Enhanced Environmental Protection: The Baltic Sea Approach

UNCLOS

ENCLOSED OR SEMI-ENCLOSED SEAS
Part IX

Article 122. Definition

For the purposes of this Convention, 'enclosed or semi-enclosed sea' means a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States.

Article 123. Co-operation of States bordering enclosed or semi- enclosed seas

States bordering an enclosed or semi-enclosed sea should co-operate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavour, directly or through an appropriate regional organization:

(a) to co-ordinate the management, conservation, exploration and exploitation of the living resources of the sea;

(b) to co-ordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;

(c) to co-ordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area;

(d) to invite, as appropriate, other interested States or international organizations to co-operate with them in furtherance of the provisions of this article.

Art. 197 of the UNCLOS: stipulates the cooperation on a regional level.

The Baltic Sea is a designated Special Area and Particularly Sensitive Area under the International Maritime Organisation (2005), i.e. especially vulnerable to damage by shipping.

There is a clear link between the protection of marine environment as set out in the 1982 UNCLOS and the Helsinki Convention, e.g. the definition of pollution in both instruments identical and the UNCLOS deals with all sources of pollution in a holistic manner which is also a feature of the Helsinki Convention.

Geography of the Baltic Sea

The Baltic Sea is a brackish inland sea, perhaps the largest body of brackish water in the world, formed by glacial erosion during the last few ice ages.

The Baltic Sea is about 1,600 km (1,000 mi) 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) which is on the Swedish side of the center. The surface area is about 377,000 km² (145,522 sq mi) and the volume is about 20,000 km³ The total area of the Baltic is 370.000 KM2). The Baltic has very special environmental problems caused by:

- Limitation of water exchange (it takes 25 years to exchange water in the Baltic);
- Differences in basins of which the Baltic consists;
- Great differences in temperatures in summers and winter

The main threats to the Baltic environment derive from eutrophication, hazardous substances, over-fishing and maritime transport. In fact, the Baltic is one of the most polluted marine areas in the world.

Radioactive pollution can persist in the Baltic for long periods due to the long residence time of its water. Levels of strontium-90 and cesium-137 are high compared with other seas. The artificial radionuclides in the Baltic originate from nuclear weapons testing, the 1986 Chernobyl accident, and European nuclear installations. Radionuclides have been closely monitored in the water, sediments, fish, aquatic plants and benthic animals of the Baltic Sea since 1984.

Coastal States:

Denmark, Estonia, Germany. Latvia, and Lithuania, Finland. Poland, Sweden, Russia (Kaliningrad Oblast).

The catchment are is bigger and includes such States, as Czech and Slovak Republics;

The traditional classification of the sources of pollution according to point sources, land-based diffuse sources, and atmospheric deposition is applicable to the Baltic Sea.

There are several contaminant groups which originate mainly from minor industrial sources, agriculture with pesticides and fertilizers; households with their use of a great many consumer products; sludge, dump sites and waste deposition in landfills. Long-term emissions; from buildings and construction materials have also gained more attention recently. Diffuse emission are often channeled to the sea via, for example, storm waters and sewage water effluents.

60% of cadmium, 84% of lead and 79% of mercury deposited into the Baltic Sea originate from distant sources outside the Baltic Sea catchment area (mainly the UK, France, Belgium and Czech Republic)

Strategic and Ecological Goals for the Baltic are as follows:

Baltic Sea with life undisturbed by hazardous substances;

Concentrations of hazardous substances close to natural levels;

All fish safe to eat;

Healthy wildlife;

Radioactivity (radionuclides) at pre-Chernobyl level;

Legal Framework of the Baltic Sea Environmental Cooperation

1. The 1974 Convention on the Protection of the of the Marine Environment of the Baltic Sea Area (the Helsinki Convention). Not in force.

2. The 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area.

Parties are: Denmark, Estonia, Germany; Latvia, Lithuania; Finland; Poland; Sweden; Russia (a very small portion in the region of Kaliningrad) and the EU.

According to the Commission decision in 2010 on the EU Baltic Sea Strategy External Action Programme in favour of the Russia Federation to be financed under Article 19 08,

(20 million Euro out the general budge of the EU)

Helsinki Convention is a holistic treaty with all sources of pollution included.

The Convention covers the whole of the Baltic Sea area, including territorial sea and the Parties' internal waters as well as the water of the sea itself and the sea-bed. Measures are also taken in the whole catchment area of the Baltic Sea to reduce land-based pollution.

- Basic principles:
- **The precautionary principle;**
- **The polluter-pays-principle;**
- **Best Environmental Practices and Best Available Technologies;**
- **Monitoring;**
- **Avoiding risks.**

The following sources of marine pollution are covered by the HC:

Land-based pollution (art. 6);

Prevention of pollution from ships (art. 8);

Prohibition of incineration (art. Art.10);

Prohibition of dumping (art. 11); and

Pollution from exploration and exploitation of the seabed and its subsoil (art. 12).

HC also has a provision for the protection of marine biodiversity (art. 15). (actively implementing the Aichi Biodiversity targets in the Baltic Sea). It also established marine protected areas with several targets. Fisheries were added to the remit of the HELCOM (Fish-Pro II Programme).

The provisions concerning the pollution from ships and dumping incorporate those standards from MARPOL and the 1972 London Convention.

HC impose stricter standards than these 2 global conventions. Art. 11 of the HC includes a blanket prohibition on dumping in the Baltic (2 exceptions: dredged material; and for safety of human life or a threat to vessel of complete destruction or total loss)-therefore standards are even stricter than those of the 1966 Protocol to the London Convention.

Article 7 of the 1992 Helsinki Convention introduced a new requirement for the parties obliging them whenever it is required by international law or EU regulations to notify the Commission and any Contracting Party which may be affected about any activity that is likely to cause a significant adverse impact on the marine environment of the Baltic Sea area and to enter into consultations with any party which is likely to be affected by such transboundary impact.

The Baltic Marine Environment Protection Commission

Known as the Helsinki Commission, or HELCOM, works to protect the marine environment of the Baltic Sea from all sources of pollution.

(http://www.helcom.fi/helcom/en_GB/aboutus/)

HELCOM works as:

an environmental policy maker for the Baltic Sea area by developing common environmental objectives and actions;

an environmental focal point providing information about (i) the state of/trends in the marine environment; (ii) the efficiency of measures to protect it and (iii) common initiatives and positions which can form the basis for decision-making in other international fora;

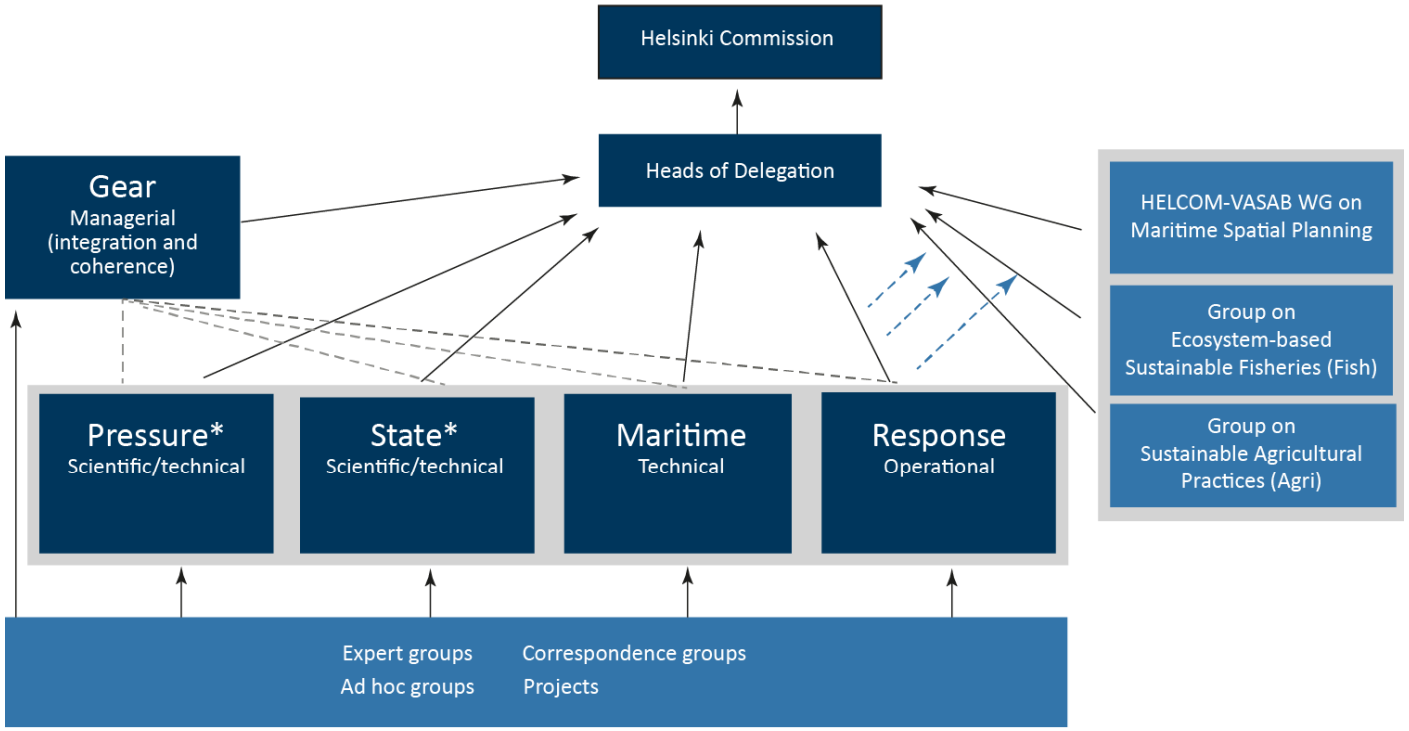
a body for developing, according to the specific needs of the Baltic Sea, Recommendations of its own and Recommendations supplementary to measures imposed by other international organisations;

a supervisory body dedicated to ensuring that HELCOM environmental standards are fully implemented by all parties throughout the Baltic Sea and its catchment area; and

a co-ordinating bod ascertaining multilateral response in case of major maritime incidents.

Renewed HELCOM working structure

September 2014



*Tentative names

Full names of the permanent working groups

Gear = Group on the Implementation of the Ecosystem Approach

State* = Working Group on the State of the Environment and Nature Conservation*

Pressure* = Working Group on Reduction of Pressures from the Baltic Sea Catchment Area*

Maritime Working Group

Response Working Group

Permanent

Time-limited / adhoc

The structure of the HELCOM reflects the HC holistic approach to the protection of the marine environment.

Achievements

Since the beginning of the 1980s the Helsinki Commission has been working to improve the Baltic marine environment, largely through some 200 HELCOM Recommendations.

Successes during this period include:

Lower discharges of organic pollutants and nutrients from point-sources.

20-25% overall reduction in emissions of oxygen-consuming substances (BOD) from 132 originally identified hot spots (since early 1990s), with about 50 hot spots deleted from the list.

Fewer beaches closed for bathing, thanks to improvements in the treatment of industrial and municipal wastewater.

Significant reductions in atmospheric nitrogen deposition.

Dramatic reductions in emissions of organo-halogen compounds such as toxic dioxins and furans.

National regulations banning hazardous substances like PCBs and DDT.

Stricter controls on industry (permits are now compulsory for industrial emissions).

Improved joint monitoring of the state of the marine environment.

The recovery of seal and white-tailed eagle populations.

Better special legislation to prevent the pollution of the Baltic Sea by shipping, developed together with the International Maritime Organization (IMO).

Measures to eliminate all illegal discharges by ships into the Baltic Sea.

A major international plan to combat marine pollution, with active co-operation involving all the Contracting Parties through HELCOM.

Development of the Baltic Sea environmental protection

is also effected through Ministerial Declarations (which are a soft law instruments but States parties to HC endavour to implement them nationally. HELCOM plays a pivotal role in the implementation of these Declarations.

MINISTERIAL DECLARATIONS

2013 Copenhagen Ministerial Declaration;

2010 HELCOM Moscow;

2003 HELCOM Bremen Declaration;

2001 Declaration on the Safety of Navigation and Emergency Capacity in the Baltic Sea Area - HELCOM Copenhagen Declaration;

1993 Declaration on Resource Mobilisation for the Baltic Sea Joint Comprehensive Environment Action Programme - Gdansk Declaration;

1992 Baltic Sea Environmental Declaration 1990 Baltic Sea Declaration – Ronneby;

1988 Declaration on the Protection of the Environment of the Baltic Sea.

One of the most effective action was the Baltic Sea Joint Comprehensive Environmental Action Programme (JCP) established in 1992 to facilitate and monitor the elimination of the 132 most polluting sources within the Baltic Sea catchment area - known as "hot spots".

The 132 environmental hot spots were designated in 1992 by an international group of scientists, engineers, environmental managers, bankers and national representatives, according to practical economic considerations as well as the seriousness of their impact on the environment and human health.

Over two-thirds of the 162 serious pollution areas - so called hot spots - identified around the Baltic Sea since 1992 have been cleaned up. Total number of active Hot Spots: 54. JCP specifies a series of actions to be undertaken at "pollution hot spots" around the Baltic Sea drainage basin.

The most notorious hot spots are point sources such as municipal facilities and industrial plants, but the programme also covers pollution from agricultural areas and rural settlements, and sensitive areas such as coastal lagoons and wetlands where special environmental measures are needed.

Another highlight of the elaboration of the HELCOM Baltic Sea Action Plan has been the active participation of all major stakeholder groups in the region. Such participation ensures that the plan is truly relevant and can be effectively implemented in practice. The choices that we make reflect the choices of society as a whole. For this reason, the common vision of the healthy Baltic Sea has been defined together with all participating stakeholders – from governments, through industry and NGOs, right down to individual citizens, including older and younger generations, and organisations in both the private and the public sectors. In this way the plan promotes employment and other aspects of sustainable socio-economic development, as well as ecological sustainability and a healthy environment.

The concept of the HELCOM Baltic Sea Action Plan has already been supported by politicians and heralded as a pilot project for European seas in the context of the proposed EU Marine Strategy Directive. The European Community has described HELCOM's plan as a cornerstone for further action in the Baltic Sea region, emphasizing that the plan is instrumental to the successful implementation of the proposed EU Marine Strategy Directive in the region. The proposed EU Marine Strategy Directive foresees such an action plan for each eco-region, including the Baltic. HELCOM is in a unique position to deliver this already, given its embracing of all the countries in the Baltic Sea catchment area. HELCOM is also in a unique position to ensure that the special characteristics of the Baltic Sea are fully accounted for in European policies.

The innovative HELCOM action plan will also serve as a model example to be followed by the Regional Seas Conventions and Action Plans under the auspices of the United Nations Environmental Programme Regional Seas Programme.

HELCOM has taken into account the environmental provisions of the Maritime Doctrine of the Russian Federation. Close co-operation with Russia, which is the only HELCOM country outside the EU in the Baltic Sea region. HELCOM's innovative strategy is also instrumental to the implementation of the renewed Northern Dimension policy, the Baltic Sea regional aspects of the EU-Russian Environmental Dialogue, the Nordic Environmental Action Plan, and the European Maritime Policy.

HELCOM action plan is considered a joint regional policy, with common objectives, actions, and obligations. The future success of the plan largely depends on how all the coastal countries can co-operate to achieve the goal of a healthy Baltic marine environment.(http://www.helcom.fi/BSAP/en_GB/intro/)

One of the success stories is the the implementation by the Government of Poland of the National Wastewater Treatment Programme (NWWTP) which is the largest with regard to investment among all the projects resulting from implementation of the EU directives in the field of environmental protection in Poland. The NWWTP, requiring over 8 billion Euros in the period to 2015, foresees construction of 30 thousand km of collecting systems, construction of 177 wastewater treatment plants, modernization and expansion of 569 wastewater treatment plants.

One such Plant is the Czajka Wastewater Treatment Plant in Warsaw which is one of the largest investments in Europe with a value of 650 million Euros. It will handle over 1.5 million residents in 2012 and ensure a high level of purification in accordance with EU standards;

Ministerial Declaration 2010 (Moscow): set the following principles concerning the implementation:

that this work shall continue to be based on the following common principles:

• A shared scientific understanding of the current status of the marine environment, and Holistic Assessment of the ecosystem health and the supporting thematic assessments on eutrophication, biodiversity, hazardous substances and maritime activities;

• A common understanding of the good environmental status of the Baltic Sea that we want to achieve by 2021, based on the agreed visions, goals and ecological objectives, and jointly constructed quantitative targets and associated indicators as initiated with the HELCOM Baltic Sea Action Plan at the international, regional and national levels, in order to ensure that adequate decisions and necessary measures pursuing the good environmental status of the Baltic Sea are taken;

• Joint coordinated monitoring providing the necessary data **for regular assessment of the status of the Baltic Sea and of pressures and impacts affecting the status;**

• A coherent and coordinated approach to developing own recommendations, recommendations providing for harmonized implementation of the measures imposed by other international organizations as well as proposals to other international organizations necessary to achieve good environmental status, ensuring full cooperation of the HELCOM Contracting Parties

Implementation of Adopted Recommendations:

Issues:

vagueness of some of the HELCOM Recommendations;

- It is not always reported whether Administrations actually implement Recommendations (even if the means of their implementation are submitted) (e.g. a full implementation of 30% of the HELCOM Recommendations in the maritime field); (http://www.helcom.fi/stc/files/Recommendations/Compliance_with_recs.pdf)
- The Recommendations have been adopted during almost two decades and therefore they contain overlapping and/or outdated requirements;

requirement of harmonisation of the HELCOM recommendations with these of OSPAR and EU Directives (http://www.helcom.fi/stc/files/Publications/OtherPublications/RecHarmWothers-2001.pdf)}

- Inconsistency of submitted national information;

Baltic Sea Surveillance

Oil spills

The HELCOM States endeavour to fly - as a minimum - twice per week over regular traffic zones, including approaches to major sea ports as well as in regions with regular offshore activities, and once per week over the regions with sporadic traffic and fishing activities.

Twice a year, several Baltic Sea states jointly organize surveillance flights (24 to 36-hours) - one covering the southern part of the Baltic Sea, and another flight over waters further north. HELCOM facilitates these CEPCO flights (Co-ordinated Extended Pollution Control Operation) in order to:

- assess the amounts of oil being discharged into the Baltic Sea

- give aircrafts and crews of different nationalities experience working together, which could be valuable in the event of a major accident

- find illegal spills of oil or other substances and possibly identify the polluting ships

In 2009, a Super CEPCO operation, which lasted for six days, was organized for the first time in the Baltic Sea, involving aircrafts from a number of HELCOM countries a(nd countries outside the Baltic Sea.

In 2012 noted lowest number of illegal oil spills detected by national surveillance aircrafts and satellites in 2011. The number of surveillance flight hours was the highest in six years.

Altogether 122 confirmed illegal oil discharges were observed in 2011, which is the lowest number of spills ever recorded in the Baltic Sea since the regular aerial surveillance started in 1988. **Since 1999 the number of observed spills has declined by 75%**

The estimated total volume of the spilled oil in 2011 was 24m3, **which is 50% less than in 2010. The total number of flight hours in 2011 was 5,541 which is close to record high, being higher only in 2005 (5,638 hours).**

Often the polluters remain unknown. **In 2011 only in 9% of the cases the polluters were identified.**

HELCOM also uses satellite surveillance to detect illegal polluters. Satellite images are provided by the CleanSeaNet (CSN) satellite service of the European Maritime Safety Agency. In 2011, 528 satellite images were delivered to the Baltic Sea countries, indicating 182 possible oil slicks. Up to 40% of the satellite detected slicks have been verified by the Baltic Sea countries, and in 8 cases the spill has been confirmed to be mineral oil.

The positive trend on decreasing spills is attributed to the complex set of measures known as the Baltic Strategy to prevent illegal discharges of oil and waste into the sea, which the HELCOM countries have been implementing since the 1990s.

Climate Change and the Baltic Sea

The projections for future climate change indicate that atmospheric temperatures will continue to warm during the course of the 21st century.

In association with this warming there would be changes in precipitation patterns, both geographically and seasonally,

These would affect the runoff into the Baltic Sea;

•The average salinity of the Baltic Sea is projected to Decrease.

As a result:

➢ Circulation and distribution of nutrients in the photic zone will be affected;

❖ There will be increased bacterial activity

❖ There will be a decrease in salinity projected influence on the composition and distribution of species in the Baltic Sea, particularly for plankton and zoobenthos;

❖ An expected result is the invasion of new species from other regions of the world, including exotic species from warmer seas resulting in changes in invaded ecosystems.
(http://www.helcom.fi/stc/files/Publications/Proceedings/bsep111.pdf)

Emissions from ships

Increasing shipping activities contribute significantly to the air and sea pollution in the Baltic Sea region.

Emissions of SOx from shipping due to combustion of marine fuels with high sulphur content contribute to air pollution in the form of sulphur dioxide, harming the environment through acidification.

NOx emissions from ships, like SOx emissions, contribute to eutrophication. Shipping (in both Baltic and North Seas) is among the largest contributors to NOx deposition to the Baltic Sea.

According to the recent estimates, the total NOx emissions from ships in the Baltic were more than 393 kton NOx in 2008.

Within 2000-2006, shipping in the Baltic was the second largest contributor (9%) to the deposition of nitrogen oxide, and the fifth greatest contributor (5%) to the total nitrogen deposition to the Baltic Sea.

In addition to SOx and NOx shipping also contributes to the emission of greenhouse gases (mainly CO2), ozone-depleting substances and volatile organic compounds (VOC), which are mainly generated during tanker loading operations in ports.

Climate Change: MARPOL 73/78 and the Baltic Sea

Globally air pollution from ships is regulated by Annex VI of the IMO's **MARPOL 73/78** on "**Regulations for the Prevention of Air Pollution from Ships**".

Annex VI of MARPOL 73/78 makes the Baltic a "SOx emission control area“ (“SECA”), demanding as of 19 May 2006 all ships either to use fuel oil with sulphur content not exceeding 1.5% or emission-cleaning systems reaching equivalent standards.

According to the recently revised Annex VI, the sulphur content of any fuel oil used onboard ships within the Baltic SECA will be further decreased, to 1.0 % m/m during 2010 and to as little as 0.1 % m/m in 2015.

The HELCOM Contracting States have established a Correspondence Group to collect the necessary information to propose to the IMO designation of the Baltic Sea as a **NOx Emission Control Area (“NECA”), whereby ships constructed on or after 1 January 2016** and operating within a NECA would be required to reduce their NOx emissions by 80% in comparison to the current situation around 7000 tn annually).

To support the work of the Correspondence Group, a HELCOM study on economic impact of the Baltic NECA (2010) has been carried out. The application to IMO has not yet been submitted, (http://www.helcom.fi/shipping/emissions/en_GB/emisions/?u4.highlight=greenhouse%20gases)

Baltic Sea Monitoring

Regional implementation of the EU Marine Strategy Framework Directive (EU MSFD) in the Baltic Sea.

Ministers agreed that this work should be based on common principles, as for example "joint coordinated monitoring providing the necessary data for regular assessment of the status of the Baltic Sea and of pressures and impacts affecting the status".

It was also agreed that HELCOM Monitoring programmes should be "adapted to support the assessing of progress towards the achievement of the environmental objectives and targets" (i.e. Good Ecological Status).

It was also agreed that the revised monitoring should provide data for the indicators which are being developed under the Baltic Sea Action Plan, "enabling the assessment and evaluation of the implementation of the jointly agreed measures".

The project which starts (2012 -2013) is aimed at developing guidelines **for a scientifically sound, well-coordinated, optimized and cost-effective joint HELCOM monitoring programme which provides the necessary data for HELCOM"s Baltic-wide indicator-based assessment activities, focusing on the state of the marine environment but also on human-induced pressures impacting the status.**

The guidelines will be presented to HELCOM MONAS for endorsement and subsequently to HELCOM for adoption.

The main objectives of the project are:

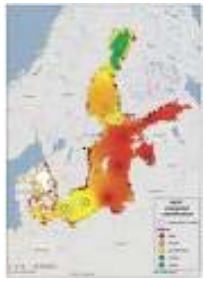
❖ **To summarize and list the required parameters, processes and products,** that must be monitored/produced to meet the requirements of the **Baltic Sea Action Plan, HELCOM Ministerial declarations and for HELCOM States being also EU Members especially the EU Water Framework Directive and EU Marine Strategy Framework Directive;**

❖ To identify **gaps in the current programmes** based on the outcome of HELCOM projects and the requirements of the EU Directives

➢ **To define the parameters as well as their spatial and temporal observation needs,**

➢ **To prepare revised guidelines for a joint programme fulfilling the requirements of the HELCOM Baltic Sea Action Plan and Declaration of the Moscow Ministerial Meeting, as well as for the EU Member countries the needs of the EU Marine Strategy Framework Directive and the EU Water Framework Directive.**

(http://www.helcom.fi/projects/on_going/en_GB/projectMore/)



The Baltic Sea costal States also implement EU Directives.
In principle HELCOM Recommendations are harmonised with the provisions of EU Directives, as well as OSPAR decisions and recommendations, Apart from Russia, the Parties to the HELXOM are bound by the EU Marine Strategy Framework Directive. Russian Federation is the Marine Doctrine of the Russian Federation.
Apart from this the European Union's Baltic Sea Region Programme 2007-2013 promotes regional development through transnational cooperation. Partners from eleven countries around the Baltic Sea work together to find joint solutions to common problems. The Operational Programme and the Environmental Report for the Baltic Sea Region Programme 2014-2020 are drafted and public are asked for comments). Baltic Sea Region Programme 2014-2020 also includes the partner countries Belarus, Norway and Russia. Transnational cooperation in the Baltic Sea Region will continue in the funding period 2014-2020. Preparations for the new programme were launched in early 2012 with a first meeting of the Joint Programming Committee (JPC). The JPC is the main body making decisions about the future programme. The JPC comprises national delegations from eight EU Member States (Denmark, Germany, Estonia, Finland, Latvia, Lithuania, Poland, and Sweden) as well as the neighbouring countries Norway, Belarus, and Russia. Based on analyses and reviews carried out in 2012, the preparation of the programme for 2014-2020 enters into the main phase of programme drafting in 2013.

Therefore the Baltic Sea is subject to the following legal regimes:

I The Helsinki Convention;

I. General Maritime Conventions: the MARPOL and the London Convention;

II. EU legislation;

III. National Legislation of Russia (Marine Doctrine of tye Russian Federation)

IV. HELCOM recommendations.

Conclusions

(a) The Baltic Sea is an interesting area of cooperation between coastal States of semi-enclosed sea which are all with an exception of Russia members of the EU;

(b) The Helsinki Convention and HELCOM fleshed out the provisions of the UNCLOS in relation to the semi-enclosed seas;

(c) through HELCOM recommendations some of the EU legislation is also applied by Russia;

(d) It may be stated that the Baltic Sea cooperation is a success (considering the state of its environment before the 1992 Helsinki Convention).