



Seminar

“Stakeholders as important actors in Marine Strategy Framework Directive implementation: from decision makers to general public”

MARMONI (Project no. LIFE09 NAT/LV/000238)

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Report

Rapporteur: Edgars Bojārs, CB BEF-LV

List of the participants

Participants	Institution	Country
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63.	Mattias Müller	Trelleborg	Sweden
64.	Ulf Lindahl	Blekinge County Administration	Sweden
65.	Yvonne Walther	Swedish University of Agricultural Sciences, Institute of Marine Research	Sweden
66.	Luulea Lääne	AS Tallink Grupp	Estonia
67.	Arvo Veskimets	Ministry of the Environment, Marine Environment Department	Estonia

Goals of the seminar:

- To inform different stakeholders about the issues the EU Marine Strategy Framework Directive (MSFD) is regulating.
- To facilitate cross-sector communication and future cooperation for good implementation of the Directive in the Baltic Sea Region.

Opening of the seminar

by Heidrun Fammler, BEF-LV

H. Fammler welcomed the participants and briefly introduced the MARMONI project and the aims of the seminar. She pointed out the reasons why it is important to talk about the implementation of the Marine Strategy Framework Directive now:

- It is new, most influential and ambitious European legal requirement on the protection of the marine environment.
- An initial assessment of the current environmental status of the waters and the environmental impact of human activities has been completed, targets are set – we can share information and compare among the countries.
- It is important to discuss across national borders what we shall do to reach the good environmental status of the Baltic Sea.

H. Fammler also presented some statistics about the seminar participants. Most of the participants were from Estonia (43%), followed by Latvia (30%) and Sweden (14%). 7% of the participants were from Finland, 3% from Lithuania. Also Germany, Ireland and international organisations were represented by 1 participant each.

Most of the participants (71%) represented environmental sector. 11% came from fisheries, 8% from maritime sector, 6% represented spatial planning, 3% - energy and 1% - defence sector.

The majority of the participants worked for state institutions (44%), followed by research institutions (25%) and non-governmental organisations (18%). Business was represented by 8%, local authorities by 4% and international organisations by 1 participant.

Welcome of the host

by Luulea Lääne, AS Tallink Grupp

L. Lääne, the communication director welcomed the participants of the seminar. *Tallink Grupp* appreciates science for marine protection. As the company itself has no knowledge to protect the sea, it helps the scientific community by supporting its activities. Also for the seminar, the company offered seminar venue free of charge and discount for accommodation.

Introduction: Overview on the MSFD and interlinks to other international policy documents

Juha-Markku Leppänen, Finnish Environment Institute

J.-M. Leppänen introduced to the basics of the MSFD. Although often not perceived as such, it is the environmental pillar for the Integrated European Maritime Policy, which aims to provide a coherent framework for joint maritime governance. The MSFD establishes a framework for the EU Member States (MS) to take the necessary measures to achieve or maintain good environmental status in the marine environment by 2020 at the latest.

The MSFD aims at effective protection of the marine environment and resources, applying holistic view and ecosystem based approach in its management.

The MSFD is implemented in several logical steps with the final goal to achieve Good Environmental Status (GES) of the European seas by 2020:

- By 2010 – transposition of the Directive into national legislation
- By 2012 – development of Initial Assessments of the status of the marine area, defining GES and related targets and indicators
- By 2014 – development of Monitoring Programmes
- By 2015 – development of Programmes of Measures
- By 2016 – implementation of Programmes of Measures

In 2018, a new 6-year cycle will start with a new assessment.

Every MS has the obligation to implement the Directive. However, Good Environmental Status shall be determined at the level of the marine region, the Baltic Sea being one of them, and the Member States shall cooperate in reaching it.

GES shall be determined on the basis of the 11 qualitative descriptors listed in Annex I of the MSFD.

The implementation is not so smooth yet in each country. Poland still has not transposed the MSFD into national legislation. By 15 October 2012, only Germany and Denmark fully reported to the EC.

In 2010, the HELCOM contracting parties agreed that the Baltic Sea Action Plan (BSAP) is a tool to implement the MSFD in the Baltic Sea.

The MSFD is linked to a variety of other international policies and documentations, e.g. UN conventions (on Biological Diversity, on Migratory Species), EU Integrated Maritime Policy, Common Fisheries Policy, Common Agriculture Policy, Water Framework Directive, Birds Directive, Habitats Directive.

Discussion:

- Discussion about the indicators for GES rose. The MSFD itself does not define them. By the decision of 2010¹, the European Commission provided a list of indicators, but Member States have to select indicators themselves and define boundaries between good and non-good status.
- Also, indicators should be coordinated between the neighbouring countries. The MSFD is clearly pointing at the Regional Sea Conventions, and the ministers of the Baltic Sea region decided to use HELCOM as the platform for coordinated approach.

Application of the ecosystem approach in light of different value systems: legal implications for achieving the aims of the EU Marine Strategy Framework Directive

Katrin Broks, University of Tartu, Estonia

K. Broks stressed that stakeholder involvement is not only the process of coming to the goal, but an aim itself. It is already part of the solution because of social learning, changing behaviour of people.

Often we are not aware of values that influence decisions. The ecosystem approach is not just a food web approach. Human values play the dominant role in ecosystem management. Humans are just one part, but with great importance. In the valuation of the marine environment, different aspects may play important role for human beings, not only a source of food or economic income. Surveys answered that non-monetary values are important for human beings, like wildlife, natural beauty, recreation, ceremonial site, spiritual experience, inspiration, sense of place, education.

¹ COMMISSION DECISION of 1 September 2010 on criteria and methodological standards on good environmental status of marine waters (notified under document C(2010) 5956) (Text with EEA relevance) (2010/477/EU)

If in the Water Framework Directive, a good water status is pristine water. In the MSFD, it is the question of choice, not only based on science. Making choices for GES should not be borne by scientists or officials, but by a larger society.

The legal system shall make procedural rules to engage stakeholders in meaningful ways and provide some guidelines for ecological choices.

Discussion:

- The ecosystem approach is not manipulation with ecosystems, but management of human activities. The correct term is ecosystem-based management (not ecosystem management).
- GES is some kind of ethical choice, but the ways to come to it should be based on scientific approach. Nevertheless, other aspects also shall be recognised.

Integrated ecosystem assessments in ICES – a possible framework to support Ecosystem Based Management and the MSFD implementation

Yvonne Walther, ICES & Swedish University of Agriculture

The International Council for the Exploration of the Sea is mostly known as the adviser for fisheries, but it is much more. ICES employs integrated assessment groups, which are dealing with multifactor analyses in marine ecosystems.

In 2007, the ICES/HELCOM Working Group on Integrated Assessments of the Baltic Sea (WGIAB) was established. It is a scientific forum for developing and combining Ecosystem-based Management efforts for the Baltic Sea.

Ecosystem-based Management is a framework for the sustainable delivery of ecosystem services. The Baltic Sea is a good model to implement ecosystem based approach. For setting goals, it is important to know priorities of the society, not only of scientists. Risk analyses allow concluding, in which direction an indicator goes.

Performing the cycle of the Integrated Ecosystem Assessment includes the following steps:

- Identifying goals of Ecosystem based Management and threats to achieving goals.
- Developing ecosystem indicators and targets.
- Risk analyses.
- Assessment of ecosystem status relative to Ecosystem Based Management goals.
- Management strategy evaluation.
- Implementation of management action.
- Monitoring of ecosystem indicators and management effectiveness.
- Adaptive management and monitoring.

Discussion:

- In future, ICES will continue developing of models that will predict the status of ecosystems. Co-operation of scientists with stakeholders and managers is the main priority of ICES. Managers, politicians, stakeholders need to start asking questions from scientists (e.g. about effects of different actions), and science has possibility to answer.
- The joint ICES&HELCOM Baltic Sea group operates already since 2005; groups for other seas are developing much faster because of the Baltic Sea example.
- Ecosystem Approach is a toolbox with variety of different options that should bridge gaps between science and management.

Main messages from the initial assessments, targets for the Good Environmental Status

Country presentations

	Estonia (<i>Georg Martin, Estonian Marine Institute</i>)	Latvia (<i>Solvita Strāķe, Latvian Institute of Aquatic Ecology</i>)	Finland (<i>Juha- Markku Leppänen, Finnish Environment Institute</i>)	Lithuania (<i>Darius Daunys, Coastal Research and Planning Institute of Klaipeda University</i>)	Sweden (<i>Bertil Håkansson, Swedish Agency for Marine and Water Management</i>)	Germany (<i>Andrea Weiss, German Environmental Agency</i>)
The main conclusions/ most interesting findings from Initial Assessments	<p>Intensity of most of the pressures in Estonian sea area is quite low. In coastal areas, traditional „hot-spot“ areas could be recognised – no new problem areas identified.</p> <p>Most important environmental parameters show stable or positive trends.</p> <p>Economic activities on sea are increasing and getting more diverse.</p> <p>Most of parameters describing biological diversity show positive trends.</p> <p>Remaining problems are connected to Eutrophication, Alien species and Fisheries.</p>	<p>Initial Assessment is based on existing information only, so no surprises and no new conclusions.</p> <p>Initial Assessment confirmed that the Baltic Sea environment is not in good state,</p> <p>Initial Assessment revealed internal discrepancy of assessment scheme – the same concentration can show GES for Descriptor D9 (contaminants in food), while non-GES for Descriptor D8 (contaminant concentrations).</p>	<p>Biodiversity: several endangered species and habitats and ecosystem services</p> <p>Alien species: 27 established, 7 harmful, 9 as locally or potentially harmful.</p> <p>Food webs: marked structural changes.</p> <p>Eutrophication: Bothnian Bay eutrophied only in some coastal areas.</p> <p>Benthic integrity: physical disturbances – only local, oxygen depletion problem in the Gulf of Finland.</p> <p>Hydrography: only very local problems.</p> <p>Contaminants: pollution of TBT, dioxins, furans</p> <p>Contaminants in fish: pollution of dioxins, PCB.</p>	<p>Causal relationships are largely hidden and influencing factors are extremely difficult to differentiate in conditions of spatially overlapping human impacts.</p> <p>High exposure and freshwater influence result in high variability of environmental conditions and large background noise, which obscure identification of responsible human impacts.</p> <p>It seems that consideration of Baltic wide processes is of the same importance as evaluation of transboundary effects (larger than national spatial scales are needed in assessments).</p> <p>Rise in average pollutant concentrations in fish observed, dioxin levels almost reaching threshold limits for salmon and herring.</p>	<p>The initial assessment represent a holistic approach taking into account::</p> <ul style="list-style-type: none"> - status of the marine environment - most important pressures and impacts - cost analysis for the degradation of ecosystem services (only maritime so far) - social analysis on attitudes regarding marine environment. 	<p>Initial Assessment was built on existing assessments and methodologies (e.g. assessments made for Water Framework Directive, Habitats Directive, HELCOM, Red List Species, ICES, Wetlands International, ASCOBANS).</p> <p>When combining different assessments, it is important to know where is the boundary of the good status according to different frameworks/assessments.</p>

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Identified problems and information gaps	<p>Existing information about Estonian sea areas is very uneven and split. Better information coverage is achieved in coastal waters (1 nm zone from baseline).</p> <p>For number of essential features and pressures no information exists covering the whole sea area under national jurisdiction.</p> <p>In several disciplines and topics the expertise and data is missing (publicly not available).</p> <p>National marine monitoring programme does not produce data sufficient for assessment of the whole marine area with similar quality.</p>	<p>Lack of scientific knowledge (including assessment methods).</p> <p>Lack of data.</p> <p>Lack of observation methods.</p>	<p>Differences in eutrophication classification between HELCOM and the national WFD classification.</p> <p>Lack of information on noise and litter, partly on commercial fish (in coastal sea areas).</p>	<p>Environmental monitoring served as the main data source for the assessment; however data have limited integration possibilities.</p>	<p>Lack of knowledge, data & scale adaption and integrated assessment procedures: partly for biodiversity, seafloor integrity, hydrographical conditions; all for food webs, litter and noise.</p> <p>Gap analysis is made in all parts of the initial assessment.</p> <p>There are 29 complete Indicators, 25 incomplete Indicators that will be operational in 2014, and 14 incomplete Indicators that will be operational in 2018.</p> <p>For Criteria 10.2, 11.1 and 11.3 no indicators have been developed so far.</p>	<p>There is an information gap concerning status of pressures/impacts – there is very few accessible data on economic activities as well as lack of methodology how to include this information in the assessment.</p>
Biggest impacts	<p>Remaining problems are connected to Eutrophication, Alien species and Fisheries.</p>		<p>For descriptors on Commercial fish, Eutrophication and Contaminants.</p>	<p>Descriptors Biological diversity, Non-indigenous species, Elements of marine food webs, Contaminants show bad environmental status.</p>	<p>Input of nutrients and organic material.</p> <p>Input of contaminants.</p> <p>Biological disturbance (Non-indigenous</p>	<p>Input of nutrients (eutrophication), contamination by hazardous substances, selective extraction of species (fishing), by-catch</p>

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				Shipping and ports are most impacting the marine environment, followed by fishing, industry and agriculture.	species, GMO, or organisms threatening the ecosystem, outtake of species) Physical disturbance (sea-floor integrity, biogenic substrates, hydrographical conditions).	
Development of environmental targets and indicators	<p>For establishing targets the Commission Decision criteria were used.</p> <p>Targets were established on qualitative level.</p> <p>The existing targets/thresholds set by other existing instruments were used where possible.</p> <p>GES indicators were used to follow achievement/not achievement of the targets.</p> <p>The example of D1: Biological diversity, 39 indicators were</p>	<p>Descriptor GES definition as given in MSFD Annex I were used as general GES target.</p> <p>Indicators were used to set numerical GES targets to reach general target. Numerical targets used were mostly those elaborated in HELCOM or during WFD intercalibration.</p> <p>The example of D 1: Biological diversity, Latvian indicator "Soft-bottom macrozoobenthos</p>	<p>Finland used the "qualitative option" in determination of GES: "How the ecosystem components will look like when the GES has been reached".</p> <p>The example for D1: Biodiversity, targets for Species distribution are:</p> <ul style="list-style-type: none"> - Conservation status of the marine directive species is favourable. - The number of species and stocks classified as endangered by HELCOM is decreasing - The natural distribution of seals is guaranteed and their 	<p>For D1: Biological diversity, the following indicators were developed:</p> <ul style="list-style-type: none"> - Abundance of wintering populations of seabirds (variable status). - By-catch of seabirds (variable status). - Proportion of oiled seabirds (bad status). - Fish community diversity index (good status). - Fish community trophic index (good status). 	<p>GES was defined for all descriptors and criteria listed in the Commission Decision.</p> <p>D1 Biodiversity: 7 GES targets but only 4 have indicators</p> <p>D2 Non-indigenous species: 2 GES targets, no indicators</p> <p>D3 Fish and shellfish: 3 GES targets, only 2 indicators</p> <p>D4 Marine food webs: 3 GES targets, only 2 indicators</p> <p>D5 Eutrophication: 3 GES targets, 10 indicators</p>	<p>GES - both a qualitative description of the 11 Descriptors and the use of environmental thresholds/limits which quantitatively describe the desired state of the environment in relation to each Descriptor – based on Annexes I, III of the MSFD and COM Decision 2010/477/EU.</p> <p>Environmental targets are primarily pressure/ impact based since the reduction in pressures and impacts is the most effective way to achieve or move towards GES. 7 high level qualitative targets, supported by a set of operational targets (still to be quantified).</p> <p>GES for Biological diversity is defined among others through:</p> <ul style="list-style-type: none"> - Good ecological and chemical status under the WDF.

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	assessed. GES achieved for 20 indicators, GES not achieved for 3 indicators; indicator present, but assessment not possible – 8; national indicator missing – 8.	index” was used to characterise Condition of the typical species and communities.	conservation status is favourable and the amount of by-catch does not threaten the populations. Indicators used: - Distribution of seals. - Number of threatened population of marine species. - Number of marine species at favourable conservation status. - Macrozoobentos index.		D6 Sea bottom integrity: 2 GES targets, 2 indicators D7 Hydrographical conditions: 2 GES targets, no indicator D8 Contaminants: 2 GES targets, 3 indicators D9 Contaminants in fish and sea food: 1 GES target and 1 indicator D10 Marine litter: 2 GES targets and 1 indicator D11 Noise: 2 GES targets and no indicator	- Favourable status of habitats and species under the Habitats Directive. - The objectives of (groups of) species-specific Conventions (e.g. ASCOBANS). - Good status of biodiversity under HELCOM. Targets is defined as “Seas with marine species and habitats non-impacted by human activities”: - Adequate retreat and resting areas. - Structure and function of food webs and marine habitats are not altered as a result of by-catch, discards and bottom fishing gear. - Endeavour re-establishment of threatened species and stabilisation of their populations. - Human-made structures and activities do not endanger the natural distribution of species. - Total number of introduced new species approaches zero.

Discussion:

- **Development of methodologies:** Methodologies from other initiatives (Water Framework Directive, HELCOM) have been used during the development of the Initial Assessments. It was stressed that the lists of indicators (as well as targets) are not final and can change radically in future after obtaining new knowledge. There is lack of methodology for aggregation of assessments on indicator level In order to come to an assessment on descriptor level.
- **Use of bird data:** In Latvia, bird data were not used in the initial assessment. In Finland, some bird indicators are included. Big potential for future is use of bird data gathered during obtaining permits (in environmental impact assessment processes). In Lithuania, wintering bird index was used in the assessment; some experts believe that it should be used on a regional, not country based scale. Concentrations of wintering birds in Lithuania were measured as densities; any distribution aspects were not considered at the current stage and left for future. In Sweden, bird data were most used. In Estonia, bird data were used in Initial Assessment but currently only two bird indicators are included in the proposed list of indicators (mid-winter population index of mute swan and distribution of wintering smew in Estonian coastal waters).
- **Data coverage:** Lithuanian marine waters are rather well covered with data because they are much smaller compared to other Baltic Sea countries, many monitoring activities on biodiversity and eutrophication have been performed in the last 30 years and a lot data obtained.
- **Coordination:** There was a feeling among the participants that indicator development lacks coordination, because the results show rather dissimilar state of the Baltic Sea among the countries, and there is confusion whether the Baltic Sea is in a good or bad status. It was noted that it is not possible to give a simple answer to this question at the current stage. Methodologies for aggregating assessment results of different indicators do not exist. During the 1st cycle of the MSFD implementation, there was no time to coordinate national activities among countries but it will hopefully improve in the next cycles.

How is the implementation of the MSFD organised in the Baltic Sea countries?

Country presentations

	Sweden (<i>Bertil Håkansson, Swedish Agency for Marine and Water Management</i>)	Germany (<i>Andrea Weiss, German Environmental Agency</i>)	Estonia (<i>Agnes Villmann, Ministry of the Environment</i>)	Finland (<i>Juha-Markku Leppänen, Finnish Environment Institute</i>)	Latvia (<i>Baiba Zasa, Ministry of Environmental Protection and Regional Development</i>)
Who/what institution(s) is(are) responsible for implementation of MSFD?	<p>The Swedish Agency for Marine and Water Management (SwAM) is the competent authority.</p> <p>The process is supported by a number of governmental agencies and county boards.</p> <p>Regional and international co-operation: under umbrella of HELCOM and BSAP in the Baltic marine region, and multi-lateral cooperation with Denmark and Norway in the North Sea sub-region, participation in EU MSFD Common Implementation Strategy work.</p>	<p>Overall responsibility for the implementation and for reporting to the EU: Federal Ministry for the Environment, Nature Protection and Nuclear Safety.</p> <p>Shared responsibilities for implementation between the coastal states for the internal waters and territorial sea and the federal government for the Exclusive Economic Zone.</p> <p>Regional and international co-operation: participation in HELCOM and EU MSFD Common Implementation Strategy work.</p>	<p>The Ministry of the Environment is responsible for the implementation of the Directive.</p> <p>Regional and international co-operation: participation in HELCOM and EU MSFD Common Implementation Strategy work.</p>	<p>The Ministry of the Environment is responsible for the implementation of the Directive, together with the Ministry of Agriculture and Forestry, and the Ministry of Traffic and Communications.</p> <p>Regional coordination is performed by the Centres for Economic Development, Transport and the Environment (ELY-Centres)</p> <p>The Finnish Environment Institute SYKE is responsible for reporting and data handling. Other institutions (Meteorological Institute, <i>Metsähallitus</i>, Finnish Game and Fisheries Research Institute, Geological Institute) are responsible for supporting.</p> <p>Regional and international co-operation: participation in HELCOM and EU MSFD Common Implementation Strategy work.</p>	<p>The Ministry of Environmental Protection and Regional Development is politically responsible, but the practical implementation lies on the Latvian Institute of Aquatic Ecology, which is subordinated to MEPRD.</p> <p>Regional and international co-operation: participation in HELCOM and EU MSFD Common Implementation Strategy work, GES-REG project.</p>
Who/what institutions and stakeholders have been involved so far?	Universities (Marine Institute, Swedish Agricultural University, Lund University); Governmental	All governmental departments and research institutions with an interest in the MSFD implementation	Expert Team was composed of about 30 different top experts all over Estonia.	SYKE was involved in the development of the Initial Assessment.	The Latvian Institute of Aquatic Ecology and the Ministry of Environmental Protection and Regional

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	<p>agencies (Swedish Meteorological and Hydrological Institute, Maritime Agency, Swedish Coast Guard, Swedish Defence Research Agency), County boards, NGOs (<i>Naturskyddsföreningen, Sportfiskarna, WWF</i>).</p> <p>Various sectors: agriculture, energy, fishery, maritime.</p>	<p>have been involved.</p> <p>Work is organised through contributions of individual experts/institutions, expert groups of the established joint federal/Länder cooperation structure on marine monitoring (BLMP) and joint federal/Länder consultation process.</p> <p>Regional coordination through involvement in HELCOM projects and working groups.</p> <p>One-off stakeholder involvement through a six months public consultation process.</p> <p>Kick-off conference inviting all interested citizens and organisations.</p>	<p>Public was invited to comment the draft on 06.09-04.10.2012, a stakeholder meeting was held on 01.10.2012.</p> <p>Other ministries were informed but they were not interested to participate in the current stage (considered the Initial Assessment and definition of GES, targets and indicators to be too scientific exercise).</p>	<p>For stakeholder involvement, river management groups were used.</p> <p>No NGOs directly involved in preparation process.</p> <p>The Ministry of the Environment worked with national stakeholders, but ELY-Centres - with local stakeholders.</p> <p>1.5 month consultation process for public was organised.</p> <p>Spatial scale is much wider than WFD, therefore stakeholders did not find their interests (ports).</p>	<p>Development have been involved.</p> <p>During development of Initial Assessment, GES and targets – public hearing (web page, workshops).</p> <p>Work Group for the implementation of the EU Integrated Maritime Policy has been regularly informed about the MSFD processes.</p>
How it is planned to implement the next steps – establishment and implementation of monitoring programmes and programmes of measures?	<p>The monitoring programme is developed and implemented by SwAM by the support of county boards and regional water agencies and central and regional agencies. In addition, sectors and NGOs will be involved.</p> <p>The program of measures is developed and implemented by SwAM by the support of county boards and local communities, according to</p>	<p>Work on monitoring programme and the programme of measures started through the federal/Länder cooperation structure on monitoring (BLMP) with the development of a concept.</p>	<p>Starting work for preparation of the monitoring programme and preliminary thoughts for the programme of measures.</p> <p>Comparison between indicators and existing monitoring programme done to identify gaps.</p> <p>In 2011-2013, the GES-REG project is being implemented. One of the</p>	<p>It is planned to establish a coordination groups and new expert groups on monitoring and measures as well as to participate in the international cooperation work.</p>	<p>The development and implementation of the Monitoring programme will be coordinated by the Latvian Institute of Aquatic Ecology and approved by the Minister for Environmental Protection and Regional Development.</p> <p>The state monitoring strategy is currently under development, and the requirements of the MSFD</p>

	Sweden (<i>Bertil Håkansson, Swedish Agency for Marine and Water Management</i>)	Germany (<i>Andrea Weiss, German Environmental Agency</i>)	Estonia (<i>Agnes Villmann, Ministry of the Environment</i>)	Finland (<i>Juha-Markku Leppänen, Finnish Environment Institute</i>)	Latvia (<i>Baiba Zasa, Ministry of Environmental Protection and Regional Development</i>)
	the Swedish Environmental Act.		aims is to identify a scientifically sound and cost-effective joint monitoring and assessment scheme. Estonia is applying funding from the European Economic Area Financial Mechanism's programme "Integrated marine and inland water management " for a project "Developing the programme of measures for the Estonian marine area in compliance with the requirements of the EU MSFD, including feasibility study on using LNG as an alternative ship fuel to reduce pollution".		will be included. The Programme of measures will be coordinated by the Ministry of Environmental Protection and Regional Development and approved by the Cabinet of Ministers.
How the stakeholders (including other sectors than environmental) will be involved in development of measures?	The Swedish environmental act states that county boards and municipalities are responsible for implementing the MSFD programme of measures. The process is not yet decided. Involvement of stakeholders at an early stage of the development of the measures is critical. Dialogues with stakeholders, like sectors, county boards and municipalities, are likely the process forward. In addition, public consultations must be done.	Planned continued dialogue with stakeholders, and procedures are under review to facilitate their involvement.	It is planned to involve the stakeholders, including other ministries/sectors in development of measures.		The Marine Environment Council has been established for co-ordination of development and implementation of the marine strategy. It is composed of state administration (sectorial ministries, agencies), coastal self-governments, associations and foundations (environmental and sectorial). The personnel of the Council are approved by the Minister for Environmental Protection and Regional Development.

Discussion

- **Sweden:** It was commented that local authorities (county administrations) have responsibility for the implementation of the MSFD, but no authority.
- **Comments by stakeholders:** In Estonia and Latvia only few comments on the Initial Assessment were received. In Germany, commenting was much more active - about 500 comments were received, including both very general as well as specific comments. The fisheries sector complained that everything was too strict but greens/environmentalists that too weak. The Estonian Fund for Nature mentioned that it submitted critical comments on the Initial Assessment because the process was not actively led by the competent authority; it was outsourced to the University of Tartu.
- **MSFD implementing authorities:** It was noted that other countries have multiple authorities for the implementation of the MSFD, but Estonia just the Ministry of the Environment. The comment from the Ministry of the Environment (MoE) was that it was decided that MoE will do at least the first step of MSFD implementation because MoE was responsible also for the transposition of the MSFD and also because Estonian Environmental Board is a young institution having not so many competent experts on marine issues. Other ministries were not left out, they decided themselves that they cannot help in the first stage. They will be much more interested in the development of the programme of measures.
- **Use of bird data:** The use of bird data in the initial assessment was commented. Birds are important, though unfortunately neglected when assessing marine ecosystems. They are most studied species group with most data, and it is surprising that so few countries have included bird indicators. There are possibilities to avoid using tens of species by accumulating them into a single index. One of the indicators developed within the MARMONI project is based on mid-winter counts, which is combined into one Baltic Sea wide wintering bird index.

The role and activities of ICES in relation to the MSFD processes

Eero Aro, ICES & Finnish Game and Fisheries Research Institute

The International Council for the Exploration of the Sea maintains 4.7 million data records of various fish and environmental parameters since early 1920's in its monitoring databases. At present, ICES deals with the assessment of 240 fish stocks.

ICES has contributed throughout the MSFD development and implementation process by creating and managing task groups in cooperation with the Joint Research Centre. Task groups provided the background information for the Commission Decision on criteria and methodological standards on good environmental status of marine waters.

Also, ICES provided guidance to the implementation of Descriptor 3 (commercially exploited fish and shellfish).

In 2011, ICES Council established the Council Steering Group on the Marine Strategy Framework Directive with the aim to help ICES member countries to implement the MSFD.

ICES is involved/will be involved in all steps of the implementation of the MSFD with various activities:

- Preparing Initial Assessments - scientific development, benchmarking and operationalization of integrated ecosystem assessments.
- Elaborating Good Environmental Status - operational and concept review, including development and test of new assessment methodologies.

- Developing indicators - review of existing indicators, and selection and development of new integrated CFP and MSFD indicators
- Setting environmental targets - development of methodologies to facilitate target setting and evaluation.
- Developing monitoring programmes - coordination of international monitoring programmes for fish stocks and ecosystems. Development of monitoring guidelines, programmes, and integrated ecosystem surveys
- Developing programmes of measures - development of management strategy evaluation tools for simulation of management measures and review of proposed measures.

Information on ICES work on MSFD is available on ICES home page <http://www.ices.dk/projects/projects.asp#MSFD>.

Discussion

Discussion about terminology of spatial planning in the sea clarified that biologists are using „marine spatial planning” although the official term used by the European Commission, DG for Maritime Affairs and Fisheries is „maritime spatial planning”. An opinion from Estonia was that marine spatial planning could be broader term that includes maritime spatial planning (planning of human uses of the sea).

The role of HELCOM in implementing ecosystem approach in the Baltic Sea

Samuli Korpinen, HELCOM Secretariat

The basis for HELCOM work, the Baltic Sea Action Plan was adopted in 2007 and aims at reaching Good Environmental Status of the Baltic Sea by 2021. Ecosystem-based approach to management of human activities is the main principle of the BSAP.

The BSAP defines measures and actions for eutrophication, hazardous substances, maritime activities, biodiversity and nature conservation.

By spring 2012, the implementation of the BSAP 114 actions was as follows:

	Accomplished	Partly accomplished	In progress	Starting
Eutrophication	0	2	19	1
Biodiversity	5	8	17	3
Hazardous substances	1	5	19	2
Maritime and response	5	10	10	9

HELCOM GEAR Group was established for the implementation of the Ecosystem Approach.

HELCOM CORESET project is developing core indicators for the follow-up of the BSAP and support for the implementation of the MSFD (descriptors 1, 2, 4, (5), 6, 8, 9).

Next HELCOM Ministerial Meeting is going to be held in autumn 2013. The parties will evaluate the implementation of the BSAP, to scrutinise the effectiveness of the BSAP national implementation programs, to assess progress towards ecological objectives and GES, and accordingly adjust the BSAP and update of targets.

Discussion

- HELCOM itself consists of member states, and does what the states agree.
- HELCOM GEAR group was meant to regionally co-ordinate the implementation of the MSFD and the BSAP. Co-ordination was done before MSFD reporting to certain extent but did not include all countries. The MSFD roof report (conclusions from country reports) will be made by the European Commission. HELCOM will analyse the situation in the Baltic Sea region of course.

Is the development of fisheries in the Baltic Sea in line with the MSFD?

Eero Aro, ICES & Finnish Game and Fisheries Research Institute

E. Aro listed the main international agreements and documents that set principles for the Baltic Sea fish stocks and fisheries management.

To ensure sustainable management of fish resources, ICES started with considering precautionary principle in fisheries where the fishing mortality rate which generates maximum sustainable yield should be regarded as a minimum standard for limit reference points. Precautionary principle aims at keeping enough adults in the fish stock to reproduce.

Lately, more comprehensive maximum sustainable yield concept was introduced, which is stricter compared to the precautionary principle. Maximum sustainable use is a broad conceptual objective aimed at achieving the highest possible yield over the long term.

In general, it might be concluded that for Baltic commercial fish species the development of fisheries goes in line with the MSFD. Exception is Baltic herring and salmon. For those species, the total allowable catch is set higher than recommended by ICES.

Discussion

- The discussion about the cod resources rose, whether its management is really sustainable, as the stock is much lower than historical records. It was pointed out that fishing mortality for the cod has levelled off, and these historic peaks are not normal. On the other side, there is 3-4 times increase of the cod since the low stock.
- The question was about the development of indicators for fish size and age. Behind all indicators used in assessments, there is age structure. Healthy stock is included in the maximum sustainable yield concept.
- About multispecies approach in fish stock management - multispecies analysis is carried out in the central basin. Also some environmental characteristics are taken into account, e.g. temperature. Temperature influences sprat, in mild winters in positive way.

Implementation of the ecosystem approach in the MSFD and BSAP from maritime perspective

Samuli Korpinen, HELCOM Secretariat

In the Baltic Sea Action Plan, the maritime segment contains 34 actions to reach the 8 management objectives and the strategic goal "Maritime activities in the Baltic Sea carried out in an environmentally friendly way" by 2021. Maritime issues are related to illegal and accidental pollution, response capacity, sewage and air pollution, alien species, platform threats and pollution.

The maritime activities are strongly related to the MSFD GES Descriptors 2 (Introductions of non-indigenous species), 10 (Marine litter), and 11 (Introduction of energy).

HELCOM is coordinating shipping and response issues in the Baltic Sea, working with safety of navigation and emergency response, sewage discharges from passenger ships, emissions and ballast water.

S. Korpinen mentioned alien species as a threat to the Baltic Sea ecosystems and economy. All areas of the Baltic Sea are invaded by non-indigenous species and the number of new species has increased in recent decades. It is one of the greatest threats to biodiversity of the Baltic Sea. HELCOM has developed a list of invasive species, which is being regularly updated.

Discussion

- It was clarified that there is almost no suitable places for changing ballast waters in the Baltic Sea because of the 200 m depth requirement.

Maritime Spatial Planning as an important tool for implementing the MSFD

Risto Kalliola, University of Turku, Finland

Risto Kalliola provided the definition of the maritime spatial planning by UNESCO “Maritime/marine spatial planning (MSP) is a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process”.

He listed the ten principles for achieving better coherence in the development of Maritime Spatial Planning developed by Helcom-Vasab:

1. Sustainable management
2. Ecosystem approach
3. Long term perspective and objectives
4. Precautionary Principle
5. Participation and Transparency
6. High quality data and information basis
7. Transnational coordination and consultation
8. Coherent terrestrial and maritime spatial planning
9. Planning adapted to characteristics and special conditions at different areas
10. Continuous planning

Planning on the sea is specially challenging because:

- It is three dimensional system with dynamic environment
- Planning doesn't usually result into concrete structures (comp. roads, buildings)
- Knowledge-base is insufficient in many aspects
- "Unpopulated" but still in the interest of many
- Difficult to determine stakeholders
- Often border areas (municipalities, states)
- Relatively new as a subject for planning

As an example, R.Kalliola mentioned planning a new ship lane outside Boston in the United States, when the distribution of the population of Baleen whales was taken into account.

Discussion

- Maritime Spatial Management has been recognised by the European Commission as one of priority tools for the implementation of the MSFD.

Mapping of the marine environment for spatial management in Sweden

Martin Isaeus, Aqubiota Water Research, Sweden

Mapping is an important tool for spatial management. A relevant mapping scale should be chosen when solving different issues. For planning wind parks in Norway, the national scale was used, for planning harbours and jetties – the municipality scale. The same applies for nature protection. For management of the long-tailed duck population, the Baltic scale is needed, for fish population management it might be the Baltic or regional or local scale.

For the Hanö Bight in Sweden, a lot of data have been gathered covering biological, environmental and anthropogenic layers. For biological data, a lot of modelling was used in addition to advanced survey methods. More than 50 biological maps have been produced for the Hanö Bight.

The key messages from the practical experience:

- MSP is a powerful tool for managers, but it is dependent on reliable map data.
- Modelling is a possible way to produce useful input for MSP
- Once biological maps are available, there is a variety of relevant methods and tools to aid MSP based on those maps.

Guiding stakeholders to participate in MSFD implementation

Sarah Twomey, PISCES project

The PISCES project (Partnerships Involving Stakeholders in the Celtic Sea Ecosystem, 2009–2012) brought together sea-users in the Celtic Sea to increase understanding of the Ecosystem Approach, and develop a practical guide to implement the Ecosystem Approach through the MSFD.

The Celtic Sea is a very busy area. In the project, stakeholders were separated from policy makers and government, and were represented by sea users of four countries (Ireland, France, Spain, and the United Kingdom). Various sectors have a stake in the Celtic Sea: renewable energy, commercial fisheries, tourism and recreation, defence, aquaculture, shipping, dredging, ports, offshore infrastructure.

Within the project, a guide to implementing the ecosystem approach through the MSFD was produced (available at the project home page: www.projectpisces.eu/guide/). The guide explores what is needed to implement the Ecosystem Approach in the context of the MSFD. It avoids complicated language and makes practical recommendations for stakeholders and governments.

The project identified three key areas of action:

1. Improving stakeholder participation in MSFD implementation
2. Encouraging stakeholders to implement their own solutions.
3. Greater communication between stakeholders and stakeholders and government.

A very positive feedback was received from stakeholders. They stressed that the project brought together different stakeholder groups that normally have no dialogue, and the discussions were organised in a free environment.

The guide is transferrable also to other marine regions.

Discussion

- Stakeholder involvement takes time. To get trust from stakeholders, the PISCES people started asking people what they are doing for ecosystem approach and lots of activities came out. Also proposals for new activities came from stakeholders themselves.

- The question was raised whether stakeholder involvement should be run by projects or supported by state. It depends on individual situation in each country. The PISCES project was lobbying workshops, but the Irish Government said “no”. In the UK, a series of workshops have been organised. Different governments have different approaches. Some just put documents on the website and ask for comments.
- There is a new project starting in 2013 – „CSP - Celtic Seas Partnership (CSP) – stakeholder driven integrated management of the Celtic Seas Marine Region” (2013–2016) funded by EU LIFE+ Programme that will continue the work started by PISCES.