Implementing the ecosystem approach

HELCOM regional coordination
1. Key messages

Commitments made under the Baltic Sea Action Plan and the follow-up of the 2007 Krakow and the 2010 Moscow Ministerial Meetings on the implementation of the ecosystem approach have been taken forward and allow taking stock of lessons learnt. This includes the role given to HELCOM in 2010 to provide a coordinating platform for the regional implementation of the Marine Strategy Framework Directive.

The HELCOM Ministerial Meeting in 2013 provides a timely stepping-stone on the road to 2021 for the Baltic Sea Action Plan and 2020 for the Marine Strategy Framework Directive and Russian Maritime Doctrine in order to guide further progress on a regionally coordinated and coherent implementation of the ecosystem approach. The Contracting Parties plan to:

Further align the implementation of the ecosystem approach between the HELCOM Baltic Sea Action Plan, the Marine Strategy Framework Directive and the Russian Maritime Doctrine, taking into account initiatives to apply the ecosystem approach in maritime spatial planning.

Enhance efficiency of implementing the ecosystem approach and avoid parallel work through better sharing of knowledge and work load both vertically (between national, EU and regional level) and horizontally (between HELCOM and other RSCs as well as ICES).

Refocus priorities towards topics and activities best suited for the regional scale, capitalising on HELCOM’s strengths and experience.

Further strengthen cross-sector interaction to foster integration of policies and acceptance of measures to ensure sustainable use within the limitation of marine ecosystems.

Promote regional knowledge and specificities of the Baltic Sea and HELCOM at EU and international level.

Support coherent marine strategies in the Baltic region, in particular the further alignment of what constitutes good status of the Baltic Sea under the Baltic Sea Action Plan, the Marine Strategy Framework Directive and the Russian Maritime Doctrine through joint activities relating to defining good environmental status, environmental targets, monitoring, indicators, assessments as well as programmes of measures.

Share research and development work on new topics in order to provide regional baseline information for assessment of the need and extent of future activities.

Produce joint documentation of approaches and results to support HELCOM EU Member States in EU reporting and sharing information at European level.

Enhance HELCOM’s role in the EU implementation process for the Marine Strategy Framework Directive allowing contributing to regional work directly to the EU process.

Reconfirm the commitment to accept and make use of regional work as part of Contracting Parties’ national implementation of the ecosystem approach and the Marine Strategy Framework Directive, and to align national approaches to regional agreements accordingly and vice versa.

Make available the necessary resources for capacity building and targeted and timely delivery to the EU process and to allow national experts to fulfill the assigned tasks in HELCOM.

Improve working procedures to balance the needs for project support and Contracting Parties’ ownership and to be fit for targeted and timely delivery to the EU process.

Review HELCOM’s working structures to align with the needs for early coordination and integration and with emerging needs (such as marine litter and underwater noise).
2. The Ecosystem Approach

Committing to the ecosystem approach

Human activities at sea and on land exert considerable pressures on marine ecosystems. They require careful management in order to maintain the quality, structure and functioning of the marine ecosystems.

The sustainable use of ecosystem goods and services through the application of the ecosystem approach is a principal aspiration that is reflected in HELCOM’s vision of 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 social activities.

Since 2003, the work of the Helsinki Commission for the Protection of the Marine Environment of the Baltic Sea has been guided by the ecosystem approach to the management of human activities. This is also a main element of the EU Marine Strategy Framework Directive (2008/56/EC) and the Russian Maritime Doctrine which both apply to Baltic Sea waters.

What does the ecosystem approach require?

The ecosystem approach presents challenges to management processes and science. While management tends to be sectorial, the ecosystem approach requires governance structures and procedures that allow integrating all ecosystem components and human activities in decision making.

Adaptation of management to new knowledge and participation of stakeholders are important elements of the ecosystem approach. Science-based management requires data and methodologies that enable the assessment of collective impacts of human activities on marine ecosystems against defined quality objectives for a healthy sea.

Yet, understanding marine ecosystems and the impact of human activities is, and is likely to remain, inadequate. Assessment and management methods need to accommodate those limitations.

The 2007 HELCOM Baltic Sea Action Plan sets out a scheme for implementing the ecosystem approach and to restore the good ecological status of the Baltic marine environment by 2021. It aims to support its Contracting Parties in fulfilling their various national, European and international obligations, such as achieving good environmental status of their waters by 2020 under the EU Marine Strategy Framework Directive and the Russian Maritime Doctrine.

Figure 1. Reiterative management cycles.
3. Regional Cooperation and Coordination

EU Marine Strategy Framework Directive

The EU Marine Strategy Framework Directive requires EU Member States sharing a marine region to cooperate in developing and implementing marine strategies to achieve or maintain good environmental status in order to ensure that measures to achieve the objectives are coherent and coordinated across the marine region.

Member States are required to follow a common approach which involves in reiterated six-year cycles:

- Assessing the current state of the marine environment (Art. 8 MSFD)
- Determining good environmental status (Art. 9 MSFD)
- Establishing environmental targets to guide progress towards achieving good environmental status (Art. 10 MSFD)
- Establishing monitoring programmes for ongoing assessment and regular updating of targets (Art. 11 MSFD)
- Developing programmes of measures to achieve or maintain good environmental status (Art. 13 MSFD)

Russian Maritime Doctrine

The Maritime Doctrine of the Russian Federation is the fundamental document defining the public policy of Russia up to 2020 in the field of maritime activities, e.g. research, development and use of the ocean resources in the interest of security, sustainable economic and social development.

The principles of the national maritime policy include integrated marine scientific research, the development of systems for monitoring the marine environment and coastal areas, and the protection and conservation of the marine environment in the interests of the Russian Federation. Compliance with international obligations and possibilities for international cooperation are important elements for achieving the goals of the Doctrine.

HELCOM as platform for regional coordination

All EU Member States bordering the Baltic Sea, the Russian Federation and the European Union are Contracting Parties to the Helsinki Convention. HELCOM Ministers have taken high interest in developing HELCOM as the environmental focal point in the Baltic Sea region and the main driving force for the implementation of the ecosystem approach. At their meeting in Moscow in 2010, HELCOM Ministers committed to establish, for those HELCOM Contracting Parties that are EU Member States, the role of HELCOM as the coordinating platform for the regional implementation of the Marine Strategy Framework Directive. They committed to strive for harmonised national marine strategies to achieve good status of the Baltic Sea according to the Baltic Sea Action Plan and the Marine Strategy Framework Directive. HELCOM Ministers confirmed their commitment to cooperation and shared efforts based on common principles.

Common principles

Shared scientific understanding of the current state of the marine environment and the predominant pressures and impacts acting on the status

Common understanding of the good environmental status of the Baltic Sea to be achieved by 2021

Joint coordinated monitoring providing the necessary data for regular state assessments and evaluation of progress towards achieving environmental objectives and targets

Coherent and coordinated approach to developing or advising on measures

(2010 Moscow Ministerial Declaration on the implementation of the BSAP)
4. Implementing the ecosystem approach through the Baltic Sea Action Plan

Marine governance is a challenge

Governance of the marine environment is fragmented at all action levels: national, European, regional and global. Vertical and horizontal division of competencies is a limitation to the Baltic Sea Action Plan and a particular challenge for achieving an integrated management of human activities and working towards a common agenda for a healthy Baltic Sea and its sustainable use. This emphasises the need for continued and deepened collaboration by HELCOM with relevant management authorities and organisations, as well as stakeholders, and its contribution to the work required by European and international legal frameworks and ongoing international initiatives (e.g. under the United Nations Convention on the Law of the Sea, the Convention on Biological Diversity, Conventions under the auspices of the International Maritime Organisation):

- The use of maritime spatial planning in combination with other policy instruments is an important tool for cross-sector management of human activities. Initiatives to apply the ecosystem approach in maritime spatial planning processes should be taken into account in the implementation of the ecosystem approach in HELCOM. The well-established cooperation between HELCOM and VASAB on coherent and ecosystem-based Maritime Spatial Planning in the Baltic Sea should continue.

- HELCOM should capitalise on its marine knowledge and fully exhaust its competences. HELCOM should make use of its monitoring and assessment capacity at the regional scale to provide the science basis for decision-making within its competences and for actively approaching sectors and other competent organisations on the environmental issues identified and in need for action.

- Following the long-standing cooperation with the maritime authorities, the HELCOM Agriculture and Fisheries and Environment Forums showcase the start of a broader regional dialogue between sectors and should inspire collaboration systems that enhance cross-sector interaction.

- HELCOM should make best use of the existing cooperation as a basis for Contracting Parties to influence and implement European policies and to provide a platform for joint action of HELCOM EU Member States when setting up their programmes of measures under the Marine Strategy Framework Directive.

Interregional cooperation needed

HELCOM Ministers agreed in 2010 on the need to intensify HELCOM’s cooperation with the Oslo-Paris, Barcelona and Bucharest Conventions and other regional marine organisations with a view to sharing best practices and, where appropriate, aiming at harmonising approaches.

The past years have shown parallel efforts of the four European regional seas and ICES to respond to the ecosystem approach and the Marine Strategy Framework Directive. This has resulted in differing approaches. Enhanced cooperation in particular with the OSPAR Commission will add value to the European-wide efforts to achieve healthy seas.

Figure 2. The Marine Strategy Framework Directive establishes four marine regions: Baltic Sea, North-East Atlantic (with subregions under jurisdiction of EU Member States: North Sea, Celtic Seas, Bay of Biscay/Iberian coast and the Macaronesian biogeographic area in the Wider Atlantic), Mediterranean Sea and Black Sea. Source: EU Commission, European Atlas of the Seas.
and enable comparison of the extent to which good environmental status is being achieved. This is of particular interest to those HELCOM countries with coasts in more than one marine region. Mutual invitations of OSPAR and HELCOM experts to share experiences and approaches in expert groups can provide a first step. Joint research projects could help focusing resources and setting priorities. Finally, the recent HELCOM cooperation process with the Black Sea should be continued and intensified to provide a model for encouraging transfer of knowledge between different regions.

Structures to help coordination

The coordinated implementation of the ecosystem approach within the Baltic Sea region requires working structures and procedures which support integration of knowledge and activities across the themes of the Baltic Sea Action Plan and other international requirements.

To this end, the Group for the Implementation of the Ecosystem Approach (GEAR) was set up in 2012, superseding the Joint Advisory Board (2009-2011). GEAR’s task is to steer the coherent implementation of the ecosystem approach and to ensure mutual coherence of objectives, targets and approaches between the Baltic Sea Action Plan, the Marine Strategy Framework Directive and related EU policies, and the Russian Maritime Doctrine.

GEAR works at managerial level and under the responsibility of HELCOM Heads of Delegation. The group uses the Baltic Sea Action Plan and its follow-up as well as the above policies as their foundation. Additional input will be provided through political commitments such as Ministerial decisions. Successful coordination requires authority to guide the process and a clear definition of the scope of mandate, lines of accountability and interaction with other HELCOM groups.

Yet, coordination and integration can only be effective if structures allow the expert level to orientate itself accordingly from the very beginning of an activity. HELCOM’s working structure should be reviewed to align with those considerations and emerging needs (such as marine litter and underwater noise).

Enhancing HELCOM’s role in the EU implementation process

The EU Work Programme 2014-2020 for the Common Implementation Process of the Marine Strategy Framework Directive recognises the central role of Regional Seas Conventions to achieve a coherent implementation of the Directive within marine regions. It is up to the Contracting Parties to accept this role and allow HELCOM to contribute to the Work Programme through its activities in particular under the Baltic Sea Action Plan. This would allow input being delivered directly to the EU process to formulate implementation requirements for the ecosystem approach. To add efficiency to the process, cooperation is needed between expert groups of HELCOM, EU and ICES.

HELCOM groups should be allowed to take the lead for tasks suitable for HELCOM’s scale with a view to sharing the results, avoiding duplication of work in several forums, and focussing HELCOM resources on its strengths and priorities. The operationalization of such an approach is reliant on

- the acknowledgement of HELCOM’s biogeographic and geopolitical specialities and its capacities
- HELCOM being accepted as equal partner in the EU implementation process while respecting its autonomy, with agreed tasks and objectives that go beyond the implementation of the Marine Strategy Framework Directive
- the appreciation of the specificities of regional processes that are inclusive for non-EU Member States and instrumental for jointly achieving good environmental status
- Contracting Parties’ willingness to accept and make use of the regional work as part of their national implementation of the Marine Strategy Framework Directive and align national approaches to regional agreements accordingly and vice versa
- the commitment of Contracting Parties to vest HELCOM with the necessary resources to fulfill the assigned tasks
- working procedures that balance the needs for project support and Contracting Parties’ ownership and are fit for targeted and timely delivery to the EU process.
What can HELCOM contribute?

HELCOM has a track record of almost 40 years in protecting the marine environment of the Baltic Sea. HELCOM’s long-standing monitoring and assessment work has resulted in considerable marine knowledge, scientific tools and management experience. This is an important asset to aid implementation of the ecosystem approach under the Marine Strategy Framework Directive. In particular recent work on developing indicators, defining boundaries for good status, revising monitoring programmes, elaborating novel assessment methods, piloting joint thematic and holistic assessments and defining targets for reducing nutrient inputs under the Baltic Sea Action Plan are designed to support the implementation of the ecosystem approach under various frameworks, including the Marine Strategy Framework Directive. HELCOM’s contribution should focus on its strengths at the regional scale. This includes:

- defining common regional criteria and methodological standards for good environmental status and device associated assessments
- establishing environmental targets associated with (sub)regional and/or transboundary problems and with maritime activities and their pressures
- guiding measures of transboundary nature or measures for larger scale problems to achieve good environmental status
- agreeing on coordinated monitoring programmes and associated methods and standards to yield comparable datasets and assessments
- sharing research and development work on new topics in order to provide regional baseline information for the assessment of the need and extent of future activities
- joint documentation of approaches and results to support HELCOM EU Member States in EU reporting and sharing information at European level

What are HELCOM’s priorities and needs for improvement?

To avoid duplication of work in various forums, HELCOM needs to better prioritise its activities under the Baltic Sea Action Plan depending on the topic concerned and corresponding descriptors for good environmental status of the Marine Strategy Framework Directive.

Yet, not all topics are addressed by the Baltic Sea Action Plan, leaving gaps in a holistic approach to managing pressures and impacts on the marine environment. On those issues, HELCOM should, to the extent possible, pick up work done elsewhere, join forces with other actors to build up knowledge and focus on adapting results to the specific needs of the Baltic Sea environment. Assessment methodologies used for implementing the Baltic Sea Action Plan and EU policies need to be regularly revised and further aligned where deemed necessary.

Biodiversity and ecosystem health (D1, 4, 6). Under the Baltic Sea Action Plan HELCOM has provided a platform for Contracting Parties to develop jointly responses to the challenges of assessing ecosystem health by defining good environmental status and devising tools to assess biodiversity, cumulative impacts of human activities on ecosystems and taking a holistic view.

HELCOM should join forces with OSPAR and ICES where they have developed similar approaches and jointly take the lead in Europe on setting up a common assessment framework that aids comparability of future assessments and judgement whether good status is achieved. HELCOM’s assessment capacity will enable advice on required action at regional level through HELCOM or other competent authorities. HELCOM should strengthen its lead in establishing and coordinating management of an ecologically coherent network of well managed marine and coastal Baltic Sea Protected Areas.

Non-indigenous species (D2). Building on ongoing activities, HELCOM should work with other actors in the field to identify risks as a basis for advising marine monitoring programmes and to ensure data and information collection that allows assessing progress towards good status. HELCOM assessments and jointly developed procedures (such as those with OSPAR for ballast water) allow for harmonised regional implementation of IMO regulations.

Commercial fish and shellfish stocks (D3). HELCOM should concentrate on assessing impacts of fisheries on coastal fish and shellfish stocks and on the structure of fish communities, as well as on im-
pacts of fisheries on habitats and biological components of marine ecosystems. HELCOM could play an important role to approach jointly the EU on the need for management action, as well as regionalization of CFP through cooperation with Baltic regional forum for CFP implementation (BALTIFISH).

**Eutrophication and contaminants (D5, 8, 9).** Based on its long-standing experience, HELCOM should continue leading the regional target setting and implementation of nutrient input restrictions as well as regional monitoring and assessment of eutrophication and hazardous substances taking due account of corresponding requirements and implementation processes as regards the Russian Maritime Doctrine and water quality grading system under the Scheme for Comprehensive Use and Protection of Water Bodies (SKIOVO) and EU policies, in particular the Water Framework Directive and Marine Strategy Framework Directive.

HELCOM’s expertise should feed into the leading EU process on deriving ecological quality standards to ensure that they are fit for application offshore. Further guidance is needed at EU level on seafood contamination before deciding on additional effort under the Baltic Sea Action Plan. HELCOM should continue the cooperation with the maritime sector on measures relating to offshore pollution sources and with relevant international organisations on the long-range transport of pollutants.

**Hydromorphology (D7).** This is an aspect which is not explicitly addressed by the Baltic Sea Action Plan. A common understanding is required in the EU on the scales at which permanent alteration of hydrographical conditions and associated effects operate. Based on this, HELCOM should explore needs and options to contribute to this aspect in the implementation of the ecosystem approach.

**Marine litter (D10).** The EU is leading on methodological work in this field. HELCOM should pilot advised methods to generate baseline information for the region which in turn guides producing regional targets on marine litter and the development of monitoring and data collection programmes appropriate for the Baltic Sea. HELCOM should lead on a regional action plan to combat marine litter.

**Energy/underwater noise (D11).** The EU is leading on methodological work in this field. HELCOM should work with existing initiatives to map underwater noise and its sources and develop monitoring and assessment strategies with a view to advising on a tool box of appropriate mitigation measures.

**Socio-economic analysis.** The EU is taking the lead on developing approaches to valuate ecosystem goods and services, costs of degradation and cost-effectiveness of measures. HELCOM should focus on applying those methods and tools to the Baltic Sea region in assessment contexts and in relation to measures of a transboundary nature. This will require capacity building within HELCOM and cooperation with institutions with relevant expertise.

**Climate change.** HELCOM should continue to cooperate with partner organisations (e.g. Baltic Earth (ex BALTEX), ICES, IOC) on monitoring and assessment with a view to keeping a watching brief on changing climatic and environmental conditions at regional scale.

The first cycle of the Marine Strategy Framework Directive started in 2012, requiring EU Member States to undertake an Initial Assessment of the state of their marine waters (Art. 8 MSFD) and by reference to the assessment determine characteristics for good environmental status (Art. 9 MSFD) and environmental targets (Art. 10 MSFD) required to bring their marine waters into good status. Member States reported their results to the EU Commission.

The following information concerning the 2012 national reports of HELCOM EU Member States on their implementation of Articles 8, 9 and 10 MSFD is based on:

- the GES-REG questionnaire submitted to all HELCOM EU Member States and replayed by Estonia, Finland, Germany, Latvia and

- the national reports published by HELCOM EU Member States on ReportNet.

In general, all national Initial Assessments followed the same basic outline defined in the Annex III of the EU MSFD and gave detailed descriptive information on the characteristics of, and pressures and impacts on, the Baltic Sea ecosystem.

Use of HELCOM assessments products in assessing state

In all national Initial Assessments, HELCOM assessments (indicator fact sheets or thematic/initial holistic assessments) and assessments under the WFD and the Habitats/Bird Directives were commonly used for assessing biological features. For assessing sea bed and water column habitats the HELCOM assessments (indicator fact sheets or thematic assessments) have been used by some countries only. For physical and chemical features, only turbidity, nutrients and oxygen were assessed using the HELCOM assessment products. The assessments of conservation status of endangered and threatened species and habitats were based on classification according to the EU Habitats and Birds Directives but also the HELCOM Lists of Threatened and/or Declining Species and Habitats/Biotopes were referred to. Assessments of commercial fish stocks were mainly based on ICES information.

Use of HELCOM assessments products in assessing pressures and impacts

In general, the analysis of pressures and impacts has been incomplete and no ranking has been carried out in the initial assessments, except for those few countries which have referred to HELCOM HOLAS assessment.

In the national Initial Assessments, HELCOM Indicator Fact Sheets and assessments were generally used as source of information for inputs of nutrients and hazardous substances as well as for distribution and introduction of non-indigenous species. The assessments produced by ICES were used in assessing the selective extraction of species, i.e. fishing.

For physical loss and damage as well as interference with hydrological processes, almost no jointly made products were used.

Sometimes bilateral cooperation (in some internationally funded projects) took place concerning the joint aggregation of data and information.
Coordinated assessment of GES

Most of the MSs seem to have considered that the first Initial Assessment under the MSFD could be descriptive and that it is not necessary or currently not always possible to assess quantitatively the environmental status at the level of Descriptor, but that the findings concerning the characteristics, pressures and impacts should be used further in the determination of future GES and the development of targets and indicators. Therefore, no quantitative, indicator-based determination of GES at the level of Descriptor was made in the Initial Assessments. In most cases, though, qualitative statements of the environmental status were presented. Neither were assessment tools used nationally in the aggregation of the information. There was no uniform approach in using geographic assessment units by the Member States.

In all assessments, references to the HELCOM thematic assessments and initial holistic assessment were included giving quantitative information on the status of eutrophication, hazardous substances and biodiversity as well as a holistic quantification of multiple pressures. Some Member States have not assessed the environmental status specifically for the 2012 reporting but used other, previously made assessments, such as those made by HELCOM, ICES or nationally made for the WFD reporting while other Member States have specifically reassessed the status.

The eutrophication status was estimated to be below GES by all Member States. The same applies to biodiversity. For benthic integrity GES was often estimated to be reached, probably because benthic invertebrates were included into D5.

All MSs considered that the level of knowledge was too scarce to assess underwater noise and marine litter. Knowledge gaps also hindered the determination of GES concerning especially alien species and hydrographic conditions, but also for commercial fish stocks, food webs, benthic integrity and concentrations of hazardous substances. The GES estimates for hazardous substances (D8 and D9) ranged from GES to sub-GES.

Coordination in defining indicators and targets

In general, the indicators defined by the Member States in their Article 10 reports, did not cover all the requirements presented in the COM Decision 2010/477/EU and quantitative targets were often missing.

Most of the indicators to assess eutrophication (D5) were the same as those agreed to within HELCOM. Indicators related to commercial fish and fisheries (D3) developed by ICES were commonly used.

Some indicators developed by HELCOM CORESET for assessing biodiversity (D1 and D2) and hazardous substances (D8 and D9) were included in the country reports. For other descriptors practically no coordination took place in defining indicators.

The agreed interim targets in the HELCOM BSAP in 2007 and the thematic assessments of eutrophication and hazardous substances in 2009 have been referred to by all Member States. The latter for hazardous substances were based on the priority substances under the WFD and on substances regulated by the food authorities.

Main concerns, emerging challenges and needs for action

Gaps in information and knowledge.

- All Member States had major knowledge gaps concerning hydromorphology, underwater noise and marine litter;
- The set of indicators to assess GES is sparse and varies between the MSs;
- Knowledge concerning alien species is generally considered to be inadequate, especially their impacts on the ecosystems. Knowledge is considered to be inadequate on underwater habitat distribution and status as well as on indicators for the food web status;
- Knowledge on the hazardous substances is spatially patchy and especially their biological impacts are poorly understood;
- Geographic assessment scales are varying between countries;
Assessment tools are neither fully developed nor agreed upon and still require more coherence with EU policies.

**Level of coordination.**

The level of coordination with recent HELCOM assessments varied between the Member States. The thematic and initial holistic assessments coordinated within HELCOM provided a first common understanding on the main pressures and their impacts as well as the status of GES especially concerning eutrophication and hazardous substances for all initial assessments. Joint work coordinated within HELCOM related to the development of a core set of indicators and their GES boundaries, assessment tools, determination of endangered species and habitats/biotopes and ecological coherence of MPAs has influenced the content of the national assessments, determination of GES and defining indicators and environmental targets.

All Member States were using ICES information in assessing commercial fish stocks. Practically no general coordination took place in the actual preparation of the Initial Assessments by the MSs. However, general exchange of information concerning Initial Assessments, determination of GES and GES/sub-GES boundaries, setting of environmental targets and establishing indicators for assessment took place within HELCOM (Joint Advisory Board).

Still, Member States did not coordinate the work for the 2012 reporting on the MSFD implementation within HELCOM. Some MSs coordinated parts of their work with neighbouring countries. The tight schedule for the national preparation of the reporting documents on the implementation of the Articles 8, 9 and 10 of the EU MSFD made the Baltic-wide coordination difficult. In addition, the HELCOM working structure and time table did not support the coordinated approach in preparation of the national reports.

Table 1. Overview of the classification of the state of the environmental in relation to GES at Descriptor level by HELCOM EU Member States. Based on evaluation of the formal reporting of initial assessments to the EU Commission on ReportNet.

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<thead>
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<th>Descriptor</th>
<th>DE</th>
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<thead>
<tr>
<th>GES reached</th>
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<th>GES not reached in general</th>
<th>Status not known</th>
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11
6. Roadmap

**Roadmap of HELCOM activities on ecosystem approach**

<table>
<thead>
<tr>
<th>Monitor</th>
<th>Streamlined Data Management</th>
<th>Indicators and GES Targets</th>
<th>Assessments</th>
<th>Programmes of Measures</th>
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<th>Milestones for the HELCOM EU Member States</th>
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<td>Milestones</td>
<td>Milestones for the HELCOM EU Member States</td>
</tr>
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- **MONITORING**
  - Joint documentation for monitoring programme (MORE)
  - Coordinated monitoring network and monit. programme (MORE, BALMON)
  - Further development of monitoring guidelines (MORE)
  - Review of HELCOM recommendation 19/3 on monitoring (MORE)

- **STREAMLINED DATA MANAGEMENT**
  - Modernization of data management and systems
  - PLC PLUS database
  - Human pressures and MSP relevant data
  - Biodiversity data portal

- **INDICATORS AND GES TARGETS**
  - BS Environmental Fact Sheets
  - Further development of Core Indicators and GES targets (CORESET II)
  - Review of eutrophication targets every 6 years
  - Eutrophication core indicators (EUTRO OPER)

- **ASSESSMENTS**
  - Development assessment tools (CHASE, BEAT, HOLAS)
  - Testing HEAT 3.0 and development of eutroph. assessment (CORE EUTRO)
  - Operationalization: Eutrophication assessment system (EUTRO OPER)
  - Operationalization: Biodiversity assessment system (CORESET II)
  - Operationalization: Haz. subs. assessment system (HAZES & CORESET II)
  - Pollution Load Compilation 5.5
  - Pollution Load Compilation 6 (2012/2014 data)
  - Assessments of the risk of extinction of species and biotopes
  - Assessment of status of BSAP network and database renewal (PROTECT)
  - Assessment of climate change
  - Holistic Assessment

- **PROGRAMMES OF MEASURES**
  - BSAP nutrient load reduction scheme review
  - Measures to reduce nutrient loads to BSAP level
  - Ecosystem-based MSP
  - Examination of sufficiency of existing measures for reaching GES
  - Establish regionally coordinated programmes of measures
  - Development of a new HELCOM recommendation for nature conservation
  - Development of an ecologically coherent network of MPAs
  - Review of HELCOM recommendation 15/5 on BSAPs

- **MILESTONES**
  - HELCOM 2013 Ministerial Meeting
  - VASAB Ministerial Conference
  - (HELCOM 2016 Ministerial Meeting)
  - Good environmental status (MSFD / BSAP)

- **MILESTONES FOR THE HELCOM EU MEMBER STATES**
  - MSFD Monitoring programmes to be established
  - MSFD Programmes of measures developed and put into operation
  - MSFD Review of initial assessment, determination of GES, targets and indicators
  - WFD river basin management plans review
  - Habitats Directive (Art 17 Reporting)