PA Safe – To become a leading region in maritime safety and security

Coordinated by: Denmark and Finland

http://pa-safe.dma.dk

The countries of the Baltic Sea region are heavily dependent on shipping for imports and exports as well as for internal trade. Passenger transport and cruise tourism is also considerable. Consequently, the Baltic Sea is one of the most heavily trafficked seas in the world. The volume of shipping in the region has been growing in recent years and represents up to 15% of the world's cargo traffic. This traffic is expected to increase further in the years to come. Simultaneously, vessels are growing in size and draught.

Such dense traffic inevitably presents a risk of maritime accidents, which can be detrimental and have substantial negative consequences for the Baltic Sea states, due to their dependence of the sea and the fragile ecosystem. Fortunately, the Baltic Sea region already has a relatively good level of maritime safety.

Due to its strategic position, the Baltic Sea region is a natural route for oil transport, in particular from Russia. This is reflected in the considerable amount of oil transported through the Baltic Sea. Between 2008 and 2013, oil shipments via the Great Belt of Denmark increased to reach 181 mt.[69] As regards oil shipments in the Gulf of Finland, the amount more doubled from 80 mt in 2000 to reach 180 mt in 2013.[70]

While there is a trend towards larger tankers, the number of laden tankers is still considerable. In 2005, approximately 2706 tankers passed the Great Belt. By 2013, this number had grown to 4925 tankers.[71] It is expected, that the region will witness an increase in LNG carriers in the coming years.

The commercial maritime traffic in the Baltic is intense, but there are also other users of the sea. Fishing boats and recreational yachts also ply the waters of the Baltic. The seabed is often used for communication cables and pipelines and fish-farms have begun to appear in the Baltic too. The interrelations between different categories of users e.g. fishery and shipping or with the increased

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69 Danish Maritime Authority.

70 Baltic Port List 2014, Centre for Maritime Studies, University of Turku.

71 HELCOM (2014), Annual report on shipping accidents in the Baltic Sea in 2013.

number of vessels providing service to off-shore windfarms can cause safety concerns and calls for increased situational awareness.

The waters of the Baltic Sea are not the easiest to navigate. The Baltic Sea is generally quite shallow and the entrance to the sea is limited to the curved and narrow straits of Denmark and the Kiel Canal, which is the world's busiest artificial waterway. During winter, ice-covered waters cause difficult navigation conditions that affect the safety and reliability of maritime transport. At the same time, the sea is environmentally fragile due to its brackish semi-closed waters and densely populated shores.

If anything goes wrong, it is essential to have well-functioning search and rescue services and oil spill response capacity in place to save human lives and reduce marine pollution.

A high level of maritime safety and security contributes to the overall objectives of the EUSBSR 'Save the Sea', 'Connect the Region' and 'Increase Prosperity' by means of Blue Growth. The vision is that the Baltic Sea should become a leading region in maritime safety and security.

The region is already home to substantial competence in the field of maritime safety, e.g. at the maritime companies, universities and branch associations of the region. Important achievements such as the Automatic Identication System (AIS) have been invented in the region. In the new field of e-Navigation – a technology originating in the region – actors from the Baltic may also gain a comparative advantage. The opportunity for companies to develop and test new equipment and technology in project cooperation with universities or public authorities can result in major technological progress which improves safety, beyond the reach of individual actors and has a potential to improve the competitiveness of the region as a first mover in creating global digital solutions for the entire maritime industry. This applies for instance to the potential future Maritime Cloud concepts which are under development in the Baltic Sea Region.

The current high level of vessel traffic combined with the expected growth increases the risk of maritime accidents in the future unless improved maritime safety and security procedures are set in place. At the core of the required procedural improvements are traffic management and traffic control measures involving the monitoring of ship movements, with the aim to prevent dangerous situations.

Maritime surveillance data collected by the respective maritime authorities often serve a specific purpose for an individual sector. Better information sharing between sectors at national level and across borders is therefore needed. It would result in more efficient use of resources as well as improved safety, increased environmental protection and security at sea, better protection of EU sea borders and more efficient accident response. Search and rescue services are, according to International Maritime

Organization (IMO) regulation, a national responsibility. There is a potential for better safety and more efficient use of the resources by cooperation in such fields as coordinated surveillance, adoption of agreed standards and terminology, joint training or even capacity sharing.

It is in the interest of all countries bordering the Baltic Sea to reduce the risk of maritime accidents and marine pollution, including hazardous spills. More efficient and more compatible surveillance, monitoring and routing systems, in particular at the level of sea basins, as outlined in the EU Integrated Maritime Policy, would significantly improve maritime safety and security.

Furthermore, the human factor is a complex multi-dimensional issue affecting the well-being of people at sea and having direct implications for maritime safety and security and for the marine environment. Addressing this issue, partly through improved training, could help reduce the risk of shipping accidents in the Baltic Sea region.

There is already regional cooperation on maritime safety and security within the Baltic Marine Environment Protection Commission,[72] which addresses a wide range of issues pertaining to the safety of navigation and oil spill response preparedness in the Baltic Sea region. According to the Convention, Baltic Marine Environment Protection Commission (HELCOM) role includes acting as a platform for harmonised regional implementation of IMO regulations.

Also other regional forums have activities at practical or at policy level. Naturally, existing forms of cooperation need to be taken into account in order to identify gaps and create synergies while avoiding duplicating efforts in the region. The strength of the policy area on maritime safety and security in the midst of the other regional cooperation forums is its focus on a project-based policy dialogue and ability to help aligning EU funding with the agreed objectives.

Since the inception of the EUSBSR in 2009, a broad range of policy activities and flagships have been conducted in the framework of the policy area on maritime safety and security, and a series of results have been achieved. These results are either being used directly for the benefit of maritime safety and security in the region, or have helped pave the way for new project activities, developing the already achieved results further.

The results include *inter alia*:

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[72] The Helsinki Convention is signed and ratified by Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden, the Russian Federation and the European Union.

- three projects on e-Navigation, which have helped in the development of services and testing of infrastructure to dynamically provide the helmsman with updated information and allowing authorities in land to monitor and manage traffic better. The results of these projects have helped shape a global policy process on e-Navigation in the IMO as well as create the Baltic Sea region e-Navigation Forum;
- two projects on information exchange among maritime authorities and coast guard functions, contributing to a Common Information Sharing Environment;
- three projects on resurveying shipping routes and ports of the Baltic Sea with modern technology, providing more accurate sea charts and safer maritime operations;
- a number of other projects on such topics as reducing accidents in fisheries, minimizing the risks related to the transportation of dangerous goods at sea and facilitating exchange of knowledge and innovation in the field of maritime safety;
- creation of a regional project-based policy dialogue among maritime authorities, researchers, project makers and regional organisations which convene in the policy area international Steering Committee to discuss, select and use projects and their results.

Results like these forms the background of the policy area and sets the starting point for future activities.

The primary aim of the policy area is for the Baltic Sea region to become a leading region in maritime safety and security, thereby i.e. contributing to reducing the risk of maritime accidents in the Baltic in accordance with the below target. This aim is pursued through implementation of actions by means of a project based policy dialogue. This dialogue helps to identify gaps in the cooperation, identify projects and encourage project makers to fill those.

The policy area may provide advice on funding opportunities and on liaising with relevant project partners including authorities, private enterprises and the academia. An important part of the policy area is to strive for alignment of funding with the set policy objectives and to assist in conveying results and recommendations of projects to the policy level for consideration. The Strategy and its Action Plan can be funded by many different financial sources (Horizon 2020, BONUS Joint Baltic Sea Research and Development Programme, the LIFE programme, Education and Culture programmes, Baltic Sea Region Programme etc.), as well as national, regional, private sources. It follows, that the policy area also helps ensuring that new projects are building on the results and recommendations of successfully completed projects in order to avoid duplication. It is therefore important to ensure cooperation with relevant organisations and stakeholders throughout the region.

Targets and indicators

Objective/ sub-objective	Indicator	Baseline	Target/deadline	Data sources
Policy objective: Reduction in the number of maritime accidents.	Number of maritime accidents.	Average number of accidents between 2009-2012.	Measurable reduction/decreasing trend in the number of maritime accidents per 1000 ships by 2020.	Calculated on the basis of HELCOM annual statistics.

This objective is rather ambitious, since external factors such as the ice coverage, the strength and number of winter storms and the global economic situation directly impacts the number of vessels operating in the Baltic Sea and thus also the risk of accidents, while the activities of the policy area by means of dialogue and projects mostly indirectly contributes to higher maritime safety.

The following actions of the policy area on maritime safety and security are important if the vision of the Baltic Sea region as a leading region in terms of maritime safety and security is to be achieved. The actions are to be pursued by means of ongoing policy dialogue in the policy area, through the flagships as well as through coordination with other bodies. In addition to existing flagships, the policy area coordinators will regularly consider proposals for new flagships that have a high macro-regional impact, contribute to fulfilling the objectives of the EUSBSR – 'Save the Sea', 'Connect the Region' and 'Increase Prosperity' – and are related to the implementation of one or more policy area actions.

The actions are chosen taking into account a number of international policies, including, but not limited to:

- the International Maritime Organization;
- the International Association of Aids to Navigation and Lighthouse Authorities (IALA);
- the Integrated Maritime Policy including blue growth and other maritime policies of the European Union;
- the Baltic Marine Environment Protection Commission, in particular its Baltic Sea Action Plan adopted in 2007;
- the activities of other regional forums, such as the Council of the Baltic Sea States (CBSS), the Baltic Sea Parliamentary Conference, the Baltic Sea Hydrographic Commission and the Baltic Sea e-Navigation Forum.

The work of the policy area serves to reinforce and supplement these policies at the regional level, while avoiding duplication of efforts.

Actions

1. Develop co-operation in maritime surveillance and information exchange

Better co-operation in the field of maritime surveillance and information exchange between countries and between different authorities can not only bring about to better maritime safety and security, but may also help to reduce costs.

At European level, the process towards the creation of a Common Information Sharing Environment (CISE) and other similar initiatives have started, aiming at increasing the efficiency, quality, responsiveness and coordination of surveillance operations in the European maritime domain and promoting innovation. At Baltic Sea region level, initiatives to better exchange maritime surveillance and make sure that public maritime data are made available in readable formats to everyone (public sector information) can help to underpin this process.

New initiatives should build on existing surveillance and information exchange systems, such as the European Border Surveillance System (Eurosur) and future system integration initiatives and pilots, taking into account developments at EU level.[73] There should be further dialogue between the relevant authorities, including the armed forces, to investigate the possibility of operating jointly national assets at regional level.

2. Ensuring safe navigable fairways by improving resurveying of shipping routes

Many of today sea charts are based on somewhat inaccurate measurements made more than 100 years ago. In contrast, modern surveys are carried out with multi-beam echo sounders or airborne LIDAR-technology and provide a detailed image of the seabed. As the size and draught of vessels is increasing, shoals and shallow areas which used to be below the reach of ships are now becoming a risk factor. Therefore, it is a priority to resurvey the mostly used routes and ports of the Baltic. In the northernmost parts of the Baltic, ice conditions may cause commercial shipping to take place outside the most commonly used routes.

Resurveying is a time consuming activity, requiring substantial resources. Cooperation on planning the resurveying of the Baltic is politically adopted in HELCOM and practically handled by the Baltic Sea Hydrographic Commission. In the context of the EU Strategy, discussions on the alignment of funding required to actually implement the plans adopted by HELCOM has taken place and resulted in a number of project initiatives.

3. Improve safety of navigation by means of e-Navigation and new technology

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[73] In the framework of HELCOM Response and the CleanSeaNet initiative, in accordance with Directive 2009/123/EC of the European Parliament and of the Council of 21 October 2009 amending Directive 2005/35/EC on ship-source pollution and on the introduction of penalties for infringements, OJ L 280, 27.10.2009, p. 52.

This action aims to enhance the overall navigational safety for the vessels operating in the Baltic Sea by improving e-Navigation services, Vessel Traffic Services (VTS) as well as by the development and testing of other new technology.

e-Navigation is intended to increase safety of navigation in commercial shipping through better organisation of data on ships and on shore, and better data exchange and communication between ships and the ship and shore. The pilot infrastructure for e-Navigation was originally developed and tested by a series of projects in the Baltic Sea region, and has since then matured into a policy process in the IMO.

Further coordination and opening up by maritime authorities of public maritime data, information-sharing mechanisms will emerge between existing systems to ensure their interoperability is desirable. Coastal states may jointly consider whether new measures (routing/traffic separation schemes/mandatory reporting systems, open public maritime data) would be advantageous to introduce. Decisions on these measures should be based on the analysis of the risks and effectiveness of the measures based on a formal safety assessment drawing on research projects where relevant. This work could result e.g. in jointly utilising improved satellite navigation systems, such as Galileo, to support maritime positioning and navigation, especially for Automatic Identification Systems (AIS), Vessel Traffic Management Systems (VMS), hazardous-cargo monitoring. Further, it should be used for port approaches, ports and restricted waters, search and rescue systems. In addition, the recent development in the area of autonomous ships and new technologies of shore base control centres as well as e-Certificates are important areas of future safety.

4. Winter navigation

Shipping in the northernmost parts of the Baltic Sea is during winter challenged by ice, which occasionally covers most of the Baltic. This action aims to improve the safety, efficiency and environmental sustainability of winter navigation through enhanced cooperation between relevant authorities, transport operators and research institutes. Examples of strategic areas of cooperation include: development of methods for conducting Formal Safety Assessments; optimisation of the infrastructure for winter navigation including icebreaking resources; ensuring the necessary icebreaking capacity and developing intelligent transport systems (ITS) solutions for winter navigation.

5. Enhancing the safety of transportation of oil, hazardous and noxious substances

This action aims to improve the safety of maritime transport of oil and other maritime fuels including LNG as well as hazardous and noxious substances (HNS), with a view to ensure that vessels transporting such goods are up to the highest maritime safety standards. At the same time there is a need to strengthen the capacity to handle oil- and chemical accidents should they occur. This entails a need to develop response actions and situation management by increasing co-operation and transfer of

knowledge between countries, in order to create practices and exchange of good ideas of response and remediation methods.

6. Ensure that crews serving onboard vessels are well trained

Most accidents happen due to human error. This action aims to decrease the risks of maritime accidents characterised by human and organizational factors, which can be counteracted partly by increasing the competence and improving the attitudes of seafarers and by developing the safety culture onboard.

This action supports also the strategic objectives of the IMO where safety culture and safety management are considered highly topical issues. The challenge is to identify and evaluate factors influencing safety culture and to turn them into safety management practices in shipping companies and on board ships. The ISM Code and its implementation should be kept under review.

Also the working environment and occupational health situation impact safety onboard. A safety culture in which crew and management do report and learn from incidents is a key. This is i.e. in line with the framework of EU efforts on quality shipping and in the light of the third EU maritime safety package adopted in 2009.

7. Develop preparedness for emergency situations

Due to the heavy vessel traffic in the Baltic, efficient search-and-rescue services are essential to maintain a high level of safety in the event of a maritime emergency. Preparedness for emergency situations or oil spills can be improved by enhanced cross-sectoral and cross border co-operation and coordination of the resources, as well as the development of international standard operation procedures (SOP). This also includes rescue personnel such as firefighters and divers. Recent disasters outside the Baltic have indicated a need to develop capacities to search for survivors or bodies trapped inside the hulls of shipwrecked vessels. The size of modern passenger ferries and cruise vessels imply that in case of a major accident, hardly any state is capable of handling a disaster by itself, for which reason coordination of national competences, equipment and joint training is increasingly important.