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The role of Maritime Spatial Planning as a management tool for Nature Protection

Latvian Institute of Aquatic Ecology

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The Ministry of Environmental Protection and Regional Development

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Goals of the workshop:

- ✓ to initiate transnational stakeholder discussion on the role of MSP as management tool for safeguarding and protecting the marine and nature environment at Pan-Baltic level,
- ✓ to share and discuss existing findings and knowledge gaps, available relevant spatial concepts and their application to the planning process.

Participants: in total 42 persons participated in the workshop.

Belgium	The Royal Belgian Institute of Natural Sciences, The Management Unit of the North Sea Mathematical Models
Denmark	Danish Coastal Authority
Estonia	University of Tartu
Finland	Finnish Game and Fisheries Research Institute
Germany	German Federal Agency for Nature Conservation
Latvia	Ministry of Environmental Protection and Regional Development, Maritime Administration of Latvia, State Environmental Service, Ministry of Agriculture, Latvian Coast Guard Service, Institute of Food Safety, Animal Health and Environment - BIOR, WWF-Latvia, Latvian Fishermen Federation, University of Latvia, Latvian Association of local and regional governments
Lithuania	Klaipeda University
Norway	Institute of Marine Research
Poland	Maritime Institute in Gdansk
Russia	NIIP Gradostroitelstva
Sweden	Swedish Agency for Marine and Water Management
BSR organisations	HELCOM, VASAB Secretariat

1. Very brief information on what was presented at the workshop

The workshop was organized in an introduction section followed by four sessions to address the main goals of the workshop. Each of the sessions had two to three introductory presentations which were followed by discussion and reflection in smaller groups, generating key messages, giving feedback and questions to the speakers.

Session 1 "Principles for sustainable management of human activities in marine space" - introduction with main approaches and planning principles to ensure Good Environmental Status in context of existing planning experiences (Lithuanian MSP case and BaltSeaPlan Vision).

Session 2 "Nature Conservation and Network of Marine Protected Areas" - given review and actual status of network of Baltic Sea Protected Areas , their management plans and policy aims.

Session 3 "MSP as tool for achievement of Good Environmental Status of the Baltic Sea" - introduction with existing tools for achieving good environmental status in Baltic Sea region, like Baltic Sea Action Plan and application of MSP in context of environmental objectives.

Session 4 "Case studies on management of sea use impact by application of MSP" - given practical examples on modeling and determining sea-uses towards to application of ecosystem approach in MSP.

2. Overview on concept of ecosystem approach and its practical application in MSP (based on presentations and discussion from Session 1 & 3)

The concept of ecosystem approach first was determined as the primary framework for action under **Convention on Biological Diversity** to reach a balance of Convention objectives. Later, the concept was transposed into 12 Malawi principles for ecosystem approach in 1998 (http://www.cbd.int/ecosystem/principles.shtml).

The Marine Strategy Framework Directive (MSFD), adopted in June 2008, is environmental pillar of the EU's Integrated Maritime Policy and aims to achieve Good Environmental Status (GES) of EU marine waters by 2020. GES means that the different uses made of the marine resources are conducted at a sustainable level, ensuring their continuity for future generations.

MSFD applies an integrated approach to ecosystems and strives to contain the collective pressure of human activities within sustainable levels. The 2020 target have to be achieved within efficient communication and close cooperation, notably through regional sea conventions.

The **Helsinki Convention** on the Protection of the Marine Environment of the Baltic Sea and its **Action Plan** strives to achieve a harmonious balance of all biological components in a healthy Baltic Sea environment with diverse biological components functioning in balance, resulting in a good ecological status and supporting a wide range of sustainable human economic and sustainable activities.

The joint Baltic Sea **MSP Working Group** was established by VASAB and the HELCOM in 2010 to provide a forum for the intergovernmental discussions on MSP in the Baltic Sea region. The Working group has developed the Baltic Sea broad-scale **MSP principles**, that *inter alia* describes the ecosystem approach as a overarching principle:

"The **ecosystem approach**, calling for a cross-sectoral and sustainable management of human activities, is an overarching principle for MSP which aims at achieving a Baltic Sea ecosystem in good status-a healthy, productive and resilient condition so that it can provide the services humans want and need. The entire regional Baltic Sea ecosystem as well as sub-regional systems and all human activities taking place within it should be considered in this context. Maritime Spatial Planning must

seek to protect and enhance the marine environment and thus should contribute to achieving GES according to the EU MSFD and HELCOM Baltic Sea Action Plan".

The ecosystem approach is a strategic approach for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The goal is to ensure that human use of ecosystems is kept within the limits of ecosystem's capacity to regenerate.

The ecosystem approach recognizes that :

- ✓ ecosystems are dynamic and complex , and knowledge of their functions is often incomplete;
- ✓ humans are an integral component of ecosystems;
- ✓ it is essential to understand the values of ecosystems and the services they provide;
- ✓ society needs to set the longterm objectives for conservation and sustainable use of ecosystems.

The ecosystem approach implies:

- ✓ the use / application of the precautionary principle;
- ✓ adaptive management, meaning that new knowledge can lead to changes in management;
- ✓ a continuous development of different types of knowledge to a greater understanding of ecosystems social and ecological systems' complex functions and interactions;
- ✓ all parts of society are involved in formulating the management objectives;
- ✓ management is decentralized to the lowest appropriate level;
- ✓ local participation and collaboration with stakeholders / users;
- ✓ a consideration of economic values of ecosystem services in decision making.

The **Regional Baltic Maritime Spatial Planning Roadmap 2013-2020** (adopted by the Baltic Sea Action Plan 2013 HELCOM Ministerial Declaration) sets the goal to draw up and apply maritime spatial plans throughout the Baltic Sea Region by 2020 which are coherent across borders and apply the ecosystem approach. The goal requires particular steps to prepare the base for coherent MSP framework and common understanding of concepts. Although concept of ecosystem approach has been widely described in many documents and projects, still there is lack sufficient knowledge, understanding and practical application. Therefore HELCOM-VASAB MSP Working group is preparing procedurally oriented Baltic Sea regional "Guidelines on the application of Ecosystem Approach in transnationally coherent MSP". The document is planned to be adopted by 2015.

Baltic Sea is small, but highly sensitive regional sea, therefore forward planning requires Baltic Sea states to work together in order to achieve strategic goals and comprehensive solutions. **BaltSeaPlan Vision 2030** sets out guiding principles which should apply to all decisions and illustrate above mentioned:

- ✓ **Sustainability** - impacts of sea uses are minimized to protect the integrity of the ecosystem
- ✓ **Pan-Baltic thinking** - considering Baltic sea as one planning space and one ecosystem;
- ✓ **Spatial efficiency** - Baltic Sea space is used sparingly and compact
- ✓ **Connectivity thinking** - different elements of ecosystem are connected across the space and time.

Four transnational topics have been identified as particularly important for the sustainable development of the Baltic Sea in the perspective of pan-Baltic thinking since they cannot be achieved at a national or sub-national level alone:

- ✓ a healthy marine environment;
- ✓ a coherent pan-Baltic energy policy;
- ✓ safe, clean and efficient maritime transport;
- ✓ sustainable fisheries and aquaculture.

MSP contributes to protecting habitat, species, biodiversity, and ecological and cultural assets inside and outside protected areas by excluding those uses that constitute a threat to protection goals. MSP should ensure connectivity by taking into consideration blue corridors or coherence between valuable environmental areas when allocating space to uses. MSP solutions must be based on a Baltic Sea wide environmental assessment and, where applicable, a socio-economic cost-benefit analysis in order to identify the most suitable areas. Therefore spatially relevant ecological information is an essential need.

For specific sea-uses data modeling could be a solution. During the GORWIND project policy-relevant and scientifically based information on wind energy fields in Gulf of Riga were produced, and using data modeling, a decision-making tool based on the spatial planning methods of the GIS was developed to facilitate common planning for the exploitation of wind energy in the Gulf of Riga.

3. Overview on state of development of the network of marine protected areas (MPAs) in the Baltic Sea and role of MSP in protection of marine ecosystem (based on presentations and discussion from Session 2)

HELCOM BSPA are the „*pearls*" of the Baltic Sea area, requiring appropriate protection. BSPA network provides appropriate platform for establishment of coherent MPA network in the Baltic Sea by 2020.

Spatial and thematic protection requirements must be included in MSP as reservation or/and priority areas, but still bearing in mind that Protected areas are not the only protection layer within MSP, other interests such as migratory routes and flyways must also be recognised and considered while designing the MSP.

Since the CBD target was set for nature protection to cover at least 10% of total area, most BSR countries have reached the goal and average coverage is about 11.7%. Although the coverage in coastal areas is fairly good, the coverage in the EEZ (4.6%) should be improved.

Most of Natura 2000 sites in the Baltic Sea have also been designed as BSPAs. In table there is given short comparison between BSPAs and Natura2000 sites.

	Baltic Sea Protected Areas	**Natura 2000 areas**
AIM	To protect valuable marine and coastal habitats and species, targeting those specific for the Baltic Sea.	To achieve or maintain favourable conservation status for European biodiversity features in both terrestrial and marine habitats.
HABITAT	Restricted to the coastal zone and marine area (’preferably purely marine areas’).	Covers both inland and marine areas.
LOCATION	Covers the whole Baltic Sea.	Does not cover the Russian areas of the Baltic Sea.

SIZE	Smallest recommended size 30 km2.	Can be smaller than 30 km2.
LEGALITY	Does not automatically provide legal protection to the site.	Provides legal protection to the sites.
IN PARACTICE	A BSPA may protect a wider range of marine species, habitats, biotopes and natural processes than an overlapping Natura 2000 site.	Natura 2000 areas may cover marine areas, but they are in most cases included in the protection mainly as e.g. feeding grounds for marine birds.

Although the Baltic Sea Action plan sets a target to have management plans for established BSPA`s till 2015, still 9% of sites have no management plans. In existing approved management plans (65% of all sites) many possibly harmful activities are largely still not restricted (fishing, shipping etc.). Also temporary/seasonal (instead of permanent) restrictions should be considered in the dialog to other sea-users.

In group discussion participants of the workshop have highlighted the following aspects in relation to MSP as tool for protection of marine nature values:

- Since MPAs are established for different purposes, the MSP experts need information about values and exact protection regimes or management requirements for theses territories. Therefore HELCOM's action to achieve that all MPAs should have management plans by 2015 is very welcome. Although countries have made legal designation of MPAs, the status does not mean that these areas are no-use by other users/interests. As the MPAs are situated more at the coastal areas where other economic activities are also more intense, then nature conservationists should define what other uses can co-exist in the MPAs.
- MSP is important tool for nature conservation in marine areas, since it is prioritizing the uses. MSP is not a tool for planning networks of protected areas, but MPAs shall be recognised as priority areas, setting conditions for other uses. However not all uses can be regulated through nature conservation legislation and MSP (e.g. shipping routes, fisheries activities). It is important to identify the assets to be protected and make decisions how to manage the protection activities.
- The different sea use interests should be weight within the MSP in relation to their economic potential and importance of society. Economic valuation methods can be applied to compare the benefits between nature conservation measures (e.g. MPAs) and other uses.
- The ecosystem connectivity is established naturally and human activities should not block these connections. The most important task of MSP is to ensure and avoid obstruction the connectivity of marine ecosystem.
- MSP potentially could be used for further development of MPA network – finding possible location of new sites. However, MPA designation shall be based on field data and strictly scientific knowledge while MSP is based on compromised and political decisions, when one uses is sacrificed in interest of other.
- Sharing of responsibilities between countries in protection of marine nature assets has to be properly addressed. If one country is hosting lot of nature value, it might be put in economically more unfavourable situation compared to countries where those values has been already lost.

4. Role of MSP in achieving environmental objectives and targets *(results from Session 3 & 4)*

As stated in Regional Baltic MSP Roadmap 2013-2020 all BSR countries should draw the MSPs coherently across borders and applying the ecosystem approach by 2020.

According to existing MSP experience (Belgium case), the role of Nature conservation zones is considered in the framework of descriptors - conservation aims mostly overlap the targets of GES and descriptors. Considering the available knowledge base and understanding, part of descriptors directly could be applied into MSP as an objective as well asmonitoring tool following spatially the rate of change.

The following descriptors were noted as the most relevant to MSP:

(1) Biological diversity - the same aim for MPAs;

(3) Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

(4) All elements of marine food webs - MSP should ensure connectivity and integrity of marine ecosystem;

(5) Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.

(6) Sea-floor integrity - MSP should ensure connectivity and integrity of marine ecosystem;

(7) Permanent alteration of hydrographical conditions - MSP should ensure connectivity and integrity of marine ecosystem;

(10) Properties and quantities of **marine litter** do not cause harm to the coastal and marine environment.

(11) introduction of energy, including underwater noise do not cause pollution effects.

Application of MSFD descriptors in MSP context is limited by the fact that most of the descriptors are not defined spatially and in most cases are not covered by indicators (*Swedish company Aquabiota is working on spatially applicable indicators for assessment of marine biodiversity within LIFE + funded project MARMONI*).

Assessment of the sea use impacts shall be based on strictly scientific approach, done before the planning (it is not the task of planners). The regional differences shall be considered when assessing the sea use impacts on marine ecosystem. Targets for GES can be regionally specific (there are different hydro-ecological conditions in different parts of the Baltic Sea). A variety of indicators and target are set under different descriptors and they also differ between the countries. Such inhomogeneous picture does not provide clear message for sea use planners. From the other hand, the limits of ecosystem are invisible and hard to determine because ecosystem flexibly absorbs any deviation and other type of changes could be raised. Therefore principle “the polluter pays” or compensation tools should be developed appropriately.

5. Overall conclusions/key findings

- ✓ Although concept of ecosystem approach has been widely described in many documents and projects, still there is lack sufficient knowledge, understanding and practical application. Therefore upcoming “Guidelines on the application of Ecosystem Approach in transnationally coherent MSP”, prepared by 2015, is urgent need for ecosystem based MSP.

- ✓ For ensuring ecosystem based approach and recognising/respecting limits of the resilience of the Baltic Sea , MSP would have to be based on a Baltic Sea wide environmental assessment and, where applicable, a socio-economic cost-benefit analysis in order to identify the most suitable areas of sea uses. Therefore spatially relevant ecological information is an essential need.
- ✓ MSP is important tool for nature conservation in marine areas – it contributes to protection of ecological and cultural assets inside and outside of protected areas by organising the sea uses and avoiding conflicts with protection goals. The most important task of MSP in relation to nature conservation is to ensure the connectivity of marine ecosystem. However, a consensus between MSP experts and nature conservation experts on question, if nature conservation shall be treated as priority or as one of sea uses interests and matter of planning, still has not been achieved. Spatial and thematic protection requirements must be included in MSP as reservation or/and priority areas, but still bearing in mind that Protected areas are not the only protection layer within MSP. The management plans/ zoning of MPAs is required that define other uses that can co-exist in the MPAs, especially at the coastal areas with intense economic and social interests. Temporal (instead of permanent) restrictions should be considered in the dialog to other sea-users.
- ✓ BSPA network provides appropriate platform for establishment of coherent MPA network in the Baltic Sea. Although the coverage of BSPAs in coastal areas is fairly good, the coverage in the EEZ (4.6%) should be improved.
- ✓ MSP is also an important tool for achievement of the objective of MSFD – good environmental status of the sea. Considering the available knowledge and understanding, part of the MSFD descriptors directly could be applied in MSP process as an objective (defining threshold values for certain economic use) as well as tool for monitoring the MSP implementation/effectiveness and following the rate of change spatially. However application of descriptors in MSP context is limited by the fact that most of them are not defined spatially.