To the Swedish Minister for the Environment, Andreas Carlgren

On 13 July 2006, the Swedish Government decided to appoint a one-man inquiry to investigate how research and environmental monitoring can be used to better effect to recreate a good marine environment in the Baltic Sea and the Kattegat and Skagerrak areas of the North Sea. Director-General Göran Enander was appointed to lead the inquiry on the same day. On 16 May 2007, the Government adopted supplementary terms of reference for the inquiry relating to issues such as international management of the Baltic Sea and the planning of Swedish sea areas. The inquiry has called itself the Marine Environment Inquiry.

On 20 November 2006, Desk Officer Rolf Carman was appointed chief expert to the inquiry and Senior Advisor Johan Appelberg, Deputy Director Erik Arnberg, Deputy Director Ingela Byfors, Senior Advisor Sverker Evans, Senior Advisor Stellan F Hamrin, Chief of Staff Maria Hellsten and Desk Officer Sofia Karlsson were appointed as additional experts. On 12 March 2007, Water Conservation Director Dea Carlsson, Director Ingemar Cato, Associate Professor Bertil Håkansson and Professor Lena Kautsky were also appointed to the inquiry. On 15 August 2007, Investigator Bengt Larsén was also appointed.

Thomas Nilsson was appointed Principal Secretary on 18 September 2006. Katarina Vrede (9 October 2006) and Josefin Dahlander (16 July 2007) were appointed as inquiry secretaries.

The interim report “A Swedish Marine Environment Institute” (Official Government Report SOU 2006:112) was submitted in December 2006.

I hereby submit the inquiry's final report "Better management of the marine environment", thereby completing my assignment.

Stockholm, 9 May 2008

Göran Enander

Thomas Nilsson
Josefin Dahlander
Katarina Vrede

Content

Summary

The Marine Environment Inquiry was appointed by the Government in 2006 to look into ways in which Swedish marine environment efforts can be improved nationally and together with other countries. The original terms of reference primarily involved knowledge-related issues. The Government's supplementary terms of reference extended the Inquiry's assignment to also include issues concerning the management and planning of Sweden's sea areas.

Despite a large number of initiatives and international agreements, the environmental situation of the seas surrounding Sweden is far from acceptable. Warning reports on algal blooms and oxygen-deficient sea-beds occur almost every summer. The status of fish stocks is worse than ever. The enormous volume of shipping in the Baltic Sea is accompanied by a considerable risk of a shipping accident with extensive oil discharges as a result.

The Inquiry considers that it is high time for a third-generation environmental policy. This third-generation environmental policy must entail a holistic approach and full integration of environmental issues into all policy areas, stronger political leadership and, to a much greater extent, an international focus. With its long coastlines and large sea areas, it is in Sweden's interests to clearly pursue issues related to the Baltic Sea and Kattegat/Skagerrak environments.

Intergovernmental management of the marine environment

The EU Marine Strategy Directive (MSD), which is expected to be adopted in 2008, and HELCOM's Baltic Sea Action Plan (BSAP) provide the conditions for intergovernmental cooperation to improve the marine environment. The MSD will allow the designation of marine areas with particularly serious environmental

conditions as pilot projects, which will mean bringing forward programmes of measures and enable stricter protective measures to be taken.

The Inquiry proposes that Sweden take the initiative for deeper cooperation with neighbouring countries to implement the MSD. In the case of the Baltic Sea, implementation should take place in the framework of a pilot project and be coordinated by HELCOM. The point of departure should be the measures in the BSAP, but these need to be supplemented in several respects. Sweden should take action to promote a more extensive integration of marine environmental issues in EU agricultural, fisheries and regional policies than is the case today. A special challenge facing the pilot project will be sectoral integration. The countries of the Baltic Sea region should cooperate to achieve joint positions on these issues.

Sweden should work to promote the establishment of an intergovernmental fund in the framework of the pilot project to finance initiatives and other measures aimed at improving the Baltic Sea environment. The purpose of this fund is to contribute to better coordination of marine environment initiatives taken in the form of projects and of the marine environment-related investments made with the support of investment banks. It should also be possible for the fund to provide support for developing ideas for environment investment projects that meet the requirements for loans from investment banks and grants from private foundations.

HELCOM should administer this fund. Sweden should work towards ensuring that money from the EU structural fund programme Interreg III for the Baltic Sea region, and parts of the structural funds for the EU agricultural and fisheries policies, are channelled to this fund.

The Government should draft an action plan for how Sweden will act in the EU and internationally on issues concerning the marine environment. The plan is to contain a timetable determining when it is important to act in the context of various policy areas and organisations. The opportunities presented, for example, by Sweden's Presidency of the EU in 2009 should be used to put the marine environment issue and the Baltic Sea problem on to the European agenda. Sweden should take action in good time before the evaluation of the EU fisheries policy in 2012.

HELCOM's position as an intergovernmental actor for marine environment efforts in the Baltic Sea region needs to be strengthened. Sweden should work to ensure that annual meetings are held

between the countries' environment ministers, and in the long-term even between the countries' heads of state and government, to emphasise how important the marine environment issue is. A committee should be established in HELCOM to control compliance with the Helsinki Convention and the BSAP, with the competence to deal with complaints from Member States, authorities and the general public in the entire Baltic Sea region.

The Inquiry proposes that the Swedish Environmental Protection Agency be appointed as the agency competent for implementation of the MSD and for overall marine environment management in Sweden.

Planning of Swedish marine environments

Despite the many conflicting interests and environmental problems, there is seldom any planning of marine environments corresponding to the physical planning done for areas on land.

The risk of conflict between various interests is particularly great in coastal and archipelago areas close to metropolitan regions, on offshore banks and in connection with other countries' claims on the use of Sweden's exclusive economic zone.

The Inquiry proposes the introduction of a new planning system for Sweden's sea areas. This planning should be based on marine spatial plans similar to the comprehensive plans for land areas.

These marine plans should however contain binding components in the form of fixed zones for use and protection. The ecosystem approach should serve to guide the planning. These marine plans should comprise all open sea from the coast to the outer border of Sweden's exclusive economic zone. It is proposed that responsibility for drafting marine plans in Swedish territory lie at regional level. Since Sweden still lacks a uniform system for a regional level of government, it is proposed that existing regional bodies, i.e., regional pilot projects, regional cooperation bodies and regional development planning associations, be responsible for implementing regional marine planning until further notice. In formal terms, this proposal means limiting the planning responsibility of primary municipalities. In practice, the consequences for the municipalities are expected to be marginal since most of them do not conduct any planning of the open sea. By actively taking

part in regional planning, which is proposed in the Inquiry, municipal influence over open seas may increase instead. Central government should have overall responsibility for planning throughout Sweden's entire sea area.

The exclusive economic zone is an area in which Sweden, as a coastal state, has certain rights, but where account must also be taken of other states' rights, for example, to navigate their ships through or lay submarine cables. Planning of the exclusive economic zone must be based on these conditions. Sweden's exclusive economic zone is not divided by county or municipality. The Inquiry therefore considers that central government should assume responsibility for planning the exclusive economic zone. Such a solution will also improve the prospects of cooperation with other countries with regard to planning activities affecting several countries' exclusive economic zones.

The Inquiry proposes that the National Board of Housing, Building and Planning be given overall responsibility for planning Sweden's sea areas, and specific responsibility for planning the exclusive economic zone. This responsibility will include reviewing regional marine plans against certain criteria and having a supervisory function with regard to regional planning. The activities of the National Board of Housing, Building and Planning will need to be changed in important respects because of this new assignment. Many other central government authorities will also need to participate, particularly in providing planning material.

The Inquiry's proposals should be seen as a model for how to design a planning system. When the principles of the planning system have been established, the Government should appoint a legislation and implementation inquiry to make a detailed examination of legislation and responsibility issues. The relevant legislation includes the Planning and Building Act, the Environmental Code, the Continental Shelf Act, the Swedish Exclusive Economic Zone Act, and the Local Government Act. How responsibility inside the 'baseline' is to be divided between the municipal and regional levels should also be examined.

The attention of the Marine Environment Inquiry has been drawn to the fact that there are several ambiguities in the administrative and legal boundaries applying to the sea. The baseline system and the various boundaries for maritime jurisdiction need to be reviewed in order to give them the precision made possible by modern technology.

Knowledge to support management

The Swedish Environmental Protection Agency's responsibility for control and coordination of environmental monitoring and other regular surveys needs to be clarified and strengthened. This should be done by extending the rights of the Agency to issue regulations on environmental monitoring, especially with regard to the state of the marine environment. To strengthen coordination of Swedish marine environment efforts, the Inquiry proposes the establishment of a new marine environment council linked to the Swedish Environmental Protection Agency. It is proposed that the new council replace the present Coordination Group and today's Marine Environment Council. The new marine environment council should also be tasked with coordinating authorities' work on monitoring and surveying.

The task of the marine environment council should be to coordinate issues where there is no clear division of labour under the legislation and appropriation directions, and to bring issues requiring its participation or taking a decision to the Government's attention. A broad composition of members and experts in the council will provide the conditions for a dialogue between central government, the business sector and NGOs on issues related to the marine environment.

The responsibility of county administrative boards for information in marine environmental emergencies should be clarified. The information centres at the county administrative boards in the counties of Västerbotten, Stockholm and Västra Götaland, run under the auspices of the Swedish Environmental Protection Agency, fulfil an important function. However, by including this task in their instructions, county administrative boards should take over responsibility for these activities as a whole. This will improve conditions for developing these activities, and for coordination between county administrative boards.

To be able to carry out vigorous measures for monitoring and surveying under the Water Framework Directive, a uniform organisation is required with a clear division of responsibilities between different levels. Today's structure with five water authorities belonging to county administrative board organisations and lacking formal coordination presents a confusing picture vis-à-vis the surrounding world. It also risks leading to inefficiency in implementation. Because of this, the Inquiry proposes a review of the way in

which water management is organised as soon as possible and no later than the presentation of the first stages of the management plans and programmes of measures in 2009. Even now, the Swedish Environmental Protection Agency should be given clear responsibility for coordination of water management at the national level.

It should also be responsible for coordinating water management with marine management. It is proposed that the Swedish Board of Fisheries and the Swedish Meteorological and Hydrological Institute be given clearer responsibility for providing data to the water authorities.

Monitoring the water environment is an important part of implementing the Water Framework Directive. Water authorities in Sweden are to ensure that a monitoring programme is established, but who is to implement and finance these programmes in practice is not made clear in the legislation. Based on the 'polluter pays' principle, and on requirements for cost recovery under the Water Framework Directive, the operator should be responsible for controlling and monitoring the water reserves affected by its operations. The Inquiry proposes that provisions on the responsibility of the operator for monitoring the water environment be included in the Environmental Code. It is proposed to give the water authorities legal authority to order operators to take part in, or finance, monitoring programmes. To achieve full cost recovery, the Government should examine how water charges can be used to supplement the proposed amendments to the regulations. Water charges are probably a pre-condition so that smaller operations, such as private sewers and non-point pollution sources can also be included.

The need for information about depth, the state of the seabed, and the prevalence and extent of marine habitats and species is enormous. Detailed information is particularly required to implement the proposed marine plan and to establish marine reserves.

The Inquiry proposes that a national programme for surveying the marine landscape be implemented over a five-year period. The programme should be led by the Swedish Environmental Protection Agency and implemented primarily in cooperation with the Swedish Maritime Administration, the Geological Survey of Sweden and the Swedish Species Information Centre.

Strategic research initiatives are also needed in terms of extensive, comprehensive research programmes targeted at the marine environment to raise the level of knowledge and to support the

marine environmental work of authorities and other actors. As part of future efforts for research, the Government should allocate SEK 40 million per year over a five-year period to research in the following areas:

- *Research on complex interactions and processes*, particularly the ecosystem's structure and function, the turnover and transport of substances, and interaction effects.
- *Research to support decision-making and management*, particularly policy instruments, joint management and models supporting decisions.
- *Research on measures and environmental recovery*, particularly ecosystem impacts, time aspects, cost-efficiency and acceptance of measures.
- *Research to support environmental monitoring and analysis of environmental data*, particularly the development of programmes, methods and techniques, analysis of environmental monitoring data and new environmental threats.

Those financing research should also be assigned the task of funding new research posts in the field of environmental analysis and new doctoral and research posts in social science research focused on the marine environment. The Government should take the initiative to evaluate Swedish marine environment research in the next two years.

There is a great need of scientific and interdisciplinary syntheses in all areas involving the marine environment. Synthesis efforts must therefore be strengthened, both nationally and internationally. An international scientific marine environment panel for the Baltic Sea should be established as part of advanced intergovernmental work to improve the Baltic Sea environment. The task of this panel should be to synthesise research and develop scenarios and models to support the solution of marine environmental problems. This panel should be linked with HELCOM.

Researchers at Swedish universities and other higher education institutions should take part more extensively in the international working groups of HELCOM, OSPAR, ICES and other organisations. The Inquiry proposes that the Swedish Environmental Protection Agency and the Swedish Board of Fisheries fund researcher participation. Swedish researchers should also be given greater

opportunities to conduct research that entails synthesis of research and survey results.

As part of developing a sustainable fishing sector, the production of selective fishing equipment and development of low-impact methods of fishing should be intensified. It is proposed to give the Swedish Board of Fisheries this task.

Professional fishermen's knowledge about the environment and ecology needs to be improved. The Inquiry proposes that a completed, certified training in environment and ecology be required in order to obtain a professional fishing licence. The shorter courses for professional fishermen organised on both the east and west coasts provide a good basis for developing a certified course in environment and ecology. These courses should continue to be supported by the Swedish Board of Fisheries. The programme specialising in fisheries given at Öckerö Upper Secondary School should include elements that meet the certification requirements.

Databases

The increased use of marine resources leads to a greater need for in-depth information on marine areas. Efficient management of the marine environment and successful research require not only information on the marine environment but also access to a considerable amount of other information, for example, about drainage areas, shipping, size of population and climate.

Secrecy surrounding detailed information concerning depth and the state of the seabed is seen as a major problem by authorities and researchers working on marine environmental issues. In the opinion of the Inquiry, there is no reason to retain general secrecy applying to information involving depth and the state of the seabed. The Inquiry therefore proposes that a review be made of legislation concerning the protection of landscape information as soon as possible. The point of departure for this review should be that data on depth is to be freely accessible to as great an extent as possible. When formulating new legislation, account must be taken of various factors, such as the climate and environment, as well as military threats. Consideration must also be given to technological developments that now make it easy for private people to measure depth.

A further barrier to free access to data is the fees charged by several authorities. The system involving fees for data leads, for example, to certain authorities and municipalities not having access to the data that they need in their work. This means that the quality of the data on which decisions are based is not sufficiently good, which can lead to the wrong decisions being taken. It also restricts the scope of researchers and other experts, thus preventing the development of new knowledge.

The Inquiry proposes that data produced by authorities and funded from the central government budget be freely available for non-commercial activities in authorities, regional bodies, municipalities, universities and other higher education institutions. It is proposed to fund this by redistributing appropriations from authorities buying data to authorities selling data. Reduced revenue for authorities caused by regional bodies and municipalities having access to free data should be compensated for via increased appropriations to the authorities concerned.

Much of the information that authorities and other actors have collected in the context of environmental monitoring and different types of investigations and surveys is not easily accessible to other users. Even at the planning stage of new investigations and surveys, the question must be raised of where and how data is to be stored and made available.

The Inquiry proposes that the Swedish Meteorological and Hydrological Institute be appointed as the authority competent for coordination of storage methods for data relevant to marine environmental work and of making it available. This responsibility should include coordination of the development of joint standards, quality labelling and other support for making data available via the Internet and issuing guidelines for its use.

The Swedish Environmental Protection Agency should be tasked with developing portals enabling the coordinated presentation of data. Data is to be downloadable in the same format and presentation of data is to be supported by map services and interactive tools so that simple types of analysis can be made.

Research and survey vessels

To be able to conduct national marine environmental monitoring, marine research and survey activities in coastal and offshore areas, vessels are needed that are able to operate in these waters. Sweden also has international commitments that require access to larger vessels. Both authorities and researchers at higher education institutions therefore need vessels that can operate in coastal zones and offshore areas for shorter or longer periods. Authorities and universities have resolved the need for vessels in different ways. These solutions have in some cases been relatively long-term, but in others have only applied to one or a few years. The authorities and universities that have been able to acquire a vessel of their own have been able to meet their needs for a vessel relatively well, while those who have not had the same financial conditions have had to rely on other solutions.

Sweden is in a problematic situation with regard to access to large vessels for research and surveys as in principle all the vessels are in a poor condition and are approaching an age where, in the relatively near future, they must be replaced unless expensive renovations and investments are made.

Vessels are associated with enormous costs in terms of interest, depreciation, maintenance and staff, even when they are not in use.

Today several of the research and survey vessels are not fully used. The Swedish Board of Fisheries' vessel Argos is in dock relatively often, since its poor condition means that it has to be regularly repaired. Today's organisation with vessels at several authorities and universities is not optimal from an economic perspective.

The Inquiry proposes that vessels used in marine environmental monitoring, surveying and research be coordinated under one organisation. As a first step, the vessels used for environmental monitoring and research by the Swedish Board of Fisheries, the Swedish Environmental Protection Agency, the Swedish Meteorological and Hydrological Institute, universities and other higher education institutions, and smaller central government actors, should be coordinated. At a later stage, if considered appropriate, vessels needed for the surveying activities of the Geological Survey of Sweden and the Swedish Maritime Administration can be included. The Swedish Coast Guard should be tasked with providing research and survey vessels. Its tasks will also include short- and long-term planning of activities and procuring, delivering, main-

taining and equipping these vessels. This new assignment would strengthen the environmental profile of the Swedish Coast Guard and in the long term, make this agency an important actor in marine environmental work.

Communications

Communications are an important part of the marine environmental strategy. However, authorities and other actors must broaden their channels of communication. Better use must be made of the great interest of the general public in marine environmental issues, and their commitment to them. The Government should therefore take the initiative for a broad communication effort on the marine environment, based on dialogue and cooperation between the actors. It is proposed that financial support be available to authorities, municipalities, sector organisations and interest groups for a dialogue and cooperation projects of relevance to the marine environment.

1 Introduction

1.1 The assignment

The Marine Environment Inquiry has been governed by two separate terms of reference. The original terms of reference mainly concerned knowledge of marine environment work and were adopted by the previous government on 13 July 2006 (Dir. 2006:87). The inquiry's supplementary terms of reference, adopted by the present Government on 16 May 2007, extended its assignment to include issues relating to management and spatial planning of the sea (Dir. 2007:67). The Government handed over a report by Swedish county administrative boards of a government assignment on regional and local coordination and cooperation in coastal areas to the inquiry on 10 April 2008.[1]

The assignment can be summarised as follows:

1. Perform a review of environmental monitoring, investigative and surveying activities relating to the marine environment, examining in particular how to improve their effectiveness and coordination.
2. Put forward proposals for strategic research initiatives to find solutions to problems in the marine environment.
3. Analyse which measures will lead to better communication of marine environment issues and to more effective use of knowledge when implementing them.
4. Analyse which measures are needed to stimulate the development of selective fishing equipment and low-impact fishing

[1] System för regional och lokal samordning och samverkan i kustnära områden [A system for regional and local coordination and cooperation in coastal areas]. Sweden's coastal county administrative boards' response to government assignment 51 in the 2007 appropriation directions. Communication 28 Sept 2007 (Ref no 537-81056-2007).

methods and to enhance the skills of fishermen and other actors involved in fish resource management.

5. Submit proposals for how to improve accessibility to marine environment-related data.
6. Submit proposals for how to coordinate research and survey vessels.
7. Analyse the implications of making the Baltic Sea into a pilot project with a joint international management strategy and, using this as a starting-point, propose a Swedish organisation for management of the marine environment.
8. Put forward proposals for a model for the spatial planning of Swedish sea areas.

The inquiry submitted its interim report "A Swedish Marine Environment Institute" to the Government on 20 December 2006.[2] The interim report contained proposals for a scientific marine environment institute with activities at several Swedish universities (Umeå, Stockholm, Kalmar and Göteborg). In April 2008, the Government took the decision to establish a marine environment institute and gave Göteborg University the task of coordinating activities.

1.2 Implementation and working methods

Detailed information about the implementation of that part of the assignment relating to a marine environment institute can be found in the inquiry's interim report.

1.2.1 Assignments to consultants and researchers

The inquiry has hired consultants and researchers to produce background material and in-depth information on several issues.

1. Mikael Olshammar and Annika Martinsson at IVL (Swedish Environmental Research Institute) have done a survey of Swedish environmental monitoring activities and similar investigations concerning the marine environment.

[2] Ett svenskt havsmiljöinstitut [A Swedish Marine Environment Institute]. Interim report from the Marine Environment Inquiry. SOU 2006:28.

2. Jens Skei at NIVA (Norwegian Institute for Water Research) has written a report summarising how marine environment monitoring is organised in Norway.
3. Gunni Ærtberg at the Danish Environmental Monitoring Institute (DMU) has produced a similar report on how marine environment monitoring is organised in Denmark.
4. The Swedish Environmental Protection Agency has commissioned an investigation into the scope for forcing operators to performing monitoring activities in accordance with the EU Water Framework Directive.
5. Jan Darpö at Uppsala University has drawn up proposals for legislative amendments relating to the responsibility of operators to monitor the water environment.
6. Claes Thorson (Gaia Leadership AB) has surveyed the views of different actors on marine environment communication.
7. Magnus Ljung at the Swedish University of Agricultural Sciences has produced background information on environmental communication.
8. Andrea Morf and Lotta Silfver (Koucky & Partners AB) have analysed the costs to authorities for buying data from other authorities.
9. Bertil Björkman (Anchor Consulting) has examined the needs of authorities for research and survey vessels and the status of existing vessels.
10. The National Board of Fisheries has performed a study of the requirements that must be placed on a replacement vessel for Argos, the authorities' existing research and survey vessel.
11. Said Mahmoudi and David Langlet at Stockholm University have performed a review of international law of the sea and EC legislation relevant to the Baltic and Kattegat/Skagerrak.
12. Robert Dahlström (the consultant firm rm2rm) has analysed initiatives on coastal zone planning in the countries around the Baltic Sea.
13. Björn Hassler at Södertörn University has assisted the inquiry by reviewing certain texts.

The Swedish Maritime Administration has produced several maps for the inquiry's final report. Several other agencies have assisted the inquiry in diverse issues.

1.2.2 Meetings with the expert group

A chief expert and twelve other experts were appointed to the inquiry by the Government. A total of eleven meetings have been held with this expert group since the inquiry started in the autumn of 2006. The expert group has been able to read and comment on texts produced as part of the inquiry.

1.2.3 Hearings

During the second phase of the inquiry, after submission of the interim report, three hearings or similar meetings have been arranged:

1. Seminar on strategic research initiatives in the marine environment field, 30 May 2007.
2. Hearing on environmental monitoring, surveys and inventories to support effective management of the marine environment, 5 September 2007.
3. Hearing on marine spatial planning, 21 November 2007.

1.2.4 Visits to other countries

The inquiry has been on a study visit to Ireland and the United Kingdom. In Ireland, the inquiry visited the Irish Environmental Protection Agency and the Marine Institute. In the United Kingdom, a visit to DEFRA (Department for Environment, Food and Rural Affairs) was arranged.

The inquiry has also met representatives from governments and/or agencies in Denmark, Germany, Poland, Latvia, Lithuania and Finland. Similar information has been received from Estonia in writing. The inquiry has also visited the HELCOM secretariat and the Finnish Environment Institute (SYKE) in Helsinki.

1.2.5 Other visits and meetings

The inquiry has visited or been visited by several agencies, including SMHI (Swedish Meteorological and Hydrological Institute), the National Board of Fisheries, the Swedish Coast Guard, the Swedish Environmental Protection Agency (Swedish EPA), The National Board of Housing, Building and Planning and the Swedish water authorities. The inquiry has also met representatives of the county administrative boards' marine environment information centres.

1.2.6 Consultation with other government inquiries/commissions

The inquiry has consulted the Commission on Climate and Vulnerability, the Commission on the Swedish EPA, the Commission on Fishing Legislation, the Pilotage Inquiry, the Management Committee and the Commission on the Public Administration Structure in the Food Chain. Regarding the consequences for the Swedish business sector, the inquiry has also consulted the Board of Swedish Industry and Commerce for Better Regulation (NNR).

1.3 Sweden's surrounding sea areas

The Baltic and Kattegat/Skagerrak are the two sea areas surrounding Sweden. These can be divided into several smaller areas (Figure 1.1). Table 1.1 presents the relevant surface areas, volumes and depths. Sweden's sea areas, including the economic zone, constitute about 35 % of the total area of the Baltic and Kattegat/Skagerrak. Sweden has the longest coastline in the Baltic Sea. Nearly 90 % of the Swedish population lives within 100 kilometres of the coast.

Figure 1.1 The sea areas of Kattegat/Skagerrak and the Baltic

Table 1.1 The relevant surface areas, volumes and depths. The figures have been taken from Change Beneath the Surface, Swedish Environmental Protection Agency, 2005

Sea area	Area (km^2)	Volume (km^3)	Average depth (m)	Maximum depth (m)
Bothnian Bay	36 740	1 360	37	148
Bothnian Sea	73 270	4 530	62	301
Gulf of Finland	30 660	1 080	35	115
Gulf of Riga	18 360	430	23	56
Baltic Proper	*227 650*	*13 440*	*59*	*459*
Entire Baltic Sea[a]	386 680	20 840	54	459
Kattegat	29 320	610	21	124
Skagerrak	31 570	6 080	190	700
Kattegat and Skagerrak combined[b]	*60 890*	*6 690*	*110*	*700*

[a] Bothnian Bay, Bothnian Sea, Gulf of Finland, Gulf of Riga and Baltic Proper

[b] includes Kattegat and Skagerrak

The land areas surrounding the Baltic and Kattegat/Skagerrak and from which water and substances are transported into the sea areas constitute just under 2 million km2. The total surface area of both seas is about 450 000 km2. Since the sea areas are relatively shallow, a relatively small water volume has to receive large quantities of substances transported from land to sea.

About 85 million people live in the drainage areas of the Baltic and Kattegat/Skagerrak. The southern parts of the drainage areas are more densely populated than the northern parts and more of the land is cultivated. The northern parts are relatively sparsely populated and are dominated by forest (Figure 1.2).

Figure 1.2. The drainage areas of the Baltic and Kattegat/Skagerrak

The map is taken from Change Beneath the Surface, Swedish Environmental Protection Agency 2005.

The salt levels vary from very low in the Bothnian Bay to a salt content close to that of the major oceans in Skagerrak. The average salt content in the Baltic is a fifth of that in the oceans. This is caused by a lot of freshwater from rivers flowing into it and by the limited water-exchange with other sea areas due to the only link to other seas being via The Sound and the Belt Sea. All this makes the Baltic's environment very special. Because the salt level is too low for most marine species and too high for most freshwater species, the Baltic is a relatively species-poor sea. Kattegat and Skagerrak, on the other hand, have a species richness that is relatively typically for the major oceans.

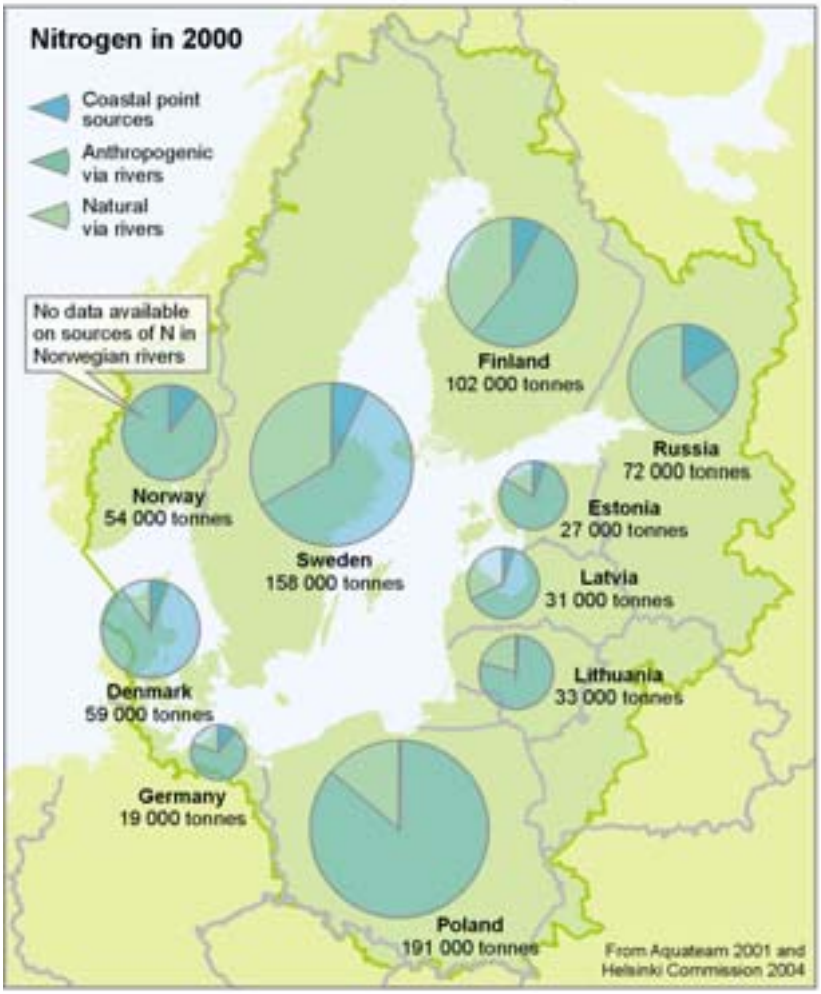
1.3.1 Marine environmental problems

A recently published study shows that 41% of the world's marine environments are seriously affected by human activity.[3] Only 4% of the seas are deemed intact. The latest assessment by the Swedish Environmental Objectives Council[4] is that the environmental quality objective A Balanced Marine Environment, Sustainable Coastal Areas and Archipelagos will be very difficult or impossible to achieve by 2020 even if further measures are implemented. The same assessment of two of the other environmental objectives of relevance to the marine environment, namely: A Non-Toxic Environment; and Zero Eutrophication.

Several environmental problems have been highlighted in Sweden's sea areas in recent years. Most of these are not new but have existed for decades. Warning reports on algal blooms and oxygen-deficient sea-beds occur almost every summer. This is the result of excessively high levels of nutrients in the water. Nutrients transported from land to the sea areas may have a natural source. The vast majority of them are however caused by human activities (Figures 1.3 and 1.4). Powerful measures to reduce emissions are required, but even if these are implemented, it will probably take a long time before they have a measurable impact on sea areas.

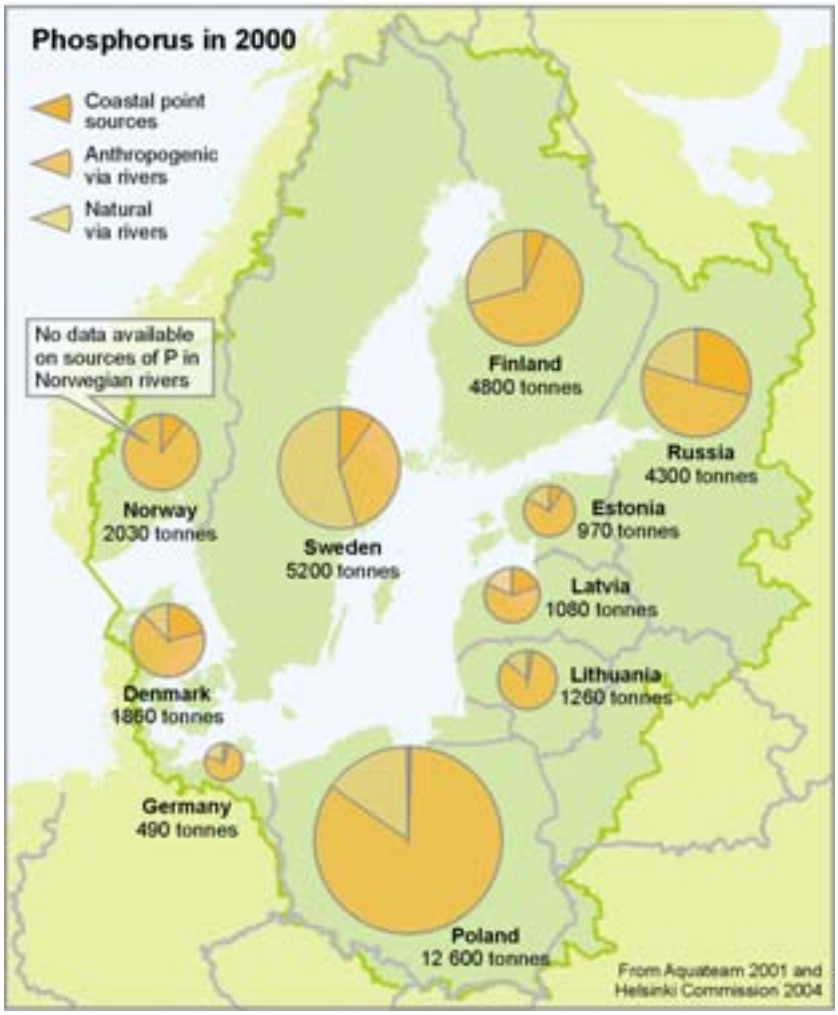
[3] A global map of human impact in marine ecosystems. Halpern, B.S., Walbridge, S., Selkoe K.A. et al. Science Vol 319. p. 948-952. 2008.
[4] Miljömålen – nu är det bråttom [Sweden's environmental objectives - we're running out of time]. The Environmental Objectives Council's evaluation of Sweden's environment objectives 2008.

Figure 1.3 Waterborne nitrogen input to the Baltic and Kattegat/Skagerrak. The word "anthropogenic" means "caused by human activity"



The map is taken from Change Beneath the Surface, Swedish Environmental Protection Agency 2005.

Figure 1.4 Waterborne phosphorus input to the Baltic and Kattegat/Skagerrak The word "anthropogenic" means "caused by human activity"



The map is taken from Change Beneath the Surface. Swedish Environmental Protection Agency, 2005.

Researchers have warned us about the overfishing of species such as cod and eel for many years. Cod quotas are regulated by international agreements and for several years have been higher than the level recommended by the International Council for the Exploration of the Sea (ICES). This has resulted in drastic reductions in many fish populations.

Levels of several well-known contaminants in fish and birds have decreased, but new ecotoxic substances are constantly being discovered. Examples of substances highlighted relatively recently include perfluorooctane sulfonates (PFOS), certain brominated flame retardants (HBCDD) and the endocrine disruptor, nonylphenol. Despite bans on using tributyltin (TBT)-based antifouling paints on smaller boats, the levels of TBT are very high in the environment, especially close to harbours and marinas.

There is extensive shipping in the sea areas surrounding Sweden. Approximately 10 % of the world's sea transport, calculated in number of vessels, occurs in the Baltic Sea. Around 2 000 large vessels (not counting fishing vessels) operate in the Baltic every day, and 300-500 of these are tankers. Oil is discharged from vessels on a regular basis and many are warning us that it is just a matter of time before a shipping accident occurs causing a massive oil spill. Another recently highlighted environmental problem is ecotoxic substances leaking from wrecks.

New species are regularly discovered in the seas around Sweden. In recent years, these include the round goby in the Baltic Sea and the comb jelly in both the Baltic and Kattegat/Skagerrak. Some foreign species migrate naturally to new areas and establish themselves. In other cases, species are either deliberately or accidentally introduced by humans. Regardless of how these new species reach new areas, they can cause substantial damage to the ecosystem if they manage to establish themselves.

The exploitation of coastal zones causes another form of environmental impact. More shoreline development and permanent housing in coastal areas, as well as more boating, affect the marine environment in different ways. An increased population and more outdoor activities in coastal areas need not be negative, but they often cause greater erosion, pollution, noise and other problems. Shoreline development almost always involves the construction of jetties and/or boathouses, which have a direct impact on the local marine environment. Furthermore, people's desire for faster transport leads to the construction of more bridges. Even exploitation

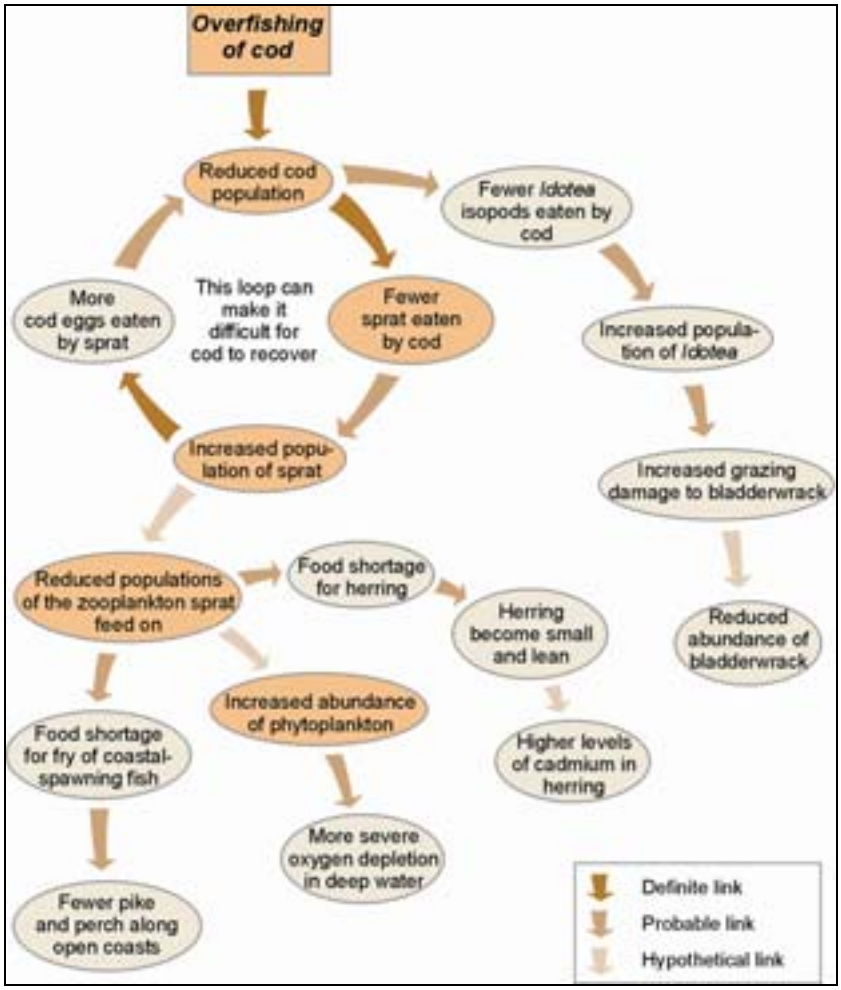
in offshore areas is increasing in the form of wind power expansion.

Climate change will affect the marine environment in many ways. The final report of the Swedish Commission on Climate and Vulnerability[5] describes scenarios where the surface water temperature of the Baltic Sea rises by between 2 and just over 4°C by the end of the 21st century. The oceans' icecaps and ice period will diminish. Increased precipitation, as predicted by many, increases the transport of nutrients to the seas. This can also reduce salt levels in the Baltic Sea. New research findings also point to greater acidification of the seas as a result of increased carbon dioxide levels. These changes will have a significant impact on marine ecosystems.

Single factors affecting the environment can have a major impact on individual species, biotopes or on the ecosystem as a whole. The dwindling populations of cod as a result of overfishing may, for example, cause a changed ecosystem (Figure 1.5). Sprats, which constitute an important source of food for cod, have increased in number as cod stocks decrease. At the same time, quantities of zooplankton, an important source of food for both the sprat and for pike and perch fry, have also diminished. Even if there isn't evidence for all these links, there is much to suggest that the increase in sprat will lead to reduced amounts of zooplankton, which in turn will make it difficult for pike and perch fry to survive. These fish species have therefore drastically decreased in coastal areas. Eutrophication can, among other things, cause algae bloom and alter the composition of species, i.e. biodiversity. Changes in the ecosystem can also have economic consequences. The comb jelly, discovered in both the Baltic and Kattegat/Skagerrak, probably caused the drastic decrease in anchovy populations in the Black Sea in the 1980s by outcompeting them for food. The reduction in anchovies hit the fishing industry hard and also had a major impact on the entire ecosystem. Today there are many forms of impact on the marine environment and no-one knows for certain what the aggregate of all these may do to the marine ecosystem.

[5] Sweden facing climate change - threats and opportunities. Final report from the Commission on Climate and Vulnerability. SOU 2007:60.

Figure 1.5 **Possible effects of cod-fishing on Baltic Sea ecosystems. Some of these links are hypothetical and there are also other factors that influence different parts of the ecosystem**



The diagram is taken from Change Beneath the Surface, Swedish Environmental Protection Agency 2005.

1.3.2 The sea as a resource

Fish are a natural resource utilised by man since time immemorial. Commercial fishing has however been increasingly brought into question due to the reduction in many fish stocks. Angling is a major pastime for many Swedes. Boating, bathing and other outdoor activities in coastal areas are other examples of how the sea constitutes an important resource for many people. Environmental destruction and a drastically altered marine ecosystem therefore have repercussions for ordinary people and also lead to major social costs, in the form of recreation and tourism being negatively affected by algae blooms and a limited supply of fish as a result of overfishing. The sea areas are key transport routes and will in future become increasingly important for energy production in the form of wind power and possibly even wave power.

For the seas to continue to be a long-term sustainable resource, management of the marine environment must be based on a holistic approach. The ecosystem approach has in recent years been highlighted as an important way of ensuring long-term sustainable management of our natural environment. The ecosystem approach has its origin in the Convention on Biological Diversity (CBD). The starting-point is coordinated management of land, water and living resources. The approach aims at a fair balance between conservation and the sustainable use of biological diversity and natural resources.

1.4 The regulatory framework

1.4.1 International law of the sea

The freedom of the sea is a principle that has applied for centuries. The most important freedom of all is that of shipping. An international regulatory framework has been drawn up since the Second World War. Under the UN Convention on the Law of the Sea (UNCLOS), adopted in 1982 and entering into force in 1994, there are international rules that must be followed by those who use the sea and by coastal states. The International Maritime Organization (IMO) is a UN organisation whose main task is to draw up international regulations and standards governing shipping on all the world's seas.

Under international agreements, countries have been given ever-greater rights at sea by means of territorial borders being repeatedly moved further out to sea and by the setting-up of exclusive economic zones. Most countries with a coastline have today extended their territorial waters to 12 nautical miles offshore (one nautical mile corresponds to 1 852 m) A coastal state may not prevent international shipping in its territorial waters, but may introduce rules to control it in different ways.

Each coastal state can establish an economic zone stretching a maximum of 200 nautical miles offshore. Within this zone, the coastal state is entitled to look for, utilise and manage any natural assets and other economic resources such as wave and wind power..Other states have basically full freedoms of navigation and overflight and of laying submarine cables and pipelines within the zone. The coastal state does have the right however to issue national legislation on e.g. environmental consideration and protection of the marine environment. Under the UNCLOS Convention, states have an overall obligation to implement measures to safeguard the survival of marine-living resources in the economic zone.

The term “continental shelf” is also used in international laws of the sea. The continental shelf refers to the prolongation of the land mass under the sea. The continental shelf of many countries, including Sweden, stretches in legal terms as far from the coast as the economic zone, i.e. a maximum of 200 nautical miles. The coastal state’s rights on the continental shelf are limited to the exploitation of natural resources.

1.4.2 Special rules governing the sea areas near Sweden

As a result of a decision within the IMO, the Baltic Sea has been given Particularly Sensitive Sea Area (PSSA) status. The PSSA classification, introduced in 2006, gives the Baltic Sea environment increased protection in the form of more stringent rules governing oil tanker transport. The decision created a number of traffic separation areas, including one south of Gotland. Russia, the only Baltic Sea country not to support the application to the IMO, has been exempted from the decision, and areas under Russian jurisdiction are hence not covered by the classification. Protective measures introduced are not compulsory for third-country vessels.

Rectifying this will require an amendment to the IMO decision making the protective measures compulsory.

1.4.3 Regional conventions and organisations for the protection of the marine environment

The Helsinki Convention

The Convention on the Protection of the Marine Environment of the Baltic Sea Area (the Helsinki Convention) was originally established in 1974 and revised in 1992. This revision came into force in 2000. The convention is applicable to all Swedish sea areas apart from Skagerrak. All nine countries in the Baltic Sea area and the EU are party to the convention. A commission has been appointed to implement the convention (HELCOM). The aim is both to restore the environment in the Baltic Sea area and to preserve its ecological balance. The convention includes basic environmental principles such as the Precautionary Principle, the Polluter Pays Principle, the Best Available Techniques Principle and the Best Environmental Practice Principle.

The HELCOM Baltic Sea Action Plan (BSAP) was adopted in 2007 and aims to achieve good environmental status in the Baltic by 2021. The action plan contains objectives and recommended measures regarding eutrophication, hazardous substances, biological diversity and shipping.

The OSPAR Convention

The Convention for the Protection of the Marine Environment of the North East Atlantic (OSPAR Convention) was adopted in 1992 and entered into force in 1998. The convention covers the North East Atlantic including the North Sea, Skagerrak and Kattegat. There is an overlap between the Helsinki and OSPAR conventions in that both are applicable in Kattegat and the Belt Sea. A commission has been set up to implement the convention. Parties to the convention shall work to prevent pollution of the sea and take necessary measures to protect the marine environment. Human health shall be protected and marine ecosystems preserved and reestablished in cases where they have been damaged. The convention is built on modern environmental principles such as the

Precautionary Principle and the Polluter Pays Principle and on the principles of promoting the use of best available techniques and best environmental practice.

The Espoo Convention

The Convention on Environmental Impact Assessment in a Transboundary Context (the ESPOO Convention) is a regional environmental protection convention for Europe, Canada and the United States. The aim of the convention is to prevent transboundary environmental impact through international cooperation. Under the convention, neighbouring countries and the general public must be informed about planned activities that may cause environmental impact. The convention, drawn up within the UN Economic Commission for Europe (UNECE), was signed in 1991 and entered into force in 1997.

International Council for the Exploration of the Sea (ICES)

The International Council for the Exploration of the Sea (ICES) supports and coordinates marine research in the North Atlantic, including the North Sea and Baltic Sea. ICES was formed in 1902, but is today based on a convention adopted in 1964. Its most important task is to function as a scientific advisory body in issues concerning the size and development of commercial fish stocks.

1.4.4 EC legislation governing the marine environment

The EU Water Framework Directive

The EU Water Framework Directive[6] was adopted in 2000. The purpose of the Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. The end objective of the directive is to achieve good status in the various water types by 2015. There are however rules enabling this date to be postponed.

[6] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

As a result of the EU Water Framework Directive, Sweden has been divided into five water districts (Figure 1.6).

EU Marine Strategy Directive (MSD)

The purpose of the EU Marine Strategy Directive (MSD) is to develop a cohesive EU policy for marine environment protection. The directive is expected to be adopted by the European Parliament and the Council during 2008.[7] The overarching aim of the directive is to achieve good marine environmental status within the EU by 2020 at the latest. According to the draft directive, marine regions shall be established as management units for implementation. The Baltic Sea and North Sea (including Kattegat and Skagerrak) constitute marine regions in accordance with this classification. Under the directive, pilot projects can be created to enable action programmes for areas in need of emergency measures to be established more quickly and to implement stricter protective measures.

[7] A consolidated text of a directive of the European Parliament and the Council (2008/.../EC) establishing a framework for community action in the field of marine environmental policy, 11 December 2007. European Parliament P6-TA-PROV(2007)0595.

Figure 1.6 The map shows the division into water districts

European nature conservation directives

The Birds Directive[8] and the Habitats Directive[9] contain rules on the establishment of protective areas for flora and fauna of community interest, known as Natura 2000 sites. A European Court of Justice (ECJ) judgement of 2005 established that these directives are also applicable in the economic zone, something which had previously been a source of some contention.

The Common Fisheries Policy (CFP)

Commercial fishing is mainly regulated by the EU Common Fisheries Policy. The aim of the Common Fisheries Policy according to the applicable regulation is to provide the conditions for sustainable exploitation of the living aquatic resources. EC fisheries regulations are directly applicable in Member State legislation. Member States may restrict their own fishing activities and those of other countries in their own territorial waters in order to minimise the impact of fishing on marine ecosystems. Decisions on fish quotas are taken by the Member States on the ministerial level, although often based on aspects other than the overarching aim of ensuring sustainable exploitation of fish stocks.

1.4.5 Swedish legislation

Internal waters, territorial sea and Sweden's economic zone

Legislation on the borders between internal waters and territorial sea and the economic zone constitutes the basis of other legislation and its application in the sea area. Sweden's territorial waters, which consist of internal waters and territorial offshore waters, are defined in the Act (1966:374) concerning the Territorial Waters of Sweden (Figure 1.7). The baseline is the legal border that separates internal waters from the territorial sea. The baseline is basically the same as the shoreline in those cases where the coast is straight and there are no islands. In cases where the coast is irregular and there are archipelagos, which is generally the case in Sweden, the baseline

[8] Council directive 79/409/EEC of 2 April 1979 on the conservation of wild birds.
[9] Council directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

is instead constituted by straight lines between headlands and fringe islands. The territorial sea stretches 12 nautical miles out from the baseline, except in cases where the distance to another country is so small that the border is instead regulated by agreements with that other country. Sweden established its economic zone in 1993 through the Swedish Exclusive Economic Zone Act (1992:1140) (Figure 1.7). Sweden cannot exercise its right to a 200-nautical mile economic zone in any sea area because the distance to the coastlines of other countries never exceeds 400 nautical miles. The outer border of Sweden's economic zone is normally constituted by a line half way between the territorial sea frontiers of Sweden and adjacent countries. Sweden's sea area is divided into municipalities and counties up to the border between the territorial sea and the economic zone.

Environmental legislation relevant to the marine environment

The same environmental provisions generally apply to land as to sea. The most important pieces of legislation are the Environmental Code and the Planning and Building Act. The Swedish Exclusive Economic Zone Act applies to Sweden's economic zone. The legislation contains rules pertaining to the protection of the marine environment and the exploitation of natural resources as well as rules on permit procedures and environmental impact assessments (EIA). The Continental Shelf Act (1966:314) regulates exploration of the continental shelf and the exploitation of natural resources on it. Fishing in Swedish waters are largely regulated by EC law, supplemented on the national level by the Swedish Fisheries Act (1993:787).

Figure 1.7 The map shows Sweden's territorial waters, consisting of internal waters within the baseline and the territorial sea outside it. The area outside Sweden's territorial waters makes up Sweden's exclusive economic zone

Sweden's environmental quality objectives

The Swedish Parliament, the Riksdag, has established 16 environmental quality objectives and 72 interim targets to steer Sweden's environment efforts. The first parliamentary decision on the environmental quality objectives was taken in 1999. The overarching aim is to solve the major environmental problems within one generation. This "generation target" has been interpreted as all the important measures to achieve the environmental quality objectives having been implemented by 2020. The environmental quality objectives that primarily concern the marine environment are: A Balanced Marine Environment, Sustainable Coastal Areas and Archipelagos; Zero Eutrophication; and A Non-Toxic Environment. The Reduced Climate Impact and Rich Diversity of Plant and Animal Life objectives are also important for the marine environment. The environmental quality objectives are evaluated every four years. The latest evaluation was presented in March 2008.

1.5 The difficulties society faces in dealing with environmental problems

The Baltic Sea and North Sea are among the most heavily regulated sea areas in the world as regards protection of the marine environment. Regulation of these marine environments began much earlier than the regulation of other regional seas. Most known sources of environmental problems in the marine environment have been regulated through international agreements. Despite this, the situation in the marine environment is currently very serious. The relevant national legislation in different countries varies both in scope and level of ambition. It also requires varying degrees of commitment from the countries involved. Several regulations are of a more binding nature within the framework of e.g. the UNCLOS Convention, whilst others are made up of non-binding international agreements and recommendations. The primary function of these types of international agreements is perhaps to increase focus on a particular issue nationally, in order to coordinate national efforts and to promote cooperation within a specific area. HELCOM and OSPAR are examples of cooperation projects in which the aims of marine environment efforts have been jointly formulated. These aims are not binding but the symbolic

significance of agreements and recommendations like these should not be underestimated.

In order to improve the state of the marine environment, laws, agreements and recommendations must be appropriately operationalised in order to be converted into suitable action. The general goal-driven management principles that currently pervade present-day public administration can cause difficulties when implementing policies. Objectives, interim targets and measures can be formulated more or less clearly in such a way as they entail very different degrees of commitment. For several reasons, they therefore risk being watered down along the way when measures are developed and benchmarks established on different societal levels and within different sectors. In particular, Baltic Sea countries have different legal and basic traditions, causing them to attach varying degrees of significance and weight to the goal-driven principles. Countries also have different interests as regards the marine environment, putting the issue of commitment and funding constantly on the agenda. Objectives and measures can become watered down as a result of political will to prioritise other issues or a total lack of such a will. It may also be the result of political controversies. It may also be caused by an obvious lack of resources, organisational difficulties, governance problems or poor communication. It may also depend on the power exercised by individual politicians or officials over the agenda within parties and organisations. The following section discusses problems that can be related to political action in the marine environment issue. Factors relating to the action of public administrations and those who exploit the sea are however not discussed but are highlighted in several respects in the other chapters of the report, only some of which are included in this abridged English version.

1.5.1 Achieving international agreements and regulations at the political level

History shows that it is very difficult to achieve powerful regulations for the marine environment on the national, regional and international level. Scientists and non-governmental organisations (NGOs) have often criticised countries for failing to agree on sustainable strategies and measures and on quotas and other types of restrictions within the framework of existing conventions. The

principle of the lowest common denominator usually determines the strength of the convention, i.e. the negotiating parties ultimately agree that the lowest ambitions will steer proceedings.

The advantages and disadvantages of binding versus non-binding undertakings and the effect these factors have on implementation are often discussed in this context. By their very nature, binding conventions are difficult to achieve. Binding agreements through e.g. the UN (certain parts of the UNCLOS Convention) and the EU (e.g. the Common Fisheries Policy) have been institutionalised for decades and have very extensive organisations and strong negotiating mandates. This arrangement has clear disadvantages, however. In the case of the UNCLOS Convention, it is a question of difficulties in linking the principles of the convention to its implementation by signatory countries. Furthermore, goal achievement is often difficult to determine. Regarding the Common European Fisheries Policy, binding undertakings and supranationality have forced member states to follow a regulatory framework that has not been modified as fish resources have dwindled in several sea areas.

The fact that HELCOM cooperation operates on the basis of agreements and recommendations must be seen as a natural structure for a regional convention. This does not mean however that countries behind a regional convention cannot work to make it more powerful in the long run. The OSPAR Convention, for example, has some binding mechanisms, though with some conditions attached. Through special procedures, it is possible to deviate from the convention's more binding principles by the party in question clearly disclaiming the relevant undertakings. It is however very conspicuous when a country deviates from agreements in this way. This type of mechanism is therefore deemed to have a stronger normative effect than non-binding agreements (such are those which form the basis of the Helsinki Convention).

Conventions of a non-binding nature can however have several benefits from a tactical and strategic point of view. Russia has no explicit interest in entering into binding agreements with EU countries, which is why a convention of a more binding nature would probably create problems and make relations with the Russian counterpart in the cooperation more difficult. Countries may well have the ambition to live up to what they have agreed within the framework of the convention, but for various reasons do not manage to do so. If countries could be fined or in some other way

punished for poor goal achievement, many would simply choose not to be party to such conventions thereby being even less likely to attain any set goals. It is therefore reasonable to assume that many of today's conventions would not have existed if they had been of a more binding nature.

It should at the same time be pointed out that there are no specific criteria for what characterises binding and non-binding conventions respectively. Most conventions can be found in various grey areas in-between. It is ultimately a question of the fact that the opportunities and powers an organisation has to exert pressure on countries (to live up to the criteria established as a result of the convention) vary.

1.5.2 Underlying political causes of marine environmental problems

Political logic

Political logic means that short-term measures promising rapid results are often prioritised. For example, it should be deemed very important from an environmental standpoint to initiate long-term measures to reduce nutrient levels in sea areas. Pumping large amounts of money year after year into a programme that stretches over twenty or thirty years and which does not provide any visible results until much later on contradicts conventional political logic.

Political game rules

In an international context, political will and the power to act must only be seen as important basic prerequisites for initiating political change. Cooperating with other countries also requires diplomacy, tactics and preferably a consensus on home turf. How well Sweden fairs in such contexts varies, according to researchers, irrespective of the fact that the country is deemed to have a widespread consensus culture. The hesitant approach often taken by Swedes to EU cooperation has often been considered a difficulty at international negotiations as this leads to unclear national positions.

Political interests and preferences of different countries

The sea is a common resource under considerable pressure. The theory of "the tragedy of the commons" is often used to show the effects of poor cooperation in relation to a free resource, which is seen by those who exploit it as unlimited. The phenomenon is built on a country acting rationally based on its own horizon. Countries bordering on a sea area therefore have a common problem but their interests are still different. They are hence tempted to put their own interest before that of the common good since efforts are often very costly. This kind of logic risks depleting resources and in the long term causing entire ecosystems to collapse. There are several explanation models as to why the political courses of action differ. Classic foreign policy focuses on the countries' preferences and interests as the determining factors for the policy pursued. When cooperating, a realistic picture of the different countries' positions is required. As regards the marine environment, the interests of countries are based on both geographical and economic factors. It should be pointed out however that countries can create opportunities for long-term, sustainable and relatively broad cooperation through confidence-building efforts.

The amount of coastline in each country must be seen in this context as potentially being of crucial importance for the countries' negotiating positions. At the coast, people come into direct contact with the sea through bathing areas, shoreline development, boating and other sea transport. This contact helps to create awareness and shape opinions, which can influence political actions in the long run. The longer the coastline a country has, the greater the interest should be in conserving the resources. The Swedish coastline is considerably longer than that of other countries around the Baltic. In several of the other Baltic Sea countries, such as Poland and Russia, contact with the sea is limited for large sections of the population.

The countries also have different economic prerequisites for cooperation, especially when it comes to costly investments. The coastal states around the Baltic can be divided into two groups; those who are well placed economically and technically to invest in protection of the marine environment and those whose economies are developing after many years of neglect. What nevertheless connects these states is their membership in the EU and the fact that they are party to most of the relevant environmental conventions.

The exception is Russia, which is outside both the EU and several international agreements covering the Baltic Sea's environment.

Most researchers agree that it is possible to predict political decision-making to quite a considerable extent, even in international contexts. The abovementioned aspects, the country's relative economic significance and its geographical position are thought to influence the actors, providing them with a ready-made negotiating position even before they start. Furthermore, previous actions by countries naturally provide important clues as regards the choices we expect them to make in the future. According to this rational perspective, it is possible to predict to a certain extent how countries are likely to act in the future.[10]

Uncertainty factors in decision-making processes

Strategic and institutional uncertainty in decision-making processes is another factor that is relevant to highlight in order to identify political difficulties when trying to rectify problems in the marine environment.[11] Strategic uncertainties occur as a result of many actors being involved in the process, which often leads to differences in and conflict over strategies. This causes stagnation in debates and seldom leads to unexpected results. The institutional uncertainty factor is thought to depend on decisions being taken in different arenas where actors from different networks participate. The institutional context is therefore fragmented, and complex debates on the same subject areas often take place in several arenas simultaneously. This is seen as typical for decision-making processes where many countries are involved and where the subject area spans several sectors.

The outcomes of decision-making processes can therefore depend on both the countries' strategic considerations and uncertainty factors. A country does not always recognise its relative position of strength in a negotiating situation, and even if the positions are clear, it is not certain that the parties can agree on specific standpoints or measures in the negotiation. Neither does the fact that countries are still often able to cooperate always spell the end

[10] See for example Dixit & Nalebuff (1991) Thinking strategically: the competitive edge in business, politics and everyday life. W W Norton, New York.
[11] van Bueren, Klijn & Koppenjan (2003) Dealing with wicked problems in networks: analyzing an environmental debate from a network perspective. Journal of Public Administration Research and Theory, April 2003:13.

of the problem. Countries' levels of action and ambition can instead be affected. An apparently common standpoint can for example be interpreted and implemented in different ways, depending on the national context. We should add that there are many special interests and opinions within a country which can influence its position and that it is therefore too simplistic to claim that countries merely have "interests". A country's foreign policy can instead often be described as the result of a game in the national arena.

The model of limited rationality exemplified above has been given ever-greater credence in recent years. Interests, actor constellations and other prerequisites can however vary from one policy area to the next and it may therefore be wise to regard each area separately. The marine environment issue must, however, be seen as a clear-cut example of how geographical and economical aspects influence decision-making at several stages because of its transboundary nature and the very costly measures it requires.

The special logic of European cooperation

Extensive research is currently being performed into European integration and the mechanisms that drive it. There is a particularly strong focus on the influence of the Member States versus that of the European Commission and the supranational norms that hypothetically speaking should be developed as a result of the Commission's activities. According to this focus, these norms are to work as a driver of integration.[12] European cooperation has numerous compulsory elements as a result of the supranational policy areas within the first pillar, which are based on EC law. These concern, among other things, the internal market, competition, trade, agriculture, fishing and the environment. This description gives a somewhat simplified picture of how European cooperation works, however. Within the policy areas, parallel processes occur in which the policy is constantly changing as a result of negotiations between member states. However, research has seldom been able to show that norms other than those based on the real self-interests of the countries have been able to determine how

[12] See e.g. Aspinwall & Schneider (2000) Same menu, separate tables: the institutionalist turn in political science and the study of European integration. European Journal of Political Research 2000(38):1.

policy areas are formulated. In this context, the European Commission is often seen as a functional institution to develop community policy and remind countries of its importance. The Commission therefore constantly defines EU policy whilst the member states are tempted to put national interests first, and thereby risk undermining the fulfilment of this policy. Policy is shaped more in these intergovernmental negotiation processes than via the objectives and guidelines formulated by the Commission. It is hence often possible to notice considerable discrepancy between expressed policy and policy that is actually pursued within the EU.

This picture shows the limited opportunities of being able to influence the development of EU cooperation. There are researchers, however, who believe that the EU can slowly change as a result of "openings" emerging in Member States' influence and that in the situation or process the opening constitutes, the Commission can influence decision-making by cementing supranational rules, principles and norms.[13] According to this theory, four factors explain what causes these openings. It is first and foremost a question of autonomous action from the Commission's side by resisting national interests. It is also a question of the limited time horizons of decision-makers. There have been several cases where unpredicted long-term institutional consequences have occurred as a result of short-term political action. National preferences can also change, as a result of e.g. a change of government.

The theory also points to the importance of specific decision-making occasions to bring about change. In a European context, a "window of opportunity" may be opened, for example, when the Commission is paving the way for a new policy whilst more or less random happenings occur simultaneously in the national arena. Countries that, for example, undergo a change in government and therefore do not have a long-term position in a particular issue at the time when a decision is being taken can (at least temporarily) be weakened and hence leave room for other leading countries, coalitions or the Commission. Decision-making occasions can also constitute a strategic point when several issues and matters coincide. These are just a few examples of factors that may lead to political breakthroughs in complex issues.

[13] Pierson (1996) The Path to European integration: a Historical Analysis. Comparative Political Studies 1996:29(2).

1.5.3 Perspectives on change

A clear-cut example of how the above limitations from a political point of view have influence the outcome of a political decision-making process is the problem of eutrophication. Here, the abovementioned factors, i.e. the political logic, the political game rules, countries' political interests and preferences, uncertainty factors in decision-making processes and the special logic of European cooperation, have influenced the process and the outcome to a varying degree. There are currently no global agreements on emissions of eutrophying substances despite the fact that these are perhaps the most important source of pollution in sea areas. Within the framework of HELCOM and OSPAR, several agreements on reduced emissions of eutrophying substances have been concluded over the last twenty years or so.

At the North Sea Conference in 1987, it was decided that nutrient emissions to the North Sea were to be reduced by 50% by 1995. This objective was never achieved. Within HELCOM, another decision was made to reduce nitrogen inputs to the Baltic Sea by 50% between 1985 and 1995, later extended to 2005. Within HELCOM and OSPAR, parties to the conventions have been given the responsibility for adopting the necessary legislation on the national level and implementing it. The majority of the states in these two sea areas are also members of the EU, and enforcement of their similar legislation and regulations could be expected to produce similar results in each Member State's marine environment. The reality is very different, however. The different levels of ambition of coastal states have clearly influenced the outcome of environmental protection initiatives.

Yet another initiative to reduce eutrophication in the sea areas was taken by the Swedish Government when it began work on the HELCOM Baltic Sea Action Plan (BSAP) in 2005. This action plan puts special focus on reducing nitrogen and phosphorus emissions by defining specific emission ceilings. To design the action plan, 12 negotiation meetings at the senior official level were held over a two-year period before it could be adopted in November 2007. During the negotiations, Sweden focused on implementing the plan by 2016, something which was not accepted by the other countries. Sweden also advocated a ban on phosphates, which it also failed to achieve.

A general will to compromise in many negotiation processes can lead to proposed undertakings being watered down. This can not directly be considered to be the case with the action plan. The countries finally agreed to relatively far-reaching undertakings on nitrogen and phosphorus emissions. It is expected to be difficult for countries to fulfil the agreed emission ceilings, however. Previous agreements within the HELCOM framework have often not been taken seriously enough by those party to them. The issue ultimately is whether or not the value of uncertainty action plan can be considered to be stronger than previous agreements. To improve implementation, an implementation group has been appointed, consisting mostly of country delegation members, whose task will be to follow the process towards goal fulfilment. It should be mentioned at this point that previous experience of implementation groups tasked with improving the implementation of decisions taken isn't undividedly positive. The mechanism cannot be considered particularly powerful.

The special logic of European cooperation must, to some extent, have influenced the outcome regarding nitrogen and phosphorus emissions. The European Commission has however managed to introduce relatively far-reaching rules governing the emissions of Member States, mostly from agriculture, through introduction of the Nitrates Directive. The Member States do not fulfil the requirements of the directive, however. Until now, only a small number of Member States have implemented the directive in full. The Commission has initiated a number of non-compliance proceedings against Member States who have not implemented the legislation. The hope is that the legislated environmental requirements, as established within the framework of the EU's rural development policy, can help Member States implement the legislation better in the long term. As a result of the 2003 reform of the Common European Agricultural Policy (CAP), a requirement to observe the provisions that apply after the introduction of the Nitrates Directive was established in the form of tighter cross-compliance. We cannot currently talk of a successful EU policy with regard to the eutrophication issue. The European Commission has managed to cement high ambitions in the form of legislation but the Member States cannot as yet live up to expectations. Different types of support measures, programmes and projects are being introduced to motivate, stimulate and make it easier for Member States to implement improvements.

It is clear that there are several reasons of a political nature for why undertakings concerning nitrogen and phosphorus have not been accomplished. Countries' interests and preferences and the political game rules are thought to have influenced the outcome. There are also several indications that political logic has also contributed, i.e. that politicians have chosen to prioritise short-term measures that have produced temporary political benefits. There is, however, no clear evidence at present that uncertainty factors in the decision-making process have affected the outcome. The low degree of sector integration in the action plan might suggest this, but it is far from certain. The likelihood is that these types of problems will increase in the future as the agriculture and fishing sectors become increasingly integrated into the environmental sector. More in-depth studies are needed of how this type of complex decision-making processes can be conducted to produce the best possible outcome.

1.5.4 Reflections

This chapter contained an in-depth discussion of the potential political obstacles to achieving various types of change in general and regarding the marine environment in particular. The extensive regulation of sea area as a result of national and international laws and agreements is inadequate to ensure an improvement in the state of the marine environment. Achieving this requires political initiative and the power to act both nationally and internationally. The point of departure has been the fact that several politically related phenomena cause specific difficulties when it comes to improving the state of the marine environment. These phenomena included in particular the interests and preferences of different countries, which often lead to the public good being considered secondary, as well as special political logic which often leads to the action taken being of a short-term nature. They also include countries' capacity in terms of national constellations of interest and diplomatic relations, as well as uncertainty in decision-making processes that can occur when, for example, the subject areas are of an intersectoral nature and when many parties are involved.

Internationally speaking, it is important not to forget that Sweden, as previously mentioned, has strong interests in the marine environment issue due to its much longer coastline

compared to other countries. All countries that border on the sea area will suffer, however, as the marine environment deteriorates. On the other hand, there might be other important issues which countries with shorter coastlines choose to focus their environmental efforts on, such as climate change. One way of deflecting from special national interests can be to transfer competence to a common organisation. An example of this is the cooperation within HELCOM and OSPAR. The problem is, however, that countries do not hand over enough of their decision-making competence to common organisations. We can clearly see this in the way they allow undertakings and powers to remain unclear and weak. Neither is it always appropriate or desirable, as previously mentioned in this chapter, to introduce supranational regulations within certain areas. Environmental consideration can be lost along the way as a result of the least ambitious countries directing decision-making processes. Stronger decision-making competence should be the aim, though preferably by strengthening HELCOM. The extent to which this organisation can decide "autonomously" (i.e. not be entirely steered by its more powerful members) will increase the chances of safeguarding common interests. It is not least important to gradually try to strengthen the HELCOM arena as cooperation with Russia can suffer if Baltic Sea cooperation focuses too much on the implementation of various EU directives, which can in particular be assumed to be the case as a result of the European Marine Strategy Directive.

Bearing in mind the interests and preferences of different countries, if we assume that the outcome of a decision-making process depends to a large extent on the interaction between first and foremost the EU's leading members, there is reason to look more closely at what these countries prioritise. To influence the more prominent members of a cooperation, other parties can team up and choose a strategy to drive forward efforts, in the hope of others joining at a later juncture (compare for example the EU and its various enlargements). The situation regarding Russia is somewhat more difficult since from the Russian side, they often show a lack of interest in cooperating within the framework of conventions. EU cooperation can also easily become rather ineffective when national interests are allowed to steer it rather than the interpretation of the common good. When talking about "European policy", we should therefore look at its actual outcome rather than at the intentions formulated by the Commission. European policy

should be seen as the sum of these results rather than the policy and aims formulated for a policy area. All the arguments highlighted here are further elaborated on mostly in Chapter 3.

2 A fifteen-point strategy for the marine environment

This chapter presents the fundamental components of a strategy for the marine environment. All components of the strategy are not elaborated on in this report but it is important to look at the Inquiry's considerations and proposals from a holistic perspective. Clearly, marine environmental problems represent a major challenge that will demand major efforts throughout society if they are to be solved.

Environmental policy has become a well established policy area. We have gone from the first generation's prioritisation of point sources to the second generation's focus on non-point emissions and new instruments of environmental protection, such as sector integration, the Environmental Code and the environmental quality objectives. Third-generation environmental policy must entail a holistic approach and full integration of environmental issues into all policy areas, stronger political leadership and much more of an international focus. For the marine environment in particular, it is vital to develop forms of marine spatial planning, implement structural changes to agriculture and fishing and understand and deal with demographic and economic changes in society, such as urban sprawl. The considerable economic resources at the disposal of central government and within the EU must be utilised and targeted so that they contribute to a better environment rather than work against it. All relevant policy areas must be incorporated into a common strategy for the marine environment.

1. International coordination – a decisive factor

Because sea areas are shared with many other countries, internationally coordinated efforts are an absolute necessity. In addition,

many activities that have a negative impact on the marine environment are either entirely or partly steered by an international market, international agreements and EU policy. Many lessons can be learned from how Sweden, together with other countries, has been successful in other environmental issues, for example concerning international agreements on reduced air pollution. A well developed dialogue between scientists, policy-makers and industry has been a success factor in this regard.

2. The highest political level

Improving the situation in the marine environment requires political determination, based on a common awareness in society, which puts pressure on politicians. Heads of state and government have to meet regularly and take joint decisions in order to push the marine environment to the top of the political agenda. Ministers of agriculture, fisheries, transport and many other policy areas must also be involved in political efforts concerning the marine environment.

3. A long-term approach is needed

Improving the marine environment is a long-term undertaking requiring considerable stamina. It will, for example, take many decades to reduce the effects of eutrophication. Restoration of the marine environment may in certain cases be necessary, but the emphasis of environmental work must lie on lowering emissions and reducing the negative impact on the environment. A long-term strategy with concrete measures built on existing knowledge should therefore be established. Research and inquiries are also needed but must not be considered a reason for inaction.

4. The link between land and sea

Eutrophication and increased toxicity are mostly caused by transport from land and inland waters. Land and marine ecosystems constitute an interlinked whole. The action taken on land and at sea must be integrated. There is also a link to the marine environment

via air pollution from land-based activities. Nitrogen oxide emissions from road traffic must, for example, be reduced.

5. Integration of fisheries and agricultural policies into environmental policy

EU agricultural and fisheries policies must in future be entirely founded on the principles of sustainable exploitation and environmental consideration. Fisheries and agricultural policies must in the long run be integrated into environmental policy. Good environmental status of our seas must be a fundamental objective for both the Common Fisheries Policy (CFP) and the Common Agricultural Policy (CAP). Sweden should cement sustainable national positions in these areas.

6. Sweden must take the lead – in its own interests

We cannot wait for others or blame other countries – Sweden must show the way forward in marine environmental protection. Sweden has substantial emissions per capita which can be rectified. With a long coastline and large sea areas, it is in Sweden's own interest to drive forward issues regarding the environment in the Baltic and the North Sea within the EU and with our neighbouring countries. A good marine environment is of long term importance for both tourism and regional development.

7. HELCOM – the main path forward

HELCOM is the international organisation that can muster the efforts of the countries around the Baltic Sea to improve the marine environment. HELCOM constitutes and important link between Russia and the EU in issues relating to the Baltic Sea environment. The EU Marine Strategy Directive (MSD) provides a legal basis for actions of several EU Member States within HELCOM. At the same time, it is important for the Baltic Sea to be given pilot project status, as provided for under the MSD. The HELCOM Baltic Sea Action Plan should form the basis of the efforts made combined with an integration of agricultural, fisheries and regional policies. Sweden must force the pace of the process.

Sweden should make use of the opportunities provided by its EU Presidency in the autumn of 2009. The European Strategy for the Baltic Sea Region, currently being prepared by the European Commission, is an important link in this process. In the long term, Sweden should actively strive to change and improve the work and decision-making procedures of HELCOM.

8. Fishing

Fishing quotas must be established on scientific grounds and be decoupled from political considerations. Sweden cannot accept the current arrangements under the European Common Fisheries Policy (CFP). Sweden should make better use of the scope for national decisions, provided for in the policy, to regulate fishing in Swedish fishing waters. Sweden should also cooperate on action to be taken in fishing waters it shares with neighbouring countries. Examples of measures are the establishment of more permanent or temporary non-fishing zones and better monitoring of fishing activities in cooperation with other countries.

9. Agriculture

Tighter regulation of livestock farming in areas sensitive to nutrient run-off is needed along with a possible ban on starting up new livestock farming activities in the most sensitive areas. The EU Water Framework Directive provides considerable untapped potential in the form of e.g. environmental quality standards, programmes of measures and economic instruments such as water charges. Local forms of cooperation and dialogue with individual operators should be developed. Better knowledge is needed as to the various measures taken by individual operators that have demonstrable effects. Another important issue concerning rural areas, including holiday home areas, and which exacerbates eutrophication, is private sewers. Municipalities must increase their inspection activities and place tougher demands on property owners as regards wastewater treatment.

10. Chemicals

Even if levels of well-known hazardous substances such as PCB are decreasing, concentrations of other newly discovered ones are on the rise. Sweden has nevertheless come a long way when it comes to reducing the spread of hazardous substances – the highest priority must be to encourage other countries to take action. It is also important to put demands on importers of products manufactured in other countries. The EU chemicals legislation REACH, which came into force in 2007, provides for this.

11. Shipping

As shipping in the Baltic increases and as vessels become ever larger, safety and emergency planning must improve. Traffic separation systems should be used to a greater extent. The decision to classify the Baltic as a Particularly Sensitive Sea Area (PSSA) provides the right conditions for regulating shipping and for designating ecologically valuable areas which shipping must avoid. The countries around the Baltic Sea should strengthen their protective measures and work to ensure that Russian waters are also covered by PSSA regulations. Air emissions from shipping must also be restricted, e.g. by introducing differentiated shipping lane fees.

Greater demands must be placed on pleasure boat owners to replace their two-stroke engines and use alkylate fuel. Economic instruments, such as differentiated purchase tax and decommissioning premiums, should be considered.

12. Exploitation and construction

There is a strong need for a clearer regulatory framework with democratically established planning of all Swedish sea areas. The same environmental requirements must apply in the economic zones as inside the territories of Sweden and other countries. Shorelines must be protected, especially in areas subject to intense exploitation pressure.

13 Participation by the general public

The general public shows a high level of commitment and interest in marine environmental issues that must be utilised. Transparency and insight into political decision-making processes are important to increase participation. Ensuring that the Swedish Government Offices lives up to this is a first step, e.g. by presenting the different stages at which an issue is discussed on its website, and to supplement the traditional Swedish referral process by inviting the general public and other stakeholders to more dialogue. Government authorities and municipalities should also to a greater extent invite the general public to participate in dialogue and cooperate on issues concerning the marine environment.

14. Link to the climate issue

Climate work must go hand in hand with protecting the marine environment. Developed scenarios indicate major changes in the marine environment. The salt level in the Baltic Sea can decrease as the result of greater precipitation and catchment. New research findings show that our seas are being acidified as a result of higher carbon dioxide levels. The considerable attention recently captured by the climate issue should be utilised to push the marine environment up the international agenda as well.

15. Scientific underpinning

Research has been of crucial importance in creating a basic understanding for relationships and causes and making politicians and the general public more aware of environmental problems in our seas. In several areas, however, there is still considerable scientific uncertainty that hinders environmental work, for example concerning the most effective action to take to reduce eutrophication. Research must focus on reducing this uncertainty and on helping to solve environmental problems. Forms of dialogue between scientists, policy-makers and industry need to be developed.

3 Intergovernmental cooperation on the marine environment and a Swedish marine authority

3.1 The EU Marine Strategy Directive (MSD)

The purpose of the EU Marine Strategy Directive (MSD) is to develop a cohesive EU policy for protection of the marine environment. The Directive has been drafted in accordance with proposals in the EU's sixth Environmental Action Programme and will be adopted by the European Parliament and the Council in 2008. A holistic approach to protecting the marine environment has not been developed by the European Commission or by Sweden nationally before. Neither have the other Baltic Sea countries taken a cohesive approach to protective measures in the marine environment. The MSD is therefore expected to lead to extensive changes as regards the status of marine environmental issues in all the countries affected.

3.1.1 The objectives and purpose of the directive

The overarching aim of the MSD is to achieve good marine environmental status within the EU by 2020 at the latest. According to the proposal, the term "environmental status" refers to the general state of the environment in the sea, considering in particular the structure, function and processes of marine ecosystems. Introductory clauses 8 and 44 in the directive stress that Member State programmes of measures must be founded on an ecosystem-based approach. According to introductory clause 3, the directive should form the environmental pillar in the EU's future maritime policy. Introductory clause 9 explains that the cohesive regulatory frame-

work of which the directive consists "should contribute to coherence between different policy areas and promote the integration of environmental issues into other policies, such as the Common Fisheries Policy, the Common Agricultural Policy and other relevant community policies". In this way, a much greater number of community regulations than before will be relevant for the protection of the marine environment.

One of the main purposes of the MSD is to help fulfil the community's and Member States' obligations and undertakings in accordance with several applicable international agreements on protecting the marine environment from pollution. Considering that many of these international agreements lack both effective mechanisms for implementing legal requirements on the national level and a supervisory authority, the directive will play an important role in this respect.

3.1.2 Marine regions and programmes of measures

Under the MSD, European marine regions shall be established as management units for implementation. The Baltic Sea and North Sea (including Kattegat and Skagerrak) constitute marine regions in accordance with this classification. Marine strategies shall be developed within each marine region, and each country shall also draft its own marine strategy which will cover the steps included in the common strategy. The countries' surveys, analyses and proposals for programmes of measures shall be reviewed and approved by the European Commission. No established environmental quality norms or measures on the EU level have been defined in the MSD. Responsibility rests instead on the Member States to cooperate within their respective sea areas, and on non-EU countries who also share common sea areas.

These marine strategies shall result in the implementation of specific programmes of measures developed with regional consideration. The process for establishing the measures stipulated in the MSD includes, in chronological order, assessment of the state of the environment, establishment of environmental objectives, establishment and introduction of monitoring programmes for continual assessment and regular updating of the state of the environment, and programmes of measures designed and implemented to achieve good environmental status. HELCOM's Baltic Sea

Action Plan (BSAP) is the programme of measures that will be applied first and foremost by the EU Member States in the Baltic Sea area to try to jointly achieve the long-term aims established in the directive. The MSD covers more areas than those focused on in the BSAP, however. The directive aims to achieve good environmental status, which means that all relevant focus areas for the marine environment are dealt with, whilst the BSAP is limited to those areas which the countries were able to agree on for special measures. Supplementary efforts will therefore be needed.

3.1.3 The implementation process

Table 3.1 lists the components included in the implementation of the MSD in chronological order. Several of these shall be implemented within three years from when the Council adopts the directive, whilst others must be implemented before 2020. The table also shows which Swedish actors should be responsible for implementation.

Table 3.1 Tasks according to the EU Marine Strategy Directive (MSD) and proposed allocation of responsibility for implementing the directive

Article in the directive	Task	Responsible actor(s)
5	Marine strategies and pilot projects	Government
6	Regional cooperation	Government
7	Appoint competent authorities	Government
8	Initial assessment	marine authority
9	Determination of good environmental status	marine authority
10	Establishment of environmental objectives	marine authority
11	Monitoring programmes	marine authority
13	Programme of measures	marine authority
14	Exceptions (where good environmental status is deemed impossible to achieve)	marine authority
15	Recommendation for Community action	marine authority/Government
17	Updating of marine strategies	marine authority
18	Interim report to the Commission	marine authority/Government
19	Public consultation and information	marine authority
26	Incorporation into Swedish law	Government/Swedish Parliament (Riksdag)

Notes: "Marine authority" refers to the authority appointed nationally to be responsible for implementing the MSD. See Section 3.3.

3.1.4 Joint international management strategy

Within the framework of the MSD, a joint international management strategy shall be developed by the countries within the marine regions. The directive provides some guidance as to the content of such a strategy. It is a question of, for example, ensuring that the countries within each marine region employ similar environmental monitoring methods so that results are comparable and of jointly estimating the degree of human impact on the marine environment and identifying potential conflicts of interest in the sea areas. Otherwise, it is not possible to work out the extent to which the joint management strategy should be based on joint efforts and measures, or whether it should rather be primarily designed in a joint process to guarantee a high degree of concordance between the various countries' approaches.

3.1.5 Option of creating pilot projects under the EU Marine Strategy Directive (MSD)

Since the process, according to current reports, will not be completed until 2020 at the latest, the option of creating pilot projects for the more rapid establishment of programmes of measures for areas in need of emergency action and to implement stricter protection measures has been introduced into Article 5. Furthermore, it is stated that the Commission may consider offering supportive action in such cases. This means that countries that choose to bring forward their programmes of measures in this way have the opportunity to serve as models in relation to other marine areas.

3.2 Relation to other policy areas

One long-term objective of the MSD is to make marine issues a guiding principle for other policy areas that concern the marine environment, in particular fishing and agriculture. Such an intersectoral perspective is currently only employed sporadically when solving problems, and the integration of marine environment issues into all EU policy areas is therefore considered highly desirable. The directive mentions that measures regulating fisheries management should only be taken within the framework of the Common Fisheries Policy, but that the environmental impact of fishing

should be considered. It is further stated that discharges and emissions resulting from the use of radioactive material are only regulated in Articles 30 and 31 of the Euratom Treaty. The agricultural policy is mentioned in introductory clause 9, which deals with coherence between different policies and fostering the integration of environmental concerns into other policies. Apart from the agricultural policy, reference is not made to any other policy areas that will be more directly affected by the directive, although it is reasonable to assume that industrial policy will be the most affected.

The Commission has taken the initiative to develop a European maritime policy, within which the MSD is supposed to deliver the environmental pillar. One of the purposes of the maritime policy is said to be to increase dialogue between environmental policy and industrial policy. Through its communication "An integrated maritime policy for the European Union", the Commission has laid down the foundations for the future maritime policy.[1] The communication constitutes a form of action plan for the maritime industry, although without the dignity of a white paper (which contains concrete proposals). The communication does not incorporate legislative proposals but provides instead proposals for project cooperation and proposes a roadmap up until 2009. The recommendation to Member States is that they should have developed national plans for their maritime issues before then. The Commission's influence on maritime policy is limited, however; most EU Member States do not wish to see a comprehensive community policy in the area. Governance from the EU Commission consists primarily of it calling on Member States to create national strategies and fostering the use of common tools to deal with maritime issues. The communication on a European maritime policy is the first step on the road to creating consensus among countries in the area, and the likelihood is that such a process will stretch over many years.

[1] An integrated maritime policy for the European Union. COM(2007) 575. Communication from the Commission to the European Parliament, the Council, European Economic and Social Committee and the Committee of the Regions.

3.2.1 The principle of subsidiarity and the MSD

The MSD aims to even out the differences between Member States as regards important aspects concerning management of the marine environment. This applies to e.g. definitions and assessment principles as well as the knowledge base in general and marine data in particular. Introduction of the directive will therefore increase cooperation between countries in the Baltic Sea area within several areas. The principle of subsidiarity is applied in the issue of more everyday, practical management measures. What measures should be implemented in order to guarantee good environmental status in the future is to be decided primarily by the individual countries. Knowledge exchange between countries will furthermore be important to keep them informed and updated about each others' systems, efforts and priorities on the management level. The concept of "joint management", or "regional cooperation" as mentioned in the MSD, can refer to the development of both joint management plans and common tools (such as survey data) as well as the establishment of jointly agreed objectives.

It is unclear, however, how far-reaching countries can agree to be regarding joint management and how much importance they intend to attach to the concept. Among the proposals in the communication regarding the new European maritime policy is that the coast guards of neighbouring countries should develop a joint management strategy to a greater extent. Baltic Sea countries, such as Denmark and Poland, do not see this type of joint action on the basic management level in such a positive light. They refer in particular to the potential legal complications of inter-authority cooperation between countries in that one country's legislation cannot be given precedence over another. The added value or cost savings such cooperation might lead to become a secondary issue as long as these legal stumbling-blocks remain, they think.

There is currently no legal framework that allows cooperation between countries in any binding form, apart from in a few cases where it has been possible to set up transfrontier local authority associations to deal with a public administrative task. The European Grouping of Territorial Cooperation, EGTC, is also a new legal instrument within the EU allowing local and regional bodies, etc., from EU Member States to create cooperative groups in the form of legal entities.[2] The possibility has been introduced to facili-

[2] Regulation 1082/2006/EC, European Parliament and the Council, 5 July 2006.

tate transfrontier cooperation. EGTC creates its own structure, owns assets and employs personnel. The principal aim of EGTC is to implement projects for territorial cooperation within the EU, which implies that the efforts are mainly of a temporary and experimental nature.

Cooperation on management issues between the Baltic Sea countries has until now mostly taken place within the framework of the EU's Interreg projects. These projects aim in many cases to test models of cooperation and joint management between countries within a specific problem area. The initiatives are often of an innovative and intersectoral nature. Today, there are many examples of how a joint approach to the management issue has been adopted by central agencies, municipalities, regions and organisations in the Baltic Sea area. Knowledge about the opportunities and limitations of joint management cooperation is as yet limited, however.

3.2.2 Preparations prior to the MSD in other Baltic Sea countries

All EU Member States in the Baltic Sea area feel they now have the necessary organisation to be able to implement the MSD. What is required as a first step is for one or more authorities to be identified or nominated as competent for implementation. All the countries concerned will do this during 2008. All of them also say that integration between land and sea is very important for future marine environment work. How this will be reflected in the organisational structure as a result of the changes to be introduced has yet to be decided, however. Accordingly, the link between the Water Framework Directive and the MSD has not been determined either.

The MSD is expected to take longer to implement in some countries than others. Some countries don't expect to be able to establish the national plans that have to be introduced within three years of the directive being adopted. Several countries also express pessimism as regards the directive's target of achieving good marine environment status by 2020, especially for the Baltic Sea. Many feel that, at the very most, it might be possible to fully establish the programmes of measures by that time. Furthermore, a few of the objectives specified in the BSAP should be met as early

as 2016, something which several countries are even more sceptical about. It is mostly the emission ceilings for phosphorus and nitrogen, defined in the BSAP, which several countries are sceptical about.

3.3 A Swedish central authority responsible for implementing the EU Marine Strategy Directive (MSD)

Proposal
I propose that the Swedish Environmental Protection Agency (Swedish EPA) be appointed as the authority responsible for the implementation of the MSD and overall marine management in Sweden. The Swedish EPA shall formally consult other relevant agencies regarding issues to do with implementation of the MSD. The Swedish EPA shall also be responsible for supplying the marine spatial planning authority (the National Board of Housing, Building and Planning), as proposed by the Inquiry, with collected national planning data on the marine landscape (see Chapter 4).

3.3.1 Background

Under Article 7 of the MSD, Member States shall designate the authority or authorities competent for its implementation. The authority will be given extensive powers. It shall, among other things, develop and continuously monitor implementation of the national strategy to which the Member State has committed itself through the MSD.

From the beginning, the remit of the authority is, in partnership with other Baltic Sea countries and North Sea countries (that border on Kattegat and Skagerrak), to establish factors that characterise good environmental status in the marine areas with appurtenant criteria, as well as methodological standards that enable comparisons between marine regions. Environmental objective and programmes for continuous monitoring shall also be developed so that regularly evaluation can be carried out. Member States shall thereafter establish and implement programmes of measures for high

environmental status based on the precautionary principle and the principle of preventive action. The Commission shall be able to assess concordance in the measures among the countries, which is why regular and detailed reporting is of key importance.

3.3.2 The authority's remit

The authority shall be the coordinating party for implementation of the MSD in Sweden. This implies primarily monitoring implementation of the systems and functions established in accordance with the directive. Implementation of the directive demands good coordination as regards laws and regulations. The Swedish structure for marine environment management is however split among several different authorities. Work is currently coordinated mostly through SAMHAV, a coordination group consisting of heads of authorities responsible for marine environment issues. SAMHAV does not have any formal powers, however.

The authority shall be specifically responsible for:

- Monitoring the implementation of the MSD in general and subsequent reporting to the EU.
- Monitoring the Swedish environmental quality objective A Balanced Marine Environment, Sustainable Coastal Areas and Archipelagos, and Swedish marine environment policy in general.
- Commissioning background data and some reporting to the EU and HELCOM. The authority shall coordinate the collection of data from all feasible stakeholders who are active in this field, whereupon an important focus will be on land-based emissions.
- Coordinating environmental monitoring.
- Coordinating sectors and highlighting the ecological aspect of strategic marine resources issues prior to the application of future EU maritime policy.
- Participating in international projects concerning these issues.
- Fish resources shall to the best possible extent be incorporated in the overall efforts to protect the marine environment. The authority shall have the ultimate responsibility for fish as a

natural resource as a result of its holistic responsibility for biodiversity in the sea areas.

- The authority shall also cooperate with the water authorities on issues concerning the integration between land and sea.

3.3.3 Feasible competent authorities

The Swedish EPA is the central authority competent for the implementation of Swedish environmental policy. There are however several actors who fulfil important functions in marine environment management and who therefore could be designated authorities competent for implementation of the MSD. Alternatively, the responsibility could be divided between two or more competent authorities. Below follows a study and discussion of which authority/authorities might be most suitable for the task, based on their current remits.

The Swedish Environmental Protection Agency (Swedish EPA)

The Swedish EPA's remit is to ensure the implementation of environmental policy decisions on an overarching level. According to its instructions, the Agency is responsible for guiding other central, regional and local authorities in environmental and supervision issues, to pursue cases in the courts and to follow how the Environmental Code is developing. The Agency's remit also includes proposing amendments to legislation and other environmental policy instruments, monitoring and reporting on the state of the environment, initiating research and managing protected areas, and so on. The Agency shall be a driving and unifying force in Swedish environmental work by guiding, coordinating, monitoring and evaluating environmental and supervision work in relation to authorities with a special sector responsibility for achieving Sweden's 15 environmental quality objectives and other central, regional and local authorities. The Swedish EPA shall also, in accordance with the proposal put forward by the inquiry, be responsible for issues relating to the integration of land and sea in cooperation with the water authorities.

Within the Swedish EPA, there is the Environmental Objectives Council, which acts a coordinator to facilitate fulfilment of the environmental quality objectives. The Environmental Objectives Council is tasked with reporting to the Government on how work to achieve the objectives is progressing and where necessary identify additional measures. The Council is responsible for overall coordination of and allocation of funding to environmental monitoring activities and monitoring of the environmental objectives.

The Marine Environment Council can also be found within the Swedish EPA and is an advisory body in marine environment issues. The Swedish EPA also convenes and chairs SAMHAV. The Marine Environment Inquiry proposes that these two bodies be amalgamated into one marine environment council (see Chapter 5 in the Swedish edition for more details concerning this proposal).

National Board of Fisheries

The National Board of Fisheries is the government authority responsible for the exploitation and preservation of Sweden's fish resources. It draws up legislation and long-term management plans for fishing and aquaculture and conducts research on fish, fish conservation and fishing as well as develops methods and equipment. The National Board of Fisheries participates at the European level in negotiations on fishing issues. It also has the overarching responsibility for Swedish fisheries control. The Board shall contribute to ecologically and socially sustainable food production.

Fishing issues are currently poorly integrated into other marine issues in Sweden. The EU fisheries policy gives the community exclusive decision-making powers in the area, which is why action is difficult to take outside these frameworks. The European Commission has recently established a combined directorate for fisheries and maritime issues, DG Maritime and Fisheries Affairs, to achieve better subject integration. The United Kingdom, for example, has established the Marine and Fisheries Directorate within its central government administration, with the aim of ensuring that policies are integrated as regards the entire subject area of marine affairs.

SMHI

The Swedish Meteorological and Hydrological Institute (SMHI) is the central authority for meteorological, hydrological and oceanographic issues. SMHI shall administrate and develop information about weather, water and the climate and through this provide relevant actors with a basis for their decision-making. The Institute shall be a resource in Swedish environmental work and supply background data for planning and decision-making for activities that are dependent on the weather and water.

SMHI's remit includes conducting subsidy-funded activities, performing assignments for other authorities and business activities on commercial terms. General forecasts and warnings, sector-oriented services, simulations and analyses, statistics, climate studies and research assignments are some examples. SMHI also carries out regularly monitoring of the marine environment in offshore areas, and is the national data host for oceanographic and biological environmental monitoring data.

Other relevant actors

Sweden has five water districts with a county administrative board acting as the water authority in each one. The water authority is responsible for water management in the district. The water authorities have the overall responsibility for ensuring the implementation of the EU Water Framework Directive in Sweden. Water management focuses on drainage areas and covers all surface water and groundwater. When the MSD is implemented, cooperation between the competent authority for the marine environment and the country's water authorities will be of key importance since action to reduce land-based emissions will be central to achieving the directive's quality targets by 2020. Proposing the water authorities as competent for the implementation of the marine strategy directive has not been on the agenda.

The county administrative boards, who are responsible for environmental monitoring on the regional level, should continue to have this responsibility once the MSD has been implemented. Close cooperation between the county administrative boards and the marine authority is therefore required.

Several other authorities, in addition to those already mentioned, will have important roles to play in the implementation of the MSD.

3.3.4 A specific authority as competent

There have been three possible arrangements as regards the choice of authority competent for implementation of the MSD. The choice has been between either designating a specific competent authority, designating two or more authorities in cooperation as competent, or establishing an entirely new marine authority. The Inquiry's assessment is that a specific authority should be appointed as it is of the utmost importance to designate such an authority in order to be able to pursue vigorous, clear and transparent efforts. The Inquiry has also deemed it important for the marine authority to be able to coordinate its work with the water authorities. Regarding the question of cooperation with other countries, it is also important for one authority to be designated competent for implementation so that it is clear where one should turn to compare results, develop joint action and gather information.

The choice of authority has most stood between the Swedish EPA, SMHI and the National Board of Fisheries, all of whom have important functions in the management of the marine environment. The Swedish EPA is currently responsible for most of the monitoring and commissioning functions which, when fully developed, will be important in the implementation of the MSD. SMHI does not currently have a main environmental policy task and has therefore not be considered as the sole competent authority for this issue. National Board of Fisheries does not have any direct experience of managing the marine environment apart from management of Sweden's fish resources. The Inquiry has considered whether certain functions could be moved from the National Board of Fisheries to a new authority, or giving it new tasks and then designating it the marine authority. The marine authority's remit would then consist of being responsible for operative work within the common fisheries policy including the commissioning of data on species and stocks. The Inquiry did not find this to be the best alternative, however. Reorganising the National Board of

Fisheries is a very extensive task that has not been deemed possible within the framework of this assignment.

The conclusion is, therefore, that the Swedish EPA should be designated the main competent authority for implementation of the MSD as the task is in line with the Agency's normal remit. The Swedish EPA is deemed to have the structure, organisation and position required to be able to shoulder the responsibility as the marine authority. Cooperation with other relevant authorities on implementation should be established in the Agency's instructions. A large number of authorities and other actors will be involved in implementation in different ways.

3.4 Cooperation between intergovernmental bodies and conventions to implement the MSD

Proposal

I propose that Sweden makes long-term endeavours to strengthen HELCOM's position as an intergovernmental actor working to protect the marine environment in the Baltic Sea area.

Sweden should propose that the political process pursued within HELCOM be strengthened by instituting annual high-level meetings between the countries' environment ministers. The long-term ambition should be for the countries' heads of state and government to meet annually to stress the priority of the marine environment issue.

I also propose that Sweden work to establish a committee within HELCOM to control compliance with the Helsinki Convention and the HELCOM Baltic Sea Action Plan (BSAP). The committee shall also work to highlight the results of and shortcomings in the marine environment work of the contracting parties.

A plan for Sweden's action within HELCOM and OSPAR should be incorporated into the general action plan for Swedish marine environment protection in the intergovernmental context, as proposed in this chapter.

3.4.1 Significance of intergovernmental environmental cooperation

Most Baltic Sea cooperation on the marine environment is currently intergovernmental. The exception is fishing, where decisions are mostly taken on the community level. Decisions regarding agriculture are also taken on the community level, but this sector is currently not integrated with the marine environment issue to any greater extent. As regards nature conservation, there are some areas where the decision-making powers are limited for the Member States, through for example the Habitats Directive. The main aim of the intergovernmental agreements is to regulate cooperation between governments in a particular field. Even if all parties to conventions are legally obliged to fulfil their undertakings, there is often a lack of effective mechanisms to guarantee compliance with their obligations. Furthermore, the relationship between international law and national law, which is normally regulated in each country's constitution, is crucial if a specific convention provision is to be invocable before national courts. Conventions on the marine environment are, however, normally designed so that it is in principle impossible to apply them in the national justice system. National adaptation measures and some transposition of the convention's wording into national legislation are hence always required.

Most known sources of environmental problems in the marine environment have been regulated through international agreements. The aim of these has normally not been to force the parties to act in a specific way but to coordinate national efforts and promote cooperation within a certain area. It is in the nature of such agreements that their content is the result of many compromises Most of them have been adopted by unanimous decision and therefore normally reflect the lowest common denominator in the parties' political will. Apart from the in-built weakness that is the result of objectives often being set too low and of the way these conventions are negotiated and adopted, their efficacy is also affected by what powers are vested in their governing bodies.

The Helsinki Convention, which is governed by HELCOM, and the OSPAR Convention, governed by OSPAR, are the intergovernmental regional agreements for the sea areas in which Sweden is included.

3.4.2 HELCOM as an intergovernmental actor

The Helsinki Commission (HELCOM) is an intergovernmental organisation for the implementation of the Helsinki Convention (established in 1974 and revised in 1992) covering nine countries in the Baltic Sea area and the European Commission. The presidency of HELCOM rotates between the countries on a two-year basis. Sweden will be president in 2010–2012. The countries' environment ministers meet within HELCOM but not on a regular basis. The countries' heads of state and government do not meet within the HELCOM framework. Work is mainly conducted in five thematic groups. These are HELCOM MONAS, which monitors and evaluates the state of the marine environment and the effects of implemented actions; HELCOM LAND, which works with issues regarding land-based pollution sources; HELCOM HABITAT, which works to protect nature and biodiversity; HELCOM MARITIME, whose remit is emissions from sea-going vessels; and HELCOM RESPONSE, whose remit relates to measures to protect and alleviate the effects of marine pollution accidents. The work mostly comprises drafting recommendations for environmental efforts in the Baltic Sea, based on information collected on the state of the marine environment over thirty years.

HELCOM works with ecological targets based on a common vision and plays a monitoring role to ensure that the objectives established within the framework of the Helsinki Convention are fulfilled. HELCOM works as a governing body for the Convention, which includes agreements on reducing emissions and restoring the ecological balance of the marine environment. HELCOM also works as an information point for authorities and other actors as regards the situation for the marine environment, the efficacy of various measures and common initiatives which can form the basis of decisions taken in international fora. Guidelines and action plans are established in working groups comprising researchers and representatives of member countries' environment ministries and are adopted at meetings on the ministerial level, which are held as appropriate. HELCOM's work is primarily funded by its members.

No binding agreements are established between the member countries within the HELCOM framework. Instead, addenda to the Helsinki Convention are drafted through general recommendations for environmental cooperation. Critics see this as one of

the Helsinki Convention's major weaknesses. The discussion regarding binding and non-binding undertakings has been discussed earlier in this report, especially in Chapter 1. It is worth mentioning in this context, however, that OSPAR, which is described below, has a clearer and more far-reaching remit under the OSPAR Convention than what HELCOM has under the Helsinki Convention. OSPAR explicitly states that the Commission shall assess whether the parties are following the Convention and the decisions and recommendations adopted thereunder. This shall also be done on the basis of reports from the parties themselves. When appropriate, OSPAR may also decide upon and call for steps to bring about full compliance with the Convention and decisions taken thereunder (Article 23). This is not a question of independent scrutiny, however, since OSPAR has been put together by the contracting parties' representatives.

The fact that the EU is party to most conventions relevant to the protection of the marine environment in the Baltic and North Sea does, however, ensure the content of these conventions is concrete and binding within the parties' domestic legislative systems. The link to EC directives makes it easier for each EU Member State to check how other convention parties are fulfilling their undertakings.

Action programmes

The Baltic Sea Joint Comprehensive Environmental Action Programme (JCP) was drafted within HELCOM in 1992, with the aim of restoring the ecological balance in the Baltic. A total of 132 "hot spots", which had a negative environmental impact on the Baltic Sea, were identified. Since then, a large number of these hot spots have been eliminated, although only a few of them in Russia. The Northern Dimensions Environmental Partnership (NDEP) works to, among other things, reduce the impact on the marine environment from these hot spots.

The countries within HELCOM agreed in November 2007 on a joint environmental action plan, the HELCOM Baltic Sea Action Plan (BSAP). The idea is for much of this action plan to constitute the basis for implementing the MSD on the regional level. The BSAP aims to cement joint principles for measurement, monitoring and analysis of the state of the marine environment. The BSAP

specifies a vision for the Baltic Sea's environment, a number of clear ecological objectives and several operationalised targets. It is built on the principle of peer pressure (i.e. that countries put pressure on each other) rather than on binding decisions. It also highlights a need for large-scale spatial planning in offshore areas.

Reporting

Most international conventions in the environmental field apply some form of reporting system according to which the Member States more or less regularly report the action they have taken to meet the obligations laid down in the convention as well as any problems they have had in doing so. The parties to the Helsinki Convention shall report to the Commission at regular intervals on legal, regulatory or other measures taken to implement the provisions of this convention, its annexes and recommendations adopted thereunder (Article 16). The reporting shall also include the effectiveness of the measures taken and problems encountered in the implementation of the provisions and recommendations. More detailed provisions as to how and when reporting is to be carried out are not included in the Convention. Reporting is not in practice governed by a uniform regulatory framework. Instead, decisions on reporting are taken specifically for the various thematic groups based on needs identified by the parties.

In light of the central role played by the Helsinki Convention and to a certain extent the OSPAR Convention in the governance of the Baltic Sea and adjoining sea areas, there is reason to look more closely at the mechanisms for development and more precise definition of the parties' undertakings. Both conventions have a commission comprising representatives of the member countries. HELCOM's tasks include monitoring implementation of the convention, proposing measures associated with its purpose and with such amendments to the convention and its annexes, as maybe required.

Compliance with the Helsinki Convention

The Helsinki Convention lacks a formal mechanism for monitoring contracting parties' compliance with it. One of HELCOM's duties is admittedly to keep the implementation of the convention under continuous observation (Article 20). The convention does not afford any concrete powers to act against failure to implement apart from proposing various types of measures.

A review of member countries' reporting, carried out in 2003, ascertained that few of HELCOM's recommendations had been fully implemented.[3] The situation was seen as an improvement compared to five years previously. It was also pointed out that, while reporting often provided a relatively good basis for evaluating formal implementation in the form of legal and administrative measures, it can be difficult to establish whether authorities and other parties concerned actually take the concrete measures needed for the recommendations to have an effect. Furthermore, some recommendations are worded so vaguely that it is difficult to assess the extent to which they have been implemented. The content of the national reports also varies a great deal, making it difficult to compare the degree of implementation reached by the various member countries.

As regards the reporting system in the HELCOM LAND working group, it can be ascertained that the reporting format was demanding unnecessary information from the member countries, which has led to a lack of motivation to report in accordance with the adopted system. Simplification and harmonisation of the reporting were highlighted as very important measures. In future, reporting to HELCOM will be coordinated with the countries' reporting to the European Commission to a greater extent.

The BSAP as a basis for implementation of the MSD and the pilot project

The HELCOM Baltic Sea Action Plan (BSAP), adopted by the member countries in November 2007, is seen as an important basis for implementation of the MSD in the Baltic Sea area. The BSAP is made up of agreements and recommendations agreed on by the

[3] HELCOM, Compliance with Requirements of the Convention and HELCOM Recommendations, HELCOM 24/2003, 25 June 2003, p. 1–2.

member countries. Legally, these are of a non-binding nature, insofar as there are no mechanisms for sanctions in the event of non-compliance with the agreements. The BSAP must nevertheless be seen as a clear commitment from all parties in that they have agreed concrete emission ceilings for phosphorus and nitrogen.

The BSAP is based on the ecosystem approach and aims to cement joint benchmarks for emissions and contaminants as well as principles for measurement, monitoring and analysis of the state of the marine environment. This includes, among other things, developing indicators and goals for environmental monitoring and for evaluating implementation. A clear follow-up system based on these indicators will be established. Furthermore, a ministerial meeting will be held in 2013 to evaluate the effectiveness of the national programmes. Depending on the results of this evaluation, the action plan and indicators will be modified for greater goal achievement. A special implementation group has been appointed to ensure the goals in the BSAP are achieved.

The overall aim of the BSAP is to achieve good environmental status by 2020. National programmes of measures shall have been developed by 2010. All measures must be implemented by 2016, though many by an earlier date. The measures to be implemented are determined based on, for example, the emission ceilings for phosphorus and nitrogen and the burden-sharing agreed on by the member countries. Measures for greater phosphorus treatment, restricted use of hazardous substances, establishment of principles for marine spatial planning, creation of more protected zones and targets for commercial species (which must be negotiated within the CFP) are other areas on which the countries have agreed within the framework of the BSAP.

Cooperation with Russia

As an arena for political negotiation on specific measures, HELCOM has found it difficult to proceed past the resolution stage. This depends on a number of factors (highlighted in Chapter 1.5), but one obvious factor is Russia frequently adopting a negative stance on commitments to greater environmental concern. Russia is also sceptical about being involved in cooperation projects that have a clear EU dimension. Negotiations between Baltic Sea countries often start with Russia pointing out that the country is

not bound by commitments made within the EU. HELCOM can scarcely therefore function as an arena for direct implementation of EU directives and recommendations, but must achieve agreements that to some extent run parallel to these.

All countries in the area agree that the relationship to Russia, to which HELCOM helps to maintain, is particularly central regarding cooperation on marine environment issues in the Baltic Sea area.

3.4.3 OSPAR as an intergovernmental actor

A regional agreement which in many respects is similar to the Helsinki Convention is the Convention for the Protection of the Marine Environment of the North-East Atlantic, the OSPAR Convention. All the coastal states of the North Sea, in addition to a few other states, are party to the OSPAR Convention. The EU is also party. As is the case with the Helsinki Convention, OSPAR is applicable to the internal waters of the parties as well as to the territorial sea and other parts of the sea that fall within the parties' jurisdiction and which are within the geographical borders of the convention. There is a certain amount of geographical overlap between the two conventions. Both are applicable to parts of Kattegat and the Belt Sea. The OSPAR Convention is also applicable to Swedish waters in Skagerrak. Both conventions have a broad impact and contain regulations on many types of activities that may damage the environment. It is important to note, however, that neither of the conventions regulates fishing as such.

OSPAR has similar competences and undertakings to HELCOM. A crucial difference is, however, that OSPAR can, in addition to recommendations, also adopt decisions that are formally binding for the parties. Both decisions and recommendations should be unanimously adopted. If unanimity cannot be reached, the Commission may, however, decide on such instruments by a three-quarter majority. A decision becomes binding two hundred days after adoption for the parties who have voted in favour of it. Such a party may, however, within this period notify the Convention's executive secretary in writing that it cannot accept the decision and will then not be bound by it.

3.4.4 Analysis and conclusions

The MSD makes several references to cooperation with existing regional organisations. Arenas like HELCOM and OSPAR have an important role in promoting cooperation and dialogue between the member countries, which also constitutes a form of control over what they achieve. HELCOM can help to improve national implementation processes. Based on an ecosystem perspective, it is clear that such a relatively small sea as the Baltic cannot be treated in the same way as a collection of national areas. Instead, it constitutes in most essential respects a single unit.

If HELCOM and OSPAR, in their roles as intergovernmental organisations, are to be able to act as a support and driving force for EU Member States when implementing the MSD, certain changes need to be made to them. Starting in 2008, OSPAR will undergo an organisational review. HELCOM cannot at present be seen as the optimum organisation for a model environmental convention. Its structure and mandate reflect the member countries' approach to environmental problems and environmental agreements in the early 1970s. When the convention was updated in 1992, HELCOM's organisation and powers were not changed. Bearing in mind that the Helsinki Convention is the only environmental agreement of legal standing to which all the Baltic Sea countries are party, every time the legal protection of the Baltic Sea is strengthened, it should happen within the framework of this convention. Effective joint management of the Baltic Sea's environment therefore requires HELCOM to be given a new and stronger role. Although its organisation is in need of strengthening, it is primarily its mandate and powers that need to be reinforced. Both these aspects complement each other and must be dealt with in parallel.

Regarding its organisational structure, a strong political body should be established within HELCOM on an annual basis for the member countries' environment ministers. The environment ministers don't currently meet on a regular basis within HELCOM. The aim should be for the countries' environment ministers to meet once a year to further increase the political significance of the issues and provide legitimacy for powerful measures. The purpose of this is also to broaden cooperation, insofar as marine environment issues are affected by several sectors, and through this create the conditions for better sector integration.

Although it would be positive for the body to have a mandate to make legally binding majority decisions, it seems currently unrealistic to hope that all member countries, especially Russia, would accept such an arrangement. One might imagine that a decision-making process such as the one applied by OSPAR would be a more reasonable alternative to propose for a transitional period compared to the current procedure. Sweden's approach should be to initiate proposals for organisational changes at a suitable juncture, although at the same time base them on a realism that accepts such changes must be allowed to take time as many countries are involved.

An important component of modern environmental conventions is that their governing bodies include a special committee for supervising compliance. Such a committee receives reports on the failures of member countries to meet their obligations. The powers of these committees vary from publishing reports ascertaining such failures to imposing sanctions.

For the decisions taken by HELCOM to be correctly implemented, a special unit – a committee for compliance control – is required with representatives from all member countries and with the competence to receive complaints not only from member countries and their authorities but also from the general public throughout the Baltic Sea region. Even a committee report ascertaining that a member country has failed to fulfil its undertakings would be enough to get the Baltic Sea countries to implement more fully what they have committed themselves to in the convention. To start with, Sweden should strive to bring about such an organisational development within HELCOM. In the longer term, it is important for Sweden to also work to bring about more fundamental changes to the Helsinki Convention.

3.5 The Baltic Sea as a pilot project for marine environment work

Proposal
I propose that Sweden take a number of initiatives to improve marine environment work within the Baltic Sea through deeper cooperation with adjoining countries. These initiatives are aimed at greater inter-country cooperation for the implementa-

tion of the MSD and to supplement the measures specified in the BSAP. This should be done within the framework of a pilot project, which, in the MSD, is specified as a way to improve implementation in especially vulnerable sea areas. It is particularly important to obtain the support of the European Commission in this work.

Sweden should work to ensure that the pilot project is focused on integrating marine environment issues in the agriculture and fishing sector to a much greater extent than is the case today. Within the pilot project, the countries should therefore cooperate to achieve common standpoints on European agricultural and fisheries policy, with the aim of amending these towards greater regionalisation and environmental concern. The pilot project should also be oriented towards measures where models for compliance control of agreements are tested in project form. Sweden should also initiate cooperation with other Baltic Sea countries to examine which areas and/or sectors are well suited to concrete, inter-country management measures.

I further propose that Sweden works to ensure an intergovernmental fund is established aimed at contributing financial resources to projects and measures to improve the Baltic Sea's environment. The fund shall contribute to better coordination of marine environment efforts made in project form and of the marine environment-related investments made with the support of investment banks. It should also be possible for the fund to provide support for developing project ideas for environment investment projects that meet the requirements for loans from investment banks and grants from private foundations. HELCOM should administer this fund and appoint a special committee for this purpose. Sweden should also work to ensure that funding from the European Structural Fund Programme for Objective 3 Territorial Cooperation (Interreg) for the Baltic Sea region, and parts of the structural funds for the EU agricultural and fisheries policies, are channelled to this fund.

I also propose that Sweden endeavours to ensure that the responsibility for implementation of the pilot project is coordinated within HELCOM.

3.5.1 The implications of a pilot project

As previously mentioned, the MSD provides the possibility to create pilot projects for more rapid establishment of programmes of measures in marine areas in need of emergency measures, and to implement stricter protection measures. Accelerating implementation of the MSD by establishing such programmes is regarded in several respects with scepticism by several Baltic Sea countries, in that the timetable for implementation was brought forward to 2020 in the negotiation process. However, the timeline as regards several of the introductory processes listed in the MSD could be shortened without the goal of achieving good environmental status by 2020 having to be formally reformulated.

Sweden has been making active endeavours to have the Baltic Sea designated a pilot project. The other country which takes a positive view of the pilot project idea is Finland. Other countries have expressed no definitive opinion on the proposal, apart from Denmark and Estonia, who have expressed some scepticism. Denmark feels that the European Commission should not be involved in the work since this would set demands which the countries might not be able to live up to. It believes instead that the pilot project will have a more flexible focus if it is managed by HELCOM. Poland is of the opinion that a pilot project with the aim of accelerating implementation seems unrealistic. Both countries do not however intend to stand in the way of the establishment of a pilot project as long as the majority of the countries around the Baltic Sea are positive to the proposal.

Integration between sectors and countries shall be the essential aspect of the pilot project. The pilot project should focus on how marine environment issues can be better integrated into the fisheries and agricultural sectors, since these areas are only dealt with very briefly in the BSAP. In relation to the MSD, the pilot project is about dealing with more segments in the directive than is the case with the BSAP, with the aim of achieving good ecological status in the sea areas by 2020. One objective should be to regionalise agricultural and fishing issues to a greater extent within the EU and to afford the Baltic Sea countries greater scope to design regulatory frameworks and measures in accordance with the prevailing conditions and prerequisites in the Baltic Sea area. A pilot project should therefore be more than a programme of measures. Since none of the measures in the BSAP are legally binding for the

countries, one added value aspect could also be found in focusing the set-up of the pilot project on the measures implemented and assessing these results in relation to the established objectives. Cooperation between the countries can also contribute to developing supervision methods to ensure that results are obtained. Focus should otherwise be on planning and zoning of the sea areas, which constitute relatively new areas of cooperation.

3.5.2 Financing of measures in the pilot project

There are currently more economic means available than ever before for protection of the marine environment in the Baltic Sea area. This is however tied to several organisations and actors with their own policies and agendas. Activities are often financed via the central government budget. An important issue for implementation of a pilot project and the BSAP is how the work can be suitably financed bearing in mind the current situation. Much of the work must be financed via the central government budgets of Sweden and other countries, whilst measures of a more experimental nature can be financed via the EU.

The following resources for intergovernmental marine environment work are currently available:

General national financing of intergovernmental marine environmental work

Intergovernmental marine environment work is partly financed via the central government budget, mostly through various projects at the Swedish EPA. It is very difficult to estimate how much money is available here. The specific item in the environmental budget for international and regional environmental cooperation currently amounts to SEK 72 million. Very little of this is thought to go to marine environment initiatives.

Nordic Council of Ministers

Activities within the Nordic Council of Ministers are financed via the Swedish Ministry for Foreign Affairs. Cooperation in the environmental field in the Nordic Council of Ministers is intended to complement work done within the EU, HELCOM and OSPAR.

Nordic environment ministers meet three times a year to draft guidelines for Nordic environmental cooperation. They follow a four-year work programme, including the Nordic Environmental Action Programme, which is linked to the work done in the EU and to other international processes. The aim of the Action Programme is to cement common principles for measuring, monitoring and analysing e.g. the state of the marine environment. A special Arctic strategy, the Nordic strategy on climate change and contaminants in the Arctic, has also been developed. The NEFCO financing programme is linked to the Nordic Council of Ministers and primarily focuses on Russia. The programme allocates risk capital to projects that e.g. focus on the marine environment. The investment fund within NEFCO has over EUR 113.4 million at its disposal every year and is owned by the Nordic countries. The Nordic Council of Ministers has increased its presence in the Baltic Sea area considerably through the establishment of regional secretariats which have project funding tied to their activities. This funding, around EUR 36 million, is allocated through official announcements. Around a quarter goes to environmental projects.

Northern Dimension

The Northern Dimension is a partnership concerning the relations of the Baltic Sea area and the Arctic region (including Norway and Iceland) with regions in north-west Russia. Northern Dimension is primarily a discussion forum for EU Member States in official Baltic Sea region and north-west Russia. The policy highlights several problems and potential solutions that are specific to northern Europe. Area-specific environmental challenges are among the things defined. Projects that aim to fulfil the policy's goals have, until now, primarily been financed via the Interreg Programme or the European Neighbourhood and Partnership Instrument (ENPI). Only within the framework of the environmental partnership does Northern Dimension control its own funds. Financing is provided via the European Bank for Reconstruction and Development (EBRD) and the member countries. The projects are particularly focused on the disposal of radioactive waste, but also on emission problems. The Environmental Partnership within Northern Dimension is partly financed through the Swedish central government budget. During the period 2002–2008, Sweden has con-

tributed SEK 160 million to this intergovernmental fund. All in all, about SEK 850 million has been distributed from the fund during this period, where the other primary contributors, along with Sweden, have been the EU, Russia, Germany, Finland and Denmark. This funding has co-financed 12 projects, most of which have concerned the marine environment to some extent.

Swedish International Development Cooperation Agency (Sida)

Sweden has funded some of the projects in the Northern Dimension Environmental Partnership bilaterally through Sida at a cost of about SEK 400 million, mostly for the construction of Russian treatment facilities.

Sida's Baltic Sea Unit has an appropriation from the Swedish Ministry for Foreign Affairs of about SEK 18 million for Baltic Sea cooperation on for example the environment. About two million of this is distributed to mostly local cooperation projects for marine environment measures in the Baltic Sea area.

The EU's cohesion policy/Objective 3 Territorial Cooperation (previously Interreg)

The aim of the cohesion policy, the EU's policy for regional development, is to contribute to economic and social cohesion within the EU. The main purpose is to reduce regional differences. The structural funds, the means to achieve this, constitute just over three-quarters of the EU budget. The structural funds finance long-term programmes within the area of economic and social cohesion. The European Regional Development Fund (ERDF), one of four regional funds and the smallest, aims to redress the regional imbalance in the EU. ERDF finances initiatives in infrastructure, employment, local and regional development, etc. Objective 3 Territorial Cooperation is one initiative in the area. There is also a cohesion fund mainly dedicated to the new EU Member States. The funding is aimed at environmental projects and trans-European networks for transport infrastructure.

During the programme period 2007–2013, there are 30 or so programmes for the Baltic Sea area worth a total of around SEK 20 billion. Programmes that concerned Sweden are partly border

cooperation programmes in which most Swedish counties are entitled to participate, and partly transnational programmes for larger, coherent areas including the whole of Sweden. There are also interregional programmes for networking and exchanging experience throughout the EU. "The Baltic Sea as a common resource" has about SEK 3 billion in its budget and is the largest of the Baltic Sea programmes. As part of the programme, about SEK 850 million is being allocated to marine environment measures during the period.

During the programme period 2007–2013, national strategies for regional cohesion are complementing EU strategies. In Sweden, this has resulted in the Government drafting "A national strategy for regional competitiveness, entrepreneurship and employment" which constitutes a clear link to the EU's prioritisation of economic and social cohesion policy.

Other EU funding

The MSD states that the European Commission can in some way provide supportive action to the development of pilot projects, and that EU funding instruments should be utilised to implement them. There is currently no information as to how much this might be in financial terms.

Nordic Investment Bank (NIB)

NIB gives credit to private and public projects aimed as promoting economic cooperation between its member countries. NIB can also take part in new investments in its member countries. Areas in which the bank grants credits include infrastructure, energy initiatives, water supply, waste management and the environmental sector, both private and public. The NIB set up in January 2008 a new loaning instrument worth EUR 500 million to finance projects aimed at the implementation of the BSAP. The bank is jointly owned by Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden.

3.5.3 Analysis and conclusions

The efforts with the pilot project is raising the level of ambition of the Baltic Sea countries and uniting them around the development of a number of specific measures related to implementation of the MSD. The Inquiry has considered whether these measures should primarily be focused on implementation of the BSAP, but has found that the pilot project approach should be wider. The BSAP constitutes an important but inadequate foundation for marine environment protection. For example, it contains few measures for biodiversity and far too few measures for agriculture and fishing. The focus areas that should be part of the pilot project initiative are discussed in several other chapters in this report. A list of the specific measures deemed to be the most important to cooperate on in the Baltic Sea area is given below.

Fishing

- Seek to achieve regional agreement on the need for joint action to increase regionalisation of the European Fisheries Policy and to show much more environmental concern in the practical application of the policy (see Section 3.6).

Agriculture

- Seek to achieve a consensus on agriculture and eutrophication and on general issues of principle (see Section 3.6).
- Based on this consensus to work to ensure change is effected to the European Agricultural Policy towards greater environmental concern and regionalisation (see Section 3.6).

Planning and zoning

- Work to bring about zoning of sea areas on a community basis and as part of this work to promote the establishment of protected areas of a transboundary nature (see Chapter 4).

Compliance control

- Establish a committee to assess compliance of the Helsinki Convention and the BSAP (see Section 3.4).
- Develop cooperation on data standardisation.
- Develop joint methods of estimating the cost of action and the cost of no action.
- Develop joint supervision support.

Other measures

- Development of models as a basis for decision-making on the local level.
- Create a joint digital database of the sea-bed. Inter-country cooperation to compile deep-sea data so that they are standardised and collected in common portals.
- Work with the hot spots identified by HELCOM.
- Establish a joint fund for the financing of measures within the pilot project which will mean that cost efficiency is assessed on an interregional basis rather than a national basis (see below).

The financing issue

As regards financing of initiatives, the current situation with a large number of funders of marine environment work is not the best. Under the BSAP, funders should act so that their prioritisations complement each other, or that they coordinate their efforts as far as possible. The investment banks that finance projects in the Baltic Sea area should coordinate their activities in future in order to help implement the BSAP. Within the framework of a pilot project, models for coordinating financing should therefore be developed and tested.

A new financing system is needed in order to improve the coordination of marine environment work in the Baltic Sea and to work systematically and cost-effectively as regards the development of marine environment management. Sweden should therefore propose an intergovernmental fund for Baltic Sea environmental coop-

eration to set up. Through such a fund, existing funds can be invested where they will be the most cost effective with regard to effect on the environment. Initiatives for the pilot project and special measures, as detailed in the BSAP, should receive special consideration by the committee when announcing the availability of funding and assessing applications. Based on a pragmatic interpretation of the common good in a Baltic Sea context, resources could for example be allocated to countries where they have the most benefit, which is especially relevant regarding the marine environment issue.

The EU's territorial perspective and its principles of regional cohesion are gradually becoming increasingly integrated in the marine environment field, the BSAP being a prime example. Another example is the marine spatial planning initiatives, the need for which is highlighted by the European Commission in the policy document regarding European maritime policy and which the Member States are now starting to develop. There is therefore no given reason why the EU should manage structural fund financing for project development regarding the marine environment field in the future. The management can to good effect, be decentralised and be included as part of a common Baltic Sea fund. Some of the funding for the agricultural and fisheries policies could, in addition, be channelled to this fund which is to support marine environment work in line with specific regional problems and conditions. The regionalisation of the agricultural and fisheries policies, as advocated by the Marine Environment Inquiry, presupposes a redistribution of the EU's support mechanisms. Other marine environment funders should, at the same time, consider channelling funds to the intergovernmental fund so that a coherent programme can be created to enable both fulfilment of the objectives of the BSAP and implementation of the MSD. Previous experience indicates the need for a mechanism that supports the implementation of international environmental agreements. In the view of the Inquiry, a fund for the Baltic Sea is necessary in order to facilitate implementation of the pilot project and help even out differences in the capacities of countries to take action.

A special committee should be established within HELCOM to manage and administrate the fund. In order for HELCOM to be able to administrate the fund, it needs to broaden its competence. A reference group should for this reason be linked to the committee, consisting of actors from the various organisations that con-

tribute to the joint fund. The European Commission should be included in the HELCOM fund committee to ensure that the fundamental principles of agricultural, fisheries and cohesion policy are upheld, as should other representatives who work in accordance with specific policies and towards specific targets in this context. HELCOM also needs to establish a project-oriented department within its secretariat in order to deal practically with the task.

The conditions should also be in place for investment banks to be able to coordinate their activities with the proposed fund in order to bring project funding into line with long-term investments. Funding through the Nordic Investment Bank will furthermore only become relevant when there is a creditworthy project with an identifiable borrower. These conditions have been difficult to fulfil, especially in Russia. In this context, a clear support function to aid development from project idea to completed project proposal would be needed. At an initial juncture, the proposed intergovernmental fund should be able to give financial support to convert project ideas into environmental investment projects that fulfil the requirements for borrowing from banks and grants from private foundations. It may also be necessary to support local and regional actors.

3.6 Swedish action plan for regional cooperation on the Baltic Sea environment

Proposal
I propose that Sweden adopt a plan for national action within the relevant sector areas to promote intergovernmental cooperation on marine environment issues. This action plan should form the basis of Sweden's work within the EU, HELCOM, the pilot project and other processes and organisations. Its primary objective should be greater integration between the EU environment, fisheries and agricultural policy areas. It should assist in coordinating stakeholders and sectors and give the work additional transparency. It should include a timeline which indicates when it is important to act within the framework of various policy areas and organisations. It will be an "actor-related" addition to the marine strategies which Sweden is obliged to produce under the MSD. For example, the opportunities arising

from Sweden's EU Presidency during 2009 should be used to push the marine environment issue and Baltic problems higher up the European agenda. The EU strategy for the Baltic Region which the EU Commission is currently developing will also be an important basis for future work.

I propose that the Government be responsible for drafting and disseminating the action plan and that it should issue an annual report on the progress of the work in general as well as on how the negotiating processes have turned out nationally, inter-regionally and internationally.

3.6.1 Areas for common action

The MSD and the BSAP have given the marine environment issue greater political importance than ever before. The Inquiry's assessment is that it is nevertheless very difficult to obtain an overall view of the work that is being carried out within and among countries, as well as of the political negotiations that form the basis of the positions adopted and the results achieved. At the same time, the constantly voiced ambition is to integrate environmental issues more closely with the agriculture and fisheries sectors (c.f. the Cardiff process), but progress has so far been limited. A number of parallel processes are ongoing, nationally and internationally, in which it is possible for Sweden to take action with a view to increasing integration between these sector areas. This work must take place in broad national processes before it is undertaken at the intergovernmental level. The Government's work as regards integration of the sectors needs to be made more visible. All relevant social sectors should at an early stage and in accordance with already determined guidelines be involved in developing the Swedish standpoints. The result should take shape as action plans for each individual sector, including descriptions of how the work is to be carried out in relation to the marine environment policy.

What is thus required is a coherent action plan for Sweden's marine environment work within the framework of intergovernmental processes and organisations. The action plan should contain timelines for political action with a view to achieving better coordination in the marine environment issue among the sectors concerned. A strategic model of that kind for marine environment work is used in the UK. The timeline should contain mechanisms

for consultation, winning support and negotiating on important decision processes, first and foremost in the EU and HELCOM. The action plan must facilitate consultation with local and regional actors and with non-governmental organisations (NGOs).

Below is a brief description of the policy areas, processes and organisations within which it is most important for Sweden to develop a clear national standpoint and propose changes by means of the work on action plans. A survey of the timings within which the Government should work strategically is also outlined below.

3.6.2 Consideration of the marine environment in the European Common Fisheries Policy (CFP)

The conservation of fish resources is essential to a sustainable development of the marine environment. In Sweden, the National Board of Fisheries (to some extent together with the Swedish Environmental Protection Agency) is responsible for ensuring the maintenance of species stocks and their functions within the ecosystem. Under the Common Fisheries Policy (CFP) however, the resource conservation aspect and socioeconomic objectives currently have equal priority. There has therefore arisen a conflict over resources, in which the conservation aspect has hitherto drawn the short straw. Sweden has also a national fisheries policy that applies in internal waters and to some extent in the territorial sea. In other respects, EU membership obliges Sweden to apply CFP regulations.

The CFP is an instrument for the management of fisheries and aquaculture. The European Commission has formulated the objective of this policy area as being "primarily to bring about sustainable exploitation of the fisheries resources, as well as to overcome the imbalance between natural resources and the capacity of the EU fishing fleet". The objective of the policy is stated as being "to reinforce the competitive strength and profitability of the fisheries industry, to promote environmentally friendly fishing and environmentally friendly methods of production, to support those who work within the fishing industry and to promote sustainable development in fishing regions". There have been EU common measures within the fisheries sector since 1983. In more recent times fisheries policy has been the object of strong criticism, both within Sweden, on the part of the National Board of Fisheries, and also

from the European Commission, as well as from NGOs. In a report by consultants commissioned by the Commission, about the functionality of this policy sector, attention is drawn to the very poor consideration for the environment shown within it.[4] Further, the Ministry of Finance commissioned a consultants' report examining the Swedish fisheries.[5] In this report, too, the authors are critical towards the present structure of the CFP.

It should be mentioned that Sweden has striven to highlight the resource conservation aspects during international negotiations, but has not made as much progress as desired. The Swedish view is also that greater heed should be taken of the scientific advice in this sector.

The allocation system by means of fishing quotas is central to the CFP. Each Member State is granted a certain quota and subsequently has responsibility to manage it, as well as to carry out inspections of the quota up-take. Each Member State must also draw up a national strategic plan for its fisheries. This plan must contain an overall strategy vision for the Member State as regards the development of fisheries and aquaculture and must embrace all parts of the Common Fisheries Policy.

The European Fisheries Fund has a total budget of approximately SEK 35 billion for the period 2007–2013. The chief objective of the Fund is to give financial support to the European fishing industry. Objectives for related policy areas within the EU, such as the environment and employment, are reported to be better integrated in the present fund period, compared to previously. Funding is available to all sectors within the fishing industry. Member States are allocated a certain sum and they decide themselves how they wish to share out these funds among the various main targets. A special form of support within the framework of the Structural Funds is devoted to measures to counter environmental pollution in the fishing regions.

Since 1 January 2008, DG Maritime and Fisheries Affairs has been organised according to geographical areas. Regionalisation was introduced at the beginning of 2006 when Regional Advisory Councils (RACs) were established for each geographical marine

[4] Sissenwine Michael, Symes David (2007) Reflections on the common fisheries policy. Report to the General Directorate for Fisheries and Maritime Affairs of the European Commission.

[5] Brady Mark, Waldo Staffan (2008) Att vända skutan – ett hållbart fiske inom räckhåll [Turning the ship around – sustainable fishing within reach] Ministry of Finance: Report to the Expert Group on Environmental Studies 2008:1

area. The Councils consist of representatives of industry, environmental and consumer interests. Their task is to put forward proposals and standpoints about the management of the fish stocks to the European Commission. The objective of the reform is to bring about a better match between quota up-take and the specific regional conditions.

The CFP runs for a 10-year period from 2002 onwards. In 2012 the European Commission is to submit to the Council a report on its functioning, based on assessments from the Member States. There is no present requirement that the policy should then be revised and that will depend on the outcome of the review No political analysis has been made of what attitude Sweden should adopt as regards the future direction of the CFP following the reforms carried out in 2002.

Within the CFP, recovery plans are being drafted for the restoration of fish stocks in danger of extinction. Protected zones and temporary bans on certain types of fishing are another element of the policy. In the Baltic Sea, there are three no-take zones where fishing is banned during the period May–December. The National Board of Fisheries has recently put forward proposals for a further six no-take zones to be established in Swedish marine areas during 2010. The most important environmental measures in fisheries management, introduced in the 2002 reform of the CFP, were the limitation of the fishing effort, catch limitations and technical measures.

The measures that have so far been taken to improve the marine environment are nevertheless judged by the majority of experts to be inadequate. The CFP has not been a sufficiently powerful instrument to protect dwindling fish stocks. While it is no longer permitted to provide financial aid that increases fishing pressure, fish stocks in several areas are impoverished and limitations have been imposed too late. As mentioned above, powerful opinion is beginning to highlight the problems of the CFP and to propose measures for improvements with regard to environmental concern. The Consultants' report to the European Commission mentions the need to operationalise the CFP better, to apply the ecosystem approach fully, to make the management process more transparent, to consider strategically the need for research and to reduce the Council's influence on practical issues within the fisheries policy.

3.6.3 Consideration for the marine environment within the European Common Agricultural Policy (CAP)

The state of the marine environment is to a large extent dependent on activities that take place on land. Agriculture, which is regulated through the European Common Agricultural Policy (CAP), causes extensive water pollution through nitrogen and phosphorus run-off. The purpose of EU legislation on nitrates is to reduce these sources of water pollution and to prevent further pollution. Effective methods nowadays exist for the reduction of nitrogen emissions, but for a number of reasons they are difficult to implement. The CAP has an impact on the conditions for achieving some of the Swedish environmental quality objectives, such as: A Varied Agricultural Landscape; Zero Eutrophication; A Non-Toxic Environment; A Balanced Marine Environment, Sustainable Coastal Areas and Archipelagos; Flourishing Lakes and Streams; and A Rich Diversity of Plant and Animal Life. The CAP has undergone changes during the most recent programme periods, in which environmental improvements have been brought about, but the measures are not adequate to improve the state of the marine environment.

In June 2003, EU agriculture ministers reached agreement on a new reformed CAP. The reform came into force in January 2005, but in certain respects was not implemented by the Member States until 2007. In a number of countries it has still not been possible to implement the reform. This policy sector is renegotiated as necessary and has no specific time-frame. Since the reform, the CAP has been divided into a market regulation component and a structural and regional policy component for rural development. The common market is the dominant component and entails free movement for agricultural products within the EU. The market is based on three principles: common prices, community preference and common financing. Through common prices, the EU guarantees farmers a minimum price for their products independent of the market price. Community preference requires that EU products must have preference on the market over those produced in non-EU countries. Common financing is carried out via the EU budget. A structural fund, managed by the Commission, provides support for agriculture.

The fundamental part of the reform is the 'decoupling principle'. This principle means that the support for farmers is decoupled

from the quantity they produce. From the EU point of view, the purpose is to adapt agriculture to the market by reducing overproduction. This CAP reform means, however, that the Member States themselves may decide whether to retain the link between the support and the production of beef and cereals (quotas), which is regarded as having negative environmental effects since it probably results in higher beef production thereby increasing nitrogen load. Lower production of course means an environmental gain per se, but in time production will increasingly be set by the world market price – whereupon production is expected to rise once again. EU Member States have made an international declaration to cease export subsidies for agricultural products. EU agricultural production will therefore slowly approach the world market price during the period 2010–2013. Several countries have already noticed that adaptation to the world market price is driving the agricultural sector towards increased production, which is often identical with a negative environmental impact.

Some of the reforms that were introduced in 2005 apply 'cross-compliance' conditions. That means that producers have a right to support payments only if they satisfy a number of norms, including environmental norms. Expenditure on market support and the disposal of surplus production has fallen considerably, but expenditure on direct support in the form of, for example, environmental protection, animal protection, food security and food quality has increased. Member States must devote at least 25 per cent of their budgets for rural development to efforts to improve the environment and the countryside. Rural support thus has a distinct environmental component. In Sweden, approximately 80 per cent of these support payments are allocated to measures to improve the environment.

Expenditure under certain headings of the CAP (for example, rural development) is partly financed by the Member States since national and regional characteristics must be taken into consideration. The majority of the measures are nevertheless common to all Member States and are governed by common rules. Total expenditure on the CAP (market measures, direct support and rural development) is approximately EUR 53 billion per year. That corresponds to approximately 40 percent of the total EU budget, but the proportion is steadily reducing. Within the agricultural sector, the Member States have been permitted to develop many rules of their own. Sweden has often elected to adopt more far-reaching

regulations than other countries. The EU sets only the lowest acceptable level of regulation. Sweden has, for example, adopted more stringent rules for animal transport, animal health, run-off and nitrates. Local limitations are also permitted and have been introduced in, for example, the county of Halland.

In November 2007 the European Commission issued a Communication about a CAP "health check". Its purpose is to review the effects of the new support payments, in order to determine any adjustments that may need to be made. The next step after the health check will be a review of the EU budget, to take place in 2009. The CAP is mentioned as a sector that the EU Commission will then examine particularly closely.

Swedish priorities are that the CAP should in future be governed by free trade and the market, with support being directed to collective benefits. Sweden wishes to see the complete abolition of quotas, which can currently be bought and sold within the Member States. The national standpoint is in general that environmental concern should be better integrated within the CAP. There is nevertheless at present strong political opposition from a number of EU Member States to making further changes in the CAP, because of their far-reaching economic consequences. A number of the new EU Member States in the Baltic Sea area are at present undergoing a structural conversion process, through which agriculture is being rationalised, but the changes are being undertaken over a very long time. There is no region-specific forum within the CAP in which Member States can discuss issues about geographically related problems and possibilities. Representatives meet in other international organisations and in informal groupings, for example within the framework of informal Nordic-Baltic cooperation. Such meetings present an opportunity to put forward proposals for subjects to be dealt with at Council meetings.

3.6.4 Other areas for cooperation

Intergovernmental regional cooperation in the environment sector is in progress in a number of small fora and organisations relating to the Baltic and the North Sea, e.g. CBSS/Baltic 21 (see below) and the Barents Council. At local and regional level, there are also several bodies working independently, in a policy-oriented and practical way, on environmental issues among regions and munici-

palities in various countries. Cooperation at the local and regional level will become more and more important in the implementation of e.g. the BSAP. As regards international organisations and processes, it is primarily HELCOM, CBSS and the EU Baltic Strategy that are of strategic relevance for future marine environment work, and they should thus also be included in the combined strategic development work via the action plan for marine environment issues.

The Council of the Baltic Sea States (CBSS)

The CBSS is an overarching political forum for international cooperation in the Baltic Sea region. Eleven countries in the Baltic Sea area (plus Norway and Iceland) are members, as is the European Commission. The CBSS sets up common political targets within specific sector areas and produces action plans for them. Cooperation is undertaken in the economic, democratic, core security, trafficking and energy sectors, etc. The organisation also initiates projects and serves as a forum for the exchange of ideas on regional development. Chairmanship of the CBSS rotates among Member States on a six-monthly basis. The Council consists of the foreign ministers of the member countries. The organisation consists of a number of working groups and a secretariat. The organisation has only a small budget, chiefly to cover the cost of the secretariat. Common activities by the CBSS are instead financed by the member countries. Individual contributions to projects are sometimes given by member countries. The environment is currently not a priority area within the CBSS. In the present situation only the Baltic 21 network, which forms part of the CBSS, directly handles environmental issues.

Baltic 21 can be described as a promotional organisation for sustainable development within a number of sector areas in the Baltic countries. The areas in focus are agriculture, energy, fishing, forestry, industry, tourism, transport, education and physical planning. Several of these sectors have links with the marine environment, but do not promote a specific marine environment perspective. Activity comprises sector-specific work that is undertaken in working groups, and meetings between representatives of various ministries from all the Baltic countries. No special funds are available. The activity aims instead to promote, stimulate and persuade

different actors in the various countries to initiate common projects of an intersectoral nature. The CBSS is undergoing organisational changes in the period up to mid-2008, in which the direction and structure of the sector areas, as well as their organisation, are to be determined at a meeting of heads of state and government. The proposed new organisation is that it should serve to provide political support for five sector areas, including the environment. It seems probable that the CBSS will remain as a political organ since that is what the majority of member countries want. Sweden has, however, expressed the view that it should be given a more practical and less politically directed function. The issue of a CBSS contribution to the implementation of the BSAP is being discussed in connection with the reform. The subject areas covered by Baltic 21 will probably be more tightly defined, as it currently has a rather broad approach.

EU strategy for the Baltic Sea region

An EU strategy for the Baltic region is now being produced by the European Commission and is to be presented at the latest by June 2009. It is foreseen to be adopted during Sweden's Presidency of the EU in the autumn of 2009. The Swedish Government is driving the work forward and has contributed background material for the strategy. The strategy aims primarily to put greater focus on region-specific Baltic issues within the EU. Sweden has formulated two main aims for it: "To meet the acute ecological challenges to the Baltic" and "to promote deeper integration and increase competitiveness in the Baltic region". The strategy aims also to illuminate the way in which ecological challenges can be handled through EU policies and measures and will constitute a basis for prioritising possible projects. The strategy is further envisaged to contribute to the adoption of strong measures at the EU level to implement the BSAP.

3.6.5 Analysis and conclusions

In this chapter several areas have been mentioned, within which Sweden should work actively to influence and change policy areas and organisations. Sweden should work in the long-term for

changes in the Common Agricultural Policy and the Common Fisheries Policy, to ensure that marine environment aspects are taken into account in the fundamental mechanisms of these policy sectors. As regards the CAP, environmental concern is reactive rather than proactive because the support mechanisms only affect the environmental aspect indirectly and through rural programmes. Furthermore, the impact of agriculture on the marine environment is altogether too lowly prioritised in discussions on the future of the CAP. Therefore a national action plan to develop and reform this policy area should be produced. It should be a suitable point of departure also for seeking increased regional consensus within the Baltic Sea area as regards the impact of agriculture on the marine environment and what the consequences should be for the future shape of this policy. The Marine Environment Inquiry advocates therefore that Sweden should work to reshape the CAP in line with the ecosystem approach, and that the policy area, as a stage in this process, should be given a regionally based foundation for the support systems. Account can then also be taken of the different environmental conditions in the marine regions. At present, eutrophication has a particularly negative impact on the Baltic Sea, but it should be possible to alleviate it through a new arrangement for support systems, in which specific needs can be taken into consideration.

There should be a similar process as regards the CFP. The focus should be, in time to achieve regionalisation of the policy, to match the division into marine regions specified in the MSD.

As regards the new EU Maritime Policy, there are today certain gaps that perhaps can be filled in future, depending on political will and growing consensus on what a maritime policy should include. Since development of this policy is at an introductory stage, there are at present good opportunities to influence its future direction. Fishing is an area that is completely omitted because there is a common policy, and the environmental aspect is in general likewise played down. Nor can the fact that the MSD is to constitute the environmental pillar of maritime policy be regarded as of much help in this context because these sectors then remain separated. Issues that directly affect shipping, which must be regarded as the most important industry in this context, are also played down. Nor are regional dimensions included in the maritime policy. Sweden should work for a much clearer integration of the environmental aspect into the maritime policy that is now being developed. This

work too should be undertaken on a broad basis and should constitute the object of a national action plan.

Most indications are that the CBSS will continue in future to function as a political strategic forum for a number of sector areas. Therefore the possibility of coordinating its political environment work with that undertaken in HELCOM should be considered, with a view to giving marine environment work and the HELCOM arena greater political weight. The alternative might be for the CBSS to give the political mandate on these matters to HELCOM. The result of such an arrangement ought to be that the political leadership is brought closer to practical environment work.

The most important processes within which Sweden must act to influence the development of the sectors and the integration of the sector areas in the international context are listed below.

Processes, organisations and policy areas in which to act

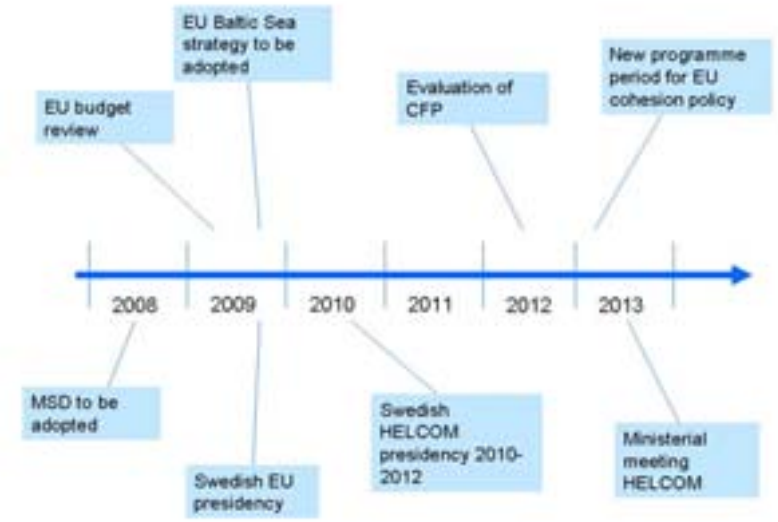
- A budget review for all areas of activity within the EU is being carried out in the period up to 2009. This entails a form of midway assessment that also opens the way to discussion about future EU policy. The CAP is a priority area in the review. Swedish preparations for the budget review have been started and are being coordinated by the Prime Minister's Office. When opportunity arises, Sweden should initiate discussions on regionalisation of the CAP and CFP, as well as the possibility of channelling parts of the support mechanisms in these policy areas to an international marine environment fund in the Baltic Sea area.
- The final text of the MSD will be negotiated in the run-up to the vote in the European Parliament during 2007–2008. The programme of measures for the marine regions is to be concluded by 2016 and implemented at the latest by 2018. The time–frame for its introduction is 2008–2020. A ministerial meeting will be held in 2013 to assess the effectiveness of national programmes. The Directive contains no timeframes for the possible establishment of pilot projects. During this period, Sweden should work for the earliest possible designation of the Baltic Sea as a pilot project, with sector integration as the point of departure, as well as for the most rapid possible implementation of the MSD. Sweden should also work to ensure that the

pilot project work is accorded financial and other support from the European Commission.

- Sweden will hold the Presidency of the EU during the autumn of 2009. Sweden should then work to push the marine environment issue and the complex of problems in the Baltic Sea higher up the European agenda. During the Presidency, Sweden should particularly highlight the need for a change of direction and organisation in the CAP and CFP as a central element to ensure greater consideration for the marine environment.
- During 2009 the European Commission is to put forward a proposal for an EU strategy for the Baltic Sea region. Sweden is currently working to ensure adoption of the strategy during the Swedish Presidency of the EU in the autumn of 2009. This initiative is expected to improve the possibilities of Member State cooperation on marine environment issues as well as of support from EU institutions.
- OSPAR: The organisation is undergoing a review during 2008.
- The HELCOM BSAP: National action plans for the reduction of phosphorus and nitrogen are to be complete by 2010. All measures must be implemented by 2016, and some of them before that. The target is to achieve good ecological status by 2020. Sweden should work to ensure that implementation of the BSAP is intensified in line with the measures that are indicated in the framework for the pilot project.
- The Council of the Baltic Sea States (CBSS): The organisation, structure and priorities are being reviewed in the period up to the summer of 2008. Sweden should work for cooperation between the CBSS and HELCOM, to bring about a transfer of the political mandate for environment issues to HELCOM.
- EU Maritime Policy: A first step towards an integrated EU maritime policy was initiated by a communication from the European Commission to the European Parliament and Council during 2007. Member States are recommended to examine how to introduce the maritime policy nationally and to submit reports on this to the Commission during 2009. Sweden should work to ensure that the new EU maritime policy has a clearer focus on the marine environment.

- The CAP: The EU budget review during 2009 is to focus particularly on agricultural policy. The CAP is renegotiated approximately every tenth year. The most recent reorganisation took place in 2002 and was introduced in the period up to 2005 (in certain cases up to 2007). In November 2007 the Commission issued a communication to the Member States on the follow-up of the renewed CAP, known as the "health check". Sweden should work for regionalisation and greater concern for the environment within the framework of the CAP, particularly as regards the possibilities of reducing the run-off of nutrients from agricultural land. Sweden should elaborate clear national positions to be taken up within the framework of the processes and timings that have been mentioned here.
- The CFP: The CFP is to be assessed during 2012. Sweden should work for regionalisation and increased concern for the environment within the framework of the CFP. Sweden should elaborate clear national positions to be taken up in preparation for the assessment of the CFP.
- The EU cohesion policy and structural funds – Objective 3 Territorial cooperation: Discussions on the future cohesion policy will be initiated with the budget review in 2009. Sweden should work to ensure that funds for the implementation of marine environment cooperation within the framework of the cohesion policy (within Objective 3 Territorial cooperation, formerly Interreg) are to some extent re-allocated and managed regionally through a committee within HELCOM during the programme period after 2013.
- Other marine environment funders: Sweden should work to ensure that other organisations that fund projects should divert some of their financial support to a joint marine environment fund for the Baltic Sea.

Figure 3.1 Time-line that shows when it is important to act within the framework for different policy areas and organisations



3.7 Funding and consequences

Funding for the forthcoming task of the Swedish EPA being the competent authority for implementation of the MSD should primarily be met by reallocating priorities within the Agency. Bearing in mind the important of the issue, new resources must also be allocated to the Agency to the tune of approximately SEK 10 million per year.

4 Planning of Swedish sea areas

4.1 Legislation of relevance for marine spatial planning

The conditions for the application of Swedish legislation affecting marine spatial planning vary as regards internal waters (within the baseline), the territorial sea and the Swedish economic zone (see Figure 1.7) Different national and international policies and rules of law govern the use of the different parts of the sea area. How far-reaching planning of the Swedish marine areas can be introduced is in part dependent on the international laws and other international agreements that apply to the area. In Chapter 1 an account has been given of the laws and conventions of greatest importance for Swedish sea areas. A number of these must be taken into account in marine spatial planning, since they entail both limitations and opportunities in the process, such as the Convention on the Law of the Sea, the EU's Common Fisheries Policy, Swedish fishing legislation, IMO regulations, etc. Some of the Swedish laws and parts thereof that have specific relevance in the context of marine spatial planning and that may in the long term require certain additions or amendments in the regulation of planning are described below. Different parts of the chapter give examples of the extents to which this will be necessary.

4.1.1 Application of the Environmental Code in sea areas

The basic provisions of the Environmental Code apply up to the boundary of the territorial sea, as well as also to a number of structures and activities in the economic zone including the continental shelf. There is a clear link between the Environmental Code and the Planning and Building Act (PBA), in that the management provisions laid down in Chapters 3 and 4 of the Environmental

Code are concretised in municipal comprehensive plans. The Environmental Code must be used as the point of departure in weighing the pros and cons as between exploitation and conservation measures. The management provisions of the Environmental Code are also applicable in the economic zone. Shoreline protection includes the marine environment out to 100 metres from the shore, but in a number of areas has been extended to 300 metres. Marine environments can also be protected by the creation of reserves. County administrative boards and municipalities have the right of initiative and decision-making as regards the creation of reserves. The establishment and supervision of Natura 2000 sites, the EU network of protected areas, affects a number of authorities, including the county administrative boards. Natura 2000 sites are determined by the Government.

In the Environmental Code there are rules of consideration which, as far as possible, protect the public interest against certain harmful interventions. Within Swedish territory, the management provisions are laid down in municipal comprehensive plans, which are based on background material from the competent national authorities and on the collective planning material of the county administrative boards, as well material produced by the municipalities themselves. The management provisions, which are defined in Chapter 3 of the Environmental Code, contain rules that must be applied when striking a balance between exploitation and conservation. Areas of national interest must be particularly protected. Chapter 4 specifies special provisions for certain designated areas that need special protection. Among them are also included provisions about Nature 2000 sites, which are classified as being of national importance. In addition, permission in accordance with Chapter 7 of the Environmental Code is required to operate business activities or take action on Natura 2000 sites. The county administrative board is responsible for monitoring observance of national interests.

4.1.2 The application of the Planning and Building Act in sea areas

The application of the Planning and Building Act (PBA) extends to include the territorial sea. The primary and long-term purpose of planning emerges from Chapter 2 Section 2 of the PBA. One pur-

pose is to promote a purposeful structure of built-up areas, green belts, routes of communications and other constructions. It must also promote good environmental conditions and long-lasting and effective management of land and water areas, energy resources and raw materials. Planning must also be based on the natural and cultural values existing in the built-up environment and in the landscape. From the social point of view, good living conditions must also be promoted. The fundamental management principles to be found in the Environmental Code form the basis of the application of the subsequent rules of consideration, prohibitions and rules governing the balancing of interests. The fundamental principles are:

- Management assessments relate to land, water and the physical environment in general.
- A long-term view must be taken.
- The point of departure is ecological, social and socioeconomic aspects.
- The most suitable use of an area shall be given precedence.
- Suitability depends on the nature of the areas and on existing needs.
- The aim must be multi-purpose use.

The regulations for comprehensive plans in Chapter 1, Section 3 of the PBA are also of relevance to marine spatial planning. In the comprehensive plan, public interests as well as environmental and risk factors in the use of land and water areas must be taken into account. When reporting, areas of national interests shall, in particular, be specified under Chapter 3 or Chapter 4 of the Environmental Code. The basic characteristics as regards intended use of land and water areas must be highlighted in the plan, as well as the way in which the municipality intends to satisfy the stated national interests, and observe applicable environmental quality standards. When proposals for a comprehensive plan, or for modification of an existing plan, are drawn up, the municipality must consult the county administrative board as well as any regional planning authorities and other municipalities whose interests are affected. Authorities, associations and individuals whose interests are affected must be given the opportunity to have their say. How to

increase participation and citizen involvement has been an important question in planning in recent years.

4.1.3 The Continental Shelf Act

The concept of "the continental shelf" relates as a geographical term to the continuation of the land mass under the sea. The coastal state's rights on the continental shelf are limited to natural resources. Wrecks lying on the shelf (for example, the wreck of the Estonia that lies on Finland's continental shelf) are thus outside the jurisdiction of the coastal state. Government permission is required as regards rights to explore and extract natural resources within the area, as also for the construction and use of artificial islands and for the construction and use of equipment for commercial purposes and other constructions (e.g. platforms). Government permission is also required for laying submarine cables or pipelines. An environmental impact assessment must be included in any application for a permit. The Act provides exceptions for principles of international law, such as freedom of navigation in the economic zone and overflying rights. Supervision of the compliance to regulations and conditions for a permit in accordance with the Continental Shelf Act is exercised by Sweden's Geological Survey (SGU).

Other states have the right to lay submarine cables on the coastal state's continental shelf but conditions may be attached to the permit with a view to protecting the marine environment. Articles 58 and 79 of the UN Convention on the Law of the Sea provide that all states have the right to lay submarine cables and pipelines on the continental shelf. Subject to the right to undertake reasonable measures to prevent, limit and control pollution from pipelines, Article 79 (2) of the UN Law of the Sea Convention provides that coastal states may not prevent the laying of pipelines. However, the provision gives the coastal state relatively wide scope, on environmental grounds, to make it difficult for another state to lay pipelines on the coastal state's continental shelf, and even to prevent it from doing so. The coastal state does not have the same scope to limit the laying of other states' submarine cables as it has with regard to pipelines.

4.2 A planning system for Swedish sea areas

Proposal
I propose that a planning system for Swedish sea areas should be established in accordance with the following: Regional bodies should be given responsibility for planning in the territorial sea and in sea areas within the baseline. A government authority should be given responsibility for planning in the Swedish economic zone and an overarching responsibility for planning in the whole of the Swedish sea area. The establishment of a planning system thus requires amendment in respect of planning, as regards the division of responsibilities between the municipalities and the regional level, and a new role for central government.

The ecosystem approach should be a guiding principle in marine spatial planning. It should be based on marine plans similar to the comprehensive plans that exist for land areas. Marine spatial plans should, however, contain binding components in the form of fixed zones for exploitation and protection. A hierarchy of decision-making should be established under which regional marine spatial plans shall be subject to statutory review, in accordance with certain criteria, by the authority appointed as the competent marine spatial planning authority. Marine spatial plans drawn up by the government authority for the economic zone should be ratified by the Government.

When the principles of the planning system have been established, I propose that the Government appoint a legislation and implementation inquiry to consider in detail the question of legislation and responsibility. The laws primarily affected are the Planning and Building Act, the Environmental Code, the Continental Shelf Act and the Swedish Exclusive Economic Zone Act. The Local Government Act is affected as regards the changes in division of responsibility between various societal actors proposed by the Inquiry.

4.2.1 The problems

Sea areas are exploited for a large number of activities that are constantly increasing in extent. This creates problems in the environmental context since there are evident risks that conflicts of inter-

est, between representatives of those who exploit and those who conserve the resources of the sea, may in future increase. Despite this, we currently have no system for marine spatial planning that promotes good management of natural resources and the development of appropriate structures at sea. Achieving this requires knowledge and well-developed tools that can contribute to a systematic and transparent process for weighing different interests against one another. The need to develop a planning system with such a function has therefore become topical. A planning system must ultimately serve to improve the state of the marine environment, and the ecosystem approach must therefore be a guiding principle in the planning process.

The central tool available for general physical planning in Sweden is the municipal comprehensive plan. The comprehensive plan and its accompanying area regulations and detailed development plans must constitute a transparent basis for political decision-taking. The comprehensive plan is most important for assessing where interests overlap and provides background material for politicians to be able to weigh the consequences and take decisions in the event of conflicts of interest. The comprehensive plan helps when weighing public interests against one another and hence promotes the involvement of stakeholders and citizen participation. County administrative boards represent the government's sectoral interests in the planning process by virtue of their right to review plans. The comprehensive plan is not in itself binding but is merely a guiding principle and it is not primarily developed to be applicable in sea areas. In the formal sense, however, it includes them out to the boundary between the territorial sea and the economic zone.

According to Swedish planning tradition, central government has limited influence over planning, as regards both land and sea areas. Decisions on national interests nonetheless entail a form of central government influence in planning. While the municipalities are currently formally responsible for making assessments in coastal waters areas and the territorial sea, the Government has the ultimate responsibility in the economic zone. There are no nationally determined objectives for planning in coastal waters and the territorial sea, because of the long tradition of decentralised planning in Sweden. Municipal planning in Sweden's sea areas is currently very incomplete. Furthermore, the level of ambition varies across the country and hence planning appears fragmented. The

division of responsibility is inappropriate since no specific demands are made on the municipalities to plan their sea areas.

The Government has not designated any authorities as competent for matters relating to the economic zone. Many authorities have remits within the territorial sea and economic zone but there is no coordinated planning. There is thus no holistic picture of the existing claims and interests regarding sea areas. In cases where individual enterprises intend to conduct operations in sea areas, they are obliged to produce summaries of the interests and other conditions that affect the area as part of the permit assessment procedure.

Neither has any specific actor a responsibility to disseminate information about what is taking place in the area as regards planning and prioritisation. In many cases, sea areas can be described as something of a no man's land with poor public insight, despite the fact that activities in the sea area and the state of the marine environment both affect the public in important respects.

Furthermore, there is no model for cooperation with neighbouring countries nor for how such cooperation should be developed over time as regards marine spatial planning. Examples of cooperation in the field of marine spatial planning exist in the form of EU projects, by means of which experimental approaches highlight how cooperation between neighbouring countries can be undertaken as regards planning issues. Nonetheless, no developed system for marine spatial planning exists in any of the neighbouring countries today, with the exception of Germany, which has come relatively far in its development of such a system. Ongoing processes in other countries to develop marine spatial planning must be taken into consideration, therefore, so that in the longer term they can be harmonised to an extent agreed on by the countries involved.

Nor is there currently any overarching system for all sea-related activities, i.e. where marine management is integrated with marine spatial planning in order to create a comprehensive basis for decision-making. In the longer term, marine environment work should be gradually integrated with marine spatial planning. The possibility to develop such an integrated system can arise in step with the development and improved coordination of marine spatial planning and the development of more and more planning material as regards e.g. conditions on the sea bottom. In the longer term, marine spatial planning can thus be refined. During an introductory

phase, it is more a matter of establishing a system for comprehensive planning in order to identify areas where interests overlap and where conflicts can arise as regards sea areas and resources.

4.2.2 Planning aspects

A planning system for the sea areas should be designed to take into account both exploitation and conservation aspects affecting the marine environment. There are today a number of areas at sea that are protected by different international conventions, but none that have explicitly been assessed as areas which are or may become particularly exposed to conflicts of interest. As regards environmental concern, there are the World Heritage Convention, the Espoo Convention, the Convention on Biological Diversity, the EU Birds Directive and Habitats Directive with its Natura 2000 sites. Through these conventions and directives, EU Member States have a duty to create areas for the promotion of biological diversity at sea. However, implementation of these conventions is limited when the adjoining mechanisms for supervision and control have in many cases not been adopted by the Member States. Taken as a whole, they nevertheless constitute an embryo for planning and zoning of sea areas, based on the ecosystem approach. They need, however, to be complemented by background material in which human activities are highlighted in a process of consideration, if we are to be able to talk about satisfactory planning.

Planning is politics and, as such, is neither neutral nor objective. A planning system for sea areas is synonymous with a basis for decision-making that simplifies the real state of affairs. The planning system must have a high degree of transparency. A planning system for the sea is a tool for officials and politicians as well as an opportunity for the general public to obtain an insight into, and to influence, what political priorities are adopted over developments in the marine environment, as regards both exploitation and conservation. The planning system can, in combination with a clear organisation of the implementation stage, contribute to well-grounded decisions and help give these decisions democratic legitimacy.

Purely conceptually, the term “planning system” is used in different ways in different sectors and different countries. There are definitions that particularly highlight the ecosystem approach and

the ambition to protect the seas, but there are also definitions with clearly sector-neutral implications. The point of departure for the Marine Environment Inquiry has been that the marine environment needs both protection and conservation measures, and for that reason the ecosystem approach is a self-evident starting-point. Without the ambition ultimately to protect natural values, the development of a planning system is rather superfluous. At the same time, the importance is emphasised of weighing environmental considerations against the human activities that must take place at sea. Shipping, windpower expansion, tourism and outdoor life are particularly important and demand a great deal of space.

4.2.3 Analysis and conclusions

There are a number of weaknesses in the current Swedish planning system relating to sea areas. One weakness is that municipal comprehensive planning rarely extends further out to sea than to areas where there are islands and built-up areas. Another weakness is that we lack forms for planning on a greater geographical scale than is encompassed by individual municipalities. In some cases there is municipal cooperation on planning, but that does not occur on a regular basis.

Satisfactory planning of the sea areas also requires a change in the division of responsibility between central government and municipalities. In contrast to what applies on land, central government should have an overarching responsibility for planning in the entire Swedish sea area.

Planning in the territorial sea should no longer be conducted by municipalities but instead be undertaken on a regional basis. The reason is that many activities at sea extend over large areas and in many cases are mobile (e.g. shipping and fishing), which points to the need for planning on a large scale. Even the fact that the seas are not static and that e.g. pollution rapidly spreads emphasises the need for larger-scale planning. In the introductory stage, the regions should be at least the size of counties and can in future, in step with any new regional formations, become significantly larger. That means that it may be a matter of producing a maximum of 14 regional marine plans instead of a host of plans, which would be the case if the municipalities continued to have the responsibility.

That is not to say that in certain cases there is not a need also to plan on a smaller scale, above all in the inner archipelago.

Participation is important for legitimacy when different interests and needs are to be weighed against one another in inshore sea areas, where civil interests are judged to be greatest. In light of this, it is proposed that the regional bodies should be given responsibility for planning these sea areas. Well developed procedures for consultation need to be introduced simultaneously with regional marine spatial planning.

Regional planning should also be extended to apply to sea areas within the baseline. The reason is that the baseline in certain cases extends so far from the coast that quite large areas of open sea are contained inside it, for example Kalmarsund and the areas to the south and north of Öland (see Figure 1.7). Even in areas with an outer archipelago, there are large areas of open sea within the baseline, for example in the Bohuslän, Östergötland, Stockholm and Luleå archipelagos. The regional marine plans should also include this type of area within the baseline, since it will otherwise be difficult to build up a holistic view of the sea and its exploitation and protection. How the formal responsibility for planning should be allocated between municipalities and regions in this case needs to be examined further. Consideration should be given to the question of whether it is possible to allow comprehensive plans and regional marine plans to overlap one another. In this case, it must be made clear what legal status the plans have in relation to one another.

In the economic zone, central government must have full responsibility for marine spatial planning. To that end, a government authority for marine spatial planning should be appointed. This authority should also be given responsibility for supporting the planning by regional bodies and for hearing appeals regarding the plans established by the regional bodies.

Guaranteeing the legality of the planning system requires formalised mechanisms for appeals. When a regional marine plan has been adopted and the government authority has ruled on the appeal issue, the possibility of further appeal to the Government should be open to the region, the municipalities and other parties concerned. As regards the economic zone, the competent authority should produce proposals for a marine spatial plan. Authorities, regional bodies and others concerned should be given the opportunity to submit views regarding the plan. The competent authority

must thereafter submit the proposed plan, together with its own comments and an account of the views received, to the Government, which should take a decision on it.

A planning system must take strategic, practical, organisational and cooperation-oriented issues into consideration. It must:

- Be monitored and developed by a central government authority and applied by other authorities and regional bodies.
- Contain a clear division of responsibility between actors and define a clear hierarchy of decision-making.
- Be based on broad marine plans corresponding to the municipal comprehensive plans for land areas. However, in contrast to the comprehensive plans, the marine plans should include binding components.
- Regional bodies should be given responsibility for planning in the territorial sea and in sea areas within the baseline. A central government authority must have responsibility as regards planning in the economic zone.

The planning system must also:

- Handle development and exploitation issues as well as traditional conservation matters.
- Include a system for zoning of the sea areas as a binding component within the marine plan.
- Harmonise with international and EU legislation on sea areas, as well as with the European Commission's view of how marine spatial planning should be developed.
- Be designed so that the concepts and standards in adjacent countries are relatively similar, in order to facilitate international cooperation.
- Contain provisions ensuring that marine spatial planning takes place in consultation with the international organisations concerned and with relevant actors in adjacent countries.
- Contain provisions relating to consultation with municipalities. For example, the municipalities must be consultation bodies in the planning process.

- Contain formalised mechanisms for consultation with the general public and stakeholders as regards planning within the baseline and in the territorial sea.
- Define the appeals procedure regarding regional marine spatial plans.

It is furthermore a question of managing the planning model that is proposed here, which also includes responsibility for ensuring that marine spatial plans contribute to good management of marine resources as well as help to balance different interests. It is also a matter of highlighting the advantages of stakeholder cooperation and showing how different physical structures and links can be created or maintained. The latter can for example include ensuring the development of electricity network infrastructure in areas where there are good prospects for the exploitation of windpower.

The Inquiry has considered alternative solutions. One alternative to appointing regional bodies as those responsible for marine spatial planning in the territorial sea is to transfer responsibility for planning in the territorial sea as a whole to central government. This could be done by giving the task to the county administrative boards. This would nevertheless entail a formal shift in the division of responsibility between central government and the municipalities, which breaks with Swedish planning tradition. This alternative has therefore been rejected by the Inquiry.

The chapters that follow aim to define more precisely the components of the planning system; the changes that are required in the matter of organisational structure, the functions of authorities and legislation to create comprehensive and effective marine spatial planning.

4.3 A government authority competent for marine spatial planning

Proposal
I propose that the National Board of Housing, Building and Planning be appointed the government authority with overarching responsibility for planning in Swedish sea areas and specific responsibility for planning in the economic zone. This responsibility also includes review of the marine spatial plans for

which regional bodies will be responsible, as well as supervision with regard to regional planning. It also entails developing a zoning system and coordinating planning material.

The activities of the National Board of Housing, Building and Planning will need to be changed in important respects because of this new assignment. Whereas the National Board of Housing, Building and Planning is today primarily the responsible authority as regards inspection and control, it will in future also be competent for tasks of an executive nature. The proposed legislation and implementation inquiry should also clarify how this task should be integrated into the Board's existing remit.

4.3.1 National responsibility

As mentioned above, there is a need to designate a competent government authority for marine spatial planning in the economic zone in particular and for marine spatial planning in general. Marine spatial planning is a new phenomenon within Swedish physical planning and, as a consequence, no Swedish authority currently has any direct experience of these issues. Specifically, it is a question of responsibility for conflict-resolution and for sectoral coordination of the plethora of activities undertaken within the sea area. An important part of the overarching national planning will also entail review of the marine plans submitted by regional bodies.

4.3.2 Responsibilities of authorities in the sea area

A number of national actors are active in Swedish sea areas or have a monitoring and control responsibility. Several of them also have a sector responsibility. International legislation is applicable in sectors such as shipping and cable-laying. EU legislation applies in the fisheries sector. The national scope for action is thus limited by this legislation but it is not non-existent. The Government ultimately decides in several issues that affect exploitation and conservation in the economic zone.

The competent authorities in these sectors are as follows:

- **Swedish Energy Agency**: responsible for energy production, energy distribution and wind and wave power.

- **National Board of Fisheries**: responsible for the conservation and exploitation of fisheries resources, commercial fisheries, aquaculture and angling.
- **Swedish Armed Forces**: responsible for certain constructions, navigable channels and exercise areas in sea areas.
- **Legal, Financial and Administrative Services Agency**: represents the state's right of disposition over public water.
- **Swedish Coast Guard**: keeps maritime watch and implements environmental protection measures at sea, as well as being responsible for border controls.
- **Swedish Environmental Protection Agency**: develops and monitors national environmental policy and legislation, evaluates environmental objectives and has responsibility for monitoring and reporting on the state of the marine environment.
- **The National Heritage Board**: responsible for marine archaeology and the marine cultural heritage.
- **Swedish Maritime Administration**: carries out hydrography and marine safety inspection, provides infrastructure service, ensures the safety of shipping lanes and also monitors them.
- **Geological Survey of Sweden** (**SGU**): responsible for marine geological surveys and other studies relating to marine geology and the extraction of minerals. Permits for the extraction of sand, gravel and stone are issued by SGU.
- **Swedish Geotechnical Institute** (**SGI**): responsible for geotechnical issues, including shore erosion.
- **Swedish Meteorological and Hydrological Institute** (**SMHI**): responsible for meteorology and oceanography, applied research, planning and information data for climate, weather and water.

The responsibilities of the authorities will remain relatively unchanged as a result of the Inquiry's proposals. The change will consist mainly of their activities being better coordinated under the leadership of the government authority competent for marine spatial planning. Assessment of permit applications, for example for windpower and resource extraction, may perhaps need to be centralised in one authority instead of being dealt with by the Gov-

ernment. The Government should primarily retain responsibility for matters of principle relating to Sweden's sea area that are subject to negotiation with other countries and with the IMO. The government authority should be competent for general monitoring of the numerous international conventions and agreements, in order to be able to draw attention to any need for greater stringency or for further legislation. In this way, the Government can continually keep up-to-date the basis for establishing priorities, as well as being proactive in international marine environment work.

4.3.3 The competent authority for marine spatial planning

Marine spatial planning is a new task in Swedish planning of which no Swedish authority has any previous experience as an overall concept. As regards the question of responsibility, it is important to make best use of the expertise of the relevant authorities without breaking up existing bodies. The objective has therefore been to strengthen the authority regarded as the most suitable and give it a remit to cooperate closely with the other authorities concerned, rather than to divide responsibility among several authorities.

Below follows a reasoning about the present tasks and powers that relate to the existing planning tasks within the relevant authorities, with a view to illustrating the consideration the Inquiry has given to the question of giving responsibility to a specific authority.

National Board of Housing, Building and Planning

The National Board of Housing, Building and Planning is the national authority for matters affecting the built environment and management of land and water areas, physical planning, building and management of built-up areas and housing questions. The Board has a supervisory responsibility for the planning and building system in Sweden, which entails monitoring the way in which legislation functions and is applied in practice. It has responsibility for the central administration of state support within its remit. It also has responsibility for the construction sector when it comes to environmental work and for environmental and disability issues linked to its remit. The Board coordinates, follows up and reports

on fulfilment of the environmental quality objective "A good built environment". Other areas of responsibility include announcing regulations, administration of matters that affect supervision, inspection and management, information about new or amended rules, follow-up of the application of the Planning and Building Act, the Building Regulation Act and parts of the Environmental Code.

Other tasks are to monitor the development of physical planning, to coordinate the government authorities' application of Chapters 3 and 4 of the Environmental Code in accordance with Ordinance (1998:896) on the management of land and water areas, and to propose changes in planning legislation. The basis for the work is the Planning and Building Act, the Building Regulation Act and parts of the Environmental Code. The Board's responsibility is linked to questions of marine spatial planning through its responsibility for application of the management provisions in Chapters 3 and 4 of the Environmental Code and for various types of international cooperation that relate to marine spatial planning. It has currently no particularly designated responsibility for Sweden's economic zone. The management provisions in Chapters 3 and 4 of the Environmental Code are, however, applied in decisions under the Economic Zone Act and the Continental Shelf Act. The Board has been involved in the development of coastal zone planning in Sweden but has limited experience of work on matters of marine spatial planning.

The Swedish Environmental Protection Agency (Swedish EPA)

As regards planning issues, the Agency currently has responsibility for area protection (in accordance with Ordinance 1998:1252 on area protection) and supports the Government in its international work. That applies to overall coordination of nature reserves, national parks, Natura 2000 sites and areas protected by virtue of international commitments. In the course of 2008, the Agency has reported on a government mandate on the management and planning within a pilot project based on the ecosystem approach, which primarily concerns the decision-making basis for marine spatial planning. Through its lead responsibility for the environmental objective Reduced Climate Impact, the development of renewable energy (including wind power) is a matter for the Agency, even

though the Swedish Energy Agency has the chief responsibility for energy matters. In addition to nature conservation issues, the Swedish EPA also has explicit responsibility for outdoor life and hunting, which has relevance for coastal areas and the sea. Beyond these focus areas, however, the Swedish EPA has no experience of managing marine spatial planning work.

National Board of Fisheries

This Board is described in its remit as a management authority for the conservation and exploitation of fish resources. The authority has a sector responsibility for environmental issues linked to its remit. Within this framework, the authority's role is to coordinate, support and promote activities in relation to other parties concerned. It has responsibility for planning as regards fisheries catches and related area protection measures.

4.3.4 Analysis and conclusions

The present functions of the authorities are inadequate to ensure well-functioning marine spatial planning. A government authority should be competent for assessments and considerations within the economic zone and should at an overall level follow up the work that is done in territorial seas and within the baseline. Central government should retain responsibility, through the county administrative boards, for ensuring that there is sufficient background material for spatial planning in the territorial sea.

It can be considered appropriate that the authority that is to be competent for marine spatial planning should adopt a more or less sector-neutral approach. The Swedish EPA, which can be considered a potential candidate since marine spatial planning shall be based on the ecosystem approach, currently assumes most of the major management tasks associated with planning environmental protection in Sweden. A planning function, with the Swedish EPA as the lead authority, can therefore lead to problems as regards retaining legitimacy among stakeholders who will be affected by the planning. There is a risk of the Agency, in this context, being seen as a representative for the environment sector whose interests should be considered in the planning process, even if the environ-

ment and environmental protection should not be regarded as a sectoral interest. In the majority of neighbouring countries, the marine spatial planning sector comes under government functions for regional development and planning. A number of representatives of the sector with whom the Inquiry has been in contact confirmed that they had not envisaged nature and environment units as potential candidates for shouldering responsibility for marine spatial planning, precisely because such units have interests to represent in the planning. For reasons of legitimacy the Swedish EPA ought not therefore to be given the role of marine spatial planning authority. The Agency is nonetheless expected to cooperate on marine spatial planning questions with whatever authority is appointed, among other reasons to ensure that the ecosystem approach is satisfactorily applied. The Swedish EPA also has an important role in coordinating planning material as regards environmental aspects and the marine landscape.

The National Board of Fisheries currently has a very limited role in planning since it has responsibility only for planning that relates to fisheries catches. To appoint it as the planning authority would entail far-reaching changes in the organisation's tasks and remit. The Inquiry has considered this possibility but did not regard it as a good solution. It should be borne in mind that, even more so than the Swedish EPA, the National Board of Fisheries would be regarded as a sector representative in this context and, as a result, would not have the legitimacy that the function demands. The reorganisation of the National Board of Fisheries into an authority for marine resources, in which responsibility for planning would also be included, has also been considered but adjudged to be altogether too complicated to develop within the framework of this Inquiry. It would also entail transferring the activities of certain other authorities to the marine resources authority and hence breaking up their present activities.

The establishment of a new authority with responsibility for marine spatial planning could theoretically be a possibility but there are a number of obstacles. For example, a marine spatial planning authority will have a limited task and therefore constitute only a small authority, which could not be regarded as justified from the point of view of cost.

The National Board of Housing, Building and Planning must therefore be regarded as the most suitable authority to shoulder responsibility for marine spatial planning. Its role should be rein-

forced in general through the receipt of clear powers in connection with its responsibility for marine spatial planning. Since the Board has previously only had responsibility for inspection, coordination of sector authorities and in certain cases general guidelines within its field of responsibility, the new instructions will entail a change in the authority's remit to include tasks of an executive kind. The Inquiry's proposal to include binding components in marine spatial planning is also a novelty in Swedish comprehensive planning. This entails the Board, as an authority, changing the direction of its activities to a certain extent by acquiring also the responsibility for reviewing the planning conducted by regional bodies. The Board's new direction may need to be reflected in a new name. It must also develop a new role with planning responsibility based on the ecosystem approach. The legislation and implementation inquiry, which should be appointed prior to implementation of the proposals in this Inquiry, should consider how the National Board of Housing, Building and Planning should develop this new function, as regards its organisation, expertise and other functions. The inquiry should also investigate how far the assessment of permit applications within the economic zone can be transferred to the Board.

4.3.5 Instructions for the National Board of Housing, Building and Planning

Section 4.2 provided a list of the components that should be included in marine spatial planning. A number of actors will have delimited tasks in relation to implementation.

The Board's general tasks should specifically consist of the following:

- To issue comments on its review of regional marine spatial plans.
- To review regional marine spatial plans.
- To draw up marine spatial plans for Sweden's economic zone.
- To coordinate planning material nationally.
- To advise regional organisations in planning matters.

- To assume responsibility for developing the zoning system that is to be developed.
- To be responsible for some assessment of permits within the maritime sector.
- To conduct a dialogue with private stakeholders, including windpower entrepreneurs.
- To conduct a dialogue with the authorities concerned in Sweden.
- To take responsibility for communication and cooperation with neighbouring countries.
- To maintain expertise on international maritime legislation.
- To keep the Government, stakeholders and the general public informed about what is happening in the maritime sector as regards conflicts of interest and environmental protection, as well as shipping traffic and other maritime operations.

4.3.6 Statutory review

After regional body has finalised its marine spatial plan, a statutory review is held, in which the Board is given the opportunity to assess whether the plan considers fundamental government interests.

The following general government interests must be taken into account in the review:

- National interests.
- Inter-regional interests.
- Health and safety.
- Environmental quality standards and management provisions.

4.4 Regional responsibility for marine spatial planning in the territorial sea and within the base-line

Proposal
I propose that responsibility for marine spatial planning in the territorial sea and in sea areas within the baseline should be vested in existing regional organisations (currently regional cooperation bodies and regional planning associations). The regional bodies should have responsibility to develop and take decisions on 'marine spatial plans', i.e. comprehensive plans that include zoning, for the sea areas mentioned. In contrast to comprehensive plans, marine spatial plans should have legal force and should be subject to appeal. The municipalities and the Board should cooperate in the planning work.

The legislation and implementation inquiry, which the Marine Environment Inquiry proposes, should examine the need for, and possibility of, introducing a special chapter in the Planning and Building Act relating to marine spatial planning and its organisation.

4.4.1 The present regional organisation for planning

Experience of regional organisation is currently limited in Sweden. The municipalities are responsible for the greater part of Swedish physical community planning. The county administrative boards coordinate central government interests in the planning process. The Planning and Building Act, together with the Environmental Code, are the most applicable legal instruments for this work. The legislation also relates to watercourses and littoral water areas. The municipalities have sovereign right to determine building development within their territory and to develop planning material in the sea areas under their jurisdiction, i.e. internal waters and territorial seas. Certain planning matters extend across municipal boundaries and can then be organised regionally. There is, however, only limited regional physical planning. In these cases, it is a question of cross-municipality regional planning, on the initiative of the municipalities concerned, and with central government authorisation. Regional physical planning today takes place within the

framework of Stockholm County Council's regional planning in Stockholm County.

There are various types of organisations at the regional level in the 14 coastal counties of Sweden. In 11 of them, the municipalities have chosen to form regional cooperation bodies or similar bodies, which primarily have taken over regional development tasks from the county administrative boards. In the counties of Skåne and Västra Götaland, a pilot project is in progress with larger regions embracing the county councils' tasks, with a political superstructure in the form of a regional board and regional assembly. One exception is the municipalities in Norrbotten, which have not yet decided how they should organise the regional development function. For the time being, therefore, the Norrbotten County Administrative Board continues to have responsibility for regional development.

At the present moment (Spring 2008), the future of the regional cooperation bodies and the pilot activities is unclear, since the issue is connected with the consideration currently being given to the proposals by the Committee on Public Sector Responsibilities. The final report by the Committee outlines a new regional administrative level, "regional municipalities". It is proposed that they should replace the county councils and assume their tasks, powers of taxation and constitutional position. Regional municipalities should be given the task of defining geographical regional interests, which includes overall planning of nature and water areas. It is proposed that the county administrative boards should have the same geographical boundaries as the regional municipalities but should have more purely central government functions such as inspection, permits and other applications of the law. The Committee on Public Sector Responsibilities further proposes that responsibility for regional development, together with certain administrative responsibility, should be transferred to the regional municipalities.

4.4.2 Current marine spatial planning in the municipalities

The present Integrated Coastal Zone Management (ICZM) is the closest we come in Sweden to physical planning of our sea areas. The need for increased coastal zone planning in Europe has been highlighted at the EU level by virtue of the adoption in 2002 by the European Parliament and the Council of a recommendation on the

implementation of ICZM in Europe.[1] The problem is the large number of claims that are being laid to the coast's resources and the fact that conflicts arise, or may in future arise, as a result. The Swedish system means that the coastal municipalities have responsibility for planning as regards both land and sea, with a duty to ensure coordination, to balance conflicting interests and to cooperate with actors who have responsibilities for implementation in accordance with the Planning and Building Act, the Environmental Code and the environmental quality objectives.[2] This gives Sweden, at least in theory, the main tools and the division of responsibility that the EU recommendations aim to achieve. However, Swedish municipalities do not currently undertake any special planning measures for the whole of their water area.[3] Neither are there any legislative requirements obliging the municipalities to conduct marine spatial planning in accordance with any special principles.

ICZM can be carried out as a strategy for land and water areas in the coastal zone. The territorial sea can also be included. The participants in a management plan for the coastal zone areas normally consist of municipalities and relevant authorities, economic actors, NGOs and the public. Today these strategies do not constitute any legally binding programme. The present system means also that the management plans are most frequently limited to environmental problems within the sea area of a municipality.

In Sweden, there are currently several good examples of initiatives for coastal zone planning that have been taken by a single municipality or by several municipalities working together. For example, in Värmdö municipality a coastal plan has been produced in a broad public process. During 2003, a shoreline inventory was implemented which formed the basis for the work with the coastal plan. In the final analysis, the coastal plan was not, however, adopted by the municipal assembly as had been expected. In addition to this more comprehensive type of initiative, several municipalities have drawn up thorough comprehensive plans for given coastal areas, for example to enable decisions on the siting of wind turbines. Another example of planning efforts in coastal areas is the

[1] Recommendation of the European Parliament and of the Council of 30 May 2002 concerning the implementation of integrated Coastal Zone Management in Europe (2002/413/EC).
[2] "A system for regional and local coordination and cooperation in coastal areas". Response by the coastal county administrative boards to Government assignment 51/2007.
[3] A national strategy for the marine environment. Government communication 2004/05:173.

project known as 'Interreg project Forum Skagerrak' that was concluded in May 2007. This project aimed to create a coherent overall picture of the exploitation of coastal resources in Denmark, Norway and Sweden.

Government regulations on the matter of ICZM do not exist in Sweden today. The development of ICZM regulation at the regional or inter-municipal level is, however, at the planning stage in other parts of Europe, for example in the Mediterranean area. A draft of a special strategy for ICZM in the Mediterranean has recently been produced. National strategies are to be coordinated with this strategy. The draft contains provisions regarding factors that have an impact on the coastal areas, cross-border cooperation including environmental impact assessments and institutional coordination.

The National Board of Housing, Building and Planning has produced a report on proposals for improvements to Swedish coastal zone management.[4] The Board maintains that there is a need for a clearer link between planning and management, as well as that strategies may be needed for certain coastal areas. The Board is also of the view that there are serious shortcomings in the present comprehensive planning by municipalities. It is noted that the comprehensive plan is an important instrument for the management of the coastal areas, but that it should be integrated with regional development planning and work on programmes of measures for which the water authorities are responsible. In its report, the Board further points out that intersectoral planning material could provide a basis for better planning and for greater inter-municipal cooperation. At present, work is in progress within the Board on the production of a planning portal as a tool for making planning material more accessible. The planning portal may in future also include background material for marine spatial planning.

[4] National Board of Housing, Building and Planning (2006) 'Vad händer med kusten? [What's happening to our coast?] Experiences of municipal and regional planning and of EU projects in Swedish coastal areas.

4.4.3 Comprehensive plans as a tool for regional and municipal planning

As mentioned above, the comprehensive plan is the central tool for physical planning at the municipal level. Under Chapter 1, Section 3 of the PBA, each municipality must have an up-to-date comprehensive plan which covers the whole municipality. The comprehensive plan must be a guide to decisions on the use of land and water areas, as well as on how the built environment should be developed and protected. It is an important and fundamental principle of planning that the comprehensive plans are non-binding in nature. The regulation of land use and building development in a municipality is effected through detailed development plans. A detailed development plan, which by contrast is binding, can only apply to a limited part of the municipality. Under Chapter 4, Section 1, the general interests under Chapter 2, which should be taken into account in decisions on the use of land and water areas, are specified in the comprehensive plan. When reporting, national interests under Chapters 3 or 4 of the Environmental Code must be given special mention. The plan should make evident

- the basic features as regards the intended use of land and water areas,
- the municipality's view of how the built-up environment is to be developed and protected; and
- how the municipality intends to satisfy the stated national interests and to observe the environmental quality standards in force.

The county administrative boards' review statement must be attached to the comprehensive plan, in accordance with Section 9. If the county administrative board has not approved a given part of the plan, that fact must be made clear. If proposals for comprehensive plans or for the amendment of plans are drawn up, the municipality must consult with the county administrative board and with the regional planning bodies and the municipalities concerned in the proposal, in accordance with Section 3. Those authorities and associations, together with individuals who otherwise have a significant interest in the proposal, must be provided an opportunity for consultation. As regards detailed development plans, central government, in contrast to what applies as regards comprehensive plans, has the possibility of statutory review through the county

administrative boards, which carry out the review on the basis of certain established criteria. The decision can be appealed to the Government.

Under Chapter 7, Section 4, a regional plan can serve as a guide to decisions about comprehensive plans, detailed development plans and area regulations. To the extent that it has importance for the region, the plan can state the basic features of the use of land and water areas, as well as guidelines for the siting of buildings and installations. Under the present wording of Chapter 7, Section 1 of the Planning and Building Act there is a possibility for joint examination of issues affecting the use of land and water areas that concern several municipalities. The Government then has the opportunity to appoint a regional planning body, which for a certain time or until further notice should manage this work (regional planning). This possibility exists insofar as examination and coordination are not effected in some other way. The Government can appoint an existing association of municipalities as the regional planning body. The Government can also decide that the municipalities concerned should form a special regional planning association which will be the regional planning body. The Municipal Association Act (1985:894) must be applied in regard to a regional planning association of this kind. There are special provisions on regional planning as regards the municipalities in Stockholm County. Under Section 2, however, no regional planning body may be appointed if there is general opposition to it on the part of the municipalities concerned. Under Chapter 7, Section 3, the regional planning body within the region must monitor regional issues and regularly submit background material on them for use in planning by the municipalities and central government authorities. Under Section 4, the regional plan must serve to guide decisions on comprehensive plans, detailed development plans and area regulations.

4.4.4 Responsibility as regards planning material

The county administrative boards currently have responsibility to supply state planning material for municipal planning. Five county administrative boards in addition constitute water authorities. The water authorities are today responsible for matters related to water quality in five Swedish districts and up to one nautical mile outside the baseline. The county administrative boards' role regarding

work on water quality is to provide a knowledge base and to put forward proposals for quality standards, supervision programmes and programmes of measures for different drainage areas. This work takes place in a dialogue with municipalities, water protection associations and other local water stakeholders. The water authorities will have a clear role in marine spatial planning work arising from their responsibility as regards different types of planning material.

The county administrative boards have, at the request of the Government, submitted proposals for "how a system of regional and local coordination and cooperation in coastal areas can be designed and implemented within the framework of water districts".[5] The objective of the task was also to "bring about a broader active participation by the relevant stakeholders in all planning, decision-making and implementation processes that relate to the protection and exploitation of the marine environment". The county administrative boards have shown interest in being given a developed role in marine spatial planning within the baseline. Under the proposal, the county administrative boards will strengthen their role and responsibility regarding coordination of the planning material for the sea areas and contribute additional expert knowledge and competence in this context. It also points to strong connections between water management and comprehensive planning. The county administrative boards also propose an inquiry into how the legal standing of comprehensive planning can be strengthened. Further proposals are that the municipalities, with the support of the county administrative boards, should develop planning of the coastal and marine environment.

4.4.5 Analysis

The proposals by the Committee on Public Sector Responsibilities for the establishment of regional municipalities ought to facilitate the development of unified marine spatial planning since the regional organisation will then be identical throughout the country. If the proposals by the Committee on Public Sector Responsibilities are introduced, the regional level will even more clearly acquire the political base and legitimacy that is necessary if regional marine spatial planning is to be strong and effective. The regional bodies

[5] Response by the coastal county administrative boards to government assignment 51/2007.

must be regarded as suitable to assume responsibility for marine spatial planning within the territorial sea. They should be relatively few in number and marine spatial planning could therefore be undertaken within larger-scale but nonetheless manageable units. To take into consideration environmental problems in a larger geographical area, regional planning should also be introduced within the baseline so that the work of the municipalities is coordinated to a greater extent than is the case today.

For the moment, however, until consideration of the proposals by the Committee on Public Sector Responsibilities is complete, regional planning should be dealt with by the existing regional bodies and their counterparts. Norrbotten, which today has no common model for regional organisation, should work in accordance with the model proposed here as regards matters relating to marine spatial planning. To implement suitable and cost-effective planning work, cooperation and association between units is of great importance. The municipalities must be considered too small to be able to carry out appropriate marine spatial planning, and for that reason it should be done on a regional basis. The municipalities will nevertheless be important partners for consultation and cooperation in the planning.

Marine spatial plans should be produced for the entire Swedish sea area. Under the proposal, marine spatial plans should be binding for the sea areas, that is to say, they should have legal force and be subject to appeal. Along with the measures proposed by the Inquiry, a new chapter on marine spatial planning probably ought to be introduced into the Planning and Building Act (PBA). It should define the attribution of responsibility and powers, as well as the appeal procedures and legal instances concerned. A regional arrangement for marine spatial planning requires the establishment of a new permanent structure. The present regional organisation provisions under the PBA are inadequate for the purposes of effective nationwide planning. The new chapter should also state that planning regarding water areas within the baseline and in the territorial sea should be undertaken on a regional basis, with reference to the County Cooperation Bodies Act (2002:34) and the Act on Pilot Activity with Amended Regional Division of Responsibility (1996:1414). In future, the county administrative boards should exercise, in conjunction with the National Board of Housing, Building and Planning, supervision of the observance of the principles that are given legal force through the marine spatial plans.

As regards the county administrative boards' role in marine spatial planning, the Marine Environment Inquiry considers that they should be given responsibility for supplying planning material to the regions. The Inquiry has not adopted a view about the additional resources that the county administrative boards propose in their report. As regards the establishment of binding marine spatial plans, the Inquiry's proposals are in line with those submitted by the county administrative boards. The Inquiry has taken no detailed position on the relationship between water management and the Inquiry's proposals on marine spatial planning. This question should nevertheless be included in the legislation and implementation inquiry that the Marine Environment Inquiry proposes.

As regards the issue of responsibility, the Inquiry's proposals are not in accordance with the proposals submitted by the county administrative boards for systems of regional and local coordination and cooperation in coastal areas. The Inquiry's view it is that public participation and legitimacy are very important in the inshore sea areas where the population is directly affected by the priorities adopted in the planning process. Therefore political bodies should continue to have a strong influence on these matters through regional bodies with a direct or indirect political superstructure. The regional bodies should cooperate closely with the municipalities and with the county administrative boards.

4.5 Zoning as a tool in marine spatial planning

Proposal
I propose that a zoning system in Swedish sea areas should be introduced as a component in marine spatial planning. A zoning system entails the division of sea areas into sectors for different degrees of protection and exploitation. Zoning must be the binding component in marine spatial plans.

Zoning should be elaborated by the National Board of Housing, Building and Planning in consultation with the Swedish EPA. The latter's role should be to ensure that the ecosystem approach is satisfactorily applied in the planning.

4.5.1 Introduction

The introduction of zoning in the Swedish sea areas for different types of exploitation and conservation was discussed in the final report by the Marine Environment Commission.[6] The Commission considered that a marine zoning system should be established and that this should be done within the framework of HELCOM. The Marine Environment Inquiry's task is to propose some first steps towards the development of a model for a planning system for the Swedish sea areas that includes zoning. By that is meant the establishment of zones with varying provisions for resource extraction and protection. However, zoning as a component in marine spatial planning is not at present clearly defined. Different sectors and countries have different views on what zoning entails. Below follow some examples of the meanings of this concept. These examples and the consequent analysis then lead on to what the Inquiry considers to be an appropriate definition.

The application of IMO regulations, regional agreements and national provisions on limitations on shipping, fishing, the erection of installations, etc., all amount in effect to approaches to zoning in most sea areas of the world. These limitations have normally come into being through the application of rules for, or the introduction of, nature reserves and other areas that are protected for environmental reasons. Existing zones in Swedish sea areas are, for example, nature reserves, protected areas for fishing and zones protected from shipping.

Marine spatial planning is not synonymous with zoning.[7] Marine spatial planning indicates a country's preferences or priorities as regards its sea areas. Zoning is one of several components in marine spatial planning. Zones can be established in the whole or parts of the sea area but they must have relatively full coverage if it is to be said that zoning applies. Much of current marine spatial planning is focused on the establishment of protected areas, which thus cannot be considered full-scale zoning. Zoning entails more ambitious targets with marine spatial planning, even though legislation, rules and measures for control should be capable of variation within a system.

[6] SOU 2003:72. Havet – tid för en ny strategi [The sea – time for a new strategy]
[7] Visions for a sea change. Report of the first international workshop on marine spatial planning (2007) Intergovernmental Oceanographic Commission on Man and the Biosphere Programme.

4.5.2 Examples of zoning

Apart from the Great Barrier Reef in Australia there is no fully developed zoning anywhere in the world today. As mentioned above, an initiative has been taken in the Mediterranean area to has develop a system of marine spatial planning that includes zoning. Work on zoning has also been started in other countries and regions, but only in limited parts of the sea areas. In the UK and Ireland, a pilot project on marine spatial planning was carried out in the Irish Sea during 2002–2004. The zoning applied was nonetheless aimed only at conservation and protection of the marine ecosystem. In Norway, the Ministry of Environment issued a plan for integrated management of the Barents Sea and Lofoten during 2006. The plan indicates sensitive areas as well as areas for commercial activities, but does not comprise a plan for zoning in its broader meaning.

Up till now, no developed zoning has been undertaken in the sea areas of any of the countries in the Baltic. To some extent zoning has been established in Germany as regards the economic zone and the territorial sea, and in Poland as far as the territorial sea is concerned. But it is then a matter of identifying needs for both exploitation and protection, for example to distinguish areas for windpower expansion.

The Interreg project 'Balance' contributed examples of how zoning can be planned and introduced in sea areas. However, it was primarily focused on cooperation in the production of planning material, and also supplied a model for marine spatial planning in which zoning was included as one of a number of components. The model produced by 'Balance' embraces a number of elements on which marine spatial planning can be based. The initial steps are to formulate visions for the sea area and planning objectives, as well as to catalogue relevant legislation and to define general principles for marine spatial planning. Next, an introductory assessment is made of the characteristics of the environment, biological diversity, the human impact and socioeconomic factors. Targets are established for the marine region in question, as regards both conservation and exploitation. At the planning stage, the selection of zones is made, costs are calculated and a management plan is drawn up. Targets for specific zones are formulated subsequently. In the implementation phase, targets are established for the zones and an initiative is taken to set up a programme of monitoring and control. As a

final step, results are disseminated, which includes the development of indicators and the circulation of reports. In the 'Balance' project, a proposal was also prepared for the establishment of four different zones in the Baltic Sea.

However, use of the 'Balance' model requires it to be complemented with a realistic plan for prior political preparation of any introduction of zoning. The Australian example below illustrates the importance of political bodies leading the zoning process.

Zoning in the Australian Great Barrier Reef marine reserve

The Great Barrier Reef in Australia is the only sea area in the world where zoning is applied to its fullest extent. The process of dividing it into zones began in 1975 and the Great Barrier Reef Marine Park was formed to manage it.[8] The Federal and Regional Government had by then reached agreement on the introduction of an integrated management approach for the sea area. At the outset, wide zones that could be changed were applied. The first zoning plan was adopted six years later and was taken fully into use after a further seven years. The purpose of the zoning is to conserve natural resources by means of regulated use and by regulating activities, creating reserves and designating research areas. During the following 15 years a number of instruments were introduced to optimise zoning. Maps, permits, education and management plans have been developed. In broad outline, zoning has been based on the concept of a multiple-use area, which entails putting a high protection value on certain areas, while accepting a reasonable degree of exploitation in others. For example, 33 percent of the sea area has been designated as zones where no fishing is permitted, as compared to 5 percent previously.

The process of introducing marine spatial planning including zoning in the Great Barrier Reef has by no means followed a straight course and much time has elapsed between proposals, decisions and action.[9] The view held is that it was the presentation of consolidated data from the area that led to a political breakthrough on the matter. A map of ecological regions had been drawn up, outlining examples of the distribution and viability of each species.

[8] Day (2002) "Zoning – lessons from the Great Barrier Reef Marine Park" in Ocean & Coastal Management, 45.
[9] Meeting with John C. Day 24.08.2007.

This led to the involvement of the general public in the issue and pressure was created on the politicians to solve the environment problems. The proposed restrictions nevertheless created problems at the political level in finding ways to deal with various special interests. As a structural adaptation measure, Parliament decided to provide certain financial compensation to those stakeholders who could show that they would be negatively affected by the system proposed. The tourist industry is a sector which, in contrast to others, has derived clear financial benefit from the creation of nature reserves in the area and which has been very much a driving-force behind the process.

Legislation has proceeded successfully, seen in a longer perspective. It provided an opportunity for some degree of parallel regulation of land-based activities regarded as having an impact on the marine environment. Complementary legislation has been passed to simplify joint management between authorities. Within a few years the legislation will need to be updated, at the initiative of Parliament. Cooperation is another important aspect in ensuring that the zoning is respected and that inspection is being carried out. Regional authorities such as the Queensland Boating and Fisheries Patrol, the Queensland Water Police, the Australian Customs Service and the Australian Maritime Safety Authority cooperate in this. To improve understanding for the method of approach and to stimulate the opinion building on the matter, information has been disseminated to the general public, in the form of maps and sector-specific information.

One thing that the authorities involved regarded as being less successful in this context is 'partial zoning', in which certain areas, for example an island or a reef, are divided between two or more zones. There have also been problems over putting out marker-buoys round the zones and widespread circulation of maps is recommended instead. It has furthermore been difficult to steer tourism to the correct zones and it became necessary to increase the intensity of random checks. A regulatory system, permitting use of certain zones only at special times, is beginning to be applied.

4.5.3 Analysis and conclusions

The Great Barrier Reef is an example of zoning based on protective measures. The division into zones was, however, subsequently complemented by zones for different degrees of exploitation. The system has been given legal force and equipped with supervisory mechanisms. It can therefore be said that the Great Barrier Reef zoning is a far-reaching variant of zoning.

By contrast, under simpler forms of zoning the system is not legally enshrined, but instead consists of recommendations about usage and conservation measures. A system of this kind is currently in operation in the German sea area of Mecklenburg-Vorpommern. The focus has primarily been on producing comprehensive planning material and on engaging the public and stakeholders in the process. For various reasons, it has not been considered appropriate to put in place in Mecklenburg-Vorpommern the binding components applied in the Great Barrier Reef.

An intermediate way can be to establish a zoning system with certain binding components. The planning material must be as complete as possible, but the legal mechanisms (at any rate at the outset) are applicable to only a limited extent. This may mean first establishing zoning and only later introducing steadily increasing regulation of the exploitation and conservation of the sea area. It can also be opportune to negotiate at the outset on the establishment of more zones in existing systems. That possibility is, for example, to be found as regards the EU's Natura 2000 classification in sea areas and the IMO's PSSA-classification to limit shipping. It is, however, not possible to speak of zoning in cases where only certain individual sectors are affected. A system with zoning solely for nature conservation can therefore not be classified as zoning of a sea area. Correct application of the terminology means that there must be different degrees in the regulation of protection and exploitation.

The Marine Environment Inquiry is of the view that Sweden should introduce a system with binding zoning, since a non-regulated system would make little difference in the practical and long-term consequences for sea areas. A system of partially binding zoning might be applied during a transitional period, but the objective must be to establish a comprehensive zoning plan for the sea areas. A clear division of responsibility and organisation for marine spatial planning is proposed in this report, to make it possi-

ble. Zones within the sea areas could also beneficially be established across national frontiers, since planning material cannot be adapted in accordance with geographical frontiers. What is required therefore is to initiate cooperation on zoning between countries in the Baltic and North Sea. (The discussion continues in Section 4.6).

In order to speak of full-scale zoning, as defined by the Inquiry, we need the following:

- The division into zones must be aimed at a system for both exploitation and conservation.
- The division must be based on the ecosystem approach.
- In fundamental respects it must be enshrined in law.
- Some form of inspection of the zoning will be necessary.
- It should be adaptable according to season or to other factors that have an impact on the exploitation of, or on the nature of, the zones.
- The zoning must be developed in a parliamentary process that comprises far-reaching discussion and consultation with stakeholders and with the general public.
- It should be coordinated with those countries whose economic zones are adjacent to that of Sweden.

This definition can be applied in varying degrees of stringency. The Inquiry advocates a relatively strict application to ensure that the system is effective and capable of being used in judicial terms. Section 4.7 describes in greater detail procedures for its introduction.

4.6 Marine spatial planning in neighbouring countries and regional cooperation

Proposal
I propose that Sweden should work for greater cooperation with neighbouring countries on marine spatial planning. A strategy for increased long-term international consultation should be set in motion on a Swedish initiative.

I also propose that Sweden should work for the inclusion of marine spatial planning, including zoning, in the work of

HELCOM. In several countries around the Baltic Sea, there is currently a readiness to divide the sea into zones. However, different countries often have different interpretations of the meaning of the concept. To begin with, therefore, agreement must be reached on how far-reaching the zoning is envisaged to be and to what extent it is appropriate to cooperate in the process. The Swedish position in the discussion should be the ambition to introduce zoning, including binding components, with the objective of regulating exploitation and conservation based on the ecosystem approach.

4.6.1 Regional cooperation on marine spatial planning

In a number of countries discussions are currently in progress on the introduction of marine spatial planning in the Baltic Sea. Within the EU, VASAB and HELCOM have recently begun to focus on it. However, we are as yet at an introductory stage about how to handle it as an area of cooperation.

VASAB 2010 (Vision and Strategies around the Baltic Sea 2010) is an intergovernmental forum which promotes a physical planning perspective in the Baltic Sea area. VASAB is elaborating practical guidelines and recommendations for work on greater international consensus. This work aims to demonstrate the benefit and necessity of employing physical planning principles in sea areas, in coastal zones and around islands. The policy entitled "Common Recommendations for Spatial Planning of the Coastal Zone in the Baltic Sea Region" has been adopted and advisers to the European Commission are also working on issues of physical planning in the Baltic Sea area. Representatives of Member State environment and industry ministries regularly meet within the framework of EU working groups. Germany and Russia take part with representatives from the Baltic Sea regions. Ministerial conferences are also held to discuss recommendations and general developmental questions, albeit not regularly. All the countries in the Baltic Sea area, together with Belarus and Norway, take part in the cooperation.

VASAB has no project funding of its own but instead contributes expertise to project development within the framework of the Interreg Programme. It has a small secretariat which is working on the production of guidelines and recommendations. VASAB is at present primarily a discussion forum for the exchange of experi-

ence and an advisory body for the countries in question on project cooperation on marine spatial planning in the Baltic Sea area. Project cooperation on this began in VASAB during 2007 with the objective of outlining general guidelines and principles for the Baltic Sea area. Background material from the different countries is currently being produced (spring 2008).

In the HELCOM Baltic Sea Action Plan (BSAP), marine spatial planning is mentioned as an area for future joint efforts, but its work on the subject is still at an introductory stage. Several of the countries around the Baltic Sea have started work on marine spatial planning within their economic zones and territorial seas, but no real cooperation has yet been undertaken in the planning sector.

The maritime policy proposed by the European Commission mentions marine spatial planning and integrated coastal zone management as a possibility for development.[10] The Commission's intention with the maritime policy is to gather the Member States together on common principles and guidelines for the exploitation of the Union's sea areas The Commission recommends that Member States should establish national plans for maritime policy during 2009. During 2008, the Commission will investigate further needs and possibilities regarding marine spatial planning, including zoning of the sea areas.

Several Baltic and North Sea countries have cooperated on the concept of coastal zone management in the course of a number of Interreg projects. The objective of these projects has been to develop management strategies for coastal zones and the international exchange of experience. Initiatives for more holistic marine spatial planning are nevertheless a relatively new phenomenon in all countries and cooperation in this sector has therefore not occurred until quite recently. It has primarily taken place in the (now terminated) Interreg projects 'Balance' and 'Baltic Master'. The 'Balance' planning model is described in Section 4.5. The 'Baltic Master' project aimed primarily to develop methods for accident preparedness at sea within and between countries, as well as to provide examples of the complete mapping of a sea area and how it can be carried out.

[10] An Integrated Maritime Policy for the European Union. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. {COM(2007) 574 final)}.

4.6.2 Marine spatial planning in some neighbouring countries

Sweden's sea areas have common borders with nine countries: Denmark, Norway, Finland, Russia, Estonia, Latvia, Lithuania, Poland and Germany. These countries have different planning traditions, which can often be explained on the basis of the traditional distribution of political power and of the structure of the administration. In the former Eastern European countries, the planning system is more recent and, especially in the Baltic States, has not yet achieved any very great impact. In the Baltic States, different degrees of importance are thus attached to physical planning as a principle for organising the territory. Certain countries have begun to lay the foundation for planning their sea areas, while others show no political interest for it at present.

Germany

Germany is a Federal Republic which consists of 16 states (Länder) and a large number of municipalities. Each state (Land) has its own government and own legislation. There are no instruments for overall physical planning at the national level. On the other hand, the Federal Government produces fundamental guidelines on a national basis which the other levels must observe in their planning. Legislative planning instruments are delegated to the Länder, which have responsibility for general planning and also define the objectives for the municipalities.

As regards marine spatial planning, responsibility as regards the economic zone lies at the federal level and is exercised through the authority known as Das Bundesamt für Seeschifffahrt und Hydrographie (BSH). The states of Schleswig-Holstein and Mecklenburg-Vorpommern, on the Baltic coast, have responsibility as regards the coastal zone areas and the territorial sea. BSH works chiefly encompasses the maritime industries and marine hydrography. It is also involved with all types of shipping, the granting of permits for windpower, pipelines and cables, environmental monitoring and the prosecution of offences. It is a cooperation partner in several international organisations, in which its primary concerns are with navigational safety and marine protection. The German economic zone is rather small in extent. Responsibility for the

zone comprises primarily the publication of licences and various types of project work, particularly as regards windpower, pipelines and cable-laying. Various ministries are linked into the processes, depending on the nature of the business in hand.

The process of initiating planning in the economic zone has been rather slow in Germany. The remit of BSH, which has long had responsibility for marine hydrography, was extended to embrace marine spatial planning in the late 1990s. It made an inventory by circulating questionnaires to all actors in the zone relating to needs in the sea areas. Later, questionnaires were also addressed to voluntary organisations. The process of gathering views and collating them took approximately two years. Several ministries are currently considering how to balance different interests in the sea area. Hearings for the general public and for representatives from countries adjacent to the Baltic will also be held. Minor legal changes will be made in the period up to 2008. Finally, specific legislation will be enacted on planning in the economic zone. An environmental impact assessment, as is required by the EU, has already been undertaken. About 40 percent of the German economic zone comprises Natura 2000 sites. The authorities have nevertheless not been able to exclude shipping from these zones. On other hand, to take another example, enterprises making plans to lay cables through Natura 2000 sites have not been given state financial support, which has served to encourage them to lay their cables elsewhere. BSH judges that conflicts are rapidly increasing in the German sea areas. There is also an older conflict about fishing and new conflicts arise relating to cable-laying. Special zones for water sport will now be introduced. In Germany there has long been a desire to close certain areas to fishing altogether, but this has so far not proved possible. Management plans for sea areas have still not been established.

The German assessment is that what happens in the economic zone is of no great public interest and that there is therefore no direct democracy dimension to take account of in this context. No need is seen for far-reaching zoning in the economic zone. There is currently no political pressure to bring about zoning in its more regulated form. The basis for mapping in the zone has nonetheless been produced in cooperation between the environment ministry and BSH. The latter is also of the view that it is a question of what data are available and that conceivable influence from different forms of use is often relatively unknown, making more research

necessary. The federal level has led the process of establishing limitations and seeking to bring about solutions within the zone. The public have also been involved. As regards windpower installations, there has been great public participation. Many of those living by the coast have protested against the construction, but municipal politicians have not followed local opinions. Demonstrations against new constructions have also been mounted by the tourist industry.

In Germany's federal state planning programme there are development plans for areas out to the boundary between the territorial sea and the economic zone. These plans are produced in cooperation between authorities, municipalities and voluntary organisations. Mecklenburg-Vorpommern carries out an extended form of comprehensive planning. Schleswig-Holstein, the other federal state on the Baltic coast, has not come quite as far in its marine spatial planning.

Discussions about introducing planning of the territorial sea in Mecklenburg-Vorpommern began towards the end of the 1990s. It was found that there are few areas at sea where windpower could be sited. Work on creating a system for assessing activities in the territorial sea has now begun. The Federal Government changed the planning law in 2004, making it possible to implement the new planning model. Since then work has been carried out on the creation of intersectoral plans. The kind of zoning on which work is taking place will in the end be relatively far-reaching. There will be different regimes for winter and summer zoning. Zoning plans are to be circulated to all stakeholders and to the public. It is nevertheless doubtful whether the plan will be based on principles of strict prohibitions, but will instead probably rely on voluntary observance. A first round of consultations related to the plan was concluded in November 2007. The obligatory environmental impact assessment has been submitted to the European Commission and approval by the Government has been given in a second round.

Poland

Poland comprises 16 regions and a large number of counties, as well as municipalities, and they have independent responsibility as regards physical planning. Sea areas are included in comprehensive

plans in the same way as land areas. The national level ensures that these are in accordance with the national principles. The counties, the level below the regions, have certain powers of self-governance but carry out specific tasks at the request of central government. Central government has responsibility for drawing up planning guidelines but no special concept is employed. There is at present no hierarchy among the existing plans. Nor do current regulations assume participation in the planning process by stakeholders and the public.

The Polish planning system is just now undergoing amendment in the legal respect. The proposed amendments are intended to make planning more practical and less theoretical. These changes in the Polish planning system are being implemented through a parliamentary process. A first draft was published at the beginning of 2008. It does not comprise a plan but only a vision and a policy. There has been no particular planning system for the sea areas and none will be established by the present reform. The work on further definition of responsibility and exploitation of sea areas in the economic zone began in 2006. However, in the present situation there are constitutional obstacles to establishing planning systems for both the territorial sea and the economic zone. Experimental zoning has been conducted in a test area in the western part of the Bay of Gdansk. The idea is that the study will in the longer term lay the foundation for decisions about permanent and time-limited prohibitions. Such a decision can come into force if the land and water planning authorities agree in the matter.

From the national vantage point, exploitation of the Polish sea areas is currently regarded as rather low. For the future, the assessment is that fishing will diminish, while tourism and the construction of wind turbines will increase. The Natura 2000 concept is not yet developed in Polish sea areas. As regards zoning as a part of marine spatial planning, the Polish view is that more research is necessary before decisions on its possible introduction can be taken.

Russia

Russia consists of regions and municipalities that have responsibility as regards the physical planning within their own territories. A central government authority has ultimate responsibility in respect

of national physical planning. The Kaliningrad Oblast Region, the Leningrad Oblast and the St Petersburg Oblast all lie on the Baltic coast and to some extent cooperate with neighbouring countries as regards, for example, survey material for marine spatial planning. That apart, Russia does not currently carry out any planning of its sea areas in the Baltic.

Lithuania

Lithuania's local administrative system comprises 10 regions plus municipalities. The legislation does not concern responsibility for sea areas, but it does relate to coastal zones, for which the municipalities are explicitly responsible. This does not, however, entail any specific responsibility for marine spatial planning. There are no principles governing physical planning in the territorial sea or the economic zone and no special efforts in marine spatial planning are being carried out or currently planned in Lithuania.

Central government is ultimately responsible as regards the territorial sea and the economic zone. The assessment in Lithuania is that the need for planning efforts for sea areas will probably increase as regards nature conservation measures. The intention is to extend the designation of areas for conservation and protection. There are also several areas where conflicts of interest may arise in the future. Fairly extensive mapping of the sea areas has been carried out. As regards windpower, plans have been drawn up for future areas. Other areas considered as possibly requiring planning are cable-laying between Lithuania and Sweden, and the presence of chemical weapons on the sea bottom.

Latvia

Latvia comprises 26 districts, together with a quite large number of municipalities. General national principles for physical planning are defined in the legislation. Responsibility for planning is shared among the administrative levels, and there are principles about the right of independent decision for the lower levels.

National principles for physical planning are currently being worked out in Latvia. The intention is in part that the national strategy should be better coordinated with the district level. New

legislation will be introduced at the same time. In the new legislation the sea will be dealt with as if it were a territory. No particular efforts for marine spatial planning are currently being conducted or planned in Latvia. There are no principles governing physical planning in the territorial sea or the economic zone. The Government has ultimate responsibility as regards the economic zone and in certain cases determines the outcome of conflicts of interest.

Possible areas for the siting of windpower installations have recently been outlined in Latvia. A strategy for the coastal zone areas is currently being elaborated. Marine spatial planning has no high political priority, with some exception as regards work in the framework of HELCOM. Marine spatial planning is chiefly seen as a national matter.

Estonia

Estonia has 15 counties, with associated county administrative boards, which constitute government authorities. There is no administrative level between central government and local authorities. Cities and municipalities have responsibility in the matter of physical planning. National physical plans function as strategies and objectives for balanced and sustainable physical development.

Central government is ultimately responsible as regards the territorial sea and the economic zone. No special efforts for marine spatial planning are being conducted or planned at present in Estonia, apart from within the framework of projects such as 'Balance'.

Finland

Finland is divided into 13 regions belonging to the central government administration. It is further divided into 19 regional councils comprising associations of municipalities. Regional plans define the framework for the more detailed municipal plans. The municipalities to a large extent have responsibility as regards planning of their land and sea areas. Central government lays down overarching national principles for physical planning and ratifies the plans of the regions and municipalities. Central government has also an important role in the national coordination and inspection. The

Government has ultimate responsibility as regards the economic zone. Sectoral responsibility in this area is not currently coordinated.

Coastal zone problems have been managed through regional planning, as it was considered that this could not be organised at the municipal level. There has been legislation in this area since 2000, when regional planning was strengthened. Regional planning takes precedence over municipal planning, but the detailed plan is within the responsibility of the municipalities. A Finnish coastal strategy was drawn up in 2006.

Norway

Norway consists of 19 regions and a large number of municipalities. It has a long tradition of local self-governance. The local and regional levels overlap one another to some extent as regards responsibility in planning matters. Central government's responsibility for physical planning comprises drawing up guidelines, ensuring that the municipalities and regions institute plans and ratifying them, exercising supervision, etc. The municipalities and regions have responsibility to produce local and regional plans that also embrace sea areas.

A first initiative for marine spatial planning has recently been taken in Norway. The Government ratified in 2006 an integrated management plan for the marine environment in the Barents Sea and in the sea areas outside Lofoten. The plan entails a form of zoning, as several protection areas have been designated. For example, prohibitions against oil platforms have been introduced in a number of areas. Furthermore, a number of preventive efforts have been taken as regards marine safety and oil disaster preparedness.

Denmark

Denmark is a decentralised state with a strong municipal influence. Under the local government reform which entered into force at the beginning of 2007 the municipal level acquired responsibility for planning of land areas and coastal zones. This responsibility had previously rested with the regions, which now have a more strate-

gic function without direct responsibility for planning. The Government can influence the decentralised planning through national objectives and general guidelines. The municipal plans include sea areas within the baseline. On the other hand, the territorial sea is not included. No particular authority has currently an overarching responsibility for marine spatial planning in the economic zone. The sectors work separately and make adjustments between themselves on an informal basis.

The economic zone and the territorial sea are included in the responsibilities of central government. The coastal directorate administers these marine areas on behalf of the government. This relationship is nevertheless not written in law but is a preconstitutional principle which "simply exists". The relationships between responsibilities are therefore difficult to define. The Government has shown no present interest in making changes on this point.

In Denmark there is a continual discussion on how conflicts regarding fisheries matters should be resolved. As regards the Øresund Bridge a special law, the Construction Act, was enacted including a provision that when conflicts arose, the Danish Folketing could solve them directly. The zoning issue has become topical through the Interreg project "Balance". The Danish view is that any more far-reaching form of zoning, if such is to be introduced, should be undertaken in conjunction with the neighbouring countries.

4.6.3 Comparative analysis

Marine spatial planning as a concept is not greatly developed in the countries neighbouring Sweden. National principles of physical planning exist in all of them and are at present being developed and improved in certain of them. Several have well-developed planning in the coastal zones including water areas within the baseline. Finland is particularly far advanced in the matter of coastal zone planning. In Poland the municipalities are at present responsible for marine spatial planning. Planning in the territorial sea is, however, less developed in the majority of countries, with the exception of Germany. Responsibility for the territorial sea is more diffuse in countries such as Denmark and Finland. In several countries there is a readiness in some degree to introduce zoning in the sea area. None of the countries today applies any form of binding

zoning plan and for the present they are not conducting any discussion about it. As regards planning in their economic zones, Germany has come furthest and has a special authority with responsibility in the matter.

The line which the Inquiry recommends thus means that Sweden and Germany will be at the leading edge as regards marine spatial planning in the Baltic area. Sweden will also be the first to introduce marine spatial planning with binding elements and mechanisms for inspection through zoning. Sweden should to the maximum possible extent share and develop these ambitions and experiences with other countries.

What is common to all countries is that they have recently begun to conduct discussions about planning for their sea areas at either the official level or the ministerial level. HELCOM is regarded by several countries as a suitable organisation in which to pursue questions about planning and zoning, in order to ensure that the work is undertaken on the basis of the ecosystem approach. HELCOM's organisation may need to be strengthened to enable the sector to be managed and developed internationally. Work in HELCOM should in that way complement work in VASAB, which has rather a coordinating role and expert function in creating forms of planning cooperation in the Baltic area. The European Commission will have an important role in continuing to elaborate guidelines for marine spatial planning in accordance with its Communication on EU maritime policy.

4.7 Implementation of Swedish marine spatial planning

Swedish marine spatial planning should be introduced in several stages:

1. Based on the Inquiry's proposals and views from the consultation bodies, the Government should submit a proposal in principle to the Riksdag.
2. Following consideration in the Riksdag, the Government should appoint a Legal and Implementation Inquiry.

The Legal and Implementation Inquiry should focus particularly on the following:

- Legislative changes consequent on the Riksdag's decision.
- Defining the boundaries between the primary municipal and regional planning responsibilities within the baseline.
- Procedures for statutory review of and appeals against marine plans.
- Permits for authorities and enterprises.
- Procedures for consultation with municipalities and the general public.
- A zoning implementation plan.
- The need for organisational change and reinforcement of the National Board of Housing, Building and Planning
- The regional bodies' need for change and reinforcement.
- Other matters arising.

3. Taking its point of departure in the detailed proposals by the Legal and Implementation Inquiry, the Government should produce a complete set of proposals, including proposals for constitutional changes, to be submitted to the Riksdag.
4. The Government issues the necessary ordinances and appoints a responsible central government authority.
5. Central government authorities and regional bodies begin the planning.

4.8 Geographical areas with strong conflicting interests

Assessment
There are many cases of conflicting interests as regards nature conservation, maritime activities and construction in Swedish sea areas. In general there are more interests that can come into conflict in inshore areas than in the open sea. The Inquiry has identified three cases where there are strongly conflicting interests and where the risk of future conflicts is thus great.

1. Coastal and archipelago areas in proximity to major city areas.
2. Offshore shallows, where windpower interests and other interests collide.
3. Other countries' claims to lay pipelines and cables or in other ways to exploit Sweden's economic zone.

There is growing interest in establishing activities both inshore and offshore. The driving force offshore consists both in the technical development making it possible to build permanent installations at greater depths and in more exposed situations, and in the striving for greater integration among the European countries, which requires fixed links in the form of cables, pipelines and bridges. In step with the increased exploitation of the sea, there is also a greater need to protect other public interests, for example nature and cultural values.

Activities and interests that are increasing and that can be expected to continue to increase are the following:

- Wind-power as an important substitute for fossil-produced energy. Construction targets have been established. Wave-power can also be developed in the longer term but this is at the present moment on a very small scale.
- Port activity is increasing but being concentrated on a smaller number of ports. The channels to the ports are being enlarged.
- Submarine cables and pipelines are being laid, both as a consequence of the construction of new wind- and wave-power installations, and to connect national electricity networks. Other types of cables, for example for telephony and data transmission, as well as gas-pipelines are being laid.
- Holiday homes and permanent dwellings along the coasts and in the archipelago, with their accompanying jetties and quaysides.
- Oil drilling (in the first instance, in the south-east Baltic Sea).
- Nature conservation and the protection of cultural values, as well as other types of protection, such as bathing-waters and protected areas for fish and shellfish.
- Open-air life and tourism.

Activities that are expected to remain on approximately the same scale as today are as follows:

- Commercial fishing. Fishing must nevertheless compete to a greater extent than previously with other activities and interests, including in offshore areas. In the longer term, developments in the fishing industry are likely to be closely connected with the state of the relevant fish stocks.
- Dredging and the need for spoil disposal.
- Military activity, including exercises with naval units at sea and the danger areas associated with coastal firing-ranges.

There is an established planning process, within the framework set by the Planning and Building Act and the Environmental Code, for balancing different interests in coastal areas (in the first instance, land-based activities). In certain cases there are, however, problems as regards the management of contradictions between public, often national, interests and individual interests. One example of this is protection of the right of access to the coastline, which in many municipalities has been greatly reduced through liberal dispensations from the overall provisions on such protection contained in the Environmental Code. The Government is currently reviewing these provisions.

Further out from the coast, in the open sea, there is no formalised planning model. Any conflicts of interest come to light only when actors show interest in establishing activities in a given area, for example windpower installations. It is not until the environmental impact assessments (EIA) have been prepared and the statutory review takes place that different interests are confronted with one another. The authorities have nevertheless to a greater extent begun to designate areas of national interest in offshore areas.

Within the economic zone, and particularly as regards activities that affect several countries, there is even less public planning. Enterprises that are planning to build, for example, gas pipelines or windpower installations, thereby acquire the main responsibility both to produce knowledge bases, which can also contain new surveys, and to weigh the various interests of different countries. The UN Convention on Environmental Impact Assessment in a Transboundary Context (the Espoo Convention) requires an environ-

mental impact assessment to be included in the documentation when applications are being assessed and also requires transboundary consultation.

4.8.1 National interests and other protected areas

National interests are part of the provisions in Chapter 3 and Chapter 4 of the Environmental Code about the management of land and water areas. The geographical extent of national interests is specified both in Chapter 4 and in decisions by a number of central authorities based on Chapter 3. What kind of interests the authorities can define as being a national interest, and who these authorities are, is laid down in Ordnance (1998:896) on the Management of Land and Water Areas.

Chapter 4 of the Environmental Code specifies the areas that, with respect to their nature and cultural values, are of national interest in their entirety (Figure 4.1). Within the areas designated as being of national interest for outdoor life, the interests of tourism and above all the interests of outdoor leisure activities must particularly be taken into account in assessing the permissibility of exploitation or other intervention in the environment. In addition to these areas specified in the Act, the Swedish EPA, pursuant to Chapter 3, Section 6 of the Environmental Code, has also designated areas of national interest for outdoor leisure activities. Figure 4.1 shows both these types of national interest for outdoor life, combined in one category.

In areas that constitute unbroken coastline under Chapter 4 Section 3 of the Environmental Code, no large industrial installations may be built. In certain coastal areas, only limited exploitation is permitted. Holiday home construction can take place only in the form of additions to existing housing. If there are special reasons other holiday homes may be built, preferably where this meets the needs of outdoor leisure activity or where it is a matter of individual holiday homes near major densely populated regions. Industrial structures may only be erected in places where others are already in existence.

Areas that are of national interest for the fishing industry, nature conservation, cultural environment, windpower and shipping are designated by authorities based on Chapter 3 of the Environmental Code (Figure 4.2). The National Board of Fisheries

designates areas of national interest for commercial fishing. These areas must be protected against measures that may impede commercial fishing in them.

The Swedish EPA designates areas of national interest for environmental protection and the National Heritage Board designates areas of national interest in the protection of the cultural environment. These areas must be protected against measures that can cause evident damage to natural or cultural environments.

The Energy Agency designates areas of national interest for windpower and the Maritime Administration designates areas of national interest for shipping. In so far as possible these areas must be protected against measures that can cause problems in the construction or exploitation of installations (windpower generating stations or shipping lanes).

The National Board of Fisheries has established a trawling limit within which no trawl-fishing may be carried out (Figure 4.3). There are nevertheless certain exceptions from this general rule. Beyond the trawling limit, the National Board of Fisheries applies fisheries legislation (including special provisions) governing protected areas for fish and shellfish. There are a number of such areas, of which some are permanent while others apply only for a certain period of the year.

Areas of national interest for shipping should be compared with the actual shipping traffic (Figure 4.4). It is evident that many ships entering Swedish waters do not call at a Swedish port but only pass through on their way to other countries. There is a distinct shipping route in the Baltic Sea towards the Bay of Finland and Russian ports. The majority of vessels pass through the Great Belt or the Sound on the way to the Baltic Sea.

In the sea areas there are also areas of national interest for defence that are designated by the Armed Forces (Figure 4.5). They comprise both exclusion areas associated with firing ranges along the coasts and firing and exercise areas at sea for naval units. Such areas must be protected against measures that can cause evident problems for the construction or use of the installations. If an application in respect of an area is made for incompatible purposes, the defence interest must in law be given preference.

Area protection under Chapter 7 of the Environment Code is developed primarily for land areas. The majority of sea areas enjoying the status of nature reserves have received protected status with regard to the natural values that exist on land, i.e. the

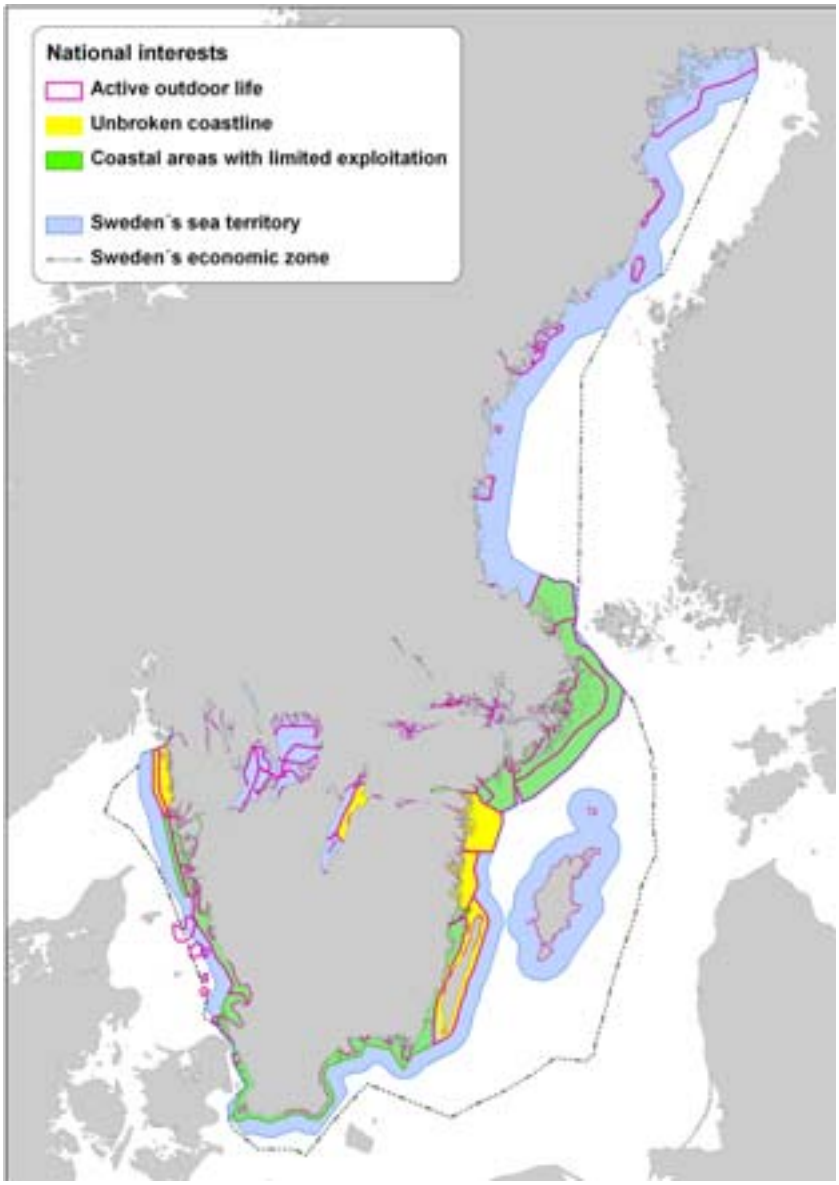
shores and islands (Figure 4.6). Only in a small number of cases has the submarine environment been designated as important when a nature reserve has been formed. That is usually because of inadequate knowledge about the sea bottom and about the living environments and species that are to be found under the surface. There are also relatively few Natura 2000 sites in sea areas.

Within both HELCOM and OSPAR work is ongoing to establish networks consisting of protected areas in the marine environment. The areas that Sweden has designated as requiring protection are listed in Figure 4.7.

The majority of known cultural relics on the sea bottom are wrecks of ships and boats. Ancient remains under water are protected under the Heritage Conservation Act (1988:950) in the same way as ancient remains on land. As regards wrecks the legal protection applies if at least 100 years can be assumed to have passed since the ship became a wreck. The National Heritage Board's ancient monument information system (FMIS) holds information about wrecks and other cultural remains on the sea bottom (Figure 4.8).

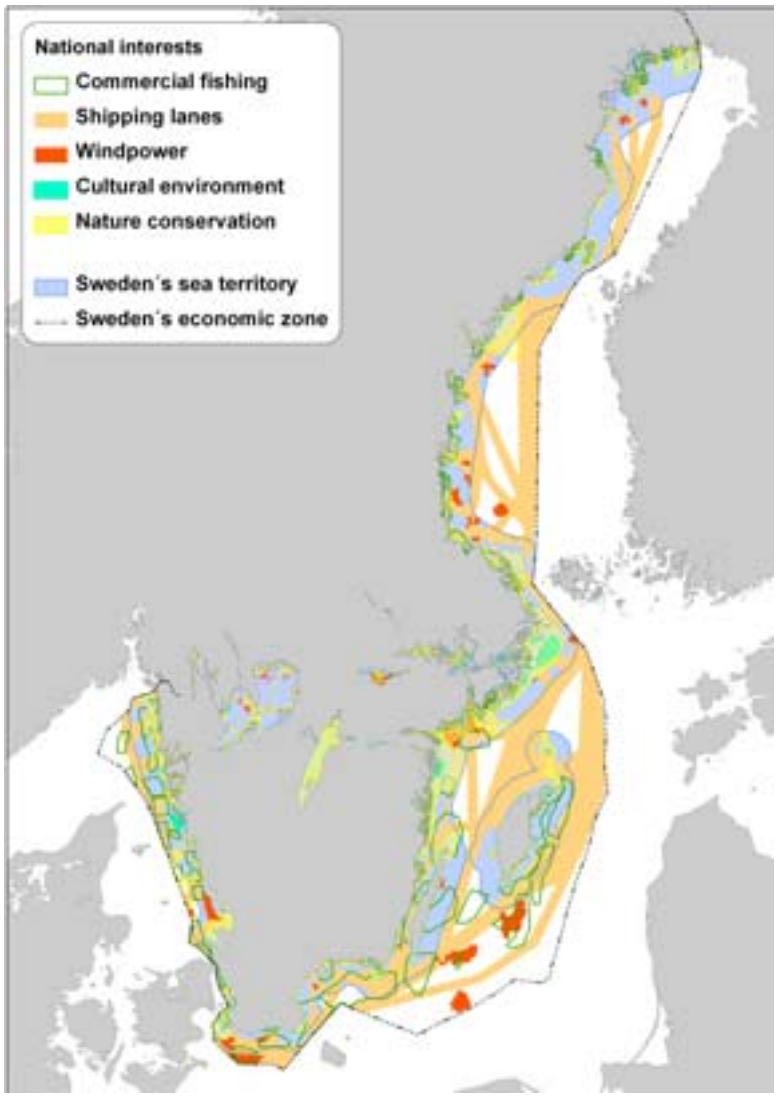
Another factor that affects the exploitation of the coast and sea and the risks of conflicts of interest is the population distribution (Figure 4.9). The majority of densely populated areas are in southern Sweden, with the greatest population concentration around Stockholm, Göteborg and Malmö.

Figure 4.1 **The map shows areas of national interest for outdoor life, coastal areas that represent unbroken coasts and coastal areas where only limited exploitation is permitted under Chapter 4 of the Environmental Code. As regards outdoor life, areas designated by the Swedish EPA, pursuant to Chapter 3 of the Environmental Code, are also included**



Source: The Swedish EPA (Outdoor life)

Figure 4.2 **The map shows areas of national interest for the fishing industry, environmental protection, the cultural environment, windpower and shipping. The areas are designated by government authorities pursuant to Chapter 3 of the Environmental Code and Ordinance (1998:896) on the management of land and sea areas. The areas designated as being of national interest for windpower also include areas that will shortly be confirmed by the Energy Agency**



Source: National Board of Fisheries, the Maritime Administration, the Energy Agency, the National Heritage Board and the Swedish EPA

Figure 4.3 **The map shows the Swedish trawling limit. Within the trawling limit trawl-fishing is banned (subject to the exception stated in the regulations of the National Board of Fisheries). In the Sound there is a general ban on trawling**

Source: National Board of Fisheries

Figure 4.4 The map shows shipping traffic in Swedish and adjacent waters. The map is based on data from the Maritime Administration's reporting system for AIS-information (Automatic Identification System). This is a safety system for shipping vessels, based on continuous transmission of information on position, course and speed

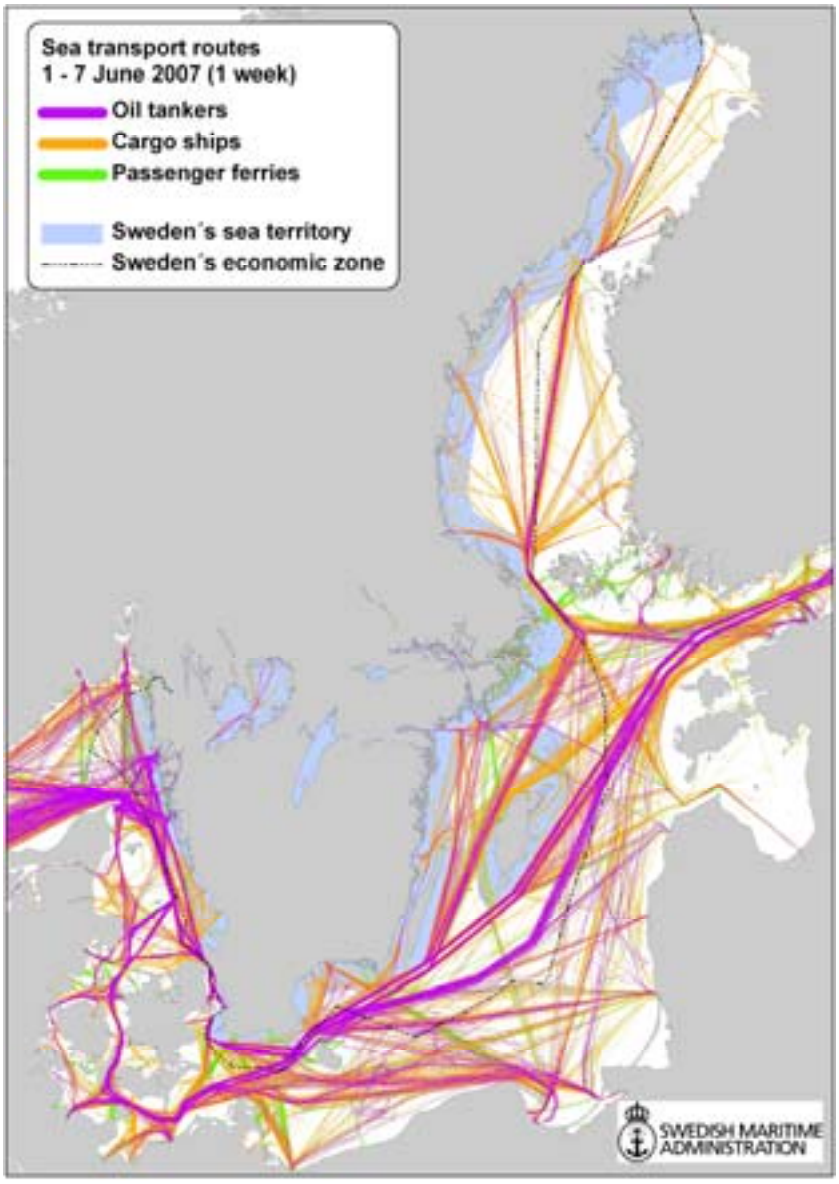
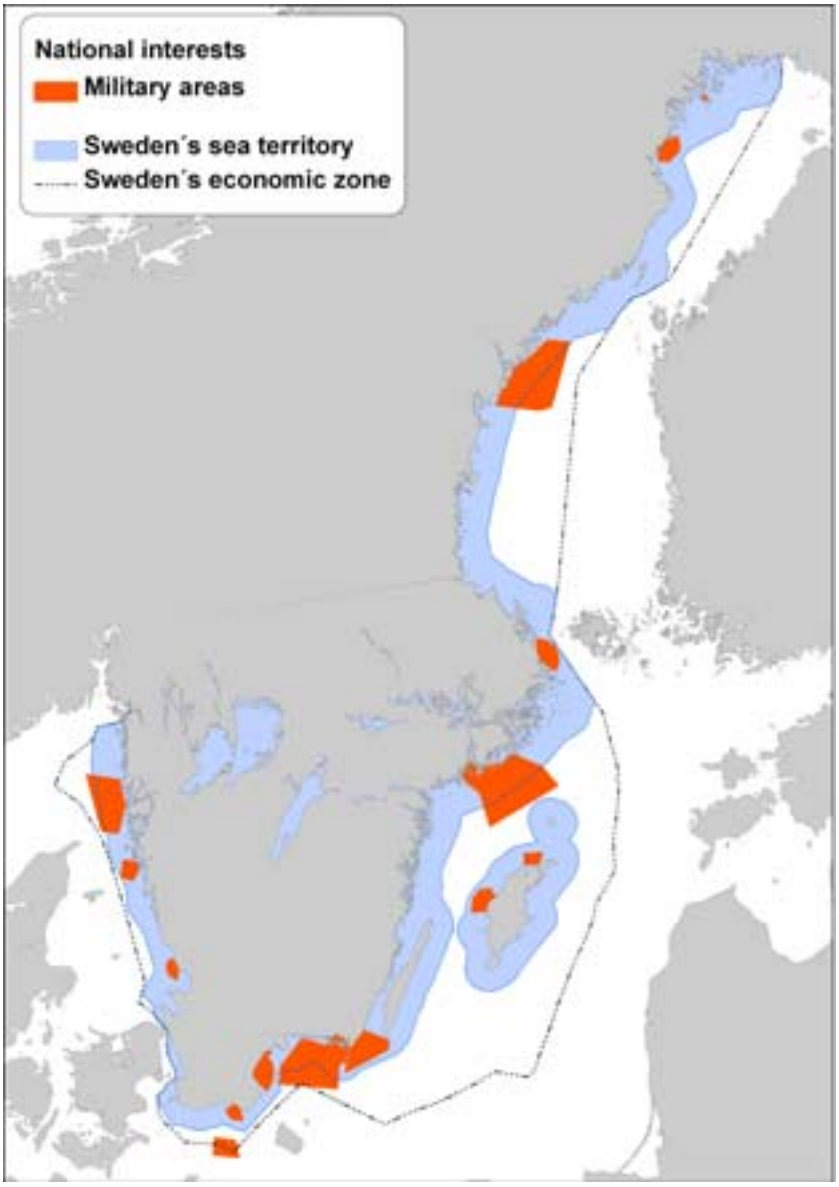
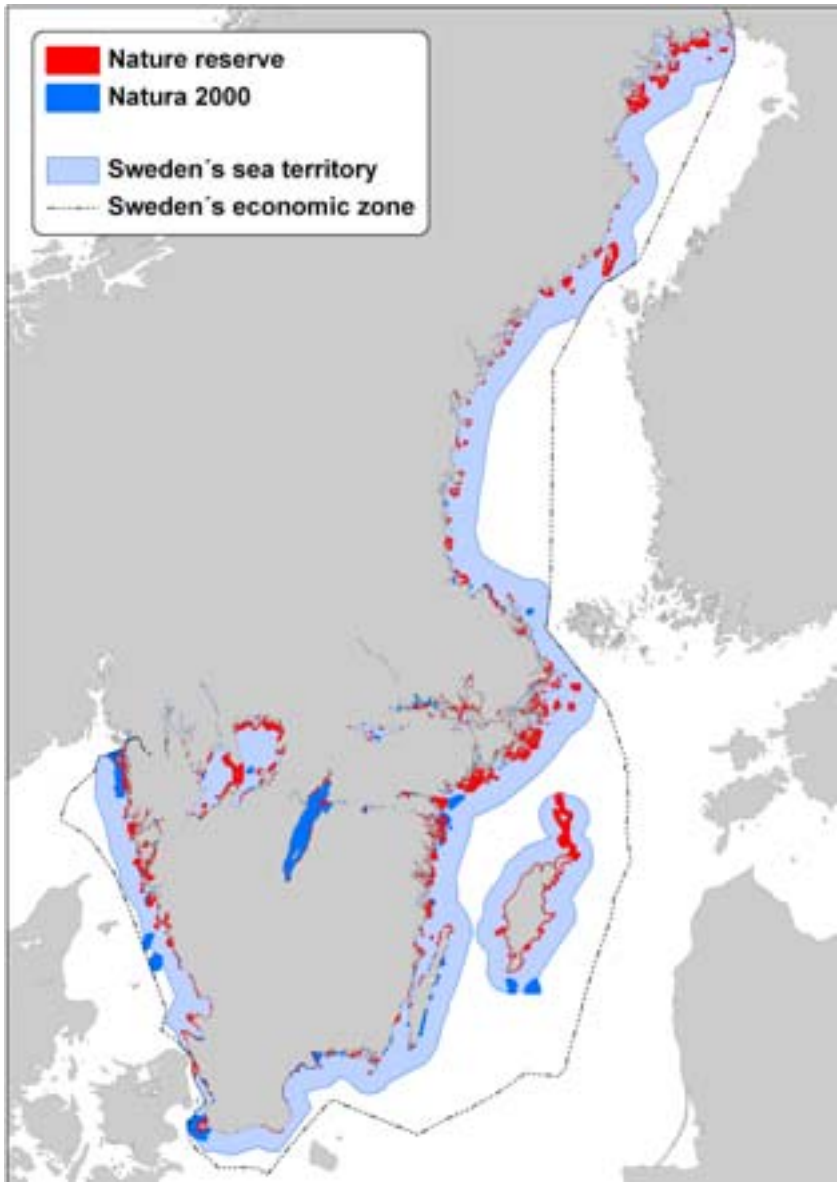


Figure 4.5 The map shows areas of national interest for Sweden's total defence. The areas are designated by the Armed Forces based on Chapter 3 of the Environmental Code and Ordinance (1998:896) on the management of land and sea areas



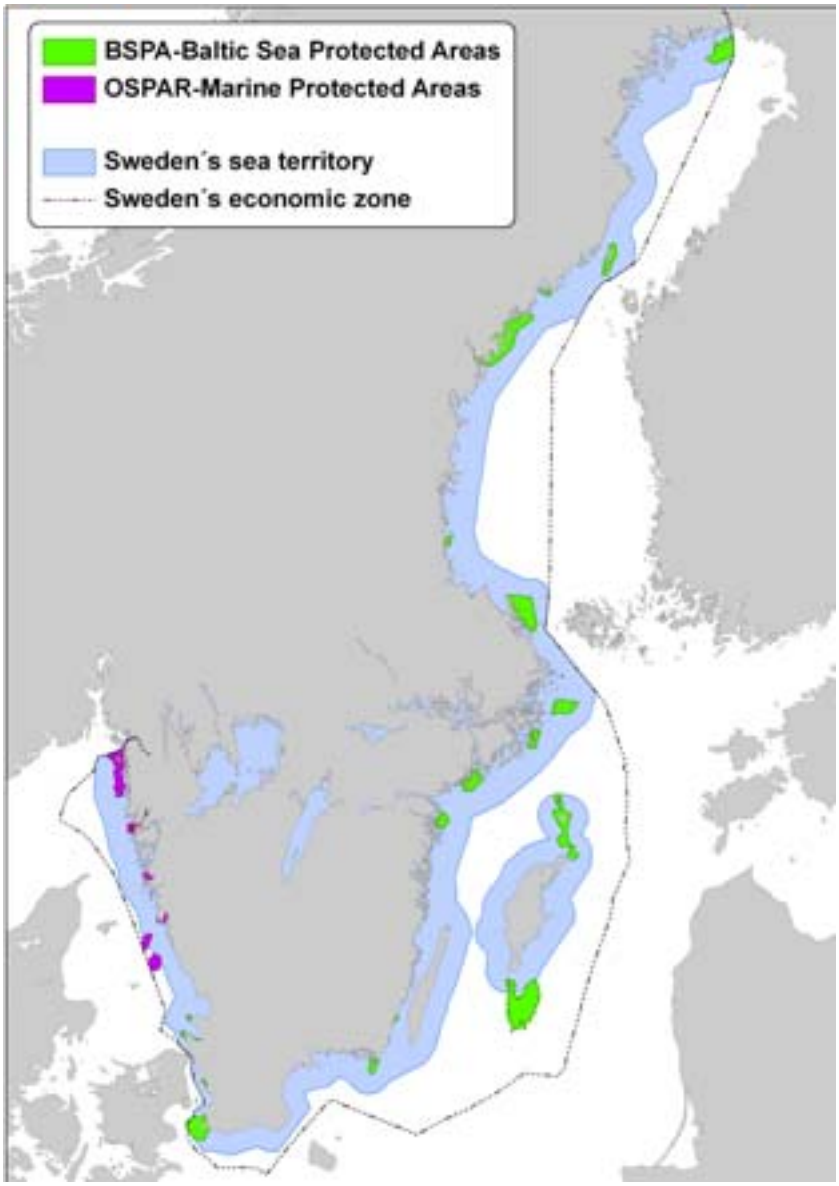
Source: Swedish Armed Forces

Figure 4.6 The map shows nature reserves and Natura 2000 sites in Swedish coastal and sea areas, and also in large lakes



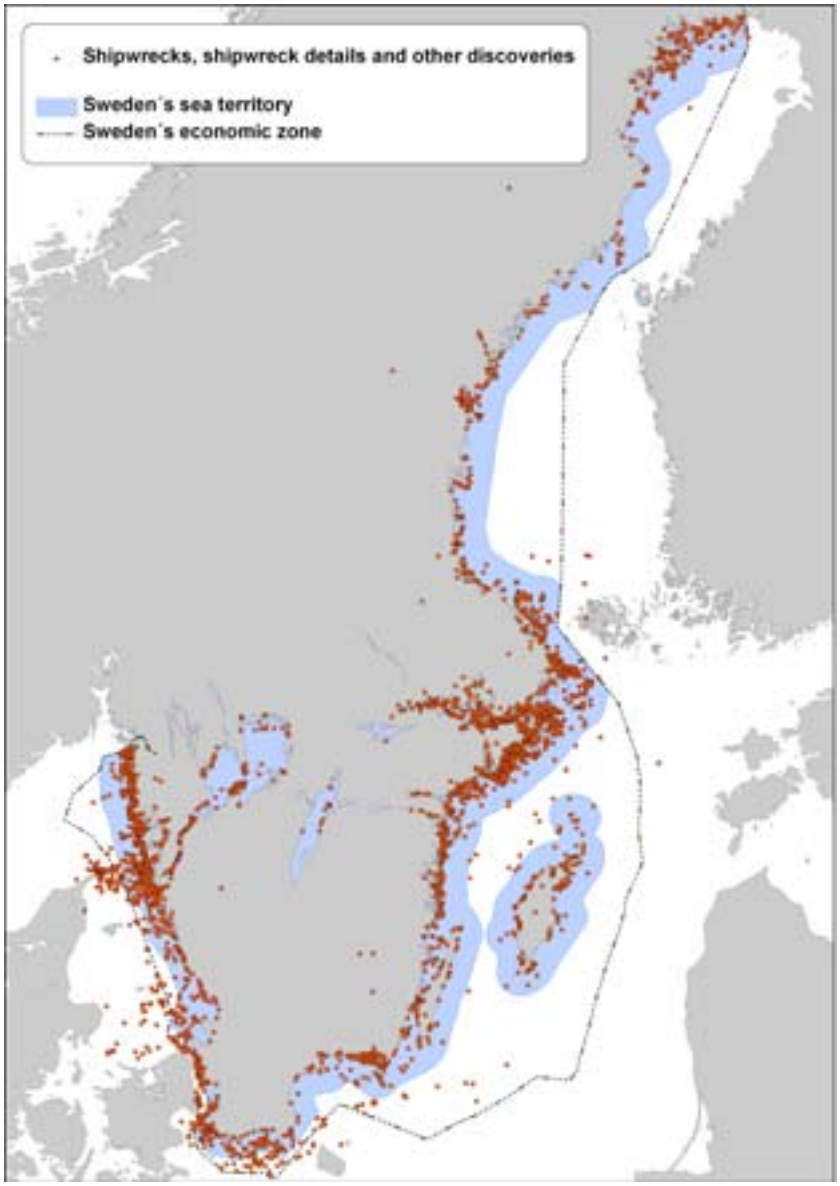
Source: Swedish EPA

Figure 4.7 The map shows areas included in HELCOM's and OSPAR's respective networks of marine protected areas (in Swedish waters)



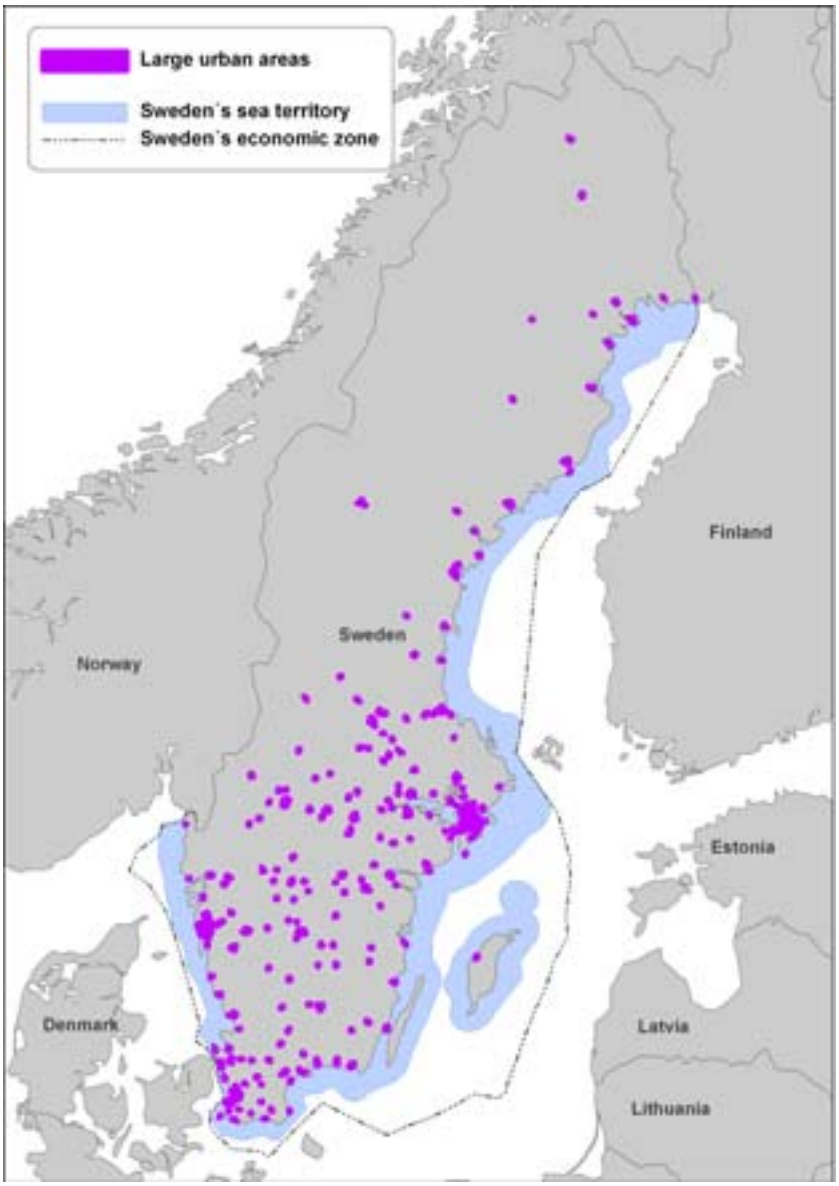
Source: Swedish EPA

Figure 4.8 **The map shows wrecks and other sea-bottom relics registered in the Swedish Ancient Monument Information System (FMIS) of the National Heritage Board**



Source: The National Heritage Board

Figure 4.9 The map shows the major densely populated areas in Sweden



Source: The National Land Survey of Sweden

Conclusions

Areas that for various reasons have been designated as being of national interest, and various types of protected areas, overlap with one another in a number of instances. It is difficult to judge whether this entails a real risk of conflicts of interest, or whether it is rather a case of stereotyped resort to use of the national interest instrument. The overlaps are most evident in coastal areas, and also where many interests are present in a small area, for example south of Gotland and in the southwest Baltic. It is also clear that the total of all sea areas to which some form of restriction applies (national interest or environmental protection) is very large. National interests have a weaker legal status than nature reserves and Natura 2000 sites.

In Chapter 3 Section 10 of the Environmental Code it is stated that insofar as an area is of national interest for a number of incompatible purposes, preference must be given to the purpose or purposes that in the most appropriate way promote(s) long-term management of land, water and the physical environment at large. If a defence installation lays claim to an area or part of it, the defence interest must take precedence. Apart from these principles stated in the Act, there is no system for balancing between different national interests. If incompatible national interests are declared for one and the same area, this situation persists until it is submitted to the courts in a case relating to use of the area.

4.8.2 Geographical areas in which there is greatest risk of conflicts of interest

Below are described some examples of areas where strong opposing interests are considered to exist and where the risk of conflict is therefore judged to be great.

Coastal and archipelago areas in proximity to major city areas

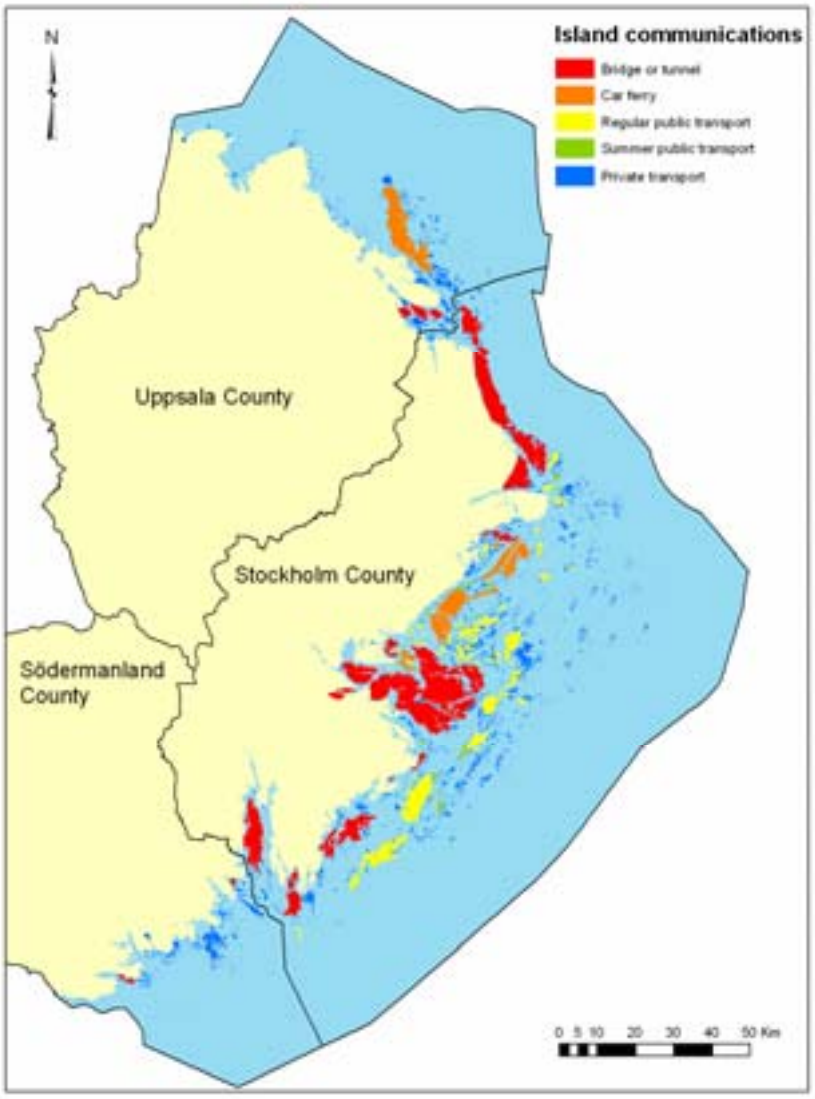
Generally, the risk of conflicts of interest is greatest in very densely populated areas. In these places there is strong competition for space and resources. That means that the majority of conflicts of interest should arise in coastal areas close to major cities. In already established areas, however, a new balance has often been reached.

Interests such as environmental protection have then had to give way to other interests, for example housing construction and infrastructure. In areas that are growing in economic and population terms, the free space diminishes and the risk of conflict increases.

The Stockholm archipelago example

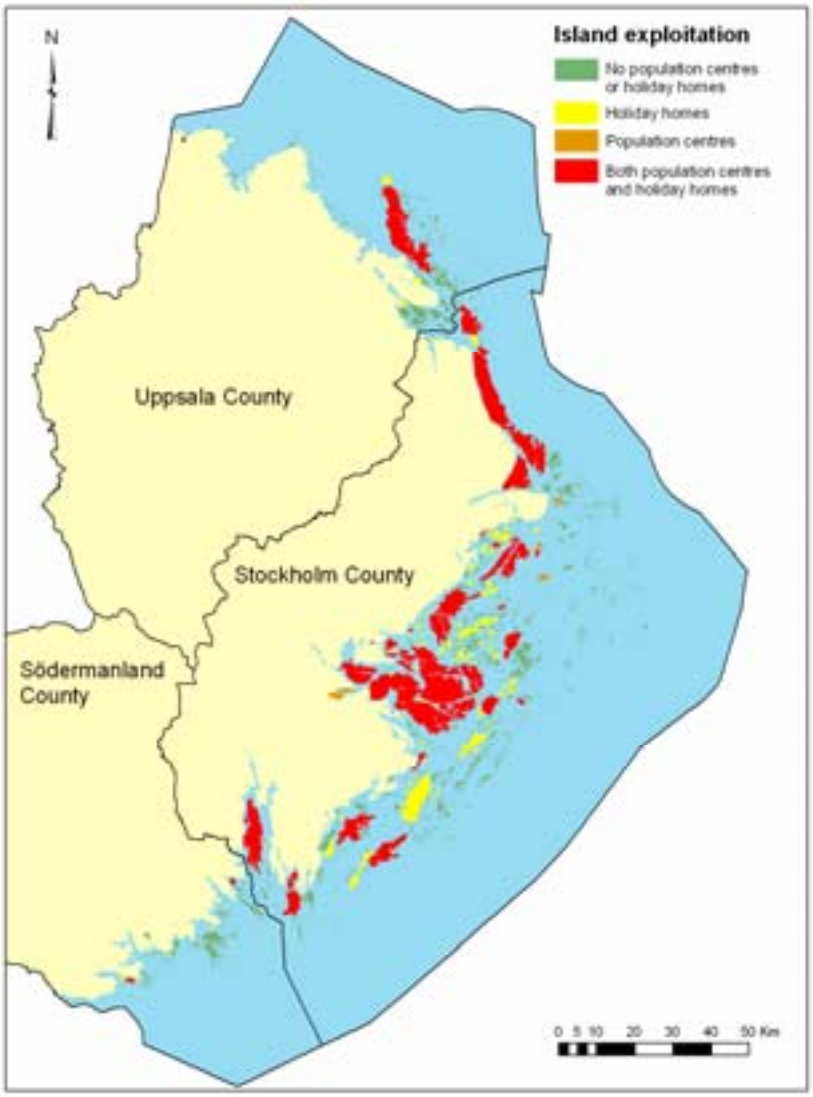
The Stockholm archipelago, which in this example embraces coastal and sea areas in the counties of Södermanland, Stockholm and Uppsala, is an area where many different interests meet. In its inner parts, there are major urban areas and major roads. That is particularly evident in Stockholm municipality and in the coastal municipalities that surround it, for example Nacka, Värmdö, Lidingö and Vaxholm. There are road connections to many islands in the inner archipelago and considerable regular boat traffic to other islands (Figure 4.10). There are in addition extensive settlements of second homes in the Stockholm archipelago which to an increasing extent are being converted for all-year occupation rather than summer use only (Figure 4.11). Increased construction of second (holiday) homes and all-year-round homes leads to an increase in the consumption of groundwater, with the risk of saltwater intrusion. On a number of islands there is already a problem because saltwater contamination has rendered groundwater unfit to drink.

Figure 4.10 The map shows various forms of communications to the islands in the Stockholm archipelago



Source: The National Land Survey and the Office of Regional Planning and Urban Transportation in Stockholm

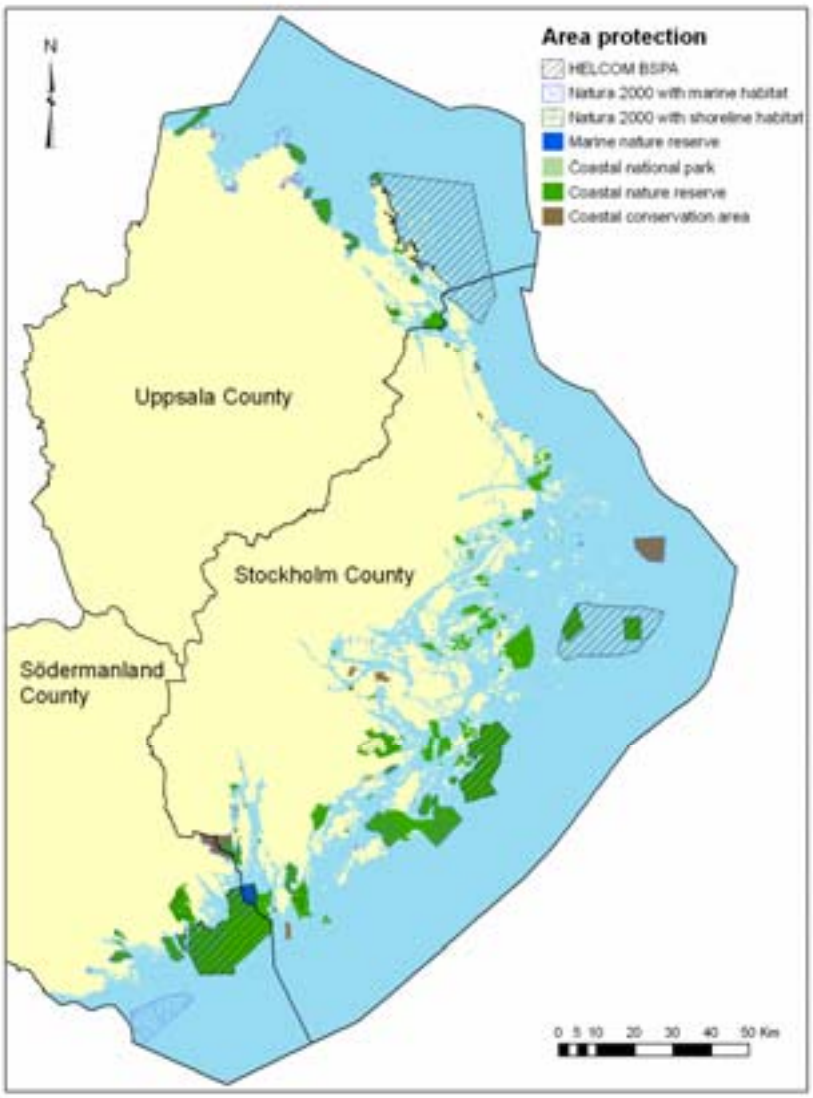
Figure 4.11 **The map shows exploitation of the islands in the Stockholm archipelago in the form of overall built-up area (place) and second (holiday) home areas**



Source: GSD-Land and Vegetation Cover, the National Land Survey of Sweden.

Stockholm's outer archipelago is by contrast relatively unexploited and unaffected. The area as a whole has great natural value and represents a type of archipelago that is unique in the world. Within it are many protected areas (Figure 4.12). Large parts of the archipelago are designated as being of national interest for outdoor life. The middle and outer archipelago are designated as being of national interest for environmental protection. The County Administrative Board of Stockholm County is moreover planning new "respect areas" which must be free of traffic noise, particularly from boat traffic.

Figure 4.12 The map shows protected areas in the Stockholm archipelago



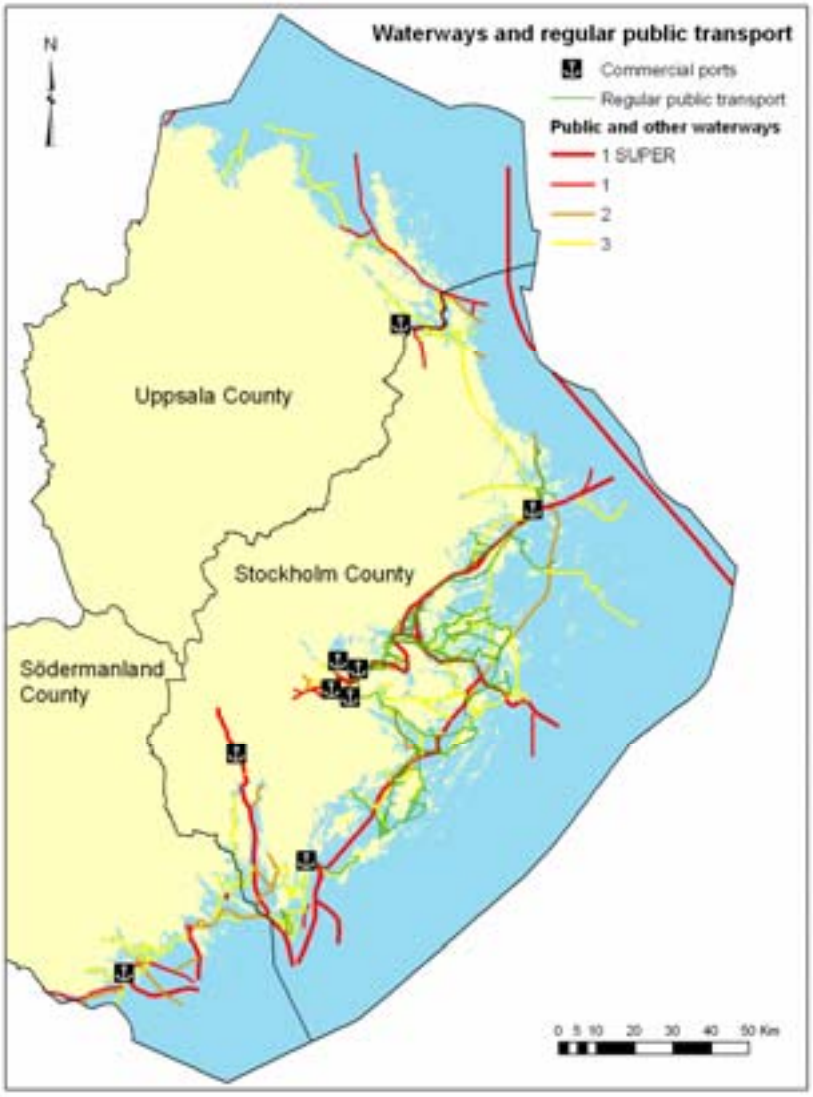
Source: The Swedish EPA (VIC Natur).

Stockholm's archipelago is also an important area for shipping (Figure 4.13). Approximately 15 million tonnes of freight and 10 million passengers are annually transported through the area. The dense traffic and larger vessels have made the existing channels through the archipelago too narrow and difficult of passage. The swell they create causes coastal erosion. However, the desire to create bigger and safer shipping channels by blasting and dredging collides with other interests, such as environmental protection, fishing and outdoor life. Planning of a new approach to Stockholm, known as 'Horsstensleden', has been ongoing for several years.

The harbour at Kapellskär, north of Stockholm, is on the list of strategic harbours for freight transport that the Inquiry on a Harbour Strategy has proposed.[11] Kapellskär is an open location with few islands, which means that the risks of accident and conflicts with other interests are less there. The heavy shipping traffic to central parts of Stockholm is nonetheless likely to continue irrespective of what status is accorded to Kapellskär. That applies not least to passenger transport.

[11] Hamnstrategi – strategiska hamnnoder i det svenska godstransportsystemet. [Harbour Strategy – strategic nodal harbours in the Swedish freight transport system]. Final Report by the Harbour Strategy Inquiry SOU 2007:58.

Figure 4.13 **The map shows the shipping channels and scheduled traffic, together with commercial harbours in the Stockholm archipelago. Classification of different types of shipping channels according to the Swedish Maritime Administration**

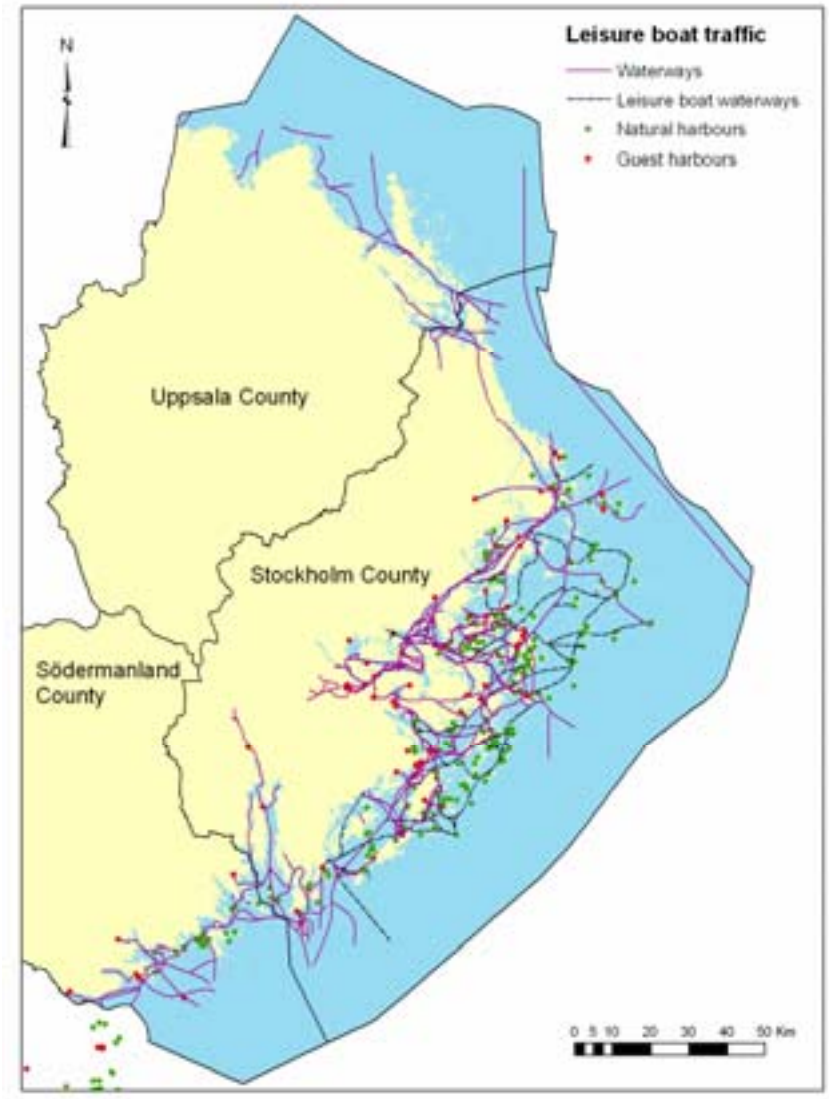


Source: Swedish Maritime Administration, the Office of Regional Planning and Urban Transportation in Stockholm and the County Administrative Board in Stockholm County.

During the summer there is also much leisure boat traffic in the archipelago (Figure 4.14). Sailing and boating represent probably the most common outdoor leisure pursuits there. Leisure boating nevertheless has its negative sides, since it results in litter and the discharge of polluted water. Motor boats also add to exhaust gases and noise. The increasing number of leisure boats also brings a need to extend the construction of jetties and small boat harbours. A study by the County Administrative Board in Stockholm County shows that the number of jetties and other constructions along the shores has increased significantly during recent decades.[12] A similar development has been recorded in Bohuslän.[13]

[12] Vad händer med våra stränder? [What's happening to our beaches?] Deras framtid i våra händer. [Their future in our hands.] Kindström, N. 2006. County Administrative Board in Stockholm County, report 2006:18.
[13] Strandexploatering i Strömstad kommuns södra skärgård. [Shoreline exploitation in Strömstad municipality's southern archipelago.] Henrik Hellström, Tjärnö Marine Biology Laboratory, University of Göteborg, December 2007.

Figure 4.14 The map shows the shipping channels, leisure boat channels, natural harbours and guest harbours in the Stockholm archipelago



Source: The Swedish Maritime Administration and Granath (2007).[14]

[14] Arholma-Landsort med Gotland: Din guide till skärgårdens öar, gäst- och naturhamnar [Your guide to the archipelago's islands, guest harbours and natural harbours] Granath, L. 2007. Nautiska förlaget, Stockholm.

Offshore shallows – windpower collides with other interests

As a result of the planning objective set by the Riksdag, for the construction of additional windpower with effect from 2002, the offshore banks (reefs or sandbanks) have become areas of great importance for exploitation. The Energy Agency produced in 2007 a new national planning objective which means that windpower generation at sea is planned to be extended so that by 2020 the total output from sea-based windpower stations will be 10 TWh. That is estimated to correspond to more than 1 000 new wind power-stations. The shallow off-shore banks provide an opportunity to construct foundations for wind power-stations far out at sea. This siting is advantageous both with regard to the wind strength and because the power-stations are scarcely visible from land. Residents by the coasts often regard wind power-stations as a visually disturbing presence in the landscape. Because these off-shore banks are also important for many marine species and hence for environmental protection, these interests must be balanced against one another.

Since 2003 a very hastily prepared inventory of the banks in Swedish waters and within the Swedish economic zone has been in progress (Figure 4.15). The Swedish EPA is of the view that a number of the banks counted cannot be considered as possible construction sites. At the same time pre-studies and legal processes have been started on applications for permission to build on other banks, for example the Södra midsjöbank and Stora middlegrund. The Swedish EPA has proposed that Stora middlegrund should be given Natura 2000 site status. The Government has, however, so far (Spring 2008) taken no decision on the matter. In Sweden wind power-stations are operating on Utgrunden in Kalmarsund and on Lillgrund in the Sound.

Planning is under way for a major wind power-station project on Kriegers Flak in the Swedish economic zone. Construction is likewise planned on the German part of Kriegers Flak, as well as on the Danish side of this shallow area. There is no organised coordination among Swedish, German and Danish authorities. Internationally coordinated marine spatial planning would create better conditions for good management of this shallow area. There is a great risk that without coordination faulty assessments will be made of the combined consequences for the environment, the ecosystem and the impact on other interests. Coordinated spatial

planning in the area could also constitute a basis for examining and discussing how countries can together most cost-effectively extend the electricity network. Such a network could handle the electricity output from the windpower installations and perhaps also distribute it internationally.

Figure 4.15 **The map shows the offshore banks that have been inventoried by the Swedish EPA and other authorities, to establish where wind-power can and may be built, as well as where exploitation should not be permitted. On some offshore banks planning for wind-turbine parks is already in progress. According to the Swedish EPA, offshore banks marked in red should be protected. The banks either have the status of a Natura 2000 site already or have been proposed for it**

Source: The Swedish EPA

Other countries' claims as regards laying cables or other use of the Swedish economic zone

Under the UN Convention on the Law of the Sea other states have the right to lay submarine cables or pipelines on the continental shelf of another coastal state. The coastal state has nevertheless relatively wide scope to influence and even to prevent this, on environmental grounds. Under the Espoo Convention an Environmental Impact Assessment (EIA) must be prepared by the state or enterprise that intends to lay cables or pipelines on the shelf.

A natural gas pipeline 1 200 kilometres long is planned between Viborg in Russia through the Baltic to Greifswald in Germany. The planning and eventual construction is being undertaken by Nord Stream AG. This is a public limited company owned by major energy companies, including the Russian company, Gazprom. The gas pipeline is proposed to pass through the economic zones of Finland, Sweden and Denmark. On 21 December, 2007 Nord Stream lodged an application to the Swedish Government for permission to lay pipelines on the continental shelf and to erect a service platform within the Swedish economic zone. Nord Stream has carried out surveys of the sea bottom along the intended route of the pipeline.

Because Nord Stream submitted an incomplete application the Government has not yet (Spring 2008) been able to consider it. The Government's view is that under the Espoo Convention the company must produce an EIA for the full length of the pipeline through the territorial waters and economic zones of all the countries concerned. The Government has also demanded a report of the trans-boundary consultations that are required under the Espoo Convention.

Also, although Nord Stream is following the international rules in its planning and in its application for permission for a gas pipeline, it is obvious that the company will be able to play a very strong part in this context, because the countries and governments concerned have not coordinated their interests in the matter. That enables the company to negotiate with one country at a time and to play them off against one another. By placing positive statements by the EU Environment Commissioner, Stavros Dimas, on the company website, Nord Stream gives the impression that the EU has adopted a position in favour of the project. A more proactive method of working, for example through coordinated marine spa-

tial planning, would give the governments and the EU greater influence over the formation of major international projects like this.

Figure 4.16 Geographical areas with significant conflicts of interest

4.8.3 Analysis and conclusions

The survey shows that in Swedish sea areas there are several geographic areas with significant conflicts of interest (Figure 4.16). A process of marine spatial planning should be embarked on as soon as possible in these areas. All relevant interests should be taken into account in this process and several compromises will probably be required. The precautionary principle suggests that planning is most urgent in areas with great basic natural values or great sensitivity to change (seen from an ecosystem perspective), where there is also great pressure for exploitation.

Conflicts of interests occur even at the level of principle, which can have an impact on future planning work. That applies particularly to certain interest groups' attitudes to areas where fishing is banned and also to other types of marine protected areas. There is often opposition to the designation of such areas, irrespective of their geographical position.

In the examples given here the focus has been on the physical exploitation of coastal and sea areas. That is also the direction taken by the Inquiry's proposals as regards the development of a planning system for Swedish sea areas. In the practical work of marine management, however, other impacts on the environment must also be weighed in the balance, such as emissions from point sources, run-off from agricultural land and private sewers, air pollution, and so on.

Win-win situations and ways to reduce conflicts

The presence of a number of different interests within one and the same area does not necessarily entail that one interest must yield to another. Sometimes there are win-win situations. One example is the establishment of windpower. The research studies that have been made regarding the long-term negative effects of wind power-stations on biological diversity have not shown any clear results. Swedish studies in Kalmarsund that have been carried out within the research programme 'Vindval' show that birds in general avoid wind power-stations and that very few collide with them.[15] Migra-

[15] Vindkraft – Tillståndsprocessen och kunskapsläget. [Windpower – The permit process and the knowledge basis]. Information brochure from the Swedish Energy Agency, 2007. (The brochure contains a survey of the current state of knowledge about the effect of windpower on its surroundings, based on studies in Vindforsk and Vindval).

tory birds choose other routes and fly round windpower installations. It is nevertheless not known what the effects may be in the longer term or when bigger windpower parks are constructed. Wind power-stations have in certain cases proved to have positive effects for biological diversity. For example, the foundations for wind-turbines can function as an artificial reef for attached organisms such as mussels and even as protection for other marine organisms. Windpower installations can also entail protected areas for fish because trawling is banned in the area. A possible negative effect of dense construction of windpower stations along the coasts of Europe is that the diffusion of alien species can be facilitated. The windpower stations can act as stepping stones.

Increased cooperation and common planning between neighbouring countries on the establishment of windpower installations should make it possible to use the cables more efficiently or, alternatively, to place a number of parallel cables on the sea bottom.

In the coastal and archipelago areas the protection of nature and cultural values can often be combined with the development of local societies and local employment opportunities. There should also be possibilities for cooperation between nature and cultural values and outdoor life/tourism.

4.9 Funding and consequences

The introduction of a system of marine spatial planning will affect all levels of society in the sea areas and the majority of social actors. Existing regional bodies will through the Inquiry's proposals acquire increased responsibilities by taking on marine spatial planning in the territorial sea and in sea areas within the baseline (Figure 4.17). Previously, the regional bodies have primarily had tasks relating to regional development and not management. This also means that the responsibility for planning in the greater part of these sea areas should be removed from basic municipalities. The consequences for the municipalities are nevertheless expected to be marginal since most of them do not at present conduct any real planning in their sea areas. In a number of municipalities coastal plans and similar instruments have nonetheless been drawn up. An important task for the regional level will be to take this work into account in their planning. It is also important that forms of coop-

eration between municipalities and the regional bodies should be built up.

Figure 4.17 Schematic picture of the proposals as regards marine spatial planning. The Inquiry has not adopted a position on precisely where the boundary should be drawn between the comprehensive plans of the municipalities and the regions' marine plans (see further, in the text)

The municipal level will retain influence in planning in the territorial sea and in the sea inside the baseline even after the appointment of the regional bodies as the responsible authorities. New routines and procedures for consultation will be established, through which local participation can continue. Regionally-based planning will improve the practical opportunities to achieve more holistic planning and, it is hoped, political engagement. The public will also have far better opportunities to obtain an insight into the priorities adopted in the sea areas. This is expected to increase the legitimacy of planning and participation in the planning process.

The central government level is proposed to become responsible, via the National Board of Housing, Building and Planning, for planning within the economic zone and for supervision regarding the regional bodies' marine spatial planning. The Board will be the responsible authority for statutory review of the regional plans, measured against certain criteria, which is in part a new element in the Swedish tradition of comprehensive planning. The proposal means that the Board's organisation will need to be strengthened. The extent to which that will be necessary should be considered by a future Legal and Implementation Inquiry.

The Marine Environment Inquiry's proposal as regards marine spatial planning may in general terms entail changes for enterprises active in sea areas. First and foremost, marine spatial planning will simplify matters for them, since it will be clearer where a given activity can be pursued. The binding zoning that is proposed may result in consequences for business activity in the designated areas. The procedures on hearing of applications, which in greater detail affect the activity of enterprises, will need to be investigated more closely in the future Legal and Implementation Inquiry.

Social consequences should be illuminated in detail in that Inquiry, which should also consider the costs of introducing the system.