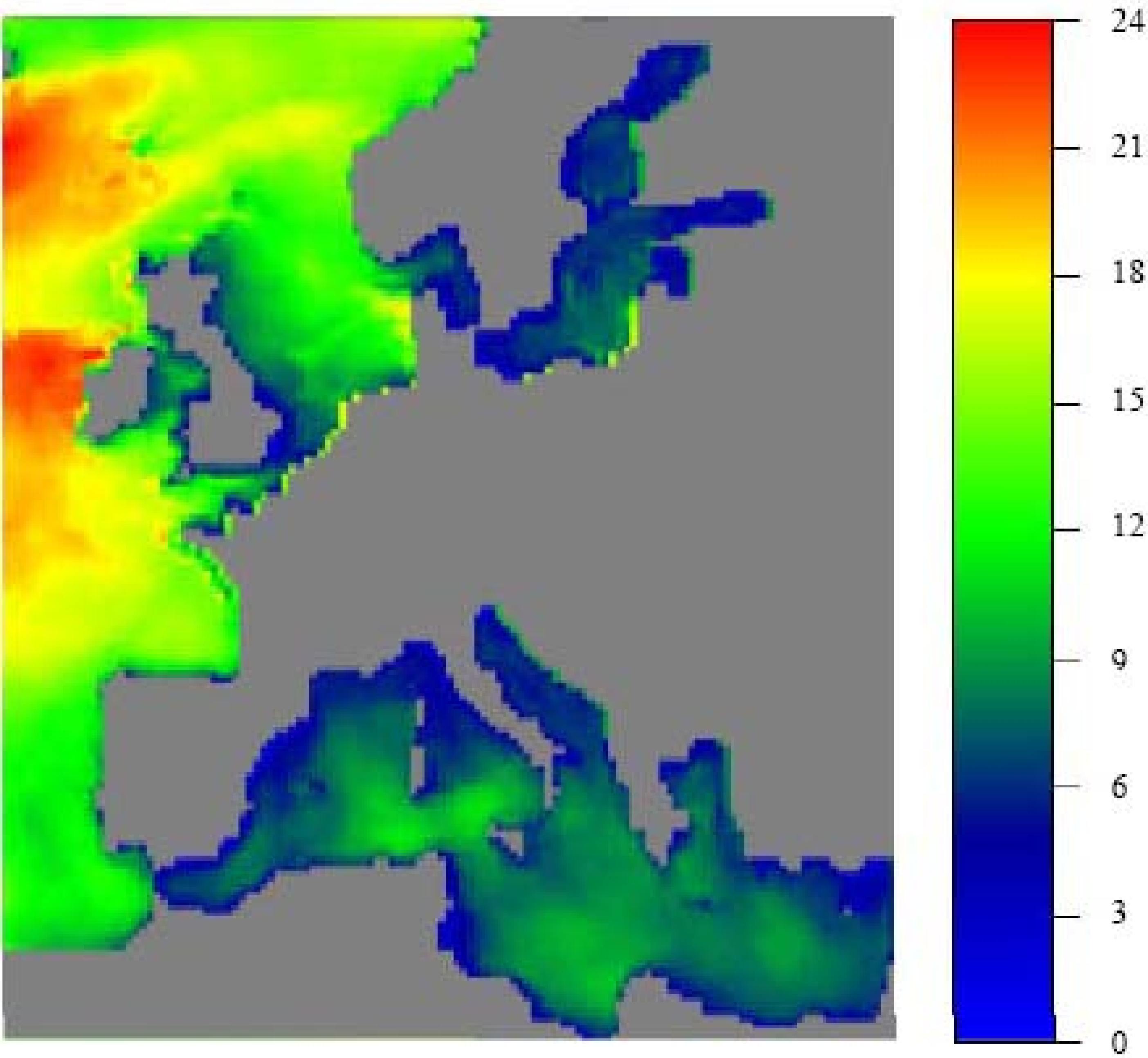
3.4 Mean annual wind speed

This plot shows the distribution of mean annual wind speeds at 50 meters above sea level throughout EU waters. (Source: Predicting offshore wind energy resources (POWER-project), Final report).



3.5 Wave height

The Baltic Sea is relatively sheltered from extreme wave conditions. This map shows the extreme wave height (m) for a 50 year return period throughout the EU-waters. (Source: Predicting offshore wind energy resources (POWER-project), Final report).

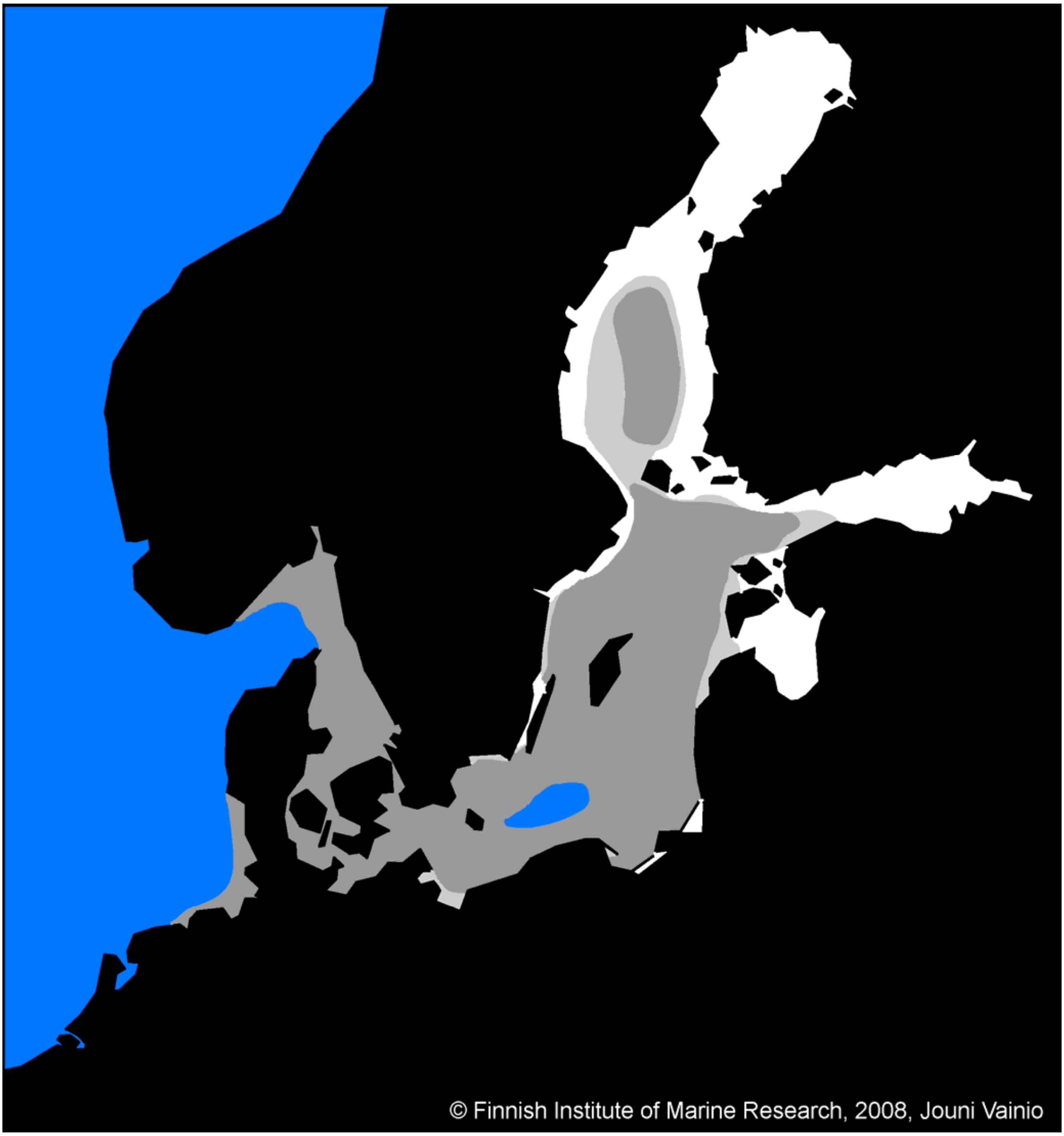


3.6 Ice cover

The map shows “typical”, median and severe ice winters in the Baltic Sea.

Explanation for the colours:

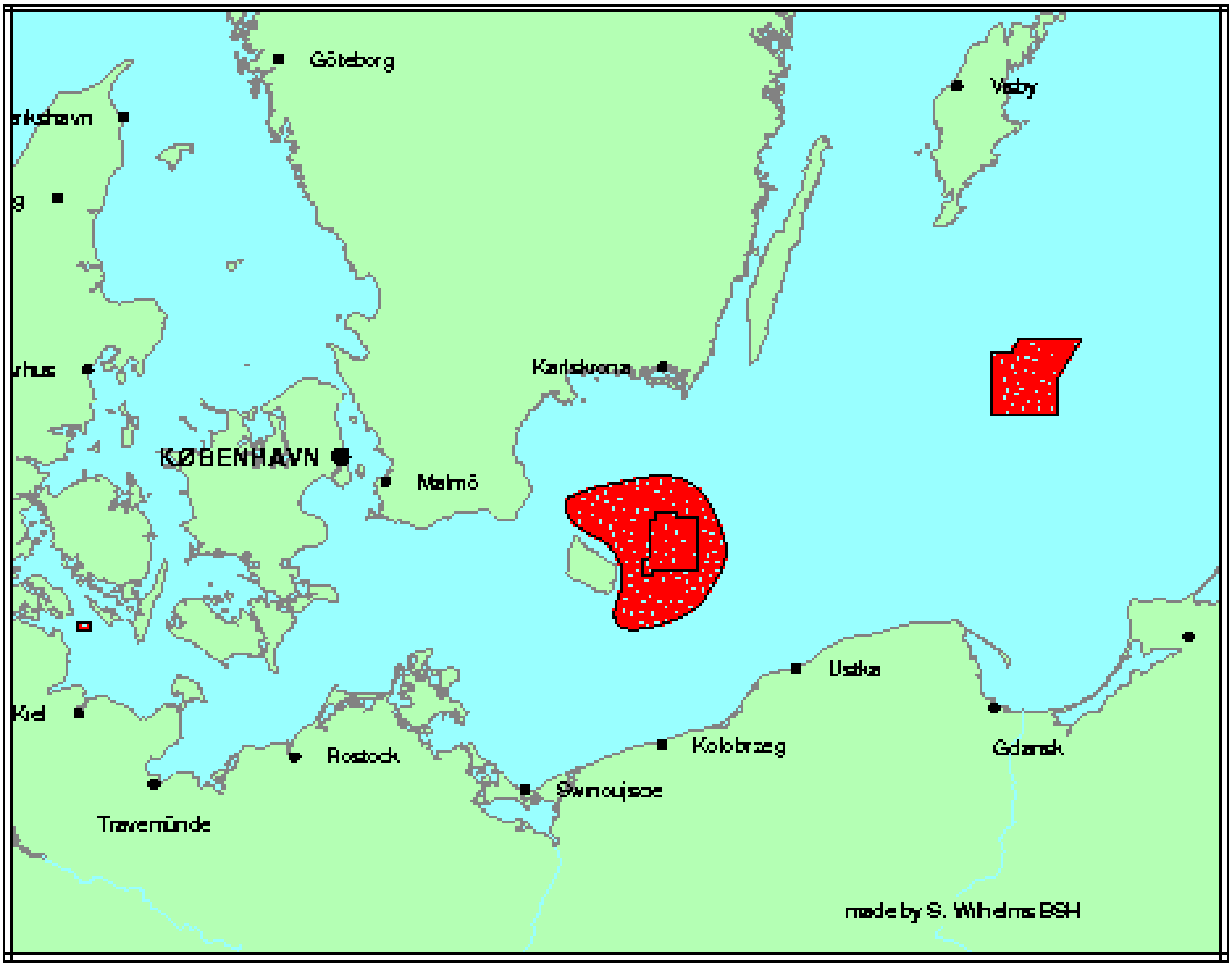
White: A ”typical” ice winter at its maximum (example years: 1997, 1998, 2001, nearly: 1991, 2007).
White + Light grey: Statistical median ice cover for the time period 1971-2000 (example years: 1999 and 1971).
White + Light grey + Dark grey: An extreme ice winter (example year: 1987).



3.7 Dumped chemical munitions

About 40,000 tonnes of chemical munitions were dumped into the Baltic Sea after World War II – mostly in the area to the east of Bornholm, southeast of Gotland and south of the Little Belt. It is estimated that these chemical munitions contained some 13,000 tonnes of chemical warfare agents. Dumping areas are marked on nautical charts with “anchoring and fishing not recommended”. However, fishing in these waters is not prohibited, and commercial fishing is continuing.

Warfare agents are also discovered outside the dumping areas from time to time, especially near Bornholm. Fishermen in these waters regularly find bombs, shells or fragments of munitions and even lumps of mustard gas in their bottom trawl nets. The crews of fishing vessels risk contamination from chemical warfare agents if lumps of viscous mustard gas or chemical munitions caught in bottom trawls are hauled on board. Simply touching these chemical agents or inhaling their vapours is very dangerous.



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