

# Maritime Safety and Sustainable Spatial and Regional Development

## An Implementation Manual



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**BalticMaster**



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Prepared for

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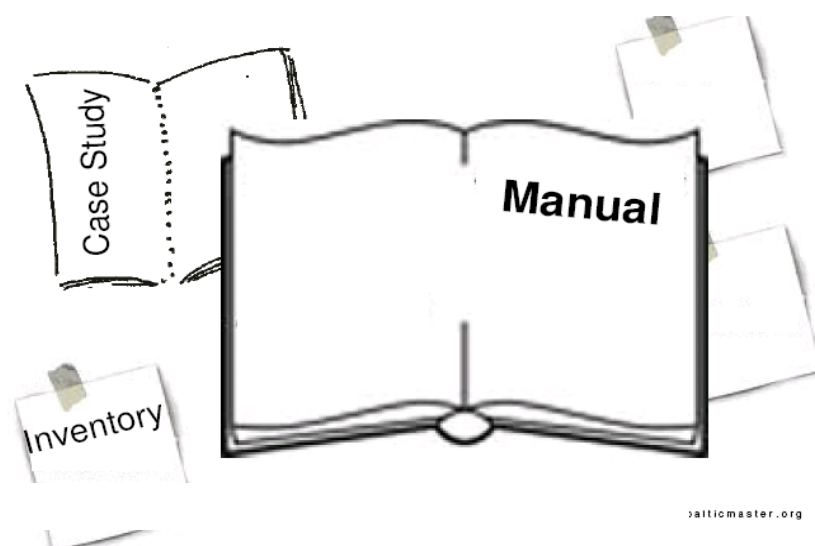
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## Preliminaries

### 1. Introduction

This manual is one of the results of the BalticMaster Projects' work package 3 *Sustainable Spatial Development*.

In this work package three vast *Case Studies* were carried out by different partners. This manual which resulted from a decision at the very beginning of the project harvested some recommendations from these case studies to be found in chapter 5. The so called *Inventories*, existing for five coastal states of the Baltic Sea offer information on marine spatial planning regarded important for the matter hereby tackled.



Pict. 1: Conception of work.

#### 1.1 Objective of this manual

Among the work packages and the toolset being build in the Baltic Master Project this manual is intended to be one tool to overcome the impasse felt by many of the coastal communities and regions facing increase of maritime transport and the corresponding risk of accidental pollution.

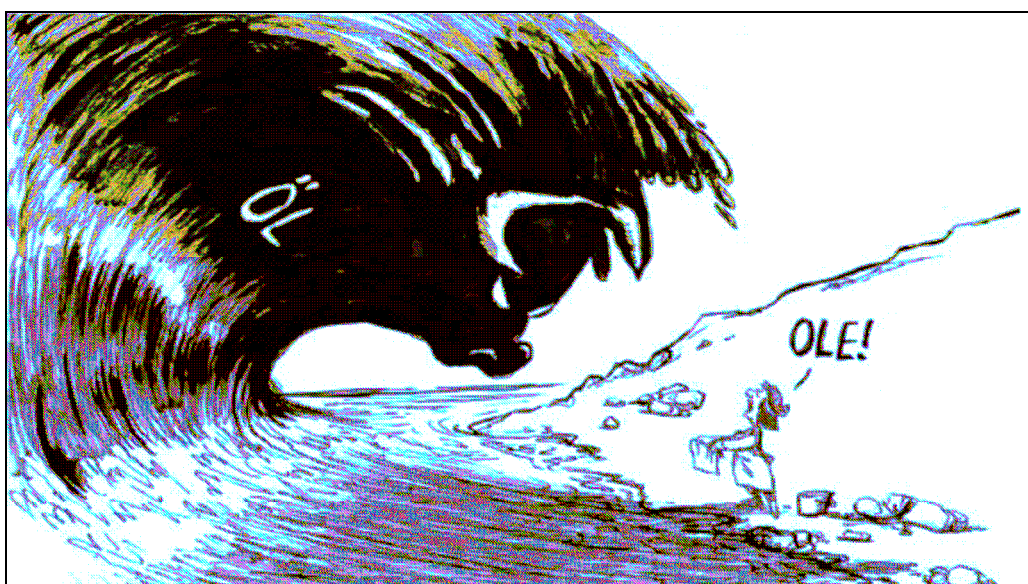
This manual aims to improve maritime safety by integrating local and regional perspectives concerning Marine Spatial Planning issues.

The manual consists of general information to be applied in the whole Baltic Sea Area. For five of the coastal states the a.m. mentioned *Inventories*<sup>1</sup> provide for information which only is applicable in Sweden, Denmark, Poland, Lithuania and Germany respectively.

The manual by intention doesn't provide new figures on the maritime transport and no description of all on- and offshore activities but tries the following:

- to offer both, information on maritime legislation with spatial relevance and to offer information on aspects of spatial planning which are of relevance for maritime safety,
- to describe the maritime safety relevance of several different planning fields, and
- to provide for recommendations resulting from research and case studies carried out in the course of the project.

Hereby the authors of the manual hope to contribute to a better approach of coastal and regional actors than showed below:



Pict. 2: Source unknown

Concerning information on the legal framework it's complexity has to be mentioned. It consists of international, EU-, supranational (HELCOM), national, regional and local organisations and players. "Regional" hereby refers to regions acting in Interreg project level. Due to the complex

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<sup>1</sup>



character of spatial planning in general and the absence of institutions which are exclusively and legally charged with broad scale Marine Spatial Planning in most of the Baltic coastal countries this framework stretches across different political and legislative fields.

The central message is to accompany the maritime traffic flow with contingency planning on all spatial planning levels from local to international one. All levels provide applicable opportunities and their limits! Supporting the choice of measures and the right actors is the objective of this manual.

Hereby this manual tries to reflect the BaltCoast findings<sup>2</sup>: *(....) spatial plans in the coastal zones should, however, neither take the responsibility of the sectoral management in the marine areas, nor should new bodies be created. Spatial planning authorities should be encouraged to consider and include the inshore marine area and the sectoral interests in their spatial plans to provide a comprehensive overview of resource use and management issues.*

## **1.2. The manual as part of the GIS based information platform MERMS**

The approach mentioned above, precisely: shaping contingency planning according to transport and other maritime uses, needs an information platform accessible for different purposes. For the purposes of local and regional actors concerned about maritime safety it seems valuable to add mapped information from the sea space to the GIS layers displaying physical and functional patterns on shore.

For the purposes of port development planning it seems important to know about land side traffic links, but also about protected areas and types of land use competing with port activities, such as tourist resorts. And what about the emergency preparedness capacity of that stretch of the coast-line foreseen for increasing ship movement? Sufficient equipment for oil spill cleaning operations available? Organisation of trained people in place? Emergency tug force located near enough?

These are the questions we'd like to have asked – answered and displayed in an information platform.

As for the German coast there exist a computer aided system for contingency planning called VPS (Vorsorgeplan Schadstoffunfallbekämpfung)<sup>3</sup>, it was decided to adapt it by means of the example of the island Bornholm in the following ways: This manual as well as the Danish inventory became part of the systems text data. Available aerial photography covers a part of the island; numerous GIS layers of the islands topography and the nautical chart as well as of current

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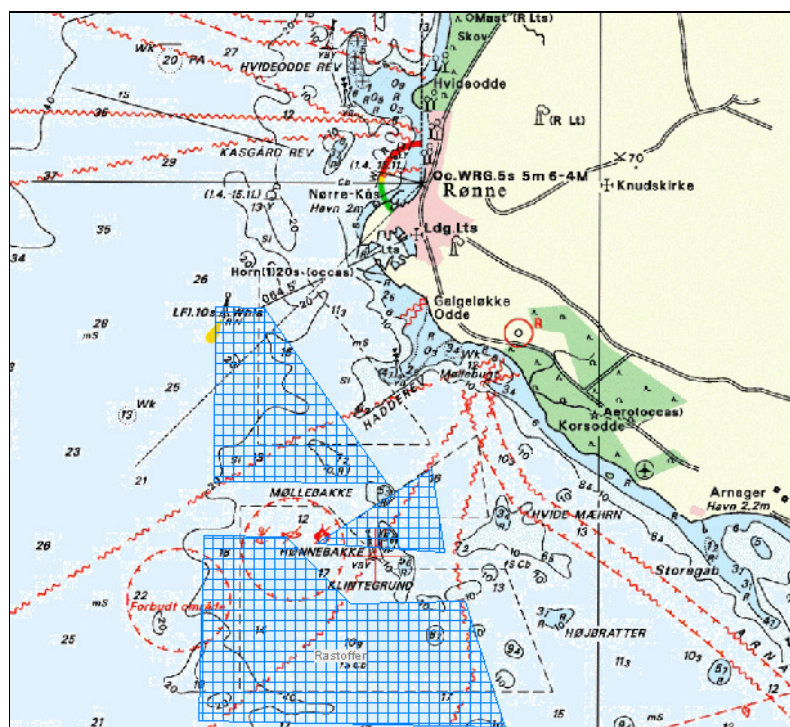
The Role of Spatial Planning in ICZM. Recommendations from the Interreg III B BaltCoast Project. Discussion Paper for the transnational working group December 2004

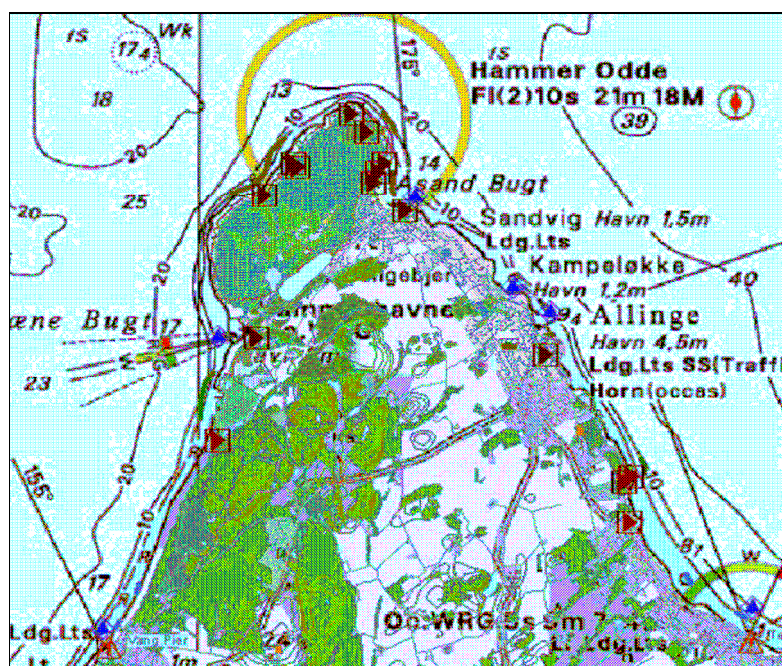
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planning projects (e.g. wind parks, delineation of the gas pipeline) plus integrated AIS tracks allow an integrated view on the challenging situation of the island concerning maritime safety.

The resulting information system was called Maritime Environmental Risk Management System MERMS and is fairly different from the German VPS as the latter, operated by the Central Command of Maritime Emergencies, CCME or “Havariekommando” and designated staff members of the Environmental departments of the federal states administration, has been designed for risk management and not for regional planning purposes.

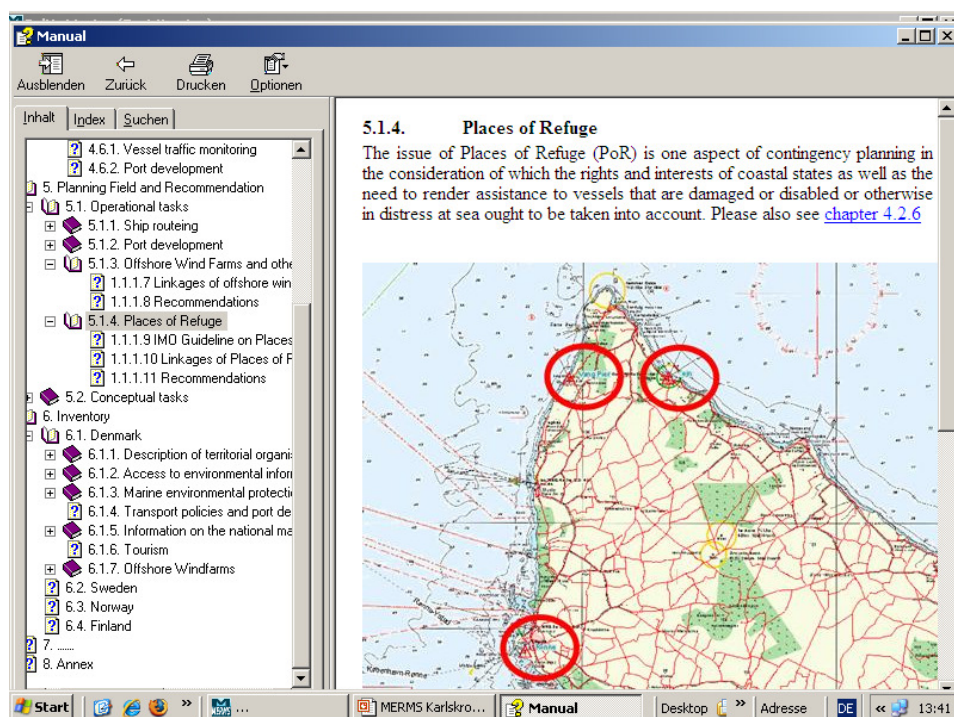
Therefore MERMS still doesn't contain spill response manual and action recommendations, pollution incident report and logbook but it contains apart from topographic information of the island and the sea chart of the surrounding waters a lot of planning relevant information, such as ferry lines and gravel extraction areas.





Pict. 4: North coast of Bornholm

The manual at hand became part of MERMS as this way it is easiest to switch from the GIS maps to the information on legal background of PoR or to the PoR related recommendations.



Pict. 5:  
MERMS screen  
shot showing  
topography, lo-  
cation of PoR  
and explanations



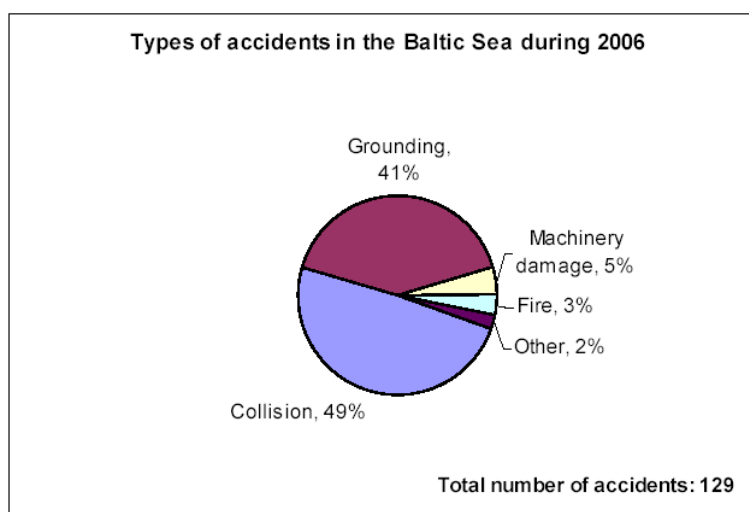
So far for the manual, its origin, it's objectives, it's combination with Case Studies and Inventories and it's value in the Maritime Environmental Risk Management System MERMS.

### 1.3 Maritime Safety Situation in the Baltic Sea Area

Data on shipping accidents in the Baltic Sea area has been collected by HELCOM since 2000. In 2004 a new reporting format was developed and used for the reporting of accidents starting 2004. For that reason the data for 2003 and the subsequent years are not fully comparable. The changed reporting is interpreted as a reason for the increased number of accidents in 2004 and subsequent years, when compared to 2003. The traffic statistics presented below has been generated by the HELCOM AIS database.

According to HELCOM figures, there are about 1,800 ships in the Baltic marine area at any given moment. There were 129 accidents in 2006. This should be compared with an average about 60-70 accidents each year during 2000-2003.

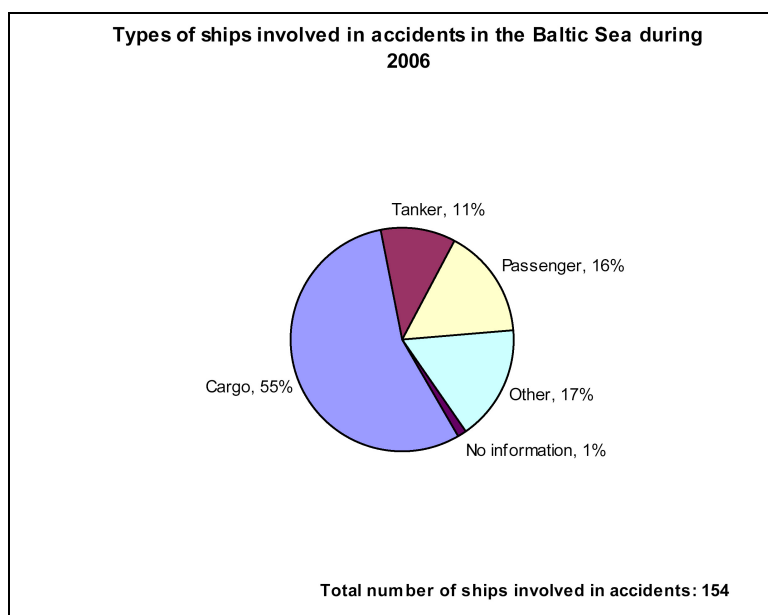
The Commissions study shows that grounding (41%), collision (49%) and machinery damage (5%) were the most common types of accidents observed in 2006.



Pict. 6: Types of accidents in the Baltic Sea during 2006

Source: HELCOM

Cargo vessels (55%), ferries (16%) and tankers (11%) were the main groups of vessels involved in accidents.



Pict. 7: Types of ships involved in accidents in the Baltic Sea during 2006

Source: HELCOM

The dramatic increase in the number of accidents is partly a result of a steadily growing maritime traffic, especially oil transportation<sup>4</sup>

The oil terminal in Primorsk at the eastern end of the Gulf of Finland has become a symbol of a surge in oil transport from Russia. The harbour became Russia's largest oil terminal in 2005. Last year 66 million tonnes of crude oil passed through the harbour. This year the total is expected to rise to 76 million. In the early stages, a new built pipeline will increase oil transport through Primorsk by 50 million tonnes a year, boosting the total amount of oil handled by the terminal to 120 million tonnes.

Other uses of the Sea such as aquaculture, oil and gas exploitation, wind farming<sup>5</sup> and coastal engineering works will increasingly claim navigable waters offshore and nearshore and will start to compete with navigation to some extent.

Today most activities in the Baltic Sea are covered by legal rules and sector-by-sector procedures allowing or rejecting concessions or licenses for certain activities.

<sup>4</sup> Helcom Executive Secretary, Ms Anne Christine Brusendorff.

<sup>5</sup> Please see: Status and trends of off shore wind park development in the Baltic Sea Region, Draft version September 06, to be found on [www.balticmaster.org](http://www.balticmaster.org)

## 1.4 Marine Spatial Planning Situation in the Baltic Sea Area

Some riparian countries of the Baltic Sea have recently begun to assess and implement MSP in a broader context on their own initiative or driven by EU recommendation.

While Marine Spatial *development* is occurring everywhere; Marine Spatial *Planning* as one branch of the mandatory spatial planning system is being carried out in the German EEZ and in Territorial Sea of Mecklenburg Vorpommern only up to now. The situation in the other Baltic Sea coastal countries is being under investigation. Also the Green Paper on a future maritime policy has been interpreted in this regard. The EU expresses the intention to deliver the framework for MSP in all coastal states and recommends planning in continuous zones reaching from the coast to the outer border of the EEZ. Concerning the “Green Paper” or the resulting “Blue Paper” more guidance is mentioned in chapter 6, *further orientation*.

## 1.5 How to use this manual

The handbook is meant to be a guide for planners, coastal managers national decision makers as well as members of the maritime administrations involved in spatial planning processes in coastal and offshore areas intersecting maritime safety issues.

**chapter 1** – introduction: objectives and task of the manual

**chapter 2** - a set of definitions and a glossary of words, both meant to produce orientation in the foggy un-institutionalized field of the interface of Marine Area Spatial Planning and Maritime Safety.

**chapter 3** – short description of those environmental conditions of the Baltic Sea which are of utmost importance concerning maritime safety risks and the changes of the environmental conditions to be expected in the course of climatic change

**chapter 4** - information on the different levels of maritime legislation and policies

**chapter 5** - a selection of maritime initiatives and programs, which need for maritime safety reasons cross-sectional or cross-border efforts, accompanied by recommendations

**chapter 6** - further orientation

Considering the variety of maritime safety concepts and spatial planning policies in the Baltic Sea Region one realizes that there'll be no single key to open the door between the two different fields of competences and different traditions of decision making.

## 2. Definitions

Experience shows that project work proceeds over long periods of time and then suddenly gets stuck because some basic items were not defined in the beginning. We are basing all further recommendation on the following set of definitions:

## 2.1 Maritime Safety

As maritime safety comprises a wider scale than just navigational safety, it has to be defined what shall be understood within the context of the project. One definition:

*Activities that seek to save human life, ensure the safety of ships and cargo, protect the marine environment and safeguard the maritime economic and social assets communities depend upon.*<sup>6</sup>

One more definition to be found on the SSPA website<sup>7</sup>:

*Maritime safety is an integral part of all marine transportation and maritime activities. There are many facets of maritime safety as safety culture and regulations, ship handling and fairway design.*

The tasks of the European Maritime Safety Agency EMSA are to “reduce the risk of maritime accidents, the marine pollution from ships and the loss of human lives at sea.”

### 2.1.1 Interrelation ‘Maritime Safety and Maritime Security’

In very general terms *safety* measures refer to natural or technical conditions causing danger and accidents like storm, fire and insufficient equipment, while *security* measures refer to intentional damage and crime in the wide context and to terrorist activities in the narrow context.

The connection between maritime security and maritime safety is twofold: due to the origin of the legislative maritime security instruments (IMO Maritime Safety Committee MSC) and due to the threat that wilful actions against or manipulation of safety equipment, respectively, cause danger and accidents leading to environmental damage and closed fairways.

In 2002 the IMO addressed security threats to maritime transportation systems by dividing Chapter XI of the International Convention for Safety of Life at Sea SOLAS 1974 into two parts: Chapter XI-1 for Special Measures to Enhance Maritime Safety and a new Chapter XI-2 for Special Measures to Enhance Maritime Security. The newly established International Ship and Port Facility Security (ISPS) Code got incorporated in the SOLAS XI-2 regulations. Further work and amendments will be negotiated in the IMO Maritime Safety Committee MSC.

Still hereby it is recommended not to mix up maritime safety and security issues in the context of sustainable spatial and regional development as the security conception for ship, shipping companies and port facilities deals with security sensitive information and the approach pursued in this manual requires transparency of all safety relevant information.

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<sup>6</sup> Richard Hill, Presentation MSOU

<sup>7</sup> <http://www.sspa.se/operations/safety.html>

## 2.2 Sustainable Development

*“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*<sup>8</sup>

The Stockholm European Council decided that the EU Sustainable Development Strategy should complete and build on this political commitment by including an environmental dimension. This recognises that in the long term, economic growth, social cohesion and environmental protection must go hand in hand.

This means that economic growth to be pursued in the shipping and port industry can't be a stand alone objective of development but has to be reflected against environmental protection goals.

## 2.3 Spatial Planning

*“Spatial planning refers to the methods used largely by the public sector to influence the future distribution of activities in space. It is undertaken with the aims of creating a more rational territorial organisation of land uses and the linkages between them, to balance demands for development with the need to protect the environment, and to achieve social and economic objectives. Spatial planning embraces measures to co-ordinate the spatial impacts of other sector policies, to achieve a more even distribution of economic development between regions than would otherwise be created by market forces, and to regulate the conversion of land and property uses”.*<sup>9</sup>

## 2.4 Marine Spatial Planning MSP/ Marine Area Spatial Planning MASP

Marine spatial planning has been defined by DEFRA<sup>10</sup> as “...a strategic plan for regulating, managing, and protecting the marine environment that addresses the multiple, cumulative, and potentially conflicting uses of the sea.”

While the above definition focuses on a plan, the following definition is process oriented:

Marine Spatial Planning (MSP) is seen “as a way of improving decision-making and delivering an ecosystem-based approach<sup>11</sup> to the management of marine activities. In essence, it is a planned framework that enables integrated, forward-looking, consistent decision-making on the use of the sea. MSP will also provide a more transparent process of conflict resolution in a situation where there are many demands for the use of marine resources and sea space”<sup>12</sup>.

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<sup>8</sup> World Commission on Environment and Development (the “Brundtland Commission”), 1987

<sup>9</sup> European Commission (1997) Compendium of European Spatial Planning Perspectives, p.24.

<sup>10</sup> [http://www.defra.gov.uk/Environment/water/marine/uk/stewardship/pdf/marine\\_stewardship.pdf](http://www.defra.gov.uk/Environment/water/marine/uk/stewardship/pdf/marine_stewardship.pdf)

<sup>11</sup> Defined in the Convention on Biological Diversity as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way”.

<sup>12</sup> Marine spatial planning: A down to earth view of managing activities in the marine environment for the benefit of humans and wildlife. World Wildlife Fund and the Wildlife Trusts.



Some elements needed to operate a system of MSP in the BSR already exist. They include the requirement for Strategic Environmental Assessment (SEA), which will help link decisions on sea use to agreed broad objectives and provide an ecosystem-based approach to management if it is linked across sectors.

## 2.5 Regional development

To understand the term regional development we do have to understand the role regional governance plays for regional development.

*“Regional development generally is viewed as an holistic process whereby the natural and physical environmental, economic, social and cultural resources of a region are harnessed for the betterment of people in ways that reflect the comparative advantage offered by the inherent and geographically different characteristics of the area”.*<sup>13</sup>

## 2.6 Ecosystem-Based Management

Many variations exist for the definition of Ecosystem-based management (EBM). Below we highlight some recent explanations.

"The goal of EBM is to maintain the health of the whole as well as the parts. It acknowledges the connections among things."<sup>14</sup>

"EBM looks at all the links among living and nonliving resources, rather than considering single issues in isolation. Instead of developing a management plan for one issue . EBM focuses on the multiple activities occurring within specific areas that are defined by ecosystem, rather than political, boundaries."<sup>15</sup>

"Ecosystem management includes the following elements"<sup>16</sup>:

1) Sustainability. Ecosystem management does not focus primarily on "deliverables" but rather regards intergenerational sustainability as a precondition.

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<sup>13</sup> [www.centerforregionaldevelopment.com](http://www.centerforregionaldevelopment.com)

<sup>14</sup> Pew Oceans Report, 2003

<sup>15</sup> US Ocean Commission Report, 2004

<sup>16</sup> Christensen et al. 1996. Ecol. Apps. 6(3): 665-691

- 2) Goals. Ecosystem management establishes measurable goals that specify future processes and outcomes necessary for sustainability.
- 3) Sound ecological models and understanding. Ecosystem management relies on research performed at all levels of ecological organization.
- 4) Complexity and connectedness. Ecosystem management recognizes that biological diversity and structural complexity strengthen ecosystems against disturbance and supply the genetic resources necessary to adapt to long-term change.
- 5) The dynamic character of ecosystems. Recognizing that change and evolution are inherent in ecosystem sustainability, ecosystem management avoids attempts to "freeze" ecosystems in a particular state or configuration.
- 6) Context and scale. Ecosystem processes operate over a wide range of spatial and temporal scales, and their behaviour at any given location is greatly affected by surrounding systems. Thus, there is no single appropriate scale or time frame for management.
- 7) Humans as ecosystem components. Ecosystem management values the active role of humans in achieving sustainable management goals.
- 8) Adaptability and accountability. Ecosystem management acknowledges that current knowledge and paradigms of ecosystem function are provisional, incomplete, and subject to change. Management approaches must be viewed as hypotheses to be tested by research and monitoring programs."

## 2.7 Contingency Planning

A short definition of contingency plan is the following:

A plan for major contingencies that can reasonably be anticipated in the principal geographic sub areas of the command.<sup>17</sup>

The purpose of an Contingency Plan is to provide the procedures to activate and proceed a coordinated *response* to potential maritime emergencies involving chemical and hazardous material releases. Advance planning will provide for *preparedness* an effective and efficient response to such emergencies, thereby minimizing excessive damage to the environment.

It is to be agreed with the project description of EROCIPS (Interreg IIIB Atlantic Area Programme) that the shoreline response to oil, chemical and inert pollution from shipping accidents represents one of the greatest resource and management challenges likely to be faced by regional and local governments and assisting organisations (statutory agencies, academic institutions, non-

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<sup>17</sup> [www.thefreedictionary.com](http://www.thefreedictionary.com)

governmental organisations, etc.) involved in the spatial planning for sustainable use of coastal assets.

Pollutants pose a direct threat to coastal assets such as conservation sites, recreational beaches, shellfish beds, marinas, harbours and wildlife. The indirect consequences of a pollution incident can be equally damaging with the loss of tourism confidence and income from fisheries undermining the economy of the polluted coast.

To link the framework for dealing with coastal pollution incidents with other spatial planning frameworks at the local/regional level ensures pre-incident planning and effective response in terms of pre-incident equipment deployment.<sup>18</sup>

### **3. Baltic Sea environment and future changes**

#### **3.1 Geophysical and biological features of the Baltic Sea**

Here no broad description is intended. Still, the manual can't do without throwing a glance on the Baltic Sea itself being object of the projects efforts.

##### Dimensions

The Baltic Sea is about 1610 km (1000 miles) long, an average of 193 km (120 mi) wide, and an average of 55 m (180 ft, 30 fathoms) deep. The maximum depth is 459 m (1506 ft, 251 fathoms), on the Swedish side of the center. The surface area is about 377,000 km<sup>2</sup> (145,522 sq mi) and the volume is about 21,000 cubic km (3129 cubic miles). The periphery amounts to about 8000 km (4968 miles) of coastline.

##### Sea ice

As a long-term average the Baltic Sea is ice covered for about 45% of its surface area at maximum annually. The ice-covered area during such a normal winter includes the Gulf of Bothnia, the Gulf of Finland, Gulf of Riga and Vainameri in the Estonian archipelago. The Baltic Proper does not freeze during an normal winter, with the exception of sheltered bays and shallow lagoons such as the Courland Lagoon). The ice reaches its maximum extent in February or March; typical ice thickness in the northernmost areas in the Bothnian Bay is about 70 cm for landfast sea ice. The thickness decrease when moving south.

Freezing begins in the northern coast of Gulf of Bothnia typically in early November, reaching the open waters of Bothnian Bay, the northern basin of the Gulf of Bothnia, in early January. The Bothnian Sea, the basin south of it, freezes on average in late February. The Gulf of Finland and the Gulf of Riga freeze typically in late January.

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<sup>18</sup> According to EROCIPS, [www.erocips.org/reports\\_press\\_releases.htm](http://www.erocips.org/reports_press_releases.htm)

The ice extent depends on whether the winter is mild, moderate or severe. Severe winters can ice the regions around Denmark and southern Sweden, and on rare cases the whole sea is frozen, such as in 1942. In 1987 some 96% of the Baltic Sea was iced, leaving only a small patch of open water to the west of Bornholm in the Baltic proper. Contrary to this, in milder winters Bothnian Bay and Template: Gulf of Finland are the only larger areas that is ice covered, in addition to coastal fringes in more southerly locations such as the Gulf of Riga.

In spring, the Gulf of Finland and the Bothnian Sea normally thaw during late April, with some ice ridges persisting until May in the eastern Gulf of Finland. In Bothnian Bay ice usually stays until late May; by early June it is practically always gone.

During winter, fast ice which is attached to the shoreline, develops first, rendering the ports unusable without the services of icebreakers. Level ice, ice sludge, pancake ice or rafter ice form in the more open regions. The gleaming expanse of ice is similar to the arctic, with wind-driven pack ice and ridges up to 15 m, and was noted by the ancients. Offshore of the landfast ice the ice remains very dynamic all year, because of its thickness it is relatively easy moved around by winds and therefore makes up large ridges and pile up against the landfast ice and shores.

The ice cover is the main habitat only for a larger few species. The largest of them are the seals that both feed and breed on the ice. Although the sea ice also harbours several species of algae that live in the bottom and inside brine pockets in the ice.

### Hydrography

The Baltic Sea flows out through the Danish straits; however, the flow is complex. A surface layer of brackish water discharges 940 cubic km per year into the North Sea. Due to the difference in salinity, a sub-surface layer of more saline water moving in the opposite direction brings in 475 cubic km per year. It mixes very slowly with the upper waters, resulting in a salinity gradient from top to bottom, with most of the salt water remaining below 40 to 70 m deep. The general circulation is counter clockwise: northwards along its eastern boundary, and south along the western one.

The difference between the outflow and the inflow comes entirely from fresh water. More than 250 streams drain a basin of about 1.6 million square km, contributing a volume of 660 cubic km per year to the Baltic. They include the major rivers of north Europe, such as the Oder, the Vistula, the Neman, the Daugava and the Neva. Some of this water is polluted. Additional fresh water comes from the difference of precipitation less evaporation, which is positive.

An important source of salty water are infrequent inflows of North Sea water into the Baltic. Such inflows, important to the Baltic ecosystem because of the oxygen they transport into the Baltic deeps, used to happen on average every 4-5 years until the 1980s. In recent decades they became less frequent. The latest three occurred in 1983, 1993 and 2003 suggesting a new inter-inflow period of about 10 years. Despite the influx of salt water in the lower levels, the Baltic is still more of a lake or river than a sea. Tides are negligible. Wave height in calm weather varies

between 2 and 3 m. Violent and sudden storms often sweep the surface, due to large transient temperature differences and a long reach of wind. Seasonal winds also cause small changes in sea level, of the order of 0.5 m.

### Salinity

The Baltic Sea's salinity is much lower than the ocean's, as a result of abundant freshwater runoff from the surrounding land; indeed, runoff contributes roughly 1/40th its total volume. It varies from 0.1‰ in the north to 0.6-0.8‰ in the center. Below 40-70 m, it can be as much as 1.5-2.0‰. A lateral salinity gradient also exists, from most saline in the northern Kattegat to least saline in the northern Gulf of Bothnia.

The most saline water remains on the bottom, creating a barrier to the exchange of oxygen and nutrients, fostering totally different maritime environments.<sup>19</sup>

### Summarizing ecological features with regard to maritime safety

The Baltic Sea ecosystem is a semi-enclosed water body connected with the North Sea. The Åland isles, the archipelagos 'skerry gardens' or 'skärgårdens' of Stockholm, Turku and Helsinki demand high navigational skills.

Water exchange is limited by narrow sounds. Marked natural fluctuations are characteristic of the Baltic Sea ecosystem; the water is largely regulated by the sporadic inflows of saline North Sea water and intermediate stagnation periods. It is estimated that renewal of the water of the Baltic Sea takes about 25-30 years. Contaminants, especially persistent chemicals and pollutants, therefore remain in the Baltic Sea for a long time.

The Baltic Sea ice winter means the time when the ice is present in the Baltic Sea. The season normally takes place from October-November to May-June. The annual maximum ice extent occurs between January and March, normally in late February – early March. The ice covers on average about 200,000 km<sup>2</sup>, which is almost a half of the total area of the Baltic Sea. During extremely mild seasons the maximum extent is well below 100,000 km<sup>2</sup>. The minimum extent was reached in 1989 with only 52,000 km<sup>2</sup>.<sup>20</sup>

Winter navigation and the existing icebreaker co- operation is a very important issue in its own, not being looked upon in this manual.

It has to be stressed that there is general agreement on the fact that the pollutant load from the surrounding land into the Baltic Sea is much higher than the impact of shipping, but is not in the focus of this work. The main environmental impacts, caused by shipping are the following:

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<sup>19</sup> [http://en.wikipedia.org/wiki/Baltic\\_Sea](http://en.wikipedia.org/wiki/Baltic_Sea)

<sup>20</sup> <http://www.fimr.fi/en/itamerikanta/bsds/1326.html>

- Introduction of "alien" species<sup>21</sup>.
- Pollution due to routine ship operation like tank washes, engine room effluent discharges
- Accidental pollution caused by ships in distress

Of those the risk of the accidental pollution and risk prevention strategy gains by far the biggest attention in this manual- due to the objectives of the BalticMaster project.

### 3.2 Impact of climate change on maritime safety

Looking to the future it is clear that the impact of global warming and climate change will become widespread. It will have a singular effect on the coast with rising sea levels and an increased probability of storms.

The main driving mechanism for all storms is the condensation of water vapour releasing energy/heat. Temperature differences cause instabilities and drive winds, and unstable disturbances grow into powerful storms.<sup>22</sup> Climate change in the Baltic Sea is related to overall global climate change, and projections of future climate change in the Baltic area build on global and regional models and emissions scenarios for greenhouse gases and aerosols.

The climate of the Baltic Sea basin is characterised by large seasonal contrasts, owing to its geographical location, variable topography, and land-sea contrasts. The climate is influenced by major air pressure systems, particularly the North Atlantic Oscillation during wintertime, which affect the atmospheric circulation and precipitation in the Baltic Sea basin. In addition to the natural variability in climate, global warming has been observed during the past century, with the largest contribution to this global warming arising from increased greenhouse gas concentrations, particularly carbon dioxide and methane. This is especially the case for the past few decades when the increase in greenhouse gas concentrations has been the most rapid.

The warming trend for the entire globe was about 0.05°C/decade from 1861–2000, while the trend for the Baltic Sea basin has been somewhat larger, 0.08°C/decade. This warming trend has been reflected in a decrease in the number of very cold days during winter as well as a decrease in the duration of the ice cover and its thickness in many rivers and lakes, particularly in the eastern and south eastern Baltic Sea basin<sup>23</sup>.

The issue of storm trends and global warming has received larger attention in Europe. For example the storm activity around Scandinavia during the winter (2004-2005) was unusually high, and

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<sup>21</sup> Description taken from Helcom PITF MLW 1b project

<sup>22</sup> Storms and Climate Change, Rasmus E. Benestad; May 2005

<sup>23</sup> <http://helcom.navigo.fi/stc/files/BSAP/FINAL%20Climate%20Change.pdf>

there was a great deal of media attention on the storm trains. These systems were responsible for a mild winter over northern Europe for most of the winter as well as extensive damage in southern Sweden.

Against this background it is assumed that storm-induced ship traffic fatalities will be more likely in the future. One preparative measure to respond on this is a change in ship design. The other is a revaluation of national contingency plans and emergency preparedness like the deployment of Marine Pollution Response Vessels and Emergency Tugs with sufficient bollard pull. MSP can take account of the effects of climate change through adaptive management.

## **4. The levels of jurisdiction and planning relevant in terms of maritime safety and marine area spatial planning**

We hereby have to distinguish several levels: The international one, the EU level, the supra national Baltic Sea Region HELCOM level, the national level, the regional and the local level.

### **4.1 Various types of policy and legislative instruments**

Due to the character of the thematic field tackled in this manual the following paragraphs don't only cover legislation but also policies.

The legal effects of policies or legislative instruments very much depend on their status. The following legal instruments are being used in EC law:

- Regulations: they are binding in their entirety and directly applicable in all Member States;
- Directives: they bind the Member States as to the results to be achieved; they have to be transposed into the national legal framework and thus leave a margin for manoeuvre as to the form and means of implementation;
- Decisions: they are fully binding on those to whom they are addressed;
- Recommendations and opinions: they are non-binding, declaratory instruments;
- White Papers: they are Commission's documents containing proposals for Community action in a specific area. In some cases they follow a Green Paper published to launch a consultation process at European level. When a White Paper has been favourably received by the Council, it can become the action programme for the Union in the area concerned.
- Green Papers: they are Commission's documents intended to stimulate debate and launch a process of consultation at European level on a particular topic. These consultations may then lead to the publication of a White Paper, translating the conclusions of the debate into practical proposals for community action.



Environmental issues are subject to the co-decision procedure, which means that Parliament and Council must agree on the same terms in order to adopt a text jointly.

#### International Conventions

- International conventions can be adopted in various fora, either at global (e.g. the International Maritime Organisation) or regional level (e.g. OSPAR or the North Sea Conference). The rules of enforcement vary from a convention to another. Contracting Governments have to comply with the provisions of the convention once they have ratified it.

## 4.2 International level - maritime legislation

Shipping is by its nature an international industry, which requires international control to regulate it. The International Maritime Organisation (IMO) of the United Nations with headquarter in London is the competent and responsible body for addressing questions of navigation and has shown sense of responsibility on raising environmental standards in the shipping sector. IMO legislation is International Law.

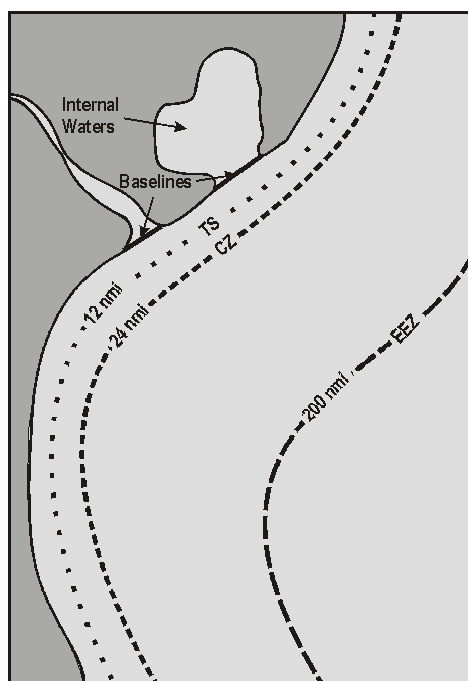
Within the context MSP some of the international conventions have to be further regarded.

### 4.2.1 UNCLOS – jurisdictional maritime boundaries

UNCLOS is the United Nations Convention of the Law of the Sea. Part I comprise Articles 2-16, dealing with the Territorial Sea and Contiguous Zone. The Exclusive Economic Zone is content of UNCLOS Part V.

The international jurisdiction of the coastal states draw maritime boundaries to delimit areas for juridical purposes. The declaration of a baseline is the basis for establishing the geographic reference from which other maritime limits are drawn. Specific protocols under the Articles of UNCLOS describe the conditions under which a state may establish such baselines, using the shoreline (mean low water), a straight baseline established under UNCLOS Articles, or a combination of both. The traditional zones of a Territorial Sea (usually 12 nautical miles), the insertion of a Contiguous Zone (additional 12 nautical miles) and the claim of an Exclusive Economic Zone (EEZ, usually 200 nautical miles) are shown in Figure 1. Since the fundamental reference to such boundaries is the baseline, the UNCLOS has declared formulae to determine the length and direction of lines other than the curvilinear "shoreline" which is based upon various vertical datums.





Pict. 8: Primary maritime boundaries drawn from baselines<sup>24</sup>

Another maritime boundary of growing significance may be derived from geographic references other than the baseline. Delimitation of the Continental Shelf Regime employs bathymetric, geomorphic and geologic data which also require geospatial documentation. Whereas the EEZ is established to allow of control of activities on the sea's surface and in the water column, the Continental Shelf claims are directed toward resources, mineral and living resources, which lie on and under the seafloor. These shelf claims can extend for significant distances beyond the 200 nm EEZ and encompass enormous tracts of the seafloor.<sup>25</sup>

#### About ship in international straits and on innocent passage:

In the Territorial Sea ship can't be hindered by the coastal state. They are only object of international legislation and surveillance by the flag state while ship approaching the ports are objects of manifold national competences, which exist beyond the IMO legislation.<sup>26</sup>

<sup>24</sup> Source: GIS application in maritime boundary delimitation, Harold D. Palmer and Lorin Pruett

<sup>25</sup> <http://gis.esri.com/library/userconf/proc99/proceed/papers/pap938/p938.htm>

<sup>26</sup> UNCLOS Art. 19, cited in Chircop et al.

#### 4.2.1.1 UNCLOS - International Pollution Liability

This subchapter and the content of chapter entirely taken from the Case Study on the Curonian Spit<sup>27</sup>.

UN Convention on the Law of the Sea establishes specific requirements for the states on the exploitation of marine resources, protection of the marine environment and assurance of the adequate compensation for the damage to the marine environment caused by the pollution.

Article 193 of the Convention provides, that ‘states have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment. Article 194 and 235 oblige states to carry out following main pollution prevention and pollution damage compensation measures:

- to take, jointly or individually all necessary measures to prevent pollution of the marine environment from all sources (from land-based sources, off-shore installations, ships, through the atmosphere or by dumping and for preventing accidents;
- to take all measures to ensure that pollution arising from incidents under their jurisdiction does not to cause pollution and does not spread to other States;
- to ensure that recourse is available in accordance with their legal system for prompt and adequate compensation in respect of damage caused by pollution of the marine environment by natural and juridical persons under their jurisdiction;
- for the assurance of prompt and adequate compensation in respect of damage caused by pollution, States shall cooperate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and compensation for damage and the settlement of related disputes, as well as development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.

Article 235(1) merely provides that States “shall be liable in accordance with international law”. The relationship to existing liability regimes is not dealt with, apart from Article 304 clarifying that the UNCLOS provisions “are without prejudice to the application of existing rules and the development of further rules regarding responsibility and liability under international law”.

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<sup>27</sup> Blažauskas, N., Gulbinskas, S., Langas, V., Depellegrin, D.: Curonian Spit – World Heritage site. The assessment of ecological and socio-economical threats of oil transport routes and mining in Lithuanian part of the South-East Baltic, Final Report, Extended Summary

## 4.2.2 IMO conventions

### 4.2.2.1 Pollution liability conventions

While a.m. UNCLOS rules territorial claims of the sea and therefore is the basis for all national claims whether concerning fishing, piracy or commercial shipping, the IMO is the international responsible body for shipping legislation.

The most important conventions for regulating liability and compensation for ship-source pollution are the IMO conventions specifically regulating the liability and compensation for pollution damage caused by ships. These conventions are based on the types of ships and cargoes causing the pollution and cover the following substances: oil carried by tankers; hazardous and noxious substances; oil carried as bunker in any ship; and nuclear material carried on board ships. Therefore, separate conventions have been developed to deal more comprehensively with all aspects of liability, compensation and insurance obligations of the parties involved in the transport of dangerous substances.

- 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS 96);
- 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage (BUNKERS CONVENTION 2001, or BC);
- 1969 International Convention on Civil Liability for Oil Pollution Damage (1969 CLC) and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971 Fund Convention).

It has to be taken into account, that pollution damage includes preventive measures, which are defined in the 1992 Conventions as: 'any reasonable measures taken by any person after an incident has occurred to prevent or minimize pollution damage.'

Comparative summary, also taken from the case study on the Curonian Spit:

The three existing IMO pollution liability regimes have a number of key features in common. They are all based on a strict but limited liability of the owner, a compulsory insurance regime admitting rights of direct action for claimants against the insurer and a certificate to be verified in the port of each State Party. They all cover pollution damage caused in the territory, in the South Baltic Sea Region including the EEZ or similar zone up to 200 nautical miles from the coastline, and measures, wherever taken, to prevent or minimize such damage and have the same definition of environmental damage and preventive measures.. The three regimes also lay down a regime of exclusive jurisdiction for the courts of the State where the pollution has occurred and a system of mutual recognition and enforcement of judgements of those courts between States Parties.

On the other hand, there are variations of certain key concepts as between the three regimes, which encompass not only the type of substances covered. The Bunkers Convention does not establish a secondary layer of compensation in the form of a fund, which is created under the CLC and HNS Conventions. Even as between the two last-mentioned conventions, there are certain important differences, such as regarding the damage covered. HNS covers other damage (including death or personal injury) as well as damage caused by fire and/or explosion.

The main substantive differences of the three regimes are the difference in monetary terms with respect to the overall liability and compensation available under the three regimes, for different sizes of ships.

#### **4.2.2.2 SOLAS**

SOLAS is the International Convention of the Safety of Life at Sea. The actual SOLAS convention dates from 1974, consists of 12 chapters dealing with ship manning, safety management and equipment. Further amendments like the one mentioned in chapter 2.1.1

In the context of the Baltic Master project a new obligatory equipment required according to SOLAS Chapter V has to be mentioned in particular: the Automatic Identification System AIS. The introduction was accelerated in the context of the maritime security legislation. A description of the HELCOM AIS system is to be found in chapter 4.4.1.

#### **4.2.2.3 MARPOL**

MARPOL 73/78 is the International Convention for the Prevention of Pollution From Ships. The current protocol is a combination of two treaties (1973 and 1978), and over the years has been modified by many amendments. The object is: To preserve the marine environment through the complete elimination of pollution by oil and other harmful substances and the minimization of accidental discharge of such substances.

MARPOL can specify 'Special areas' where low levels of otherwise tolerated pollution are not accepted. Particular Sensitive Sea Areas PSSA (see below) are introduced via MARPOL. For more information please see the following chapters.

#### **4.2.2.4 COLREG**

COLREG is the Convention on the International Regulations for Preventing Collisions at Sea. Dating from 1972 it contains several rules of which rule 10 introduced Traffic Separation Schemes (TSS) which are important Associated Protective Measures (APM) in Particular Sensitive Sea Areas (PSSA). Please find more information and some recommendations in the following paragraph and in the following chapters.

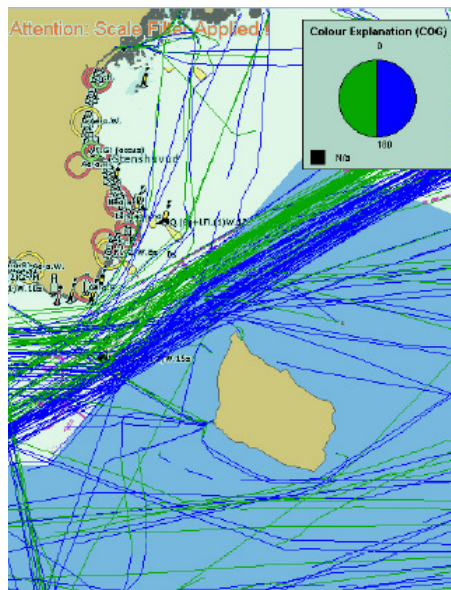
### 4.2.3 International concepts

#### 4.2.3.1 Particularly Sensitive Sea Area

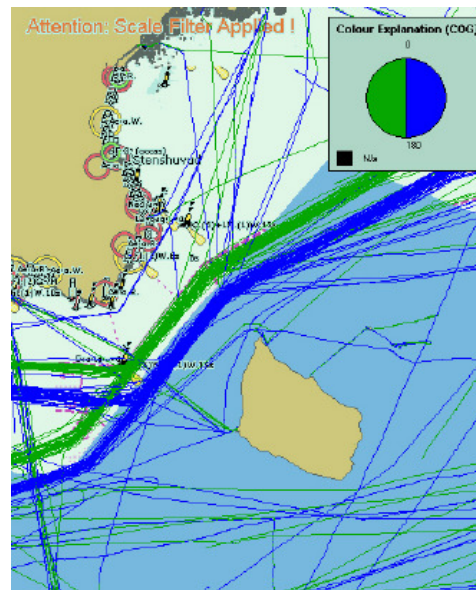
A Particularly Sensitive Sea Area (PSSA) is an area that needs special protection through actions of the IMO because of its significance based on recognised ecological, socio-economic, or scientific reasons, and which may be vulnerable to damages by international maritime activities. In the beginning of April 2004, the IMO designated in principle the whole Baltic Sea, except for the Russian territorial waters, a status of a PSSA. A proposal on the APM's which are aimed at improving safety at sea and environmental protection were submitted to the IMO in February 2005. APM's are binding measures regulating shipping in an area that the IMO has designated as a PSSA. The APM's can be international or territorial. The international APM's include routing systems for ships (traffic separation schemes, areas to be avoided, no anchoring areas, inshore traffic zones, deep water routes, precautionary areas, recommended routes, ship reporting systems (Vessel Traffic Service Systems VTS, and Vessel Traffic Monitoring and Information System, VTMISS), discharge and emission (restrictions of both, pollutants and noise are possible). The PSSA status of the Baltic Sea entered into force on 1 July 2006.

In brief, the Associated Protective Measures are as follows:

1. A traffic separation scheme has been established in the Bornholmsgat (s. pict. 4).
2. A traffic separation scheme has been established north of Rügen (s.pict.5).
3. A new rule concerning maximum draught in the TSS Off Gotland Island came into force.
4. An inshore traffic zone has been established at the TSS South of Gedser.
5. A Deep Water route has been established between the Bornholmsgat and waters West of Hiiumaa (DW ROUTE OFF GOTLAND ISLAND).
6. Voluntary "Areas to be avoided", for ships with a gross tonnage of 500 or more, has been established at Hoburgs Bank and Norra Midsjöbanken
7. The southern reporting boundaries of VTS Great Belt has been shifted further south.

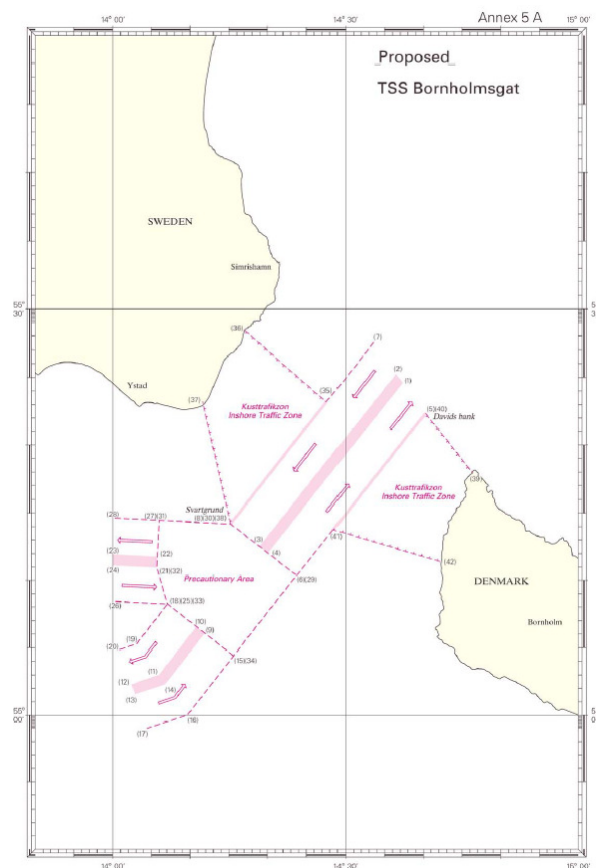


Pict. 9: TSS Bornholm 2005



TSS Bornholm 2006

Source: Swedish Maritime Administration, Willand Ringborg, 2007



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Pict. 10: Traffic Separation Scheme

Source: NAV 51/3/X; March 2005

#### 4.2.3.2 Places of Refuge

Following the EU Directive 2002/59/EC, the IMO Assembly adopted resolutions addressing the issue of places of refuge for ships in distress in November 2003.

Resolution A.949 (23) Guidelines on places of refuge for ships in need of assistance

The guidelines recognizes that, when a ship has suffered an incident, the best way of preventing damage or pollution from its progressive deterioration is to transfer its cargo and bunkers, and to repair the casualty. Such an operation is best carried out in a place of refuge. However, to bring such a ship into a place of refuge near a coast may endanger the coastal State, both economically and from the environmental point of view, and local authorities and populations may strongly object to the operation. Please find more information and some recommendations in following chapters.

#### 4.2.3.3 Vessel Traffic Service

VTs Guidelines are to be found in the IMO Assembly Resolution A.857(20). As they are of national and regional interest, more information is to be found in chapter on the national level

The purpose of a VTS is to improve the maritime safety and efficiency of navigation, safety of life at sea and the protection of the marine environment and/or the adjacent shore area, work sites and offshore installations from possible adverse effects of maritime traffic in a given area. Implementation of a new VTS or the re-assessment of an existing VTS may be a practical solution, if there is concern about the levels of safety and if, as a result of reviewing the existing safety measures, these have been found to not adequately meet the requirements<sup>28</sup>.

#### 4.2.3.4 Information and Public Participation

*"The protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being"* is the ultimate objective of the

UN/ECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), signed in 1998 by the European Community, together with the fifteen Member States. This objective shall be reached by allowing the public to become more involved in environmental matters and to actively contribute to improved preservation and protection of the environment.

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<sup>28</sup> IALA VTS Manual-2002



The Convention, which entered into force in October 2001, is built on three main pillars: access to information, public participation in decision-making and access to justice in environmental matters. Resulting EU directives are described in the next chapter.

### 4.3 EU level

#### 4.3.1 Maritime Legislation

The maritime safety legislation of the EU is gaining further independent structures. For access of the legislative texts see: <http://www.emsa.europa.eu/end187d004.html>

The following regulations and directives all are of different significance for MSP related matters:

**Prevention of Pollution from Ships (COSS) Regulation** (2009/2002 EC) of the European Parliament and of the Council of 5 November 2002 establishing a Committee on Safe Seas

**2002 Amendment of the Directives on maritime safety and the prevention of pollution from ships** (2002/84/EC) of the European Parliament and of the Council of 5 November

**EMSA Regulation** (1406/2002 EC) of the European Parliament and of the Council of 27 June 2002 establishing a European Maritime Safety Agency (Text with EEA relevance)

**Double Hull Regulation** (417/2002 EC) of the European Parliament and of the Council of 18 February 2002 on the accelerated phasing-in of double hull or equivalent design requirements for single hull oil tankers and repealing Council Regulation (EC) No 2978/94

**The Community vessel traffic monitoring and information system Directive** (2002/59/EC) repealing Council Directive 93/75/EEC.

#### 4.3.2 Environmental legislation

**The 1979 Bird's Directive** (79/409/EEC) laid the foundation of the ECs nature policy. It establishes Special Protection Areas (SPA) covering more than 10 million hectares which have led to a EC-wide area network constituting and important part of the coming NATURA 2000 network.

**The 1992 Habitat Directive** (92/43/EEC) represents the principal tool for nature conservation at the European level. It defines a common framework of action whereby Member states are responsible for concrete implementation in the respect of defined rights and obligations. Prior assessment of territorial development plans and programmes that affect conservation areas are compulsory.

**The Natura 2000 Network** The Birds and Habitats Directives are aimed at promoting the maintenance of biodiversity, while taking account of economic, social, cultural and regional requirements. This is to be achieved in particular by the establishment of a EU-wide network of protected sites, called Natura 2000. Human activities in or near Natura 2000 sites should be maintained, and encouraged where appropriate. The Natura 2000 network has a potential impact on



every sector, and, in particular, on agriculture, transport, tourism, waste and energy. The need to integrate the philosophy of these two Directives into all aspects of spatial planning is clear.

**Water Framework Directive** (Directive 2000/60/EC) The EU Water Framework Directive (WFD), is widely described as the most important, far-reaching water legislation ever to emerge from the EU, and came into force in 2000. Its timetable for implementation extends over 15 years, requiring good ecological status to be achieved by 2015.

The Directive is the most substantial piece of water legislation ever produced by the EC, and provides the major driver for water policy in the Baltic Sea Region for the foreseeable future. It embodies the principles of sustainable development (environmental, economic and social). At the heart of the Directive is river basin management planning and the following requirements:

- a high level of environmental protection,
- adoption of the precautionary principle and preventive action,
- the elimination of pollution at source,
- adoption of the polluter pays principle
- and identification of costs and benefits.

The WFD applies to all water bodies, including rivers, estuaries, coastal waters out to at least one nautical mile, and man-made water bodies, and will have implications for many different industries and activities.

**Environmental Impact Assessment** (EIA) (Directive 85/337/EEC & 97/11/EC) covers mainly infrastructure investment. Its integration in the decision-making process makes it an important environmental policy tool for influencing the location of projects. In some Member states EIA has now become an integral part of land use regulations and permission procedures. Furthermore, this Directive has a cross-border co-operation dimension because of its information requirements in relation to neighbouring countries and region for projects with a potential significant Impact across boundaries. See Espoo Convention.

**Strategic environment assessment** (SEA) Directive 2001/42/EC anticipates possible consequences of development proposals instead of reacting to them, as is the case of EIA. Where applicable, new Community policies and instruments make explicit reference to the requirement to undertake a SEA such as the Habitats Directive as well as to the Structural Funds, which require that in the programming, process SEA is applied to plans and programmes. SEA will contribute to more transparent planning by involving the public and by integrating environmental considerations. This will help to achieve the goal of sustainable development.<sup>29</sup>

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<sup>29</sup> <http://ec.europa.eu/environment/eia/sea-legalcontext.htm>

**Espoo Convention** the Espoo (EIA) Convention sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across borders. The Espoo Convention entered into force in 1997.<sup>30</sup>

#### 4.3.3 Information and Public Participation

Built on the Aarhus Convention the European Community has already adopted several legislative instruments in order to fulfil its obligations of implementation, especially Directive 2003/4/EC on public access to information in environmental matters and Directive 2003/35/EC providing for public participation in the drawing up of certain plans and programmes.<sup>31</sup>

#### 4.4 Baltic level

There are many intergovernmental organisations in the Baltic Sea Region of which the following are important concerning maritime safety or spatial planning. Their role in the future approaches of marine area spatial planning is still uncertain, but certainly major.

##### 4.4.1 The Helsinki Commission (HELCOM)

Best way to get information on HELCOM surely is a visit of it's website [www.helcom.fi](http://www.helcom.fi), in the context of this manual some isolated information on special topics such as ICZM, HELCOM AIS and the Baltic Sea Action Plan is selected.

HELCOM is the governing body of the "Convention on the Protection of the Marine Environment" - more usually known as the Helsinki Convention. HELCOM works to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental co-operation between Denmark, Estonia, the European Community, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden.

HELCOM consists of several working groups, which focus on special topics. HABITAT undermore aims to extend the principles of Integrated Coastal Zone Management (ICZM) to cover the whole Baltic Sea. The group was further responsible for the HELCOM Recommendation 24/10.

The recommendation is: *to identify laws and regulations of relevance for the use and protection of marine areas and to identify interacting and/or conflicting interests, obligations and activities of private and public stakeholders.* Still conflicting interests, obligations and activities of private and public stakeholders concerning maritime transportation are nowhere object of discussion.

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<sup>30</sup> <http://www.unece.org/env/eia/eia.htm>

<sup>31</sup> <http://www.unece.org/env/pp/>

The oil pollution regulations of the 1974 Baltic Sea Convention are based on those of 1973/78 MARPOL Convention. The 1992 Baltic Sea Convention in addition obliges the parties to undertake a number of measures to prevent oil pollution including preventing discharges, establishing reception facilities, notifying one another in the case of pollution incidents, cooperating in combating pollution, and assisting in investigations of violations, surveys, and certification. The 1992 Convention also contains a specific provision on nature conservation and biological diversity, which is relevant in the context of oil pollution control.

Although, HELCOM cannot make legally binding decisions on measures relating to the purposes of the Convention, its recommendations are adopted unanimously and the parties are required to seriously endeavour to comply with them.

#### **4.4.1.1 HELCOM AIS**

The HELCOM AIS system, was launched on 1 July 2005, is providing a possibility to get an up-to-date and comprehensive overview of the ships' traffic situation in the Baltic Sea area.

The new system builds upon the International Maritime Organisation's (IMO) requirements for all larger ships to be equipped with AIS. HELCOM's work will also contribute at European level to the implementation of the EU directive on traffic monitoring and information, under which AIS exchange systems should be operational by the end of 2008.

The HELCOM AIS system enables the identification of the name, position, course, speed, draught and cargo of every ship of more than 300 gross tonnes sailing in the Baltic Sea, and displays all the available data over a common background map of the region.

The system covers the whole of the Baltic Sea and Norwegian waters. It greatly improves risk management and facilitates decisions on new measures to prevent collisions and improve navigational safety in the Baltic Sea.

The system includes land-based stations established in all the coastal countries to receive information from all vessels passing through their national waters. All stations are linked to a special "HELCOM server", which combines all the data and provides a comprehensive real-time picture of the overall maritime traffic situation in the Baltic Sea to the competent authorities in each HELCOM member state.

The primary task of the shore-based AIS network is to provide the competent authorities with a monitoring tool for supervision, risk analyses, search and rescue (SAR) operations, port state control, security and other safety-related tasks to ensure safe navigation in the crowded waters of the Baltic Sea.

For the behalf of Marine Area Spatial Planning the Baltic Sea Action Plan seems very important presently. For more information and some recommendations please see chapter 5.2.3.

#### **4.4.2 The Agenda 21**

For the Baltic Sea Region, in short, Baltic 21, is founded on the political will to accelerate the work on sustainable development in the Baltic Sea region and to implement Agenda 21 regionally. The process was initiated in 1996 by the Prime Ministers of the Baltic Sea Region and involves the eleven countries from the Baltic Sea Region (the members of the Council of the Baltic Sea States, CBSS), the European Commission and a number of intergovernmental organisations, international financial institutions and international non-governmental networks.

The Baltic 21 Action Programme addresses the three dimensions of sustainable development – the environmental, the social and the economic aspects – and includes goals and indicators. It features thirty different actions, both sectoral and cross-sectoral, which are mostly of pilot and demonstration character and address the transition to sustainable development in the Baltic Sea Region. Further Development of Integrated Coastal Zone Management is one out of 30 actions and belongs to the three spatial planning actions.<sup>32</sup>

#### **4.4.3 The Vision and Strategies Around the Baltic 2010 (VASAB 2010)**

VASAB has its focus on spatial planning and supports the Baltic 21. Vision and Strategies for the Baltic Sea Region 2010 (VASAB 2010) was founded in 1992 at the Minister Conference in Karlskrona to prepare the report "VASAB 2010. Towards a Framework for Spatial Development in the BSR". This report as well as "VASAB 2010 plus" is an outline of spatial development perspectives for the Baltic Sea Region. "Integrated development of coastal zones and islands" is one out of six key themes.<sup>33</sup>

Interesting from the view of Baltic Master Work Package 3 is the fact that the proposed concept for integrated coastal zone management includes all types of coastal areas, e.g. areas of intensive tourism, urban expansion areas and infrastructure development areas, shore and land-side coastal areas, which could lead to the practise to check e.g. port development projects according to ICZM principles.

Interaction of intergovernmental organisations:

Aim of VASAB 2010 is to integrate ICZM into existing spatial planning procedures. A Committee on Spatial Development in the Baltic Sea Region (CSD/BSR) and the joint secretariat in Gdańsk, Poland co-ordinate the common actions. VASAB closely cooperates with Baltic 21.

#### **4.5 The national level**

##### **UNCLOS – Influence of coastal States in the Territorial Sea**

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<sup>32</sup> <http://www.baltic21.org>

<sup>33</sup> <http://www.vasab.org/>

### **About the tasks of coastal states:**

In conformity with the provisions of the UNCLOS convention Part II, Section 3 the tasks of the Coastal States are under more:

surveillance of foreign ships in territorial waters and ports, punishment included

- coast guards with its tasks concerning traffic control, maritime safety, prevention and pollution control and combatement
- pilotage, possible APM in PSSA.
- vessel traffic information service, please see also above. Particular requirements for the entry of vessels into internal waters
- radar control
- routeing with vessel separation schemes and navigation aids. Please see also 5.1.2
- nautical warning service
- discharge of ship wastes
- port state control

### **About permission of entry:**

Port authorities are frequently either autonomous or fall under the direction and responsibility of a local authority, whether at the municipal, provincial or regional level as the case may be. In some cases they fall under the direction of the national government.

Any coastal state, port authority or regional authority has the right to refuse permission to entry if a ship presents a serious and likely pollution threat or other hazard to life or property. Entry into ports is a privilege, not a customary right of the ship (UNCLOS Art. 25, cited in<sup>34</sup>).

### **About ship in international straits and on innocent passage:**

In the territorial sea can't be hindered by the coastal state. They are only object of international legislation and surveillance by the flag state while ship approaching the ports are objects of manifold national competences, which exist beyond the IMO legislation (UNCLOS Art. 19, cited in Chircop et al.).

### **About the coastal states influence:**

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<sup>34</sup> Chircop, A., Lindén, O. & Nielsen, D. (2005). Characterizing the problem of places of refuge for ships. In A. Chircop & O. Lindén (Eds.), Places of refuge for ships: emerging environmental concerns of a maritime custom (pp. 1-34). Leiden: Nijhoff

The coastal state may make laws and regulations inter alia, for the purpose of safety of navigation and maritime traffic, protection of navigation aids, facilities and installations, protection of pipelines, conservation of living resources, and preservation of the marine environment and pollution control (UNCLOS Art. 19, cited in Chircop et al.).

Internally, the coastal state legislates these rights and obligations and in doing so may empower its maritime administration and port authorities with a regulatory authority necessary to instruct a ship in distress to move to or from a specific area and take specific actions. There may be vital interests at a local level to be protected. The exercise of such authority over international navigation is not unfettered. The regulatory and enforcement action must be consistent with the UNCLOS convention and other rules of international law, in particular the IMO Conventions (UNCLOS Art. 21, cited in Chircop et al.).

To sum up according to the authors cited above the coastal state has a right, inter alia, to exercise jurisdiction for marine environment protection purposes in the Territorial Sea, international straits and the EEZ. But in practise it is not always a clear matter in the Law of the Sea between the pursuit of the international law and the exercise of coastal state jurisdiction.

#### 4.5.2 Vessel Traffic Service

Please see also the above chapters on the international level. When considering the implementation of a VTS, the Government or the Competent Authority has to take full account of IMO Assembly Resolution A.857(20) on Guidelines for Vessel Traffic Services (see Annex 1) and, in particular has to ensure :

1. that legislation is in place for the establishment and operation of a VTS, in accordance with national or international law;
2. that a mission statement and objectives for the VTS are set;
3. that a VTS Authority is appointed and legally empowered;
4. that the geographic service area is delineated and declared a VTS area; including, where appropriate, defining VTS sub areas and sectors<sup>35</sup>

Co-operation between vessel traffic services can be of particular interest where two such services share a common border because they may need to coordinate jointly with the master of a ship when the VTS sailing plan is being agreed. In other cases it should be recognised that the exchange of data between vessel traffic services could give advance notice of arrivals thus relieving

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<sup>35</sup> IALA VTS

the reporting burden of vessels. It could also provide an Administration with valuable information on future traffic and cargo flows in its intermediate sea area.

#### **4.5.3 Legal aspects of offshore Windfarm development – EEZ**

Wind farms in the EEZ will have to compete with other sea uses, including navigation. In the Exclusive Economic Zone the coastal state has sovereign rights. On the one hand wind farms beyond territorial waters must be erected and operated with ‘due regard’ for third States’ freedoms there.

Within EEZs these are essentially communications freedoms, notably navigation, overflight and laying submarine cables and pipelines.

On the other hand, the coastal state has in its EEZ, the exclusive rights, to exploit its renewable resources and to construct and to authorise and regulate the construction, operation and use of artificial islands and of installation and structures to exploit those resources. It also has exclusive jurisdiction over those platforms. (Art 60 (1) and (2) UNCLOS).

According to the UNCLOS, the coastal state may in its EEZ or above its continental shelf, where necessary, establish reasonable safety zones around installations and structures, in which it may take appropriate measures to ensure the safety of navigation and of the installations and structures. The breadth of these safety zones shall be determined by the coastal state, taking into account applicable international standards. The designation of such zones must be reasonably related to the nature and function of the artificial islands, installations or structures

Furthermore, they are not to exceed a distance of 500 metres around them, measured from each point of their outer edge, except where authorised by generally accepted international standards or where recommended by the IMO.

Shipping is an important source of conflicts of interest when siting offshore wind farms. The reasons for this are the following:

- ship lanes represent a limitation factor for siting procedures as certain areas will be prohibited for use for wind power where established shipping lanes demand it. Furthermore, locations where ships may lay anchor to enter ports, must be avoided. Please see general information and recommendation on routeing and its relevance in MSP in chapter 5.1.2.
- even where careful planning is carried out, and the farm is not placed near major navigation routes, or routes have been altered in order to minimise collision risk, there will still exist a risk of significant environmental damage in case of ship collisions with wind turbines.

Marine spatial planning would ensure debate and joined-up decision-making involving all relevant authorities, stakeholders and the public parties at the planning stage, rather than at the project stage, avoiding confusion and conflict. Recommendations can be found in chapter 5.1.4.2.



## **5. Planning fields regarded as combined tasks concerning Maritime Safety and Marine Spatial Planning**

### **5.1. Regional planning**

The spatial area covered by regional planning may vary widely and the specific field of planning on regional scale as well, but in coastal areas regional planning with regard to maritime safety is dealing mainly with planning of transport corridors for the hinterland of ports, with port planning as such, with coastal protection, with tourism and with environmental protection of the coastline – serving partly as basis for coastal tourism and being object of compensation measures due to the manifold economic claims listed above.

Port planning is a multidisciplinary task. It takes into account operational, technical, economic, social and environmental aspects.

Usually investments are phased according to growth figures. Traffic and cargo flows, commodity structure, vessel services and hinterland transport is taken into account. Shipping channels in and out of harbours are adjusted; the management and of the dredged material is a task on its own. Environmental effects are assessed for all relevant planning issues. More information and some recommendation can be found in chapter 5.1.3.

Concerning a Vessel traffic monitoring system installed during port development the Local Conditions have to be considered: The prevailing weather, in particular visibility and wind together with the tidal range and stream, may impose difficulties on the ability to navigate safely. Together with the local geography they determine the degree of navigational difficulty likely to be encountered by a vessel. Guidelines were therefore elaborated by the IMO. Please see chapter 4.2.5.3 .

#### **5.1.1.1 Linkages with Marine Spatial Planning – the results of the case study Trelleborg**

The linkages are manifold. Coastal planning on regional scale needs to anticipate socio-economic implications and environmental changes and impacts arising from the use of the sea. The pattern of ship traffic depends on the port development activities (see above). Traffic separation schemes resulting from risk perception of the traffic density, transport of dangerous goods or installation of offshore wind parks which in turn need to be linked up with the coastal zone by cables demanding for own planning approval and co-operation of shore and seaside responsibilities.





Pict. 11: Trelleborg, a port view

Source: Case study Trelleborg, Report II – Problems and Conflicts, draft version

The study carried out in Trelleborg is: “Integrated Coastal Zone Management at the local level in the Baltic Sea through geographical mapping and scenario analysis”. It tackles:

- Physical planning
- Coastal zone management
- Scenario analysis

#### **5.1.1.2 Findings and Recommendations**

As for the case study on Trelleborg the following findings and conclusions concerning Maritime Safety can be mentioned:

- Information on the marine ecosystem was found to be too small
- Pollution from ships and ports should gain more attention
- Communication was found to be insufficient especially between scientists and planners
- Sectoral planning is found to be prevailing integrated planning
- Problem oriented management is missing

- The development and use of a GIS based tool provides for bottom up approach

The following recommendations resulted from the work on the case study itself and from the finalizing seminar in Berlin, December 2007:

- Establish jointly integrated scenario planning for the Baltic Sea Region
- Fund institute/ institution to carry out the scenaria planning
- Establish evaluation like in Trelleborg in all BSR shore side communities
- Publish and distribute experiences of these evaluations
- Make available all existing marine [and maritime] data
- Use GIS based tool [on local level] to realize better bottom up approach
- Put more focus on pollution from ship and ports
- Create big picture [of the impacts on marine environment]
- Carry out problem oriented management instead of sectoral management

### 5.1.2 Ship routing

As the IMO is the United Nations' agency for these matters, IMO provides for the adoption of ships routeing systems under SOLAS regulation V/8 and for the adoption or amendment of traffic separation schemes (TSS) in rules 1(d) and 10 of Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREG). Guidelines and criteria developed by the IMO for the adoption of routeing measures are contained in the IMO General Provisions on Ship's Routeing (IMO Assembly resolution A.572 (14), as amended). These measures include traffic separation schemes (TSS), two-way routes, recommended tracks, areas to be avoided, inshore traffic zones, roundabouts, precautionary areas and deep-water routes. Information on recent new and amended traffic separation schemes and associated routeing measures is contained in Annex 18 to the report of the Maritime Safety Committee on its 73rd. session (MSC 73/21/Add.3).<sup>36</sup>

**Elements used in traffic routeing systems include:**

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<sup>36</sup> <http://www.un.org>

- traffic separation scheme: a routeing measure aimed at the separation of opposing streams of traffic by appropriate means and by the establishment of traffic lanes
- traffic lane: an area within defined limits in which one-way traffic is established. Natural obstacles, including those forming separation zones, may constitute a boundary
- separation zone or line: a zone or line separating traffic lanes in which ships are proceeding in opposite or nearly opposite directions; or separating a traffic lane from the adjacent sea area; or separating traffic lanes designated for particular classes of ship proceeding in the same direction
- roundabout: a separation point or circular separation zone and a circular traffic lane within defined limits
- inshore traffic zone: a designated area between the landward boundary of a traffic separation scheme and the adjacent coast
- recommended route: a route of undefined width, for the convenience of ships in transit, which is often marked by centreline buoys
- deep-water route: a route within defined limits which has been accurately surveyed for clearance of sea bottom and submerged articles
- precautionary area: an area within defined limits where ships must navigate with particular caution and within which the direction of flow of traffic may be recommended
- area to be avoided: an area within defined limits in which either navigation is particularly hazardous or it is exceptionally important to avoid casualties and which should be avoided by all ships, or by certain classes of ships<sup>37</sup>

Some of these elements are being used as APMs in the Baltic Sea, designated as PSSA. For more information please see chapter 5.2.1 .

#### **5.1.2.1 Linkages with Marine Spatial Planning**

Not the routeing as such but the consideration of the ship routeing and the provision for buffer zones and other means of avoiding use conflicts are being carried out in MSP.

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<sup>37</sup> [http://www.imo.org/Safety/mainframe.asp?topic\\_id=770](http://www.imo.org/Safety/mainframe.asp?topic_id=770)

### 5.1.2.2 Recommendations

- Regard shipping routes as basic pattern for future zoning in MSP
- Use AIS signals and arising charts as information sources on the real maritime traffic flow
- Add buffer zones for safety purposes
- Establish appropriate elements of routeing (see above) where collision risk is high due to traffic density, offshore installation or other reasons

### 5.1.3 Port development

Port development is a complex task and currently being a topical issue in all Baltic countries. It is regarded as the appropriate means to address the local traffic problems and the future needs in infrastructure belonging to the everyday tasks or the strategic tasks of port authorities respectively.

#### 5.1.3.1 Linkages with Marine Spatial Planning

An additional benefit of an effective tie-in between Marine Spatial Planning and terrestrial planning is that the policies of one are reflected in the other. This would be of substantial benefit to developers in the marine area. If, for example, an area of coastline was identified as a possible, or even preferred area for port development, the relevant land plans would develop policies to facilitate the requisite infrastructure links, subject to sustainable development and environmental considerations. An general example of a benefit MSP could bring is in the concept of 'shipping clearways', protecting viable shipping channels in and out of harbours and ensuring their future availability after a change of trade patterns.

Some aspects could be incorporated into MSP to offset those disadvantages for ports. Firstly, that MSP, River Basin Management plans, terrestrial plans and any others that overlap in the marine area undergo harmonisation in order to ensure that their goals are sympathetic rather than in conflict.

#### 5.1.3.2 Recommendations

- Do not only focus on aspects such as layout, dimensioning, equipment concepts and specification, but instead
- Assess the additional maritime safety risk induced by new or bigger terminals for traffic flow on sea and in the immediate port surrounding

- First check the given contingency provisions and their location
- Also consider future trends of other activities in the coastal area, such as fishing, recreation and offshore activities
- Consider national port development planning policies to avoid extra risks and extra costs

#### **5.1.4 Offshore installations / structures**

Spatial planning in marine areas needs to address the development of emerging activities which cause environmental impact such as offshore installations whether oil rigs or wind turbines. Both are generally high demanding in investment and planning.

##### **5.1.4.1 Linkages of offshore structures and marine spatial planning – results of the case studies carried out**

The principles of Strategic Environmental Analysis SEA are being applied to define suitable areas / priority areas for wind farms while Environmental Impact Assessment EIA including risk assessment is being carried out as part of the approval procedure for the individual wind parks. In the Swedish and Danish EEZ cable corridors and cross over sections need to be planned and approved separately.

Where comprehensive Marine Spatial Planning (MSP) is implemented the planning procedures belonging to an offshore wind park are considerably reduced as cable corridors and cross over sections are already foreseen and approved during the integrative MSP procedure.

The two case studies carried out are:

1. Offshore Windfarm development and the issue of maritime safety. Case Study „Kriegers Flak” I, II and III<sup>38</sup>
2. Curonian Spit – World Heritage site. The assessment of ecological and socio-economical threats of oil transport routes and mining in Lithuanian part of the South-East Baltic<sup>39</sup>

##### **5.1.4.2 Offshore wind park development - Findings and Recommendations**

As for the case study on Kriegers Flak the following conclusions are worth mentioning

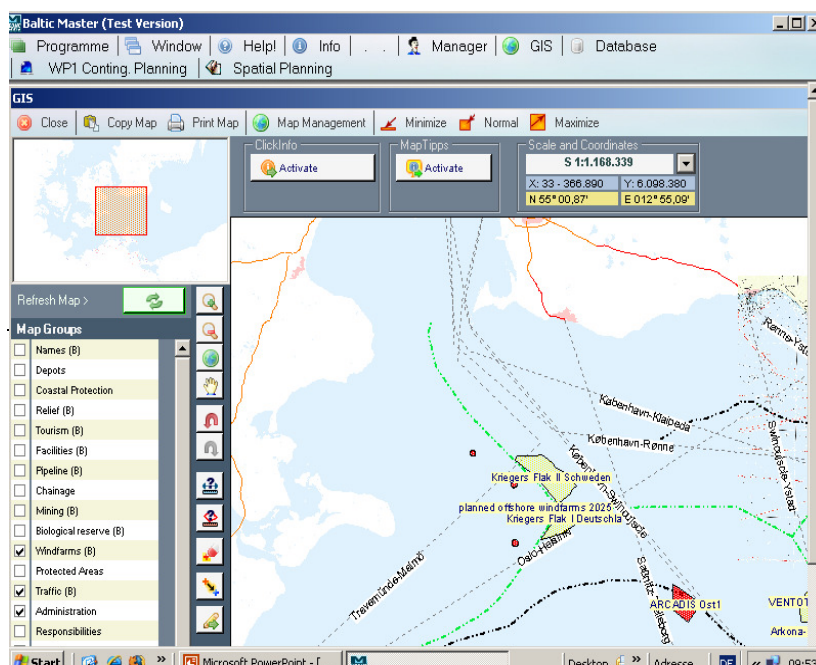
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<sup>38</sup> Schnegelsberg, S. (S007): Offshore wind farm development and the issue of Maritime Safety – Case Study Kriegers Flak I,II and III.. [http://www.balticmaster.org/file\\_archive.aspx?page\\_id=166](http://www.balticmaster.org/file_archive.aspx?page_id=166)

<sup>39</sup> Blazauskas, N., Gulbinskas, S., Langas, V. and Depellegrin, D. (2007): Curonian Spit – World Heritage Site. The assessment of ecological and social-economical threats of oil transport routes and mining in Lithuanian part of the South-East Baltic. Coastal research and planning institute, Klaipeda University

The following recommendations result from the elaboration of the case study “Kriegers Flak” as well from the work shop in Trelleborg, December 06 and the finalizing seminar in Berlin 07.

- Develop offshore wind farms based on environmental impact data and monitoring
- Use experiences gained from extensive monitoring of the first offshore wind farms and widen the scientific basis for future assessment of projects.
- Carry out the development of offshore wind farms as part of a comprehensive MSP.
- Exchange information about maritime safety requirements in your coastal zones, territorial waters and your EEZ resp. and support development of unified safety requirements e.g. head for successive standardization of traffic regulations concerning safety and easy flow of traffic within the Baltic Sea Region
- Exchange information about risk assessment methodology and support development of unified methodology within the Baltic Sea Region
- Use the possibility to compare the results of different risk assessment when the same parameters are applied.
- Investigate and communicate cumulative risk effects in an area with more than one wind farm
- Address cumulative aspects in transboundary context
- Apply unified approaches with the aim to reach transboundary communication and participation.



Pict. 12:  
Location of Kriegers Flak  
I + II on the edges of the  
EEZs

Source: MERMS, please see chapter 1.2



#### **5.1.4.3 Findings and Recommendations concerning the maritime safety situation of an off-shore oil drilling platform close to the Curonian Spit**



Pict. 13: D6 platform, 22,5 km from costs of the Kaliningrad region at the depth of about 30 meters

Source: Presentation of Valdas Langas on WP 3 Seminar in Berlin, December 2007

As for the case study on the D6 oil platform the following findings and conclusions have to be mentioned.

1. The system of Russian emergency preparedness and (assistance) in case of an oil spill is found to be complicated and communication with Lithuanian is insufficient
2. The picture of arising costs for the assistance in case of a spill and the compensation procedure for the environmental and social damage is unclear
3. Principles for the calculation concerning social were non existent

The following recommendation result from the elaboration of the case study itself as well as from the finalizing seminar in Berlin December 07. For further reading the report of the case study is recommended. Please see footer 39.

- Locate response equipment always in the vicinity of the oil rig or alongside the transport route
- Provide for effective communication on rescue capacities and –plans
- Don't consider national borders as boundaries for environmental concern and protection
- Find principles for the calculation of social and environmental costs and carry out socio economic impact assessments
- Apply the principles found and pay / make pay respectively the social and environmental costs
- Implement the *polluter pays* principle in sea transport, here shipping companies and port facilities when found responsible of a spill
- Concerning liability and compensation, treat oil rigs like ship in IMO – and EU legislation  
For further information please see chapter 4.2.2

### **5.1.5 Trans national infrastructure planning**

#### **5.1.5.1 Linkages of transnational infrastructure to marine spatial planning - results of the case study on the Fehmarn Belt Crossing**



Pict. 14:

Fehmarn island, fixed link across the Fehmarn Sound and present traffic situation between the island and the Danish island Falster (Fehmarn Belt) highlighted by AIS tracks from 13<sup>th</sup> and 14<sup>th</sup> August 2007 which display the ferry traffic and the traffic through the Belt.

Source: MERMS, see also chapter 1.2

The environmental consultation procedure ended in 2006 with a report which reflected what is currently known about the environmental impact of the fixed link in the coast-to-coast section and the related upgrading of hinterland connections in Germany and Denmark.

One finding of the report is that further examination of the collision risk is needed. The question whether sufficiently safe conditions will be achieved after the bridge is constructed and which measures (VSS, pilotage) therefore have to be applied will be tackled by a bi national working group by means of a procedure according to the IMO Formal Safety Assessment FSA.

As for this case study the following findings and conclusions are worth mentioning

- Planning procedure on two countries territory is challenging
- The importance of the Fehmarn Belt for shipping purposes as well the relevance of the fixed link / crossing with regard to maritime safety is being acknowledged
- The demanding conception of the traffic forecast suffers from uncertainty of the final bridge design concerning location, distance between pylons

### 5.1.5.2 Recommendations

The following recommendations result from the elaboration of the case study:

- Prioritize maritime safety aspects
- Carry out FSA risk analysis based on traffic forecasts with scenarios displaying the final

bridge design and local climate conditions to be expected due to climate change

### **5.1.6 Places of Refuge**

The issue of Places of Refuge (PoR) is one aspect of contingency planning in the consideration of which the rights and interests of coastal states as well as the need to render assistance to vessels that are damaged or disabled or otherwise in distress at sea ought to be taken into account.

#### **5.1.6.1 IMO Guideline on Places of Refuge**

In January 2006 a proposal of the European Parliament (EP) and European Council (EC) to amend article 20 of directive 2002/59/EC was published. Within the context of this manual the following parts of the proposal are of interest:

“Article 20a - Plans for the accommodation of ships in distress

- (1) Member States shall draw up plans for responding to threats presented by ships in distress in the waters under their jurisdiction.
- (2) The plans referred to in paragraph 1 shall be prepared after consultation of the parties concerned, taking into account the relevant IMO guidelines referred to in Article 3(a), and shall contain at least the following:
  - the inventory of potential places of refuge, recapitulating those elements which are conducive to speedy assessment and decision-making, including descriptions of the environmental and social factors and the natural conditions of the potential places considered;
  - the assessment procedures for selecting the place of refuge on the basis of places listed on the inventory;
  - the resources and installations suitable for assistance, rescue and combating pollution.

#### **5.1.6.2 Linkages of Places of Refuge to spatial and regional planning**

According to the draft amendments of the directive member states shall draw up plans for responding to threats presented by ships in the waters under their jurisdiction. These plans shall under more contain an inventory of potential places of refuge and the resources and installations suitable for assistance, rescue and combating pollution. And these plans, inventory of potential PoR included shall get communicated to the EU Commission.

### 5.1.6.3 Recommendations

- Ensure that information on location and conditions Places of Refuge as part of the national maritime safety concepts are shared from the maritime authorities, port authorities, authorities responsible for shore side safety
- Establish communication and alert procedures if missing
- Establish cross border communication and action to meet the requirements of the growing maritime transport
- Adjust PoR conception first when safety relevant activities, such as port development and resulting changes of frequency, seizures and cargoes are draftet

## 5.2 Conceptual tasks

### 5.2.1 PSSA

A number of routeing measures entered into force in the Baltic Sea on 1 July 2006, which are aimed at improving safety at Sea and environmental protection.

In brief, the measures are as follows:

1. The Baltic Sea area, with the exception of waters under sovereignty and jurisdiction of the Russian Federation, will be classified as a “Particularly Sensitive Sea Area” (PSSA).
2. A traffic separation scheme will be established in the Bornholmsgat (TSS BORNHOLMSGAT).
3. A traffic separation scheme will be established north of Rügen (TSS NORTH OF RÜGEN).
4. A new rule concerning maximum draught in the TSS Off Gotland Island will come into force.
5. An inshore traffic zone will be established at the TSS South of Gedser.
6. A DW route will be established between the Bornholmsgat and waters W of Hiiumaa (DW ROUTE OFF GOTLAND ISLAND).
7. Voluntary “Areas to be avoided”, for ships with a gross tonnage of 500 or more, will be established at Hoburgs Bank and Norra Midsjöbanken

## 8. The southern reporting boundaries of V Linkages with regional planning<sup>40</sup>

### 5.2.1.1 Linkages of PSSA to spatial and regional planning

The protective value of PSSA and Associated Protective Measures (APM) is probably more in relation to daily routine of shipping activities than to the exceptional situation of a ship in distress; that means PSSA designation process is a central subject to Marine Spatial Planning.

In Marine Area Spatial Plans of Territorial Sea and EEZ APMs are or will be considered on a case-by-case basis, based on the particular circumstances of the area. These include special passage planning requirements (e.g. closure of routes to certain types of vessels or cargoes, seasonal closures to protect migrating marine mammals, speed restrictions); special anchoring requirements; special activity restrictions (eg. regulation of offshore bunkering); obligatory escort towing; and obligatory pilotage.

The picture of conditions and restrictions on Sea, gives reason to think about harmonisation with the regional planning on shore. At least the PSSA status might lead to questionable investments due to unexpected costs to be taken into account – costs arising from the obliged use of pilots, tugs, from waiting time and deviation.<sup>41</sup>

### 5.2.1.2 Recommendations

- Take into account the full scale of possible APMs
- Take into account that the PSSA Status relies to the proven criteria of sensitivity of the Baltic Sea and therefore co-operate with the actors who are responsible, competent and engaged on the ecological, socio-economical or scientific fields proven to be sensitive.
- First consider the PSSA status when planning new touristic resorts, offshore installations and port enlargement or dedication of port areas to new goods or other safety relevant purposes.

### 5.2.2 Marine Protected Areas

Marine Protected Areas (MPAs) are most often established to promote the conservation of marine biodiversity, although they can also be used to benefit other interests such as fisheries and recreation. Marine spatial planning (MSP) has a much broader remit, providing an overall framework for managing activities in the marine environment

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<sup>40</sup> Notification in NfS issue 2/2006

<sup>41</sup> acc. To Chircop

Marine Protected Areas (MPAs) have been defined by IUCN, the World Conservation Union, as: *“Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment”*.<sup>42</sup>

Protected Areas form part of each nation’s strategy for dealing with the conservation and sustainable use of biodiversity and land/seascape. These areas vary considerably in their objectives, the extent to which they are integrated into the wider land/seascape, and the effectiveness with which they are managed. Nevertheless they provide powerful evidence of a nation’s commitment to conservation and sustainable development.<sup>43</sup>

There are many types of MPA, with management arrangements ranging from multiple-use to strict protection zones where all extractive activities are prohibited.

The uniqueness of the Baltic Sea is reflected in many international conservation networks. As early as 1992, the Member States of the European Union committed themselves, upon entry into force of the European Directive on the conservation of natural habitats and of wild fauna and flora (the “Habitats Directive” 92/43/EEC of 21 May 1992) to create a coherent network of protected areas. Together with the Special Protection Areas (SPAs) classified under the EU Birds Directive (79/409/EEC of 2 April 1979), the Special Areas of Conservation (SACs) designated under the Habitats Directive form the NATURA 2000 system of protected areas, the Baltic Sea Protected areas (BSPA) established by Helsinki Commission, RAMSAR-sites, National parks and Seal Sanctuaries. The purpose of this network is to preserve terrestrial, freshwater and marine biological diversity. After the enlargement of European Union in May 2004 only Russia remains as a non EU member in the Baltic Sea area and the Baltic Sea will be EU’s inland sea. Regional co-operation among all Baltic Sea states is, however, still necessary to ensure ecologically sustainable maritime transportation.<sup>44</sup>

Although usually considered to be areas designated for biodiversity conservation, there are also other types of MPAs. They include fisheries reserves or “boxes” where there may be seasonal closures or gear restrictions as part of a management regime for commercial fisheries, areas of archaeological interest, military exercise areas, and safety zones around marine structures (such as oil platforms and offshore wind turbines) where access is restricted and which act as de facto reserves.

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<sup>42</sup> Marine Protected Areas in the context of Marine Spatial Planning – discussing the links, Dr. Susan Gubbay, WWF Report 2004

<sup>43</sup> [http://www.iucn.org/themes/wcpa/pubs/pdfs/PARKS/parks12\\_3.pdf](http://www.iucn.org/themes/wcpa/pubs/pdfs/PARKS/parks12_3.pdf)

<sup>44</sup> <http://www.habitatmarenatura2000.de/en/hintergrund.php>

<http://www.wwf.se/source.php/1003142/wwf-1074785.pdf>



### 5.2.2.1 Linkages to Marine Spatial Planning

MPAs are one of many “interests” which will need to be integrated into any future system of MSP. While they will stand in their own right as a sectoral interest, there will also be links with other sectors. In the case of oil and gas extraction or offshore wind farms, for example there is potential for these industries to help achieve nature conservation objectives. In the case of fisheries there may be direct resource benefits from establishing MPAs. A system of MSP might be able to resolve some of the issues of concern between these sectors and develop some of the opportunities.

The effectiveness of MPAs and the success of MSP requires some flexibility in the systems which are introduced. While providing greater clarity and certainty for decision processes, MPA management and MSP will inevitably require a dynamic approach, particularly in the longer term where, for example, there will be a need to respond to the likely impacts of climate change.<sup>45</sup>

### 5.2.2.2 Recommendations

- Issue protective status to the areas not yet covered by the appropriate status
- Minimize use conflicts by routeing measures listed above
- Check contingency plans and location of pollution control equipment first when planning new port activities or offshore installations
- Adjust the contingency plans and the location of equipment in accordance with the regional projects on- or offshore which are of safety relevance.
- Take into account the cross border nature of safety risks, oil spills and ecological and economic losses and therefore intensify the cross border co-operation in all safety relevant planning issues.
- offer a transparent strategic approach through MSP which allows all industries to be given equal and fair consideration of how their activities may be affected by MPA site selection and management, and network design.

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<sup>45</sup> Marine Protected Areas in the context of Marine Spatial Planning – discussing the links, Dr. Susan Gubbay, WWF Report 2004

### 5.2.3 HELCOM Baltic Sea Action Plan BSAP

By the end of 2007 HELCOM had prepared a strategic Baltic Sea Action Plan, seen as contribution within the thematic frame of the Marine Strategy Directive which was drafted in October 2005.

In line with the Helsinki convention to protect the Baltic Sea from all sources of pollution, the BSAP deals with eutrophication, hazardous substances, maritime safety and the ongoing loss of habitats and biodiversity. In the context of this manual we recommend to pay attention to the results of the working group findings concerning maritime safety.

Based on the draft HELCOM Thematic Assessment on Maritime Transport in the Baltic Sea<sup>46</sup> a set of activities has to be agreed upon until 2007 and implemented in the years 2008 and 2009. In addition to the work towards increased safety of navigation emergency assistance and effective response to pollution incidents are seen as crucial components of maritime safety. The idea behind emergency assistance is to ensure assistance to the vessel at a very early stage of the accident and in that way to avoid or reduce the scale of the pollution.

#### 5.2.3.1 Sub regional risk assessments

The idea of enhanced sub-regional co-operation, which has been discussed and agreed in HELCOM RESPONSE, rests on a four-step logic<sup>47</sup>:

- Analysis of the likely accident scenarios taking into account sub-regional specifics;
- Identification (both quantitative and spatial) of the emergency and response resources needed sub-regionally to respond to an accident of Tier 1 and 2 and how to deal with a Tier 3 accident until the assistance arrives;
- Comparison of the identified needs to the available resources and development of plans to meet the needs for resources in the sub-region in the most effective way;
- By the above standing steps, achieving adequate emergency and response preparedness in the most cost-efficient way.

By assessing the risks and the available resources on the sub-regional scale HELCOM (please see also chapter 4.4.1) aims to support the sub-regional cooperation and to find the most effective ways to fill in existing gaps in emergency resources.<sup>48</sup> The proposed indicators are:

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<sup>46</sup> Maritime Transport in the Baltic Sea, Draft HELCOM thematic assessment in 2006

<sup>47</sup> HELSINKI COMMISSION HELCOM BSAP TASK FORCE 3/2006

Adequate\* emergency towing, fire-fighting and emergency lightering capacity and arrangements is available in all sub-regions (\* in accordance with the findings of the sub-regional risk assessments/regional plans)

### 5.2.3.2 Linkages to Marine Area Spatial Planning

Marine broad-scale spatial planning is an overarching spatial management method providing tools for comprehensive and integrated coastal and marine management. Broad-scale marine spatial planning can help in meeting ecosystem based management objectives, in reducing user conflicts, and in reducing adverse impacts of human uses now and in the future.

Several components of broad-scale spatial planning are already in place within the Baltic Sea Area, e.g. Marine Protected Areas, Traffic Separation Schemes and the EU and EU-Russian regulations on fisheries management (areas closed to fisheries).

With the request of a development of broad-scale Marine Spatial Planning principles in the Baltic Sea Area the Commission reminds Article 3 of the Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992 (Helsinki Convention), in which the Contracting Parties declare the application of the precautionary principle, and Article 15 in which the Contracting Parties agree to individually and jointly take all appropriate measures, with respect to the Baltic Sea Area and its coastal ecosystems influenced by the Baltic Sea, to conserve natural habitats and biological diversity and to protect ecological processes, and further recalls the HELCOM Recommendation 24/10 on implementation of integrated marine and coastal management of human activities in the Baltic Sea Area and to promote integrated management of human activities having impacts on the marine environment, recognising that the network of Baltic Sea Protected Areas forms an integral part of the broad-scale spatial planning.

It is recognised by the Commission, that most of the Contracting Parties have national legislation and policies regarding integrated management of human activities impacting marine and coastal areas and that the interests, concerns and obligations regarding the marine and coastal areas of National agencies, private parties and NGOs differ from one another as well as between countries.<sup>49</sup>

### 5.2.3.3 Recommendations

In the Baltic Sea Action Plan recommendations on the development of broad-scale Marine spatial planning Principles in the Baltic Sea Area have been elaborated. Main recommendations are:

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<sup>48</sup> Ad hoc Task Force for the HELCOM Baltic Sea Action Plan, Third Meeting Hamburg, Germany, 4-5 December 2006, Attachment 2: GUIDANCE FOR THE SUB-REGIONAL PLANS TO QUANTIFY NEEDED EMERGENCY/RESPONSE RESOURCES

<sup>49</sup> HELCOM Baltic Sea Action Plan, Krakow, 15.11.2007

#### BSAP:

##### Concerning broad-scale marine Area Spatial Planning:

- jointly develop the marine and coastal broad-scale spatial planning common principles to facilitate the protection and sustainable use of the Baltic Sea
- ensure that all Contracting Parties have free access to the HELCOM GIS database and permission to use the data for the spatial planning activities in their countries,
- fill in data gaps in spatial data e.g. on marine and coastal biodiversity, natural resources use of land and water areas, demography, traffic, shipping
- develop joint solutions to the problems associated with access to spatial data; provide HELCOM and other relevant parties with the necessary spatial data for marine and coastal broad-scale spatial planning;
- identify and map interacting and/or conflicting interests, obligations and uses of the sea, primarily to broaden the HELCOM GIS as a data source and an effective tool to be used in marine broad-scale spatial planning (compatible with the European Environment Agency database including spatial data);
- carry out consultations jointly concerning activities which may have transboundary negative effects on the environment and coastal populations.
- The implementation of this Recommendation should be evaluated at regular intervals. \* e.g. the VASAB Recommendation for spatial planning of the coastal zone in the Baltic Sea Region.

##### Concerning Emergency preparedness:

- Spatial allocation and preparedness should correspond to the time limits for approaching and securing a ship in distress along the major shipping lane(s) in the sub-region before it reaches shallow waters.
- All priorities related to vulnerable areas (BSPAs) are to be pre-planned within sub-regional action plans; this may include wildlife response as deemed feasible.
- Shoreline response capacity should be addressed and arranged in its complexity within subregional agreements between adjacent Contracting States. Such agreements are aimed at ensuring fast and sharp reaction when a second and/or third tier or transboundary pollution accident has occurred.

- Based on risk assessment in a sub-regional context, including evaluation of the environmental factors, adequate response capacities should be available for places of refuge.

#### 5.2.4 Integrated Coastal Zone Management

*"The growing pressure on the coastline of the Baltic Sea calls for urgent and unified action by all countries of the region. There is a need for Integrated Coastal Zone Management ensuring a sustainable development in the coastal areas. Use conflicts are not limited to the land side areas of the coastal zones. Especially in the offshore areas use conflicts will get more numerous and more complex in future. In the past, the coordination of different demands could often be restricted to the balancing between two sectors. No complex co-ordination instruments were needed. But with growing complexity and intensity of use interests, more frequently mutually excluding use interests need to be balanced in a multi-sectoral perspective. [...]"*<sup>50</sup>

*"Integrated Coastal Zone Management should not be treated as a new instrument or procedure (similar to EIA) but rather as an efficient combination of different existing instruments (legal, financial, indicative etc.) which need proper co-ordination and calibration."*<sup>51</sup>

In the Recommendation of the European Parliament and of the Council of 30 May 2002 concerning the implementation of Integrated Coastal Zone Management (ICZM) in Europe (2002/413/EC) it is stated, that there is a need to ensure coherent action at European level, including cooperative action and consultation with regional seas organisations or international organisations, such as the International Maritime Organisation (IMO), to address cross-border problems.

To compensate the missing common level of spatial and regional development and maritime safety issues, ICZM may provide as a means to an end. At the same time maritime transport is subject to global standards and in this respect it is unclear how its management could relate to regional ICZM initiatives.

The preamble of the 1982 United Nations Conventions on the Law of the Sea (UNCLOS) consider integration as one of the most important principles of ocean management: *"the problems of ocean space are closely interrelated and need to be considered as a whole"*. ICZM is a promising approach to operationalise the integrative vision of UNCLOS.

However, in contrast to the hard law that largely regulates maritime transportation and spatial planning as well, ICZM is a "soft" instrument based on a consensus-based strategy serving the realisation of spatial planning objectives.

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<sup>50</sup> Recommendations on the role of Spatial Planning in ICZM and Sea Use Planning based on the the INTERREG III B Projekt BaltCoast

<sup>51</sup> Baltic Sea Region ICZM Platform meeting, Helsinki, 26th September 2003

There is much in maritime transportation that needs to be managed on a sectoral basis, at the same time there are navigation issues that engage other coastal and sea users and interests. Hence the IMO is increasingly involved with ports and navigational related matters affecting coastal and marine interests other than shipping.

It is possible that the IMO standards could be used as drivers for ICZM. At the same time, spatial planners and coastal managers have to recognise the special status of marine transportation as an ocean use and the international constraints that accompany it.<sup>52</sup>

For the purpose of the integration of a maritime safety perspective into spatial planning a look on the countries' different modes of interaction of the different planning hierarchies in general and on the interaction when planning occurs in offshore areas, respectively has to be taken. As far as possible it has to be distinguished between planning in the Territorial Sea and in the Exclusive Economic Zone. Organigrams showing the mode of interaction can be found in the inventory.

#### **5.2.4.1 Linkages to Marine Area Spatial Planning -**

It is hereby referred to the main conclusion of BaltCoast: to use the strengths of spatial planning for a successful implementation of ICZM and for cross-sector coordination of offshore development in 12sm zones and beyond, in the EEZ.

#### **5.2.4.2 Recommendation**

In the Interreg III B Project „BaltCoast“ recommendations on the role of Spatial Planning in the ICZM (a) and on the implementation of Sea Use Planning (b) have been elaborated. Main recommendations are:

Part a:

- Do not create ICZM specific institutions – improve the use of existing ones
- Cross-sectoral Agencies at Regional Level should take the lead for implementation
- Link the regional approach with case specific solutions
- Spatial Planning should take a central role in ICZM

Part b:

To implement the ministerial decision to extend spatial planning also to the off-shore side (Sea Use Planning) as stated in the Wismar declaration of 2001 there is a need

- for an agreement on the systematic information exchange concerning off-shore uses,

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<sup>52</sup> The Regulation of Maritime Transportation and Integrated Coastal Management: Two Approaches in Need of Integration, Aldo Chircop 2005

- to prepare spatial plans for offshore areas where needed
- for the introduction of project oriented and cross-sectoral coordination procedures.
- The focus should be on implementation rather than on theoretical ICZM discussions

### 5.2.5 Water Framework Directive

The Water Framework Directive (2000/60/EC) applies to all surface water bodies, including lakes, streams, rivers, estuaries and coastal waters, and to artificial waters such as canals. It also applies to groundwater.

The geographical scope of the Water Framework Directive (WFD) reaches at least one nautical mile on the seaward side from the *nearest* point of the baseline. The application of the WFD extends on inland and coastal water navigation. Especially Ports and Harbours with their commercial and leisure navigation are interacting with the WFD. Under the WFD Port development projects will therefore be subject to greater constraints and may even be prohibited as a result of their likely effect on water quality status.

#### 5.2.5.1 Linkages to Marine Spatial Planning

Ports will need to be actively involved in the monitoring process, and notably in assessing risks from specific pressures and appropriate responses. The findings of the monitoring will be relevant to the preparation of the measures to be implemented in Port management plans.

These measures should be based on sound data and ports should therefore make sure that decisions are well informed with regard to the actual impacts of port (and related) activities on water status. It is clearly important for ports to participate in the process of defining the adequate protection and restoration measures required to meet environmental objectives, and notably of assessing their technical and economic feasibility.

In this context special attention should be paid to the designation of Places of Refuge (PoR). Therefore please see also chapter 5.1.6

#### 5.2.5.2 Recommendations

To list the outcomes of the seminar “Navigating the EU Water Framework Directive” there is a need

- For clarification of the implications for port- and navigation authorities.
- For involving these authorities into discussions now, to avoid the type of problems associated with the Birds and Habitats Directives.
- For recognising the vital importance of ports and harbours.



- For further consideration of the relationship between European and other policies (eg. short sea shipping) and the WFD.
- For paying attention to the application of the derogations to the navigation sector: a common application is needed across member states.
- For clarification of key-interests: There remains a lot of uncertainty both at the high level and at the detailed level including on issues such as the statutory role of port and navigation authorities, monitoring costs, stakeholder involvement, mitigation, over-riding public interest, reference conditions and economic assessment.
- For resolving the significant uncertainty about the application of the polluter pays principle. Due to difficulties in identifying cause and effect, navigation authorities may face disproportionate costs.<sup>53</sup>

### 5.2.6 Short Sea Shipping

Although it is part of the traditional wealth of maritime language, the concept of short sea shipping has taken on a new meaning in recent years: as well as being a type of non-ocean maritime transport, it is understood to be a link in the intermodal transport chain with the basic purpose of capturing a share of land cargo transport in order to relieve the pressure on the road transport system. One side effect of short sea shipping is a reduction in pollution and in fuel consumption through scale economies.

In 2003 the European Commission presented the Programme for the Promotion of Short Sea Shipping. The programme consisted of 14 actions the Commission wants to realise in view of stimulating the use and effectiveness of Short Sea Shipping. The programme proposed, among others, the introduction of a European Intermodal Loading Unit, Motorways of the Sea and a bottleneck exercise.

#### 5.2.6.1 Motorways of the Baltic Sea – State of implementation

In its aim of promoting intermodal transport and Short Sea Shipping, the European Commission proposed in the Transport White Paper of September 2001 the development of **“Motorways of the Sea”** as a competitive alternative to land transport. Intra-Community maritime transport, together with inland waterway transport, is said to be a key component of intermodality which must provide a means of coping with the growing congestion of road and rail infrastructure and of tackling air pollution.

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<sup>53</sup> “Navigating the EU Water Framework Directive”, Seminar on the Implications of the EU Water Framework Directive, Brussels, October 30th 2003

The European Commission has identified four priority areas for the development of motorways of the sea: i) the Baltic Sea, connecting the States that border on this sea with member-States in central and western Europe, including a North Sea-Baltic Sea connection; ii) western Europe, including Portugal and Spain, via the Atlantic arc to the North Sea and the Irish Sea; iii) south-eastern Europe, connecting the Adriatic Sea with the Ionic Sea and the eastern Mediterranean (including Cyprus) ; iv) south-western Europe (the western Mediterranean) connecting Spain, France, Italy and also taking in Malta, with a connection with the south-eastern Europe motorway of the sea, which includes the connection with the Black Sea.

Article 12a TEN-T gives three main objectives for the sea motorways projects:

- (1) freight flow concentration on sea-based logistical routes;
- (2) increasing cohesion;
- (3) reducing road congestion through modal shift.<sup>54</sup>

The MoS concept for many reasons is seen controversially within the riparian countries.<sup>55</sup>

According to VASAB Statement on community and Pan-European transport policy the Van Miert Group has proposed that the Baltic Sea would be a pilot region in implementing the MoS concept. Supported actions of the Motorways of the Sea can't be detected up to now (June 06) on the Trans-European Network for Transport (TEN-T) web site supported actions.<sup>56</sup>

### 5.2.6.2 Linkages to Marine Spatial Planning

The Motorway of the Baltic Sea intends to link the Baltic Sea Member States with Member States in Central and Western Europe, including the route through the North Sea/Baltic Sea canal) (by 2010). Within the context of maritime safety issues in the Baltic Sea the choice of ports for a MoS project of course seems important.

The concept focuses on narrow hinterland connections of the ports. Opening the bottle necks physically by more connecting roads and opening them logistically by application of IT tools is the main purpose. Facilitated transport to the ports result in increasing ship traffic and rising maritime safety risks.

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<sup>54</sup> [http://europa.eu.int/comm/transport/intermodality/motorways\\_sea/index\\_en.htm](http://europa.eu.int/comm/transport/intermodality/motorways_sea/index_en.htm)

<sup>55</sup> [http://europa.eu.int/comm/transport/intermodality/motorways\\_sea/projects\\_en.htm](http://europa.eu.int/comm/transport/intermodality/motorways_sea/projects_en.htm)

<sup>56</sup> [http://ec.europa.eu/ten/transport/actions/index\\_en.htm](http://ec.europa.eu/ten/transport/actions/index_en.htm)

### 5.2.6.3 Recommendation

Where port infrastructure and suprastructure is being developed within a MoS Project, consideration of all the recommendations above and specially those concerning port planning, offshore wind farms, Places of Refuge and PSSA is recommended.

## 6 Further orientation

### 6.1 From land use planning to sea use planning

In many respects, ‘planning’ in the marine environment today resembles terrestrial planning in the 1970s. With only a few exceptions, there has been no clearly articulated spatial (or temporal) vision for the use of marine areas, no plan-based approach to management, and consequently, a lack of certainty for marine developers and users, for a long time. This was additionally aggravated by the sector-by-sector responsibilities for determining development applications in the marine environment. Aiming to give orientation about the present state of discussion and its key players, the following statements are cited.<sup>57</sup>

Due to the Wismar declaration agreed on 2001 by Ministers responsible for spatial planning and development in the Baltic Sea Region emphasis should be placed on the extension of spatial planning also to off-shore areas.

The EC initiative on Integrated Coastal Zone Management (ICZM) is also relevant. A Council Recommendation, adopted in 2002, called on Member States to carry out “stocktakes” to analyse which actors, laws and institutions influence the planning and management of their coastal zones. From these findings, the recommendation is that each Member State should develop a national strategy for ICZM. The relevance of this to the issues discussed here is that ICZM will provide the link between land use planning and any system of MSP<sup>58</sup>.

Recommended by the Interreg IIIB Project Baltcoast<sup>59</sup>, “*the strengths of onshore spatial planning for cross-sector co-ordination in offshore development should be used when preparing spatial plans for offshore areas, aiming at an effective and transparent co-ordination of different use interests with no transfer of unsolved onshore problems to offshore areas (and a sea area reservation for unknown future needs)*”).

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<sup>57</sup> Ecosystem - based, Sea Use Management/Marine Spatial Planning Workshop, 8. –10. November 2006, Paris

<sup>58</sup> Marine Protected Areas in the context of Marine Spatial Planning – discussing the links. A report for WWF-UK by Dr Susan Gubbay. November 2004

<sup>59</sup> <http://www.eucc-d.de/baltcoast2004/>

As a consequence of the findings and recommendations of Baltcoast the Gdańsk Declaration<sup>60</sup> from 2005 stated, *“that the use of the Baltic Sea for transportation, for recreation as well as for economic and energy purposes creates conflicts, which should be managed jointly through spatial planning”*.

In the North Sea Region the UK regards OSPAR and the Fifth North Sea Conference as current key drivers for Marine Protected Areas and Marine Spatial Planning. These institutions are asked *“to investigate possibilities for further international cooperation in planning and managing marine activities through spatial planning of the North Sea States, taking into account transboundary and cumulative effects”*<sup>61</sup>.

### **6.1.1 Spatial planning activities in the marine environment in the BSR today**

Today most activities in the Baltic Sea are covered by legal rules and sector-by-sector procedures allowing or rejecting concessions or licenses for certain activities.

Some riparian countries of the Baltic Sea have recently begun to assess and implement MSP in a broader context on their own initiative or driven by EU legislation.

The German coastal *Länder* recently extended their spatial planning competences to the territorial Sea, while the Federal Spatial Planning Act has been amended to extend national sectoral competences (including MSP) to the EEZ.

In Poland draft spatial plans of the sea area are prepared by the territorially competent director of the Maritime Office concerned and finally accepted by the Minister responsible for planning and construction.

The legal basis for planning in the Territorial Sea is the Act of Parliament of Sea Areas of Poland and Maritime Administration of 21 March 1991. The plan decides on:

- designation of sea area,
- prohibitions or limitations of use of these areas taking into account requirements of nature protection,
- location of public investments,
- directions of development of transport and technical infrastructure
- areas and conditions of protection of environment

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<sup>60</sup> Gdańsk Declaration, Sixth Conference of Ministers Responsible for Spatial Planning and Development in the Baltic Sea Region, held under the chairmanship of the Polish Government Centre for Strategic Studies, Gdańsk, 19 September 2005

<sup>61</sup> see No. 38

## 6.2 EU Maritime Policy

Because of the present attention for marine and maritime issues shown by the EU policy two strategies have to be mentioned here.

One is the Environment Commissioner's proposal for a European strategy for protecting and conserving the marine environment, usually called the '**Marine Strategy**'; the other initiative is the project of the Commission for Fisheries and Maritime Affairs, the '**Green Paper - Towards a future Maritime Policy for the Union: A European vision for the oceans and seas**'. It was intended to launch a broad public debate on both, on the principle of the overall EU approach to maritime policy and on the many ideas for action.

### 6.2.1 Guidance from the Marine Strategy

In its strategy for the marine environment, published in 2002, the European Commission indicates that it "will address the integration of nature protection measures and the various sectoral activities impacting on the marine environment, including spatial planning". A subsequent stakeholder conference on the strategy concluded that "principles from spatial planning should be considered to establish a good basis for a more integrated approach of the marine area". There is few indication nevertheless how this idea can be realized.

In reference to the Marine Strategy Directive the Green Paper (see below) starts on page 11 to operate with the principle of *eco-system based spatial planning*.

*"The key aim is to achieve good status of the EU's marine environment by 2021. It [The marine strategy directive] introduces the principle of eco-system based spatial planning. Without this, we will soon be unable to manage the increasing, and often conflicting uses of the oceans".*

As the term *ecosystem based planning* isn't mentioned in the Marine Strategy Directive no further orientation is gained. The expression used in the Marine Strategy is *eco-system based management*. Management always refers to units of space defined by planning processes. So obviously the principles for planning as such are left to the Green Paper.

### 6.2.2 Guidance from the 'Green Paper'

Among the maritime actors there is no consent about the significance of the "Green paper"- *Towards a future Maritime Policy for the Union*. Formally it is only a draft strategy paper, by far less binding than the Marine Strategy Directive. Due to both, the attention currently paid and the statement of the Green paper's authors to regard the marine strategy directive as the Green Paper's environmental pillar, we suggest to regard it's comments on Marine Area Spatial Planning as important guidance.

The Green Paper encourages the systematic examination on how the policies on maritime transport, industry, coastal regions, offshore energy, fisheries, the marine environment could be combined and states the requirement for

*“new ways of designing and implementing policies at the EU, national and local levels, as well as at international level through the external dimension of our internal policies.”*

The Green Paper clearly encourages Marine Area Spatial Planning:

*“As economic activity moves further offshore it will increasingly take place in waters which are subject to the right of innocent passage. The EU and its Member States will need to take the lead in ensuring that multilateral rules evolve to allow for reconciling this right with the need for off-shore spatial planning.”*

When looking into details the following guidance can be achieved:

#### **6.2.2.1 Concerning the objectives of planning**

The chapters title “Spatial planning for growing maritime economy” indicates, that the discipline of planning is meant to be mainly driven by economic interests. Consequently the Green Paper favours application lead indicative planning to comprehensive and precautionary planning (p. 35 /39). And it expresses the intention that the planning shall be monitored by EU principles (p. 39).

It is uncertain to what extent the recommended reference to the Marine Strategy Directive (p.11) shall be used as no orientation about ecosystem based planning can’t be found in the draft Marine Strategy, expect for special areas of conservation (p.22).

#### **6.2.2.2 Concerning administrative rupture from land to sea**

The Green Paper welcomes planning approaches with the least rupture ( p 34). The only country which seems to have formally realized MSP without ruptures in administrative competence is Poland.

In Germany, the only European country carrying out comprehensive Marine Spatial Planning up to now in compliance with the United Nations Law of the Sea (UNCLOS), there exist ruptures from land to Territorial Sea and again when reaching the EEZ. German approach for MSP isn’t mentioned in the Green Paper.

#### **6.2.2.3 Concerning technical advice**

Planning and policy procedures shall be based on best technical and scientific advice available, (p. 37). Application of satellite information technology and Geographic Information Systems are recommended to monitor and describe the marine environment, respectively. Elaboration of an EU Atlas of the Seas displaying the marine environment as well as socio economic data and underwater archaeological sites, to be used as a planning tool, is recommended.

#### 6.2.2.4 Concerning international co-operation

The Green Paper recommends that a “*degree of commonality between the [planning]systems will be needed to ensure that decisions affecting the same ecosystem or cross-border activities, such as pipeline and shipping routes, are dealt with in a coherent manner.*”

#### 6.2.2.5 Concerning the vision

The Green papers vision is a common EU maritime space, governed by same rules of maritime safety, security and environmental protection (p. 41). Multilateral rules aiming to reconcile the right of innocent passage (p. 34), are regarded as necessary.

The Green Paper suggests to elaborate concepts answering the following questions:

- *What are the principles and mechanisms that should underpin maritime spatial planning systems?*
- *How can systems for planning on land and sea be made compatible?*
- *On what lines should an European Atlas of the Seas be developed?*

The investigation carried out as external expertise within Work package 3 “Sustainable Spatial Development” revealed the following answers:

Concerning the principles and mechanisms which should underpin maritime spatial planning it is recommended to regard maritime safety as a principle and to establish mechanisms which ensure economic developments – whether onshore or offshore - always in line with maritime safety requirements. Regarding maritime safety as a principle means to view and decide upon requirements from the safety perspective. Contingency planning is a central part of it.

Compatibility of land and sea use planning can be reached by tools which allow access to relevant information on land-, coastal and sea features to both, planners for onshore and offshore planning. Generation of easy accessible information for the public is essential for public participation in both fields, resulting in an integrated view which is needed in the whole society to recognize the challenging situation of the endangered sea and its decreasing capacity of providing welfare for the coastal population.

The Atlas of the Seas to be developed should not be limited to given physical and socio economic features but also provide integrated information such as patterns of risks, contingency capacities, corresponding gaps and potentials of development.