



Joint documentation of regional coordination of Programmes of Measures in the Baltic Sea area

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Summary

This document gives an overview of the HELCOM *acquis* and its contribution to achieving good environmental status in the Baltic Sea Region. It describes the process and results of the regional coordination of measures and identifies opportunities for improved regional coherence of national measures and for additional joint regional actions. Possible actions for regional coordination and to reach HELCOM targets and objective have been recommended to HELCOM Working Groups and HOD for further consideration and specification as part of HELCOM's work.

While the joint documentation contained in this document is specifically intended for the use by the Contracting Parties to the Helsinki Convention being EU Member States in support of the establishment and reporting of regionally coordinated Programmes of Measures under Art. 13 of the EU Marine Strategy Framework Directive, the work towards an improved coordination of measures aims to benefit all Contracting Parties in HELCOM. It will result in filling in gaps identified in HELCOM work, such as the work on environmental targets for some major pressures on the Baltic Sea, and will provide an opportunity to reinforce the follow-up of the HELCOM Baltic Sea Action Plan.

1. Protecting the Baltic Sea marine ecosystems

The Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), 1974 and 1992, requires the Contracting Parties, individually or jointly, to take all appropriate legislative, administrative or other relevant measures to prevent and eliminate pollution in order to promote the ecological restoration of the Baltic Sea area and the preservation of its ecological balance. This includes all appropriate measures to conserve natural habitats and biological diversity and to protect ecological processes.

The Convention enshrines the precautionary principle, the polluter-pays principle and the promotion of the use of Best Environmental Practice and Best Available Technology as part of the fundamental principles and obligations of the Contracting Parties. Since 2003, the management of human activities by HELCOM is guided by the ecosystem approach.

The Helsinki Convention, the Ministerial Declarations, the Baltic Sea Action Plan (BSAP), the Recommendations and other agreements adopted by the Helsinki Commission (HELCOM) form the body of the already regionally agreed measures in HELCOM for the Baltic Sea, i.e. the "HELCOM *acquis*".

By the end of 2015, the HELCOM countries being EU Member States will have to establish regionally coordinated and coherent programmes of measures to achieve or maintain good environmental status under the EU Marine Strategy Framework Directive (2008/56/EU, MSFD). The Directive requires the Member States, among others, to take into account relevant measures required under Community legislation and international agreements when setting up their programmes of measures (Art. 13(2) MSFD).

It is to be noted that any inclusion of HELCOM *acquis* or other HELCOM measures by EU-Member States as a regional component of their national MSFD programmes of measures does not amend the legal nature of these measures, bearing in mind that Actions and Recommendations listed in the *Acquis* were often agreed well before setting the MSFD into force.

In support of the MSFD requirement and the continued implementation of the BSAP and its follow-up commitments, this document

- takes stock of the HELCOM *acquis* and points to the status of its implementation by the Contracting Parties,

- analyses the contribution of the HELCOM *acquis* to regional environmental objectives set for moving towards good environmental status under the BSAP and – where appropriate - the EU MSFD.
- takes stock of and analyses new national measures planned by HELCOM Contracting Parties to achieve good environmental status in their waters,
- identifies opportunities for improved coherence of national measures in the region and opportunities for additional joint regional actions, with a focus on transboundary issues.

Ultimately, the document is intended to provide a joint documentation for HELCOM EU Member States of their regional cooperation on, and coordination of, measures to reach good environmental status of the Baltic Sea Region under the EU MSFD. While the joint documentation is designed to support HELCOM EU Member States reporting under Art. 13(9) MSFD, the work on improved coordination of measures will benefit all Contracting Parties in HELCOM. Therefore, all HELCOM countries have been invited to contribute to the information exchange and associated evaluations.

2. Regional coordination

2.1 Implementation of the MSFD

The EU Commission's assessment of EU Member States' first implementation steps of the MSFD in 2012 highlighted certain weaknesses. This includes lack of quantification and shortcomings in the coherence of national approaches to defining good environmental status (Art. 9 MSFD) and setting environmental targets (Art. 10 MSFD). In the HELCOM input provided to MSFD CIS HELCOM EU countries inform how they intend to contribute to the CIS utilizing cooperation and activities in HELCOM.¹ This includes work within HELCOM to develop coordinated programmes of measures (see box). A HELCOM plan to improve regional coherence in moving towards good environmental status in the Baltic Sea region has been drafted.²

“Work towards developing coordinated programmes of measures, including joint elements, taking into account GEAR work and the HELCOM upcoming gap analysis, and develop as a first step coordinated measures on marine litter and noise. This implies support to agreement on a Marine Litter Baltic Action Plan in HELCOM (with a draft being available in early 2015 to be considered for public participation) in time for it to form a basis for Baltic EU Member States to take on board as a regional component of their Programme of Measures by 2015. Baltic Member States will also consider further opportunities for joint actions, elements of programmes of measures or coordinated programmes of measures, on the basis, i.a. of the results of the HELCOM gap analysis.”³

Ideally, cost-efficient measures are devised by reference to environmental targets, which quantify the reduction of the pressures required for achieving or maintaining good environmental status, however this quantification is not a legal requirement in the MSFD. By doing so, environmental targets bridge the gap between the current status and the desired (good) status of the marine environment. It is, therefore, necessary and urgent to develop regionally coherent definitions of good environmental status as a basis for such marine strategies. This is taken forward by HELCOM through its work on status core indicators and assessment methods.

¹ See Part 4 of Annex 4 to the MSFD CIS Work Plan as agreed by MD on 5 December 2014, <https://circabc.europa.eu/sd/a/9a4d2960-16ec-4e21-b949-c8f06035b8dd/MSFD%20CIS%20future%20work%20programme%202014%20-%20beyond%20-%20final.pdf>

² Draft HELCOM plan to improve regional coherence in moving towards good environmental status in the Baltic Sea region is available [here](#)

³ See meeting conclusions <https://circabc.europa.eu/sd/a/bb44ce45-694b-49c2-90cb-e8ae3e4bb99f/HELCOM%20regional%20meeting%20conclusions%20final%20clean.pdf>

HELCOM has set a number of qualitative or general management objectives. However, a common approach to devising quantitative environmental targets for pressures and associated measures is available to date only for eutrophication (BSAP Nutrient reduction scheme⁴). The HELCOM countries have committed to explore similar joint approaches to coherent target setting and measures for other transboundary issues.

“Prioritise further areas where greater regional convergence can be achieved in relation to environmental targets by 2018 over and above the approach for nutrient pollution”³

Science-based target setting and its application to management is a necessary as well as demanding and challenging task, which requires continued efforts beyond 2015. The starting point for developing environmental targets in other areas than eutrophication will be to develop joint principles for defining such targets for seafloor integrity/damage (2016) and underwater noise (2017/2018). Subsequently, pressures will be identified which would benefit from regionally agreed targets.

Regional Action Plans may provide a useful tool for developing comprehensive and quantified management strategies for other themes than eutrophication, following the latter example.

2.2 National programmes of measures

The regional coordination of national programmes of measures in HELCOM includes:

- the exchange of information and alignment of measures that are primarily of national concern and responsibility;
- the development of measures and actions at regional level with a focus on transboundary issues;
- the development of joint proposals for measures that are required to achieve good environmental status but are in the competence of the EU, international organizations (e.g. IMO, International River Basin Commissions) or third countries outside the EU and HELCOM (e.g. upstream-countries), and the agreement of concerted actions of the Contracting Parties to approach those bodies/countries through HELCOM.

The coordination process allows ensuring that national measures have a positive impact on waters under the jurisdiction of neighbouring countries and contribute to achieving or maintaining good environmental status at regional scale.

The coordination process has been taken forward in a two-step approach through the HELCOM Group for the implementation of the ecosystem approach (GEAR) and a temporal intersessional group on programmes of measures (IG PoM), set up by GEAR for this purpose:

- in 2014, Contracting Parties started sharing information on the national measures, which they consider necessary to achieve good environmental status in their waters;
- in 2015, the emphasis shifted to the analysis of proposed national measures by GEAR and other HELCOM subsidiary bodies with a view to identifying opportunities for improved coherence, joint approaches and regional actions and measures.

The coordination process needed to take account of the different timetables of the Contracting Parties' procedures to develop draft national programmes of measures and to submit them to public consultation (see table below).

⁴ <http://www.helcom.fi/baltic-sea-action-plan/nutrient-reduction-scheme/>

The timetable of public consultation processes of HELCOM EU Member States in relation to the development of MSFD programmes of measures are set out in the following table

<i>Public consultation of national MSFD programmes of measures of HELCOM countries being EU Member States</i>							
DE	DK	EE	FI	LT	LV	PL	SE
1.04.– 30.09.2015	tbc	1.04. – 1.11.2015	15.01- 31.3.2015	4.– 6.2015	tbc	tbc	01.02 –30.04 2015

An interim draft of this report had been prepared in February 2015 to document work in progress and to allow interested EU-Member States an early inclusion of regionally available information on regional coordination in national public consultation procedures under the MSFD. The interim draft provided a snapshot of the state of play at the time of possible measures under consideration in HELCOM countries and was not formally adopted by HELCOM Contracting Parties. Based on an analysis of planned national measures, Annex 1 provides an overview of the issues addressed and shared by Contracting Parties in their programmes of measures (status 28 February 2016) and their link to regional coordination processes.

Based on the shared measure topics, Contracting Parties identified possible additional opportunities for regional coordination in HELCOM for the following themes:

- input of nutrients and organic matter,
- inputs of synthetic and non-synthetic contaminants and systematic contaminants and/or intentional releases of substances,
- accidental pollution from maritime activities,
- spatial protection measures,
- conservation, restoration and reintroduction of species,
- physical loss and damage to the seafloor,
- selective extraction and incidental by-catch of species,
- introduction of non-indigenous species,
- input of litter,
- input of energy, including underwater noise.

2.3 Transboundary consultations

Contracting Parties used HELCOM GEAR and the UNECE Seminar on Cooperation under the Espoo Convention in the Baltic Sea Subregion to exchange information on national strategic environmental assessments of their programmes of measures and to coordinate their approaches to transboundary consultation processes under the Protocol on Strategic Environmental Assessment (UNECE SEA Protocol) to the Convention on Environmental Impact Assessment in a transboundary context (UNECE Espoo Convention). HELCOM Contracting Parties agreed practical arrangements for notifying and informing Baltic Sea countries under the SEA Protocol about their programmes of measures and the findings regarding likely significant effects of their programmes on other Baltic Sea countries' waters, and for inviting for participation in their public consultations. By 28 February 2016, transboundary participation had taken place by Sweden, participating in the Finnish and German public consultations of programmes of measures), and by Finland and Estonia, participating in the Swedish public consultation of programmes of measures.

3. The HELCOM *acquis*

By 2015, HELCOM had adopted some 265 Recommendations and a wealth of other agreements in order to tackle the pressures acting on the Baltic Sea environment and to improve the state of marine ecosystems. Over the past decades a substantial part of the HELCOM measures have been implemented. At the same time, the EU has increasingly covered the field of HELCOM's work, providing an additional driving force for the HELCOM countries being EU Member States to take action and to ensure the implementation of a consistent set of measures in the Baltic Sea region. The following documentation highlights selected HELCOM measures in support of achieving good environmental status. Specific focus is given to measures adopted with the BSAP in 2007 and since then.

The 2007 [Baltic Sea Action Plan](#) sets out the priorities for future actions and provides a package of measures to address the four themes of eutrophication, hazardous substances, biodiversity and maritime safety. The BSAP, complemented by the commitments resulting from the HELCOM Ministerial Meetings in 2010 and 2013, and existing [Recommendations](#) reflect the HELCOM *acquis* in relation to the four themes and is the foundation for the development of regionally coordinated programmes of measures.⁵

The HELCOM *acquis* includes regional frameworks for coordinated national measures as well as joint initiatives of the Contracting Parties. Such regionally concerted actions have led to international measures covering the entire Baltic Sea, e.g. the designation of the Baltic Sea as SOX Emission Control Area under IMO MARPOL Annex VI (air pollution) and as a special area under Annex V (garbage), or to a harmonized implementation of international measures in the region such as the IMO Ballast Water Management Convention.

An assessment of the implementation status of the HELCOM *acquis* has been done largely for the 2013 Ministerial Meeting⁶. It is planned to start in 2016 to put in place an online-management tool providing latest information on the implementation of the BSAP, Ministerial Declarations and HELCOM Recommendations.

The 2013 implementation assessment evaluated the progress on the implementation of the BSAP and follow-up commitments, including the implementation of HELCOM Recommendations on land-based pollution adopted since 2007⁷. This assessment identified gaps in the implementation of agreed measures and the need for additional measures to achieve the objectives of the BSAP. The 2013 HELCOM Copenhagen Declaration draws on the mentioned assessment and represents an agreement among the Baltic Sea countries and the EU on further action needed, including measures at all levels (national, regional, EU and global). The present coordination process can be seen as a follow-up of these further actions.

The segments of the BSAP address many of the pressures which require consideration under the MSFD in relation to the eleven descriptors (D) for good environmental status. Yet, the BSAP does not cover all pressures. Marine litter, underwater noise and physical damage and loss of the seafloor are not, or not adequately, covered. These pressures have been identified by the HELCOM Ministers in

⁵ Annex 4, Part 4, of the MSFD CIS Work Plan 2014-Beyond <https://circabc.europa.eu/sd/a/9a4d2960-16ec-4e21-b949-c8f06035b8dd/MSFD%20CIS%20future%20work%20programme%202014%20-%20beyond%20-%20final.pdf>

⁶ http://www.helcom.fi/Documents/Ministerial2013/Associated%20documents/Supporting/BSAP_Overview_wi th%20cover.pdf

⁷ <http://www.helcom.fi/Documents/Ministerial2013/Associated%20documents/Background/Reporting%20on% 20recent%20HELCOM%20Recs-LAND.pdf>

2010 and 2013 as areas requiring action. Other areas such as nutrient reduction, a well-managed coherent MPA network and the conservation of species, require intensification of existing efforts.

4. Coordination of programmes of measures

The thematic sections in this chapter describe the coordination of regional measures. Annex 3 complements the sections with proposed further actions on regional coordination under consideration by HELCOM. Coordination has been structured around the most important pressures acting on the Baltic Sea and spatial and restoration measures related to nature conservation. The thematic sections broadly reflect, and can be assigned to, the key type measures set up by the EU Commission as a means to structure EU Member State reporting under Art. 13(9) MSFD⁸. The structure of the chapter allows the HELCOM countries being EU Member States to link up their national reports with the thematic sections.

Each thematic cluster contains links to the state of the environment via descriptors of good environmental status and status core indicators as well as to the most crucial human activities or sectors causing the pressure. This structuring outlines the linkages along the drivers (D)-pressures (P)-state (S)-impact (I) chain and shows how the measures (response (R)) can be expected to act along that DPSIR chain.

The 2010 Holistic assessment of the ecosystem health of the Baltic Sea⁹ provides regional information on state, impacts and pressures. The assessment concluded that the most prominent pressures acting on the Baltic Sea ecosystems are eutrophication and different methods of fishing. Eutrophication resulting from nutrient enrichment remains a main Baltic Sea-wide problem, which impacts the functioning of marine ecosystems and counter-acts nature conservation efforts. Commercial fishing also results in a widespread pressure, and the elimination of top predators from the food chain remains a major concern. Especially bottom trawling affects large areas of the seafloor and associated biodiversity. Also other activities such as construction works, dredging and the disposal of dredged material disturb the seafloor and can have impacts on local marine environments. Shipping and offshore activities contribute to contaminant pollution and are accountable for accidental or illegal oil spills.

The HELCOM Ministers in their Declarations of Moscow (2010) and Copenhagen (2013) recognised the pressures from marine litter and noise-generating activities on marine organisms and the need to act on them.

4.1 Inputs of nutrients and organic matter

State or impact	Eutrophication (MSFD descriptor 5) is one of the main threats to the biodiversity of the Baltic Sea and is caused by excessive inputs of nutrients (nitrogen and phosphorus) mainly from land based sources such as agriculture, municipal waste water, transport and combustion activities. At sea, airborne emissions and waste water discharges from ships are the greatest source of nutrient inputs. Eutrophication is assessed through HELCOM status core indicators:
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⁸ Link to the EU COM CIS Recommendation on programmes of measures, https://circabc.europa.eu/sd/a/26f71a0d-bf1a-4914-a9f6-8fad0b49deb0/MD2014-2-2%20Item%20%202_REV_CIS%20Updated%20POM%20recommendation_with%20comments%2021.11.2014.pdf

⁹ HOLAS I assessment report BSEP 122. On the main pressures and impacts as well as priorities for actions see Chapter 4 of the HOLAS I assessment report. <http://helcom.fi/Lists/Publications/BSEP122.pdf>

	<ul style="list-style-type: none">– Average DIN concentration in the surface (0 – 10 m) during winter– Average DIP concentration in the surface (0 – 10 m) during winter– Average chlorophyll-a concentration in the surface (0 – 10 m) during summer– Average Secchi depth during summer– Average oxygen debt below halocline												
Impacts on species and biotopes	<p>Excessive inputs of nutrients and organic matter impact the overall water quality and ecosystem functioning, with main direct and indirect impacts on:</p> <ul style="list-style-type: none">– Fish– Birds– Pelagic habitats– Benthic habitats <p>See Annex 2 for threatened species (in particular birds, fish, macrophytes and benthic invertebrates) and biotopes impacted by nutrient and organic matter inputs.</p>												
Activities or sectors causing the pressure	<p>Land-based activities</p> <ul style="list-style-type: none">– waterborne inputs from:<ul style="list-style-type: none">• agriculture and forestry• municipalities, industries and aquaculture– airborne emissions from<ul style="list-style-type: none">• transport and energy sector• other combustion activities <p>Seaborne activities</p> <ul style="list-style-type: none">– water borne discharges and inputs from:<ul style="list-style-type: none">• shipping• aquaculture– airborne emissions from<ul style="list-style-type: none">• shipping												
HELCOM environmental target(s) and distance from target	<p>2013 HELCOM Ministerial Declaration:</p> <ul style="list-style-type: none">– <i>Maximum Allowable Inputs (MAIs)</i> of nutrients to the Baltic Sea are 792209 tonnes of nitrogen per year and 21716 tonnes of phosphorus per year.– <i>Country-wise Allocated Reduction Targets (CARTs)</i> of nutrients were agreed for each Contracting Party by the HELCOM 2013 Ministerial Meeting. This is based on the assumption of reductions by shipping and other countries in the order of 28880 tonnes nitrogen per year and 800 tonnes phosphorus per year. <p>Assessment of the progress towards the achievement of the national reduction targets for the period 2010-2012 is expected to become available in 2015. A report of the related core pressure indicator on progress to reduce nutrients MAI has already been published on the HELCOM website. CART indicates how much HELCOM countries needs to reduce nutrient inputs compared to a reference period (1997-2003)</p> <table><tr><th>The country-wise reduction targets (CART) set by the 2013 Ministerial Declaration</th><th>Nitrogen t</th><th>Phosphorus t</th></tr><tr><td>Denmark</td><td>2890</td><td>38</td></tr><tr><td>Estonia</td><td>1800</td><td>320</td></tr><tr><td>Finland</td><td>3030</td><td>356</td></tr></table>	The country-wise reduction targets (CART) set by the 2013 Ministerial Declaration	Nitrogen t	Phosphorus t	Denmark	2890	38	Estonia	1800	320	Finland	3030	356
The country-wise reduction targets (CART) set by the 2013 Ministerial Declaration	Nitrogen t	Phosphorus t											
Denmark	2890	38											
Estonia	1800	320											
Finland	3030	356											

	Germany	7670	170
	Latvia	1670	220
	Lithuania	8970	1470
	Poland	43610	7480
	Russia	10380	3790
	Sweden	9240	530
	Reduction expectations towards other sources	Nitrogen t	Phosphorus t
	Baltic Sea shipping	6930	
	Other countries in catchment and transboundary input	21950	800
	Total	118140	15174
HELCOM <i>acquis</i>	<p><i>Helsinki Convention:</i></p> <ul style="list-style-type: none"> – Annex III <p><i>Baltic Sea Action Plan:</i></p> <ul style="list-style-type: none"> – Eutrophication segment <p><i>HELCOM Ministerial Meeting Declaration (2010 or 2013):</i></p> <ul style="list-style-type: none"> • updated MAI and CART from 2013 • any decisions regarding sectors on curbing loads <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 28E-4, Amendments to Annex III “Criteria and measures concerning the prevention of pollution from land - based sources” of the 1992 Helsinki Convention – 28E-5, Municipal wastewater treatment – 28E-6, On-site wastewater treatment of single family homes, small businesses and settlements up to 300 person equivalents – 28E-7, Measures aimed at the substitution of polyphosphates (phosphorus) in detergents 		
Relevant global, EU and Russian measures	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), UNECE Convention on Long-range Transboundary Air Pollution (including the Gothenburg Protocol), London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, International Convention for the Prevention of Pollution from Ships (MARPOL), EU Water Framework Directive, EU Nitrates Directive, EU Urban Waste Water Treatment Directive, EU Industrial Emissions Directive, EU Directive on Port Reception Facilities, Water Code of the Russian Federation		
Further actions to be considered	<p>4.1.1 Management of [internal load/endogenous nutrient reserves] [accumulated nutrients / stored nutrients]</p> <p>4.1.2 Intensifying HELCOM work to reduce airborne transboundary nitrogen input from outside of HELCOM area, in particular through the Gothenburg Protocol</p>		
Indicators for follow-up of the pressure	HELCOM core indicator on progress in reducing nutrient inputs to reach Maximum Allowable Inputs. <i>Assessment of progress towards country-wise allocated reduction targets (CART) under finalization</i>		

4.2 Inputs of synthetic and non-synthetic contaminants and systematic and/or intentional release of substances

State or impact	<p>Hazardous substances (MSFD descriptor 8) can accumulate in the marine food web up to levels which are toxic to marine organisms, particularly predators, and they may also represent a health risk for people through fish consumption. Certain contaminants may be hazardous because of their toxicity, persistence and bio-accumulating properties or because of their effects on hormone and immune systems.</p> <p>Contaminant status is assessed by means of the HELCOM core indicators:</p> <ul style="list-style-type: none"> – Polybrominated diphenyl ethers (PBDE) – Hexabromocyclododecane (HBCD) – Perfluorooctane sulphonate (PFOS) – Polychlorinated biphenyls and dioxins and furans – Polyaromatic hydrocarbons and their metabolites – Metals (lead, cadmium and mercury) – Tributyltin (TBT) and imposex – Radioactive substances
Impacts on species and biotopes	<p>Inputs of contaminants impact overall water quality, with main impacts on:</p> <ul style="list-style-type: none"> – Birds – Mammals – Fish – Cephalopods – Pelagic habitats – Benthic habitats <p>See Annex 2 for threatened species (in particular birds, fish and mammals) and biotopes impacted by inputs of contaminants.</p>
Activities or sectors causing the pressure	<p>Land-based activities</p> <ul style="list-style-type: none"> – waterborne losses from: <ul style="list-style-type: none"> • municipalities, industries and products – heavy metals, PCB and pharmaceuticals • agriculture – pharmaceuticals, pesticides – airborne emissions from <ul style="list-style-type: none"> • car traffic and energy sector – PAH, heavy metals, dioxins • industrial emissions - PBDE, HBCDD, PFOS, PAH, PCB, heavy metals, dioxins • combustion activities – heavy metals, PAH, dioxins <p>Seaborne activities</p> <ul style="list-style-type: none"> – waterborne losses from: <ul style="list-style-type: none"> • shipping – TBT, illegal discharges • aquaculture – pharmaceuticals
HELCOM environmental target(s) and distance from target	<p>No common environmental targets for hazardous substances have been agreed. For illegal oil-spills a zero spill target is agreed. A pressure core indicator on oil spills is expected to be adopted in December 2015.</p>
HELCOM acquis	<p><i>Helsinki Convention:</i></p> <ul style="list-style-type: none"> – Article 5 and Annex I Harmful Substances – Part I of Annex III Criteria and measures concerning the prevention of pollution from land-based sources – Annex VI Prevention of Pollution from offshore activities

	<ul style="list-style-type: none"> – Regulation 3 on surveillance of illegal oil spills of Annex VII – Action Plan for the protection of the environment from offshore platforms (“zero-discharge principle”) <p><i>Baltic Sea Action Plan:</i></p> <ul style="list-style-type: none"> – Hazardous substances segment <p><i>HELCOM Ministerial Meeting Declarations (2010 and 2013)</i></p> <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 28E-8, Environmentally friendly practices for the reduction and prevention of emissions of dioxins and other hazardous substances from small-scale combustion – 29-1, Reduction of emissions from crematoria – 31E-1, Implementing HELCOM’s objective for hazardous substances – 31E-2, Batteries and accumulators and waste batteries and accumulators containing mercury, cadmium or lead – 31E-3, Cadmium in fertilizers – 31E-4, Proper handling of waste/landfilling – HELCOM Recommendation on dredged material (in progress) – 26/3, Monitoring of radioactive substances – 18-2, offshore activities <p><i>Other HELCOM measures:</i></p> <p>HELCOM Maritime and Response initiatives</p>
Relevant global, EU and Russian measures	<p>UNECE Convention on Long-range Transboundary Air Pollution, Stockholm Convention on Persistent Organic Pollutants, London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, MARPOL International Convention for the Prevention of Pollution from Ships, Minamata Convention on Mercury, EU Water Framework Directive, EU Environmental Quality Standards Directive, EU Industrial Emissions Directive, , EU Large Combustion Plants Directive, EU Waste Incineration Directive, EU Volatile Organic Compound (VOC) Solvents Directive, Law on environment protection of the Russian Federation</p>
Further actions to be considered	<p>4.2.1 Micropollutants in effluents from wastewater treatment plants</p>
Indicators for follow-up of the pressure	<p>HELCOM has agreed on a number of supporting parameters related to monitor trends in inputs of hazardous substances:</p> <ul style="list-style-type: none"> – Atmospheric deposition of heavy metals on the Baltic Sea – Atmospheric deposition of PBCDD/Fs on the Baltic Sea – Atmospheric emissions of heavy metals in the Baltic Sea region – Atmospheric emissions of PCDD/Fs in the Baltic Sea region – Emissions from Baltic Sea shipping – Illegal discharges of oil in the Baltic Sea – Liquid discharges of Cs-137, Sr-90 and Co-90 into the Baltic Sea

4.3 Accidental pollution from maritime activities

State or impact	<p>Accidental pollution from shipping, oil and gas exploration and exploitation and other offshore activities add to pollution of the marine environment with oil, hazardous substances and other substances and material (e.g. cargo). For the HELCOM status core indicators on hazardous substances see section 4.2.</p>
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	For oil pollution and pollution with other substances and material, other than illegal discharges of oil, no specific core indicator exists. The indicator on polyaromatic hydrocarbons and their metabolites (section 4.2) is also relevant for oil pollution.
Impacts on species and biotopes	<p>Accidental pollution impacts overall water quality, with main impacts on:</p> <ul style="list-style-type: none"> – Birds – Mammals – Fish – Cephalopods – Pelagic habitats – Benthic habitats <p>See Annex 2 for threatened species (in particular birds) and biotopes impacted by accidental oil spills.</p>
Activities or sectors causing the pressure	<p>The risk of pollution accidents in the Baltic Sea includes:</p> <ul style="list-style-type: none"> – Leakages resulting from collisions and groundings of ships, with potential for large volumes spilled – Leakages resulting from accidental pollution during bunkering and loading of ships, commonly involving smaller volumes – Leakages from storage tanks of oil or other substances in coastal facilities – Leakages from wrecks and lost cargo (consequences of accidents) – Leakages from oil rigs in the Baltic Sea (Poland and Russia)
HELCOM environmental target(s) and distance from target	<p>There are no common quantitative environmental targets.</p> <p>BSAP objectives:</p> <ul style="list-style-type: none"> – Safe maritime traffic without accidental pollution – Efficient emergency and response capability
HELCOM acquis	<p>Prevention of pollution incidents from ships</p> <p><i>Helsinki Convention</i></p> <ul style="list-style-type: none"> – Article 8, 9 and 13 and Annex IV on Prevention of pollution from ships – both sizeable ships (IMO regulated) and pleasure crafts <p><i>Baltic Sea Action Plan</i> segment on maritime activities</p> <p><i>HELCOM Ministerial Declarations 2010 and 2013</i></p> <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 34E-2, Further testing and developing the concept of pro-active route planning as well as other e-navigation solutions to enhance safety of navigation and protection of the marine environment in the Baltic Sea Region – 31E-5, Mutual plan for places of refuge in the Baltic Sea area – 28-11, Further measures to improve the safety of navigation in ice conditions in the Baltic Sea – 28-3, Guidelines on bunkering operations and ship to ship cargo transfer of oils, subject to Annex I of MARPOL 73/78, in the Baltic Sea area – 28-2, Recording of fuel oil bunkering operations in the oil record book and documentation for the use of reception facilities – 25-5, Assessment of the need for escort towing in tanker transport routes to prevent accidents in the Baltic Sea area – 33-1, Unified interpretation in relation to access to and use of HELCOM AIS <p><i>Other HELCOM Measures</i></p> <p>HELCOM-Baltic Sea Hydrographic Commission Harmonized Re-survey Scheme</p>

	<p>2013</p> <p>Response to pollution incidents</p> <p><i>Helsinki Convention:</i></p> <ul style="list-style-type: none"> – Article 14 and Annex VII Response to Pollution accidents – both accidents at sea and at the shore <p><i>Baltic Sea Action Plan:</i></p> <ul style="list-style-type: none"> – Segment on maritime activities <p><i>HELCOM Ministerial Declarations 2010 and 2013</i></p> <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 36-3, Marine pollution incident reporting and requests for assistance between Contracting Parties in the Baltic Sea area – 34E-4, Airborne surveillance with remote sensing equipment in the Baltic Sea Area – 31E-6, Integrated wildlife response planning in the Baltic Sea area – 33-3, Reporting on incidents involving harmful substances and emergency dumping – 33-2, Co-operation in response to spillages of oil and other harmful substances on the shore – 31-1, Development of national ability to respond to spillages of oil and other harmful substances – 28-2, Recommendation concerning recording of fuel oil bunkering operations in the oil record book and documentation for the use of reception facilities – 24-9, Ensuring adequate emergency capacity – 31E-5, Mutual plan for places of refuge in the Baltic Sea area – 28E-12, Strengthening of sub-regional cooperation in response field – 23-2, Co-operation and assistance to Estonia, Latvia, Lithuania and Russia in the field of combatting marine pollution incidents – actions, Restricted use of chemical agents and other non-mechanical means in oil combatting operations in the Baltic Sea – 20-5, Minimum ability to respond to oil spillages in oil terminals – 19-17, Measures in order to combat pollution from offshore units – 17-12, Measures to abate pollution by oil and other harmful substances in cases of grounding, collision, sinking of a ship or other maritime casualty – 12-7, Special cooperation in case of a chemical tanker accident in the Baltic Sea <p><i>Other HELCOM Measures</i></p> <p>HELCOM Response Manual (sea and shore response, wildlife response, chemical)</p> <p>HELCOM tool SeaTrackWeb to forecast and hind-cast the fate of spilled oil</p>
Relevant global, EU and Russian measures	<p>International Convention for the Prevention of Pollution from Ships (MARPOL), 1973</p> <p>International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990</p> <p>Nairobi International Convention on the Removal of Wrecks, 2007</p> <p>International Convention on Civil Liability for Oil Pollution Damage (CLC), 1969</p> <p>Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND), 1992</p> <p>International Convention on Civil Liability for Bunker Oil Pollution Damage,</p>

	2001
Further actions to be considered	4.3.1 Regional risk assessment tool for ships
Indicators for follow-up of the pressure	<p>Illegal pollution as observed from aerial surveillance (HELCOM Annual illegal spills report)</p> <p>Ship accidents in the Baltic Sea region (HELCOM Annual accident report)</p>

4.4 Spatial protection measures

State or impact	<p>Spatial protection measures comprise the spatial management and/or restrictions of human activities under various policies (e.g. nature conservation, shipping, fisheries, spatial planning).</p> <p>Coastal and Marine Baltic Sea Protected Areas (HELCOM MPAs¹⁰) aim to protect valuable marine and coastal species and habitats in the Baltic Sea. This is done by designating suitable areas which have particular nature values and by managing human activities within those areas. For effective protection, the MPAs should be part of a network that takes into account connectivity, e.g. the possibility for larvae to disperse between the protected areas. This is done by considering the size and spacing between the MPAs and the representation of different kinds of species and habitats. In this way the network can protect the environment better than individual MPAs. Effective protection requires a management plan for each MPA.</p> <p><i>Spatial protection is a measure towards achieving:</i></p> <ul style="list-style-type: none"> – BSAP goal: A favourable conservation status of Baltic Sea biodiversity – GES for MSFD descriptors: Biological diversity is maintained (descriptor 1). All elements of marine food webs occur at normal abundance (descriptor 4) and Seafloor integrity ensures the structure and function of ecosystems (descriptor 6).
HELCOM environmental target(s) and distance from target	<p>Regional targets stem from HELCOM Recommendation 35/1 System of Coastal and Marine Baltic Sea Protected Areas (HELCOM MPAs). The recent overview assesses the current situation in relation to the set targets.</p> <ul style="list-style-type: none"> – <i>At least 10% of the marine area in all sub-basins of the Baltic Sea including the EEZ areas beyond territorial waters is covered by MPAs where scientifically justified.</i> Analyzed most recently in 2013¹¹: <ul style="list-style-type: none"> – the target has been reached for the Baltic Sea as a whole (11.7% in 2013) but not in the Baltic Proper and the Gulf of Bothnia – protected areas in the Exclusive Economic Zone (EEZ) have not increased between 2010 and 2013, with 4.6% of the EEZ protected in 2013. – <i>An ecologically coherent network of protected areas</i> – analyzed most recently in 2010 (BSEP 124A and B), concluding, e.g. that: <ul style="list-style-type: none"> – criteria of adequacy met in terms of size of protected areas but not in the sense that e.g. the majority of protected areas are

¹⁰ Former BSPAs

¹¹ [Overview of the status of the network of Baltic Sea marine protected areas. Approved for publishing by HELCOM HOD 42/2](#)

	<p>effected by eutrophication</p> <ul style="list-style-type: none"> – a set of indicator species and biotopes was, with a few exceptions, found to be represented in the Baltic Sea wide network of MPAs, but offshore areas were poorly represented – a set of indicator species and biotopes was found to be adequately replicated in the MPA network, but a number of broad-scale landscapes were found not be adequately replicated – good connectivity was only found for the species with the dispersal distance >100 kilometers, and poor connectivity of many landscape types. <p>– <i>Management plans in place by 2015 / five years after MPA designation, harmonized for neighboring MPAs in transboundary areas</i> - in 2013:</p> <ul style="list-style-type: none"> – 111 (64%) of the HELCOM MPAs had a management plan in force. 42 (24 %) had a management plan in preparation, and 21 (12 %) had no management plan. – A planned assessment of management plans can be used to provide an estimate of the distance from the target set for 2015. <p>– <i>HELCOM MPAs should provide specific protection to those species, habitats, biotopes and biotope complexes included in the HELCOM Red Lists (HELCOM Recommendation 35/1):</i> Not systematically analysed yet.</p> <p>– <i>HELCOM MPAs included as areas of particular ecological significance in coastal and maritime spatial planning processes and their management provisions incorporated in spatial plans and Integrated Marine and Coastal Management Strategies:</i> Not systematically analysed yet.</p>
HELCOM acquis	<p><i>Helsinki Convention:</i></p> <ul style="list-style-type: none"> – Article 15 Nature conservation and biodiversity <p><i>Baltic Sea Action Plan:</i></p> <ul style="list-style-type: none"> – Biodiversity segment <p><i>HELCOM Ministerial Meeting Declaration (2013), e.g.:</i></p> <ul style="list-style-type: none"> – Species, habitats and biotopes included in the HELCOM Red List are priorities for protection – Measures to halt the loss of all threatened marine habitats and biotopes in the Baltic Sea should be taken, their recovery should be facilitated, their degradation and fragmentation should be significantly reduced by 2020 <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 35/1, System of Coastal and Marine Baltic Sea Protected Areas (HELCOM MPAs)¹²
Relevant global, EU and Russian measures	<p>Convention on Biological Diversity, agreement to establishment of Ecologically and Biologically Significant Areas (EBSAs).</p> <p>Natura 2000 network comprised of Special Areas of Conservation (SAC) designated under the EU Habitats Directive, and incorporating Special Protection Areas (SPAs) designated under the EU Birds Directive.</p> <p>Ramsar sites designated under the Ramsar Convention of Wetlands.</p> <p>Emerald network, made up of Areas of Special Conservation Interest established under the Bern Convention.</p>

¹² Former BSPAs

	Directive 2014/89/EU: Establishing a framework for maritime spatial planning.
Further actions to be considered	4.4.1 Coordination of management measures of pressures and impacts on MPAs, in particular for adjacent transnational MPAs 4.4.2 How to consider MPAs in Maritime Spatial Planning and vice versa? 4.4.3 Develop joint tools/approach for assessing effectiveness of spatial protection measures for individual sites as well as network level
Indicators for follow-up of regional actions and measures	<i>Under development</i>

4.5 Conservation, restoration and/or reintroduction of species and biotopes/habitats

State or impact	Conservation plans, restoration and reintroduction are measures to improve the state of species and habitats and towards achieving: <ul style="list-style-type: none"> – BSAP goal: A favourable conservation status of Baltic Sea biodiversity – GES for MSFD descriptors: Biological diversity (descriptor 1), Food webs (descriptor 4) and Seafloor integrity (descriptor 6).
Activities	<ul style="list-style-type: none"> – Spatial protection measures (see section 4.4), Maritime Spatial Planning (MSP) and other spatial regulations – Reinstatement/restoration activities for species and habitats/biotopes – Any specific species or biotope –wise measures, not being part of the previous chapter – HELCOM Sturgeon Project with the goal to re-establish viable natural populations of Baltic Sea sturgeon by conducting releases in Germany and Poland in the Odra and Vistula river areas (already some 50.000 juveniles released) and the development of a HELCOM Sturgeon Action Plan
HELCOM environmental target(s) and distance from target	2013 HELCOM Ministerial Declaration: <ul style="list-style-type: none"> – ‘...by 2020, regionally, the loss of all red listed marine habitats and biotopes in the Baltic Sea will be halted and they have largely recovered, and the degradation and fragmentation have been significantly reduced...’
HELCOM acquis	<i>Helsinki Convention:</i> <ul style="list-style-type: none"> – Article 15 Nature conservation and biodiversity <i>Baltic Sea Action Plan:</i> <ul style="list-style-type: none"> – Biodiversity segment, including the Ecological objective: habitats, including associated species, show a distribution, abundance and quality in line with prevailing physiographic, geographic and climatic conditions 2013 HELCOM Ministerial Declaration, e.g.: <ul style="list-style-type: none"> – species, habitats and biotopes included in the HELCOM Red List are priorities for protection – conservation plans for species, habitats and biotopes at risk of extinction should be established by 2015 – protect sturgeon through supporting the HELCOM project on Baltic

	<p>sturgeon remediation...</p> <ul style="list-style-type: none"> – protect the ringed seal in the Gulf of Finland, ... immediate action is needed to significantly reduce by-catch and to improve the understanding of the other direct threats on the seals... – take decisive action to work towards a favourable conservation status of the harbor porpoise ... in particular by addressing the pressing problem of by-catch <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 34E-1, Safeguarding important bird habitats and migration routes in the Baltic Sea from negative effects of wind and wave energy production at sea – 32-33-1 Conservation of Baltic salmon (<i>Salmo salar</i>) and sea trout (<i>Salmo trutta</i>) populations by the restoration of their river habitats and management of river fisheries – 19-2, Protection and improvement of the wild salmon *) (<i>Salmo salar</i> l.) populations in the Baltic Sea area – 27-28-2, Conservation of seals in the Baltic Sea area – 28E-9, Development of broad-scale marine spatial planning principles in the Baltic Sea area – 21-4, Protection of heavily endangered or immediately threatened marine and coastal biotopes in the Baltic Sea area – 17-2, Protection of harbour porpoise in the Baltic Sea area – HELCOM Recommendation on conservation for HELCOM red listed species expected for 2015
Relevant global, EU and Russian measures	<p>ASCOBANS: Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas</p> <p>Convention on Biological Diversity, Aichi targets, target 15: 'By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.'</p> <p>EU biodiversity strategy 2020</p> <p>Target 2: By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems.</p> <p>Action 6: Set priorities to restore and promote the use of green infrastructure</p> <p>Target 4: Ensure that sustainable use of fisheries resources achieve Maximum Sustainable Yield (MSY) by 2015. Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the MSFD.</p>

Further actions to be considered	4.5.1 Activities to support conservation of Baltic Sea species and biotopes/habitats categorized as threatened according to the HELCOM Red List ¹³
Indicators for follow-up of regional actions and measures	<p>Proposed indicators to follow-up measures (under development):</p> <ul style="list-style-type: none"> – New recommendations on conservation plans for threatened species, biotopes, biotope complexes and habitats in place¹⁴ – Area of red listed marine habitats and biotopes¹⁵ <p>HELCOM status core indicators that are potentially useful to follow up effect of measures:</p> <ul style="list-style-type: none"> – Population growth rate, abundance and distribution of marine mammals – Abundance of waterbirds in the wintering season – Abundance of waterbirds in the breeding season – Abundance of sea trout spawners and parr – Abundance of salmon spawners and smolt <p>Pre-core indicator:</p> <ul style="list-style-type: none"> – Extent, pattern and distribution of benthic biotopes <p>Results of the upcoming (2019) Red list assessments on species and biotopes/habitats.</p>
Indicators for follow-up of the pressure	The pre-core indicator “Distribution, pattern and extent of benthic biotopes” will measure the reduction in degradation and fragmentation of biotopes caused by pressure on benthic biotopes.

4.6 Physical loss and damage of seabed habitats

Action on physical loss and damage	
State or impact	<p>Loss and fragmentation of seabed habitats is a major pressure on the Baltic Sea biodiversity and ecosystem functioning.</p> <p>Actions on physical loss and damage are measures towards achieving:</p> <ul style="list-style-type: none"> – BSAP goal: A favourable conservation status of Baltic Sea biodiversity. – GES for MSFD descriptors: Seafloor integrity ensures the structure and function of ecosystems (descriptor 6), biological diversity is maintained (descriptor 6). All elements of the marine food web occur at normal abundance (descriptor 4). <p>The status of seabed habitats and associated communities are assessed through the HELCOM core indicators:</p> <ul style="list-style-type: none"> – State of the soft-bottom macrofauna communities – Population structure of long-lived macrozoobenthic species <p>and the pre-core indicators:</p> <ul style="list-style-type: none"> – Cumulative impact on benthic biotopes

¹³ Note that Denmark maintained the study reservation on the draft Recommendation at HOD 49-2015. Intersessional work established under lead of Germany with a view of reaching agreement by HELCOM 37-2016.

¹⁴ Note that Denmark maintained the study reservation on the draft Recommendation at HOD 49-2015. Intersessional work established under lead of Germany with a view of reaching agreement by HELCOM 37-2016.

¹⁵ Note that Denmark maintained the study reservation on the draft Recommendation at HOD 49-2015. Intersessional work established under lead of Germany with a view of reaching agreement by HELCOM 37-2016.

	<ul style="list-style-type: none"> – Distribution, pattern and extent of benthic biotopes
Impacts on species and biotopes	<p>Physical loss or damage of seabed habitats impact:</p> <ul style="list-style-type: none"> – Birds – Fish – Benthic habitats <p>See Annex 2 for threatened species (in particular fish, birds, benthic invertebrates, macrophytes) and biotopes impacted by the physical loss or damage of seabed habitats.</p>
Activities or sectors causing the pressure	<p>Man-made structures:</p> <ul style="list-style-type: none"> – Tourism/leisure infrastructure – Ports and other coastal constructions – Offshore marine infrastructure (including associated with mineral and energy extraction) – Cables & pipelines <p>Extraction of non-living resources:</p> <ul style="list-style-type: none"> – Extraction of oil and gas – Extraction of sand and gravel – Extraction of rock & minerals <p>Extraction of living resources:</p> <ul style="list-style-type: none"> – Fish & shellfish harvesting (professional, recreational), including effects from bottom-contacting gear <p>Landscape restructuring:</p> <ul style="list-style-type: none"> – Dredging and dumping of dredged material
HELCOM environmental target(s) and distance from target	No common quantitative HELCOM environmental targets have been agreed
HELCOM acquis	<p><i>Helsinki Convention:</i></p> <ul style="list-style-type: none"> – Article 15 Nature conservation and biodiversity – Article 11 and Annex V requiring that dumping of dredged material is subject to special permit <p><i>Baltic Sea Action Plan:</i></p> <ul style="list-style-type: none"> – Biodiversity segment, including the Ecological objective: restoring and maintaining seafloor integrity at a level that safeguards the functions of the ecosystems. <p><i>HELCOM Ministerial Declaration (2013), e.g.:</i></p> <ul style="list-style-type: none"> – 1K: develop assessment for c) impacts of fisheries on other species and on the seabed, <p><i>HELCOM Recommendations:</i></p> <ul style="list-style-type: none"> – 19-1, Marine Sediment Extraction in the Baltic Sea Area (including guidelines for sediment extraction) – 17-3, Information and Consultation with regard to Construction of New Installations Affecting the Baltic Sea – 21-4, Protection of Heavily Endangered or immediately Threatened Marine and Coastal Biotopes in the Baltic Sea Area – 36-2, Management of Dredged Material <p><i>Other HELCOM Measures</i></p> <p>HELCOM Guidelines for Management of Dredged Material at Sea</p>
Relevant global, EU and Russian measures	Convention of Biological Diversity, Aichi targets, target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is

	<p>significantly reduced.</p> <p>EU biodiversity strategy 2020, Target 2 Maintain and restore ecosystems and their services.</p> <p>Habitats Directive.</p> <p>Water code of the Russian Federation; the law on internal waters, territorial sea and contiguous zone of the Russian Federation; the law on environmental protection of the Russian Federation and subordinated legal acts.</p>
Further actions to be considered	4.6.1 Development of joint principles for defining environmental targets for seabed habitats
Indicators for follow-up of the pressure	Pressure indicators/data layers (VMS data for fishing activities, information on structures, dumping, etc.) in combination with core and pre-core state indicators (in particular cumulative impact on benthic habitats)

4.7 Selective extraction and incidental by-catch of species

State or impact	<p>The selective extraction of species refers to commercial and recreational fishing of targeted species, and also to hunting and collection of living organisms for non-food purposes.</p> <p>Selective fishing unavoidably results in the by-catch of non-target species such as benthic invertebrates, other fish species, seabirds, and marine mammals. By-catch is particularly critical for the population of species that are already threatened.</p> <p>Actions on selective extraction and incidental by-catch of species are measures towards achieving:</p> <ul style="list-style-type: none"> – BSAP ecological objectives: Thriving and balanced communities of plants and animals, and viable populations of species. – GES for MSFD descriptors: Populations of commercially exploited fish and shellfish are within safe biological levels (descriptor 3), Biological diversity is maintained (descriptor 1), and all elements of the marine food web occur at normal abundances (descriptor 4). <p>HELCOM does not evaluate the status of commercially exploited fish and shellfish stocks. The status of some fish communities is evaluated through the HELCOM core indicators:</p> <ul style="list-style-type: none"> – Abundance of key coastal fish species – Abundance of key coastal fish functional groups – Proportion of large fish in the community (off-shore) – Abundance of seatrout spawners and parr – Abundance of salmon spawners and smolt <p>and status of mammals and birds through:</p> <ul style="list-style-type: none"> – Population growth rate, abundance and distribution of marine mammals – Abundance of waterbirds in the wintering season – Abundance of waterbirds in the breeding season
Impacts on species and biotopes	<p>The extraction of living species and by-catch has an overall impact on food webs and ecosystem functioning, with direct and indirect impacts on:</p> <ul style="list-style-type: none"> – Birds – Fish – Cephalopods – Mammals

	<ul style="list-style-type: none"> – Pelagic habitats – Benthic habitats <p>See Annex 2 for threatened species (in particular fish, birds and mammals) and biotopes impacted by the selective extraction and by-catch of species.</p>
Activities or sectors causing the pressure	<ul style="list-style-type: none"> – Fish & shellfish harvesting (professional and recreational) which results in catch of target and non-target species, including also mammals, birds and benthic invertebrates – Hunting of fish (e.g. bait) and eggs collecting for non-food purposes,
HELCOM environmental target(s) and distance from target	No environmental targets have been agreed at the regional level. A pressure core indicator ' Number of drowned mammals and waterbirds in fishing gears ' with associated environmental target is under development.
HELCOM acquis	<p><i>Helsinki Convention</i></p> <ul style="list-style-type: none"> – Article 15 Nature conservation and biodiversity <p><i>Baltic Sea Action Plan</i> biodiversity segment e.g.</p> <ul style="list-style-type: none"> – by 2015 by-catch of harbour porpoise, seals, water birds and non-target fish species has been significantly reduced with the aim to reach by-catch rates close to zero – to increase knowledge on and protection of Baltic Sea marine habitats, communities and species by 2010 by further developing in co-operation with the 1991 Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS) a coordinated reporting system and database on Baltic harbour porpoise sightings, by-catches and strandings – to increase knowledge on and protection of Baltic Sea marine habitats, communities and species by the development and implementation of effective monitoring and reporting systems for by-caught birds and mammals – adoption of measures to minimise by-catch of undersized fish and non-target species by 2012 – an evaluation of the effectiveness of existing technical measures, by 2008, to minimise by-catch of harbour porpoises, and to introduce adequate new technologies and measures. <p><i>HELCOM Ministerial Declaration (2013), e.g.:</i></p> <ul style="list-style-type: none"> – protect the ringed seal in the Gulf of Finland, ... immediate action is needed to significantly reduce by-catch and to improve the understanding of the other direct threats on the seals... – take decisive action to work towards a favourable conservation status of the harbor porpoise...in particular by addressing the pressing problem of by-catch. <p><i>HELCOM Recommendations</i></p> <ul style="list-style-type: none"> – 27-28-2, Conservation of Seals in the Baltic Sea Area, specifically: para 6) “to develop and to apply where possible non-lethal mitigation measures for seals to reduce bycatch and damage to fishing gear, as well as to support and coordinate the development of efficient mitigation measures”. – 17-2, Protection of harbour porpoise in the Baltic Sea area, specifically: para a) “give highest priority to avoiding by-catches of harbour porpoises, particularly following the recommendations of ASCOBANS and the ASCOBANS Jastarnia Plan, in order to achieve the ecological objective of the Baltic Sea Action Plan: “By 2015 by-

	catch of harbour porpoise, seals, water birds and non-target fish species has been significantly reduced with the aim to reach by-catch rates close to zero.
Relevant global, EU and Russian measures	Convention on Biological Diversity, Target 6: By 2020 fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits. EU Biodiversity Strategy 2020, Target 4: Ensure the sustainable use of fisheries resources, Action 14: Eliminate adverse impacts on fish stocks, species, habitats and ecosystems Habitats Directive (Article 12), EU Common Fisheries Policy (CFP), ASCOBANS (Agreement on the Conservation of Small Cetaceans of the Baltic, North-East Atlantic, Irish and North Seas under the auspices of the Convention on Migratory Species (CMS or Bonn Convention).
Further actions to be considered	4.7.1 Adjustment or utilization of EU data collection framework to retrieve data for assessments and the development of management measures related to by-catch of species 4.7.2 Testing alternative fishing gears/fishing techniques to minimize incidental catch through joint project/projects
Indicators for follow-up of the pressure	For by-catch: Number of drowned mammals and waterbirds in fishing gears , supplemented by relevant status core indicators (population size). For target catch: fishing mortality and fishing effort, supplemented by relevant status indicators (stock size).

4.8 Introduction of non-indigenous species

State or impact	HELCOM assesses the status of the environment as regards non-indigenous species through the status core indicator: <ul style="list-style-type: none"> – Trends in arrival of new non-indigenous species
Impacts on species and biotopes	The introduction of non-indigenous species has direct and indirect impacts on: <ul style="list-style-type: none"> – Birds – Fish – Cephalopods – Mammals – Pelagic habitats – Benthic habitats See Annex 2 for threatened species (in particular birds and fish) and biotopes impacted by the introduction of non-indigenous species.
Activities or sectors causing the pressure	<ul style="list-style-type: none"> – Inland water ways: natural dispersal and hull fouling/ballast – Marine shipping: ballast water, hull fouling – Aquaculture
HELCOM environmental target(s) and distance from target	Baltic Sea Action Plan ecological objective: <ul style="list-style-type: none"> – No introductions of alien species from ships.
HELCOM acquis	<i>Helsinki Convention</i> <ul style="list-style-type: none"> – Article 15 Nature conservation and biodiversity – Article 8 Prevention of pollution from ships <i>Other HELCOM Measures</i>

	<ul style="list-style-type: none"> – Joint harmonised procedure for the Contracting Parties of OSPAR and HELCOM on the granting of exemptions under International Convention for the Control and Management of Ships' Ballast Water and Sediments, Regulation A-4 (Adopted as part of the 2013 HELCOM Copenhagen Ministerial Meeting, amended by HELCOM and OSPAR in 2015) – Commitment to ratify the 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments by all coastal countries (adopted as part of the 2007 HELCOM BSAP, currently ratified by Denmark, Germany, Russian Federation and Sweden) – Road map towards harmonised implementation and ratification of the 2004 International Convention for Control and Management of Ships' Ballast Water and Sediments (adopted as part of the 2007 HELCOM BSAP)
Relevant global, EU and Russian measures	<p>The 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments (not yet in force).</p> <p>Convention of Biological Diversity, Target 9: 'By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.'</p> <p>EU Biodiversity Strategy 2020, Target 5: By 2020, Invasive Alien Species and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS.</p>
Further actions to be considered	4.8.1 Regional monitoring programme on non-indigenous species in the Baltic Sea

4.9 Inputs of litter

State or impact	<p>Marine litter poses a growing threat to the marine and coastal environment. Most marine litter (in average three quarters on beaches) consists of plastics that degrade slowly, if at all. This means that a continuous input of large quantities of items made from different plastics results in a gradual build-up in the marine and coastal environment. Marine animals may be harmed by marine litter/debris when they get entangled and/or ingest marine litter. Plastic litter is visible on the sea surface as it accumulates, but it is also found in the water column and at the bottom of the ocean. Additives and persistent pollutants contained in plastic litter may potentially enter the food chain when being eaten by marine organisms and seabirds. Other frequently observed impacts are the damage of sensitive habitats, the smothering of benthic habitats and the transport of non-endemic species on litter items into new habitats. Because marine litter comes from sea-based and land-based sources, reduction, prevention and removal measures need to be implemented across a wide range of geographic locations and societal sectors.</p> <p>Status can be assessed through the proposed indicators under development in the HELCOM area:</p> <ul style="list-style-type: none"> – pre-core indicator 'Beach litter' – candidate indicator 'Microlitter in the water column' candidate
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	indicator 'Litter on the seafloor'.
Impacts on species and biotopes	<ul style="list-style-type: none"> – Birds – Mammals – Fish – Benthic habitats and associated symbiotic communities <p>See Annex 2 for threatened species (in particular birds) and biotopes impacted by marine litter.</p>
Activities or sectors causing the pressure	<p>Land-based activities</p> <ul style="list-style-type: none"> – general littering and littering caused by tourism, recreational activities and events, industrial facilities and construction; micro litter from waste water treatment plants, micro fibres from road traffic, municipal solid waste (e.g. sanitary waste introduced via rivers or floodwaters and waste from dumpsites on the coast and riverbanks) <p>Sea-based activities</p> <ul style="list-style-type: none"> – shipping (recreational and commercial): solid waste – fishing: abandoned/lost fishing gear – illegal dumping – offshore platforms
HELCOM environmental targets(s) and distance from target	<p>2013 HELCOM Ministerial Declaration:</p> <ul style="list-style-type: none"> – Decide to develop a regional action plan by 2015 at the latest with the aim of <i>achieving a significant quantitative reduction of marine litter by 2025, compared to 2015.</i>
HELCOM acquis	<p><i>Helsinki Convention</i></p> <ul style="list-style-type: none"> – Article 8 and 9 on requirements for the provision of port reception facilities – Regulation 6 of Annex IV on mandatory discharge of all waste to a port reception facility <p><i>HELCOM Ministerial Declaration (2013), e.g:</i></p> <ul style="list-style-type: none"> – carry out concrete measures for prevention and reduction of marine litter from its main sources with the aim of achieving significant quantitative reductions focusing <i>inter alia</i> on working with industry to reduce or phase out microbeads in certain products in the market – develop and test technology for removal of microplastics and nanoparticles in municipal waste water treatment plants by 2020 and <i>inter alia</i> work with industry to ban the use of microplastics and on the assessment of the use of nanoparticles within the production process (e.g. in cosmetics) – utilize existing networks to address marine litter issues – develop common indicators and associated targets related to quantities, composition, sources and pathway of marine litter, including riverine inputs, in order to gain information on long-term trends, ... – identify the socio-economic and biological impacts of marine litter, also in terms of toxicity of litter – review regularly the effectiveness of the measures, for the first time by 2020 <p><i>HELCOM Recommendations</i></p> <ul style="list-style-type: none"> – 36-1, Regional Action Plan on Marine Litter (RAP ML)

	<ul style="list-style-type: none"> – 29-2, Marine litter within the Baltic Sea region (guidelines on sampling and reporting of marine litter found on beaches) – Set of HELCOM Recommendations on uniform requirements for port reception facilities and delivery of ship-generated waste – agreed HELCOM actions to reduce litter input in the Baltic Sea environment, especially <i>via</i> Recommendations 10/5 concerning guidelines for the establishment of adequate reception facilities in ports (1989); 10/7 concerning general requirements for reception of wastes (1989); 19/14 concerning a harmonized system of fines in case a ship violates anti-pollution regulations (1998); 19/9 (supplemented by 22/1) concerning the installation of garbage retention appliances and toilet retention systems and standard connections for sewage on board fishing vessels, working vessels and pleasure craft (1998) and 31E/4 concerning proper handling of waste/landfilling (2010)
Relevant global, EU and Russian measures	<ul style="list-style-type: none"> – the Rio +20 commitment to take action to achieve significant reductions in marine debris by 2025 ; Honolulu Strategy (UN GA Resolution A/RES/66/288 (2012)); - the London Convention 1972 and the 1996 Protocol; - UNEPs Global Program of Action for the Protection of the Marine Environment from Land-Based Sources (GPA); UNEP Regional Seas Program (RSP) - MARPOL Annex V; - EU legislation, including Waste Framework Directive, the Packaging and Packaging Waste Directive, the Port Reception Facilities Directive, the Landfill Directive, the Marine Strategy Framework Directive, the Ecodesign Directive; - related regulation of the Russian Federation: the Federal law on wastes of production and consumption; Water code of the Russian Federation; The law on internal waters, territorial sea and contiguous zone of the Russian Federation; The law on environmental protection of the Russian Federation and subordinated legal acts.
Further actions to be considered	4.9.1 Regional Action Plan on Marine Litter (coordinated implementation)
Indicators for follow-up of the pressure	The same indicators as listed under State or Impact.

4.10 Inputs of energy including underwater noise

State or impact	<p>Descriptor 11 covers different forms of energy. Among those, underwater noise exerts pressures at a large scale. Observations indicate that both impulsive noise (e.g. from pile driving) and continuous underwater noise (mainly from shipping) is increasing. Underwater noise can have adverse impacts on marine species, in particular marine mammals and fish. Impulsive noise can result in physical damage or even lethal impact on marine organisms. Continuous noise has the potential to mask biologically important signals or scare and displace marine organisms.</p> <p>To date information is limited to assess the extent and volume of</p>
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	<p>underwater noise and of the problem it poses.</p> <p>A register is needed for impulsive sound, and observations are needed to identify trends for continuous noise. HELCOM indicators for noise are under development: 'Distribution in time and place of loud low and mid frequency anthropogenic impulsive sounds' (candidate indicator) and 'Continuous low frequency anthropogenic sound' (pre-core indicator).</p>
Impacts on species and biotopes	There are studies indicating that noise may have adverse impacts on marine life, such as porpoise and fish (cod). However, the complexity of the topic makes a species-by-species assessment unfeasible at present.
Activities or sectors causing the pressure	<p>The following activities associated with Descriptor 11 take place in the Baltic Sea:</p> <ul style="list-style-type: none"> – shipping – piling (for example for wind farm construction) – underwater explosions (used by Navies for practicing or clearing unexploded ammunition, and by commercial actors for, e.g. construction) – sonars (used for studies/measurements, by Navies and Commercial actors) – air guns (prospecting for oil and gas)
Relevant global, EU and Russian measures	<ul style="list-style-type: none"> – Guidelines for the Reduction of Underwater Noise from Commercial Shipping to Address Adverse Impacts on Marine Life (MEPC.1/Circ.833) – Convention on Biological Diversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives – ACCOBAMS Resolution 4.17 on Guidelines to address the impact of anthropogenic noise on Cetaceans in the ACCOBAMS area.
HELCOM environmental target(s) and distance from target	No environmental targets have been agreed at the regional level.
Contributing HELCOM acquis	<p><i>2013 HELCOM Ministerial Declaration, e.g.:</i></p> <ul style="list-style-type: none"> – as soon as possible and by the end of 2016, using mainly already on-going activities, to: <ul style="list-style-type: none"> • establish a set of indicators including technical standards which may be used for monitoring ambient and impulsive underwater noise in the Baltic Sea; • encourage research on the cause and effects of underwater noise on biota; • map the levels of ambient underwater noise across the Baltic Sea; • set up a register of the occurrence of impulsive sounds; – consider regular monitoring on ambient and impulsive underwater noise as well as possible options for mitigation measures related to noise, taking into account the ongoing work in IMO on non-mandatory draft guidelines for reducing underwater noise from commercial ships and in CBD context
Contributing global, EU	No information available

and Russian measures	
Further actions to be considered	4.10.1 Regional Baltic Underwater Noise Roadmap (2015-2017)
Indicators for follow-up of the pressure	There are no indicators at present.

4 Summary conclusions and next steps

HELCOM Contracting Parties look back to a long standing cooperation on the management of human activities exerting pressures on the marine ecosystems of the Baltic Sea. The intensified regional coordination of Contracting Parties, especially over the past two years, has led to the specification of work required to follow up commitments within HELCOM and has triggered a number of new or specified initiatives which may support Contracting Parties in their national actions to achieve good status of the Baltic Sea ecosystem. This is illustrated for example by the adoption by HELCOM in 2015 of the Regional Action Plan on Marine Litter or the development of a recommendation on aquaculture to be proposed for adoption at HELCOM 37-2016. Those activities provide a framework for coordinated regional and national management actions and reference point for national programmes of measures for those topics.

Annex 3 of this Joint documentation lists further actions for consideration, which complement other ongoing HELCOM activities to achieve regional targets. Those actions relate to the transboundary coordination of the management of nutrient pollution, micropollutants in effluents, risks of ship accidents, marine protected areas and their lines with maritime spatial planning, conservation of species, interference with seafloor integrity, by-catch in fisheries, introduction of non-indigenous species, marine litter and underwater noise.

Contracting Parties' programmes of measures give particular emphasis to measures relating to the reduction of inputs of nutrients, contaminants and litter as well as on the protection of marine habitats and species. Many of the Contracting Parties' planned measures link with existing or ongoing cooperations in HELCOM and therefore benefit from regional coordination, thereby emphasising the need for continued cooperation on HELCOM work strands.

The current development of improved HELCOM tools to follow-up on the implementation of HELCOM actions and measures will provide an important contribution to showing the efforts of Contracting Parties and their progress towards the HELCOM management and environmental quality objectives.

Work on the specification and quantification of environmental targets for the management of pressures and quality objectives for marine ecosystem components through the HELCOM core indicators has started. Progress on this work is vital for assessing distance to good environmental status and for informing an effective future management of human activities in the Baltic Sea region.

Abbreviations

BSAP	Baltic Sea Action Plan
CART	Country-wise Allocated Reduction Targets
CIS	EU Common Implementation Strategy (here for the MSFD)
D	Descriptor for good environmental status in the meaning of Annex I MSFD
DPSIR	Driver-Pressure-State-Impact-Response
EU	European Union
GEAR	HELCOM Group for the implementation of the ecosystem approach
HELCOM	Helsinki Commission
IMO	International Maritime Organisation
MAI	Maximum Allowable Input
MPA	Marine Protected Area
MSFD	EU Marine Strategy Framework Directive (2008/56/EU)
RSC	Regional Sea Convention
UNCLOS	United Nations Convention on the Law of the Sea

Glossary

For the specific purposes of this document, the following terms mean:

'Programme of measures': "A set of measures that the Member State is responsible for implementing, put into context with each other, referring to the environmental targets they address".¹⁶

'Coordination': A managerial process to ensure that the programmes of measures required to achieve or maintain good environmental status by 2020 are coherent across the marine region or subregion concerned. Programmes of measures under the EU Marine Strategy Framework Directive need to recognise the different geographic scales and competences of management involved. Accordingly, they need to identify the appropriate action level in relation to the environmental problem concerned. The action levels are broadly the national, European Union, regional and international (multilateral, global) level. The action level determines the specific need for coordination.

The role of Regional Sea Conventions in relation to coordination embraces¹⁷:

- **'Coordination of national measures':** Exchange of information and alignment of measures that are primarily of national concern and responsibility.
- **'Joint regional measures':** The development of measures at regional level (e.g. HELCOM Recommendations) with a focus on transboundary issues.
- **'Concerted regional action in relation to third parties':** The development of joint proposals for measures that are required to achieve GES but are in the competence of the EU, international authorities (e.g. IMO, River Commissions) or third countries outside the EU and Regional Sea Conventions' cooperation (e.g. upstream-countries), and agreement of concerted actions of the Contracting Parties to approach those bodies/authorities through HELCOM.

A focus of cooperation should be on measures of a transboundary nature, targeting ecosystems and/or pressures that transcend the national scale (e.g. management of marine protected areas; gas/oil exploitation in open seas; chemical contamination and nutrient enrichment, in particular through long-distance transport; seafloor protection, litter, underwater noise).

'Coordinated programmes of measures': The result of the above listed coordination activities. The term refers to national programmes of measures for achieving and maintaining good environmental status by 2020 in the Baltic Sea region.

'Measure': "Any action on a national, European or international level with a view to achieving or maintaining GES and with reference to the environmental targets." Measures relate to legislative, economic, technical and policy-driven actions.¹⁸

¹⁶ EU MSFD CIS guidance "Recommendation on Programmes of Measures" <https://circabc.europa.eu/sd/a/36284090-d09b-4fb5-822d-9986a22d7920/MD-2014-1-1%20Annex%20Item%202.1%20PoM%20-%20final.pdf>

¹⁷ EU MSFD CIS guidance "Recommendation on Programmes of Measures" <https://circabc.europa.eu/sd/a/36284090-d09b-4fb5-822d-9986a22d7920/MD-2014-1-1%20Annex%20Item%202.1%20PoM%20-%20final.pdf>

¹⁸ EU MSFD CIS guidance "Recommendation on Programmes of Measures" <https://circabc.europa.eu/sd/a/36284090-d09b-4fb5-822d-9986a22d7920/MD-2014-1-1%20Annex%20Item%202.1%20PoM%20-%20final.pdf>

'Regional action plan': A regionally agreed approach to the management of selected (transboundary) themes which may cover commitments on:

- measures at all action levels (national, EU, regional, international)
- streamlining and/or enhancement of existing measures
- actions in preparation of measures

Annex 1 Overview of planned measures under consideration in HELCOM Contracting Parties

(Status: 8 October 2015)

The following table is based on the information from Contracting Parties on the state of play of their planned measures by 28 February 2016. The table provides a general overview of the measure topics per theme (sections 4.1-4.10) for which Contracting Parties are currently planning to propose new measures in their national programmes of measures, noting that some Contracting Parties have not yet finalised their programmes of measures and that changes to proposed planned measures may still occur. The crosses in the table only relate to the national measures which are considered new by Contracting Parties; other Contracting Parties may consider the action as an existing measure which they may have already fully implemented or are still in the process of implementing. Contracting Parties' approaches to considering a measure as new or existing in the context of the MSFD differ. This needs to be taken into account in the EU context when assessing regional coherence of national programmes of measures. The commentary column provides insight into ongoing coordination processes in HELCOM, encompassing all HELCOM Contracting Parties, and further actions for consideration.

Note that national measures may include various components that relate to more than one theme (sections 4.1-4.10) or measure topic. One measure may therefore have been indicated more than once in the table. In addition to the information recorded in the table below, the following information was provided:

- Finland reported to plan a general measure cutting across the themes on the development of relevant communication material and activities related to the implementation of the Finnish marine strategy.
- Latvia and Lithuania reported on the development of maritime spatial planning (MSP) in their waters.
- Sweden reported that national MSP work is described to need to pay special attention to aspects of importance to reach MSFD GES, and guidance is proposed for coastal/marine spatial planning taking into account MSFD GES.

Russia provided information that they will not be able to provide any input at this time.

Overview of planned new measures under consideration in HELCOM Contracting Parties¹⁹

Section 4.1 Inputs of nutrients and organic matter									
Planned new measures in relation to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Nitrogen emission control area (NECA)	X			X			X		Ongoing HELCOM coordination. A possible synchronized submission by HELCOM and by North Sea countries for Baltic Sea and North Sea NECAs to IMO is under consideration. It is expected that 6930 tons of nitrogen can be reduced over thirty years following a NECA designation. Reference: 2007 and 2010 HELCOM Ministerial Meetings
Alternative ship fuel (e.g. Liquified Natural Gas, LNG)	X		X	X			X		Ongoing HELCOM coordination. A "Green Technology and Alternative Fuels Platform for Shipping" was launched in 2014 to enhance cooperation between public and private stakeholders and catalyse further regional work. Alternative fuels such as LNG are expected to reduce exhaust gas emissions (NOx, particulate matter, SOx) substantially. Reference: 2013 HELCOM Ministerial Meeting.
Sewage from passenger ships			X				X		In July 2011 and upon the coordinated proposal by the HELCOM countries, the International Maritime Organisation (IMO) designated the Baltic Sea as a special area for sewage from passenger ships. The decision entered into force on 1 January 2013. Originally the special area status, referring to amendments in IMO MARPOL Annex IV, was planned to take effect on 1 January 2016 for new ships and 1 January 2018 for old, at the earliest. However, the dates have since - as of IMO meeting in April 2015 - been postponed to 2019 and 2021, respectively. The effective application of this already existing legal status has been, according to the 2011 IMO decision, subject to the availability of adequate sewage Port Reception Facilities (PRF) in the region. This

¹⁹ When interpreting this table it is worth noting that there is also a difference in what countries have considered classifies as a measure; for example in commissions guidance for PoM it is stated that Activities to fill gaps for other parts of the Directive (eg. Art 8, 9, 10, 11) are by definition not measures.

									availability of adequate sewage PRF has to be separately notified to IMO MEPC by the Baltic Sea coastal countries. Interim guidance on technical and operational aspects of sewage delivery to port reception facilities has been prepared by HELCOM. Reference: 2007 HELCOM Ministerial Meeting
Internal loads / endogenous				X				X	→ Action still needed
Blue catch crops / compensation / nutrient recycling				X	X	X		X	
Sedimentation						X			Local measure.
Aquaculture		X	X	X				X	HELCOM coordination has started. HELCOM 37-2016 is expected to adopt a Recommendation on sustainable aquaculture. It is envisaged to develop guidelines on best available techniques and best environmental practices. The development of guidelines has the potential to help coordination of planned national measures on aquaculture.
Wastewater treatment plants						X			Most Contracting Parties rely on measures under the Water Framework Directive and the Nitrates Directive. Initiated HELCOM cooperation on nutrient recycling in agriculture, including on standards for nutrient content in manure and nutrient accounting on farm level.
Stormwater			X						
Agriculture and agricultural land				X	X				
Recovery of riverine habitats				X					Local measure.
Monitoring					X	X			
Research					X	X			
Section 4.2 Inputs of synthetic and non-synthetic contaminants and systematic and/or intentional releases of substances									
Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Environmentally friendly ships	X								HELCOM coordination is ongoing in relation to individual aspects of environmentally friendly ships (e.g. green technologies, alternative fuels, the “no-special fee” system, economic incentives to green shipping). Currently there is no cooperation on ship eco-labels.
Ship emissions (engines/fuel)						X			Ongoing HELCOM coordination. Cooperation by Contracting Parties to enforce the Baltic Sea SECA and more stringent limits for SOx emissions, including consideration of joint measures. Implementation of SECA is a

									strong catalyst for mainstreaming innovative green technologies and alternative fuels. Reference: 2013 Ministerial Declaration
Scrubbing waters	X						X		Ongoing HELCOM coordination. MARITIME recently started to look into scrubbing technology and associated legislation (i.a. national practices regarding releases of scrubber water). There is information exchange and cooperation with the European Sustainable Shipping Forum, involving Contracting Parties, EU authorities, the shipping industry and environmental NGOs. Reference: 2013 Ministerial Declaration on SOx emission limits
Harbour bunkering			X						Ongoing HELCOM coordination covered under MARITIME. Cooperation by Contracting Parties in the context of HELCOM recommendations and guidelines on bunkering activities and harbor bunkering.
Paraffins and derivatives	X						X		Ongoing HELCOM coordination covered under MARITIME
Carriage of hazardous and noxious substances by sea (IMO)						X			Ongoing HELCOM coordination covered under MARITIME
Ballast water management (IMO)							X		Ongoing HELCOM coordination of harmonized implementation of BWMC, including Joint harmonized procedures for the Contracting Parties of OSPAR and HELCOM on the granting of exemptions under the BWMC.
Pharmaceuticals				X					Ongoing HELCOM coordination. Information and data exchange on pharmaceuticals of concern for the marine environment and their sources and pathways is the basis of a status report on pharmaceuticals under preparation. This provides a basis for consideration of any possible further actions. Reference: 2010 and 2013 Ministerial Meetings
Waste water effluents								X	➔ Action still needed.
Polluted sediments								X	Local measure.
Dumped munitions	X					X			Ongoing HELCOM coordination covered under MARITIME
Shipwrecks							X		Ongoing HELCOM coordination covered under MARITIME
Public information and awareness raising						X			
Monitoring						X			

Assessment and screening				X		X		X	
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Section 4.3 Accidental pollution from maritime activities

Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Pollution prevention, emergency preparedness and response (e.g. oil spills)	X		X	X		X	X		Ongoing HELCOM coordination. Comprehensive cooperation exists, based on the Helsinki Convention, HELCOM Response Manual and related Recommendation, and additional initiatives are under way to enhance cooperation and capacity building. → Action still needed.
Enforcement						X			Ongoing HELCOM coordination covered under MARITIME
Liability						X			Ongoing HELCOM coordination covered under MARITIME
Safety of ship traffic				X					Ongoing HELCOM coordination covered under MARITIME
Aerial surveillance						X			Ongoing HELCOM coordination. Cooperation on aerial surveillance provides regular information in HELCOM on illegal discharges of oils and other harmful substances.
Monitoring and assessment				X					

Section 4.4 Spatial protection measures

Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
New MPAs		X	X		X			X	Ongoing HELCOM coordination. Designation of new MPAs with the view improving the coherence of the MPA network can be supported by site-selection analyses and has been agreed to carry out in HELCOM, Rec 35-1
Expanding / adjusting existing MPAs									
Management of MPAs	X	X	X					X	→ Action still needed
Effectiveness of MPAs	X			X					→ Action still needed
Mapping/monitoring of habitats/biotopes in MPAs		X				X			
MPAs and Maritime Spatial Planning	X			X					→ Action still needed

Section 4.5 Conservation, restoration and/or reintroduction of species and biotopes/habitats

Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
									Planned national measures overlap with theme 4.4 and cover spatial protection measures and effective management of MPAs.
Fisheries related measures	X		X			X			
Regulation of human activities other than fisheries			X	X				X	→ Action still needed
Management/conservation plans for species/biotopes (e.g. ringed seal)			X	X		X			→ Action still needed
Monitoring of ecosystem components						X			Coordination through joint HELCOM monitoring guidelines
Restoration activities								X	
Enhancing knowledge on species/biotopes				X				X	
Information campaigns on protection/restrictions						X			

Section 4.6 Physical loss and damage of seabed habitats

Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Environmental impact assessments						X			
Dredging and dredged material		X		X			X		Cooperation in HELCOM ongoing. Regulation of dumping of dredged material is addressed in the Helsinki Convention (G Paragraph 2 of Art. 11). Dumping of dredged material containing harmful substances is only permitted according to HELCOM Guidelines .
Extraction of non-biological resources	X	X		X		X			
Hydromorphological inferences	X						X		
Ship wrecks							X		
Monitoring / indexing / mapping / research	X	X			X	X	X		→Action still needed Ongoing HELCOM coordination.

									The national activities may be part of planned measures in relation to dredging, extraction of non-biological resources, hydromorphological interference and ship wrecks. Enhancing knowledge relates e.g. to the identification of damaged areas and remediation.
Section 4.7 Selective extraction of species including incidental non-target catches									
Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Coastal fisheries				X				X	HELCOM coordination initiated. Looking into options for possible common methodologies of recreational fisheries monitoring that could be developed based on a scientific approach and analytical tools, as well as exchange of information on the regulation practices for recreational fisheries.
EU regulated fisheries								X	
Use of fish resources			X						
Recovery / conservation plans for commercial fish species				X		X			
Public awareness	X								
Monitoring/data collection by-catch						X	X		→ Action still needed
Section 4.8 Introduction of non-indigenous species									
Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Aquaculture		X							Ongoing HELCOM coordination. HELCOM 37-2016 is expected to adopt a Recommendation on sustainable aquaculture. It is envisaged to develop guidelines on best available techniques and best environmental practices. The development of the guidelines has the potential to help coordination of planned national measures on aquaculture.
Ballast water management (IMO)			X			X	X		Ongoing HELCOM coordination of harmonized implementation of BWMC, including Joint harmonized procedures for the Contracting Parties of OSPAR and HELCOM on the granting of exemptions under the BWMC.
Biofouling management (incl. IMO)						X		X	

Warning and response systems								X	
Communication and information			X			X			
Monitoring and data access						X		X	HELCOM coordination started. Development of coordinated monitoring for HELCOM indicators relating to non-indigenous species. ➔ Action still needed.
Research and knowledge building					X			X	
Section 4.9 Inputs of litter									
Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
Primary microplastic	X								HELCOM coordination has started. In 2015, HELCOM adopted the Regional Action Plan on Marine Litter with common regional and optional national actions to address inputs of litter to the sea. Contracting Parties' planned measures relate to the two components of the Regional Action Plan. Coordination of the implementation of measures under the Regional Action Plans has started. Some of the actions build on coordinated initiatives which have already been started in HELCOM (e.g. the “no-special fee” system for waste reception in ports, beach litter collection projects, fishing-for-litter projects, implementation of shipping waste regulations). ➔ Action still needed.
Secondary microplastic	X								
Products (modification, substitution)	X								
Fishing gear	X		X	X			X	X	
Plastic litter (packaging, bags)	X		X		X				
Beach litter collection	X	X	X	X				X	
Fishing for litter	X								
Local community actions	X		X						
Waste reception in ports (no special fee system)			X			X	X		
Deposit systems					X				
Shipping waste regulations						X			
Management of waste streams						X		X	
Target setting		X		X					
Education	X		X	X					
Communication and information		X	X	X	X	X		X	
Monitoring				X	X	X			
Research and studies				X	X	X			
Section 4.10 Inputs of energy including underwater noise									
Planned new measures relating to	DE	DK	EE	FI	LV	LT	PL	SE	Comment
									➔ Action still needed

									Planned national measures are partly taken up in the Regional Baltic Underwater Noise Roadmap 2015-2017 which goal is to make every effort to prepare a knowledge base towards a regional action plan on underwater noise in 2017/2018
Management structures		X							Local measure.
Underwater noise register	X		X	<u>X</u>		X			HELCOM coordination has started through the HELCOM roadmap on underwater noise and an initiative for a joint OSPAR/HELCOM regional registry of impulsive noise.
Underwater noise mapping	X								Ongoing HELCOM coordination. HELCOM has started mapping underwater noise through the BIAS project. The project results are expected to provide a basis for building further knowledge and management capacity.
Seismic investigations, guidelines, technologies		X							
Actions to reduce impulsive noise (pile driving, construction activities)	X	X		X		X			
Reducing underwater noise from ships (promoting IMO action)	X			X		X			HELCOM coordination has started through the HELCOM roadmap on underwater noise.
Underwater noise mitigation and reduction	X			<u>X</u>					HELCOM coordination has started through an initiative in the HELCOM roadmap on underwater noise to assess the applicability of certain measures.
Impacts of underwater noise	X								HELCOM coordination has started through the HELCOM roadmap on underwater noise and an initiative to explore possibilities for determining certain biologically acceptable levels of noise and associated biological limit values.
Lighting of offshore installations	X								
Introduction of heat	X								
Communication and information				X					
Monitoring						X			
Assessment tools						X			
Research					X				HELCOM coordination has started through the HELCOM roadmap on underwater noise and an initiative to compile certain knowledge

									elements.
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Annex 2 Draft proposal for table on threatened species and biotopes

Impact assessment based on BSEP 138 Red List of Baltic Sea underwater biotopes, habitats and biotope complexes and BSEP 140 HELCOM Red List of Baltic Sea species in danger of becoming extinct. *Inputs of energy were not assessed.

Legend: Category of state: CO – collapsed, CR – critically endangered, EN – Endangered, VU – Vulnerable

	Threatened species			Covered by HELCOM measures on		Impacted by							
	Scientific name	Threat category	Common name	Conservation, restoration and reintroduction of species	Spatial Protection	Inputs of nutrients and organic matter	Inputs of non-/synthetic contaminants ; systematic intentional releases	Accidental pollution from maritime activities	Physical loss and damage of seabed habitats	Introduction of non-indigenous species	Selective extraction of species including incidental non-target catch	Inputs of litter	Inputs of energy*
	SPECIES												
Breeding Birds	<i>Larus fuscus fuscus</i>	VU	Lesser black-backed gull				X			X	X		
	<i>Aythya marila</i>	VU	Greater scaup					X		X	X		
	<i>Gelochelidon nilotica</i>	RE	Gull-billed tern							X			
	<i>Charadrius alexandrinus</i>	CR	Kentish plover							X			
	<i>Calidris alpina schinzii</i>	EN	Southern dunlin			X				X			
	<i>Larus melanocephalus</i>	EN	Mediterranean gull							X			

	Threatened species			Covered by HELCOM measures on		Impacted by							
	Scientific name	Threat category	Common name	Conservation, restoration and reintroduction of species	Spatial Protection	Inputs of nutrients and organic matter	Inputs of non-/synthetic contaminants ; systematic intentional releases	Accidental pollution from maritime activities	Physical loss and damage of seabed habitats	Introduction of non- indigenous species	Selective extraction of species including incidental non-target catch	Inputs of litter	Inputs of energy*
	<i>Arenaria interpres</i>	VU	Ruddy turnstone			X				X			
	<i>Hydroprogne caspia</i>	VU	Caspian tern							X			
	<i>Philomachus pugnax</i>	VU	Ruff			X				X			
	<i>Xenus cinereus</i>	EN	Terek sandpiper							X			
	<i>Podiceps auritus</i>	VU	Slavonian grebe			X	X			X			
	<i>Melanitta fusca</i>	VU	Velvet scoter			X				X			
	<i>Rissa tridactyla</i>	VU	Black-legged kittiwake both					X	X		X	X	

Wintering birds	<i>Gavia arctica</i>	CR	Black-throated diver					X	X		X		
	<i>Gavia stellata</i>	CR	Red-throated diver					X	X		X		
	<i>Anser fabalis fabalis</i>	EN	Taiga Bean Goose			X	X		X				
	<i>Clangula hyemalis</i>	EN	Long-tailed duck					X	X		X		
	<i>Melanitta fusca</i>	EN	Velvet scoter					X	X		X		
	<i>Melanitta nigra</i>	EN	Common scoter					X	X		X		
	<i>Podiceps grisegena</i>	EN	Red-necked grebe (wintering)					X	X		X		
	<i>Polysticta stelleri</i>	EN	Steller's Eider (w)					X		X	X		
	<i>Rissa tridactyla</i>	VU wintering	Black-legged kittiwake					X	X		X	X	
	<i>Somateria mollissima</i>	EN	Common eider					X	X		X		
	<i>Cephus grylle arcticus</i>	VU	Black guillemot					X	X		X		
	<i>Mergus serrator</i>	VU	Red-breasted merganser (wintering)					X	X	X	X		
Mammals	<i>Phocoena phocoena</i>	CR	Harbour porpoise				X				X		
	<i>Phoca hispida bothnica</i>	VU	Baltic ringed seal				X				X		
	<i>Phoca vitulina (Kalmar Sund population)</i>	VU	Harbour seal/Common seal				X				X		

Fish and lamprey species	<i>Acipenser oxyrinchus</i>	RE				X					X		
	<i>Dipturus batis</i>	RE									X		
	<i>Gadus morhua</i>	VU				X							
	<i>Anguilla anguilla</i>	CR								X	X		
	<i>Lamna nasus</i>	CR									X		
	<i>Thymallus thymallus</i>	CR				X	X	X	X		X		
	<i>Squalus acanthias</i>	CR									X		
	<i>Anarchichas lupus</i>	EN									X		
	<i>Coregonus maraena</i>	EN									X		
	<i>Molva molva</i>	EN									X		
	<i>Galeorhinus galeus</i>	VU									X		
	<i>Raja clavata</i>	VU									X		
	<i>Salmo salar</i>	VU									X		
	<i>Salmo trutta</i>	VU									X		
	<i>Merlangius merlangus</i>	VU									X		
	<i>Petromyzon marinus</i>	VU				X					X		

Macrophytes	<i>Hippuris tetraphylla</i>	EN				X		X	X				
	<i>Lamprothamnium papulosum</i>	EN				X		X	X				
	<i>Persicaria foliosa</i>	EN				X		X	X				
	<i>Alisma wahlenbergii</i>	VU				X		X	X				
	<i>Chara braunii</i>	VU				X			X				
	<i>Nitella hyalina</i>	VU				X		X	X				
	<i>Zostera noltii</i>	VU				X		X	X				
Benthic invertebrates	<i>Abra prismatica</i>	VU				X		X	X		X		
	<i>Atelecyclus rotundatus</i>	VU				X			X				
	<i>Clelandella miliaris</i>	VU				X							
	<i>Cliona celata</i>	VU				X		X	X				
	<i>Deshayesorchestia deshayesii</i>	VU						X	X				
	<i>Epitonium clathrus</i>	VU				X			X		X		
	<i>Haploops tubicola</i>	VU											
	<i>Hippasteria phrygiana</i>	VU				X			X				
	<i>Hippolyte varians</i>	VU				X							
	<i>Lunatida pallida</i>	VU							X		X		
	<i>Macoma calcarea</i>	VU				X							
	<i>Modiolus modiolus</i>	VU				X		X	X		X		

	<i>Nucula nucleus</i>												
	<i>Parvicardium hauniense</i>	VU				X		X	X				
	<i>Pelonaia corrugata</i>	VU				X			X		X		
	<i>Scrobicularia plana</i>	VU											
	<i>Stomphia coccinea</i>	VU											
	<i>Solaster endeca</i>	VU				X			X				
	Threatened biotopes			Covered by HELCOM measures on		Impacted by							
	Biotope code	Biotope name	Threat category	Conservation, restoration and reintroduction of species	Spatial Protection	Inputs of nutrients and organic matter	Inputs of non-/synthetic contaminants ; systematic intentional releases	Accidental pollution from maritime activities	Physical loss and damage of seabed habitats	Introduction of non-indigenous species	Selective extraction of species including incidental non-target catch	Inputs of litter	Inputs of energy*
	BIOTOPES												
Baltic	AA.M1Q2	Baltic photic mixed substrate dominated by stable aggregations of unattached <i>Fucus</i> spp. (dwarf form)	EN			X	X						
	AA.H1Q2	Baltic photic mud dominated by stable aggregations of unattached	EN			X	X						

		<i>Fucus</i> spp. (dwarf form)											
	AA.I1Q2	Baltic photic coarse sediment dominated by stable aggregations of unattached <i>Fucus</i> spp. (dwarf form)	EN			X	X						
	AA.J1Q2	Baltic photic sand dominated by stable aggregations of unattached <i>Fucus</i> spp. (dwarf form)	EN			X	X						
	AA.D	Baltic photic maerl beds (unattached particles of coralline red algae)	EN						X		X		
	AA.G	Baltic photic peat bottom	VU			X	X		X				
	AA.E1F1	Baltic photic shell gravel dominated by vase tunicate (<i>Ciona intestinalis</i>)	VU			X	X		X		X		
Baltic aphotic benthos	AB.D	Baltic aphotic maerl beds (unattached particles of coralline red algae)	EN						X		X		
	AB.E1F1	Baltic aphotic shell gravel dominated by vase tunicate (<i>Ciona intestinalis</i>)	VU			X	X		X		X		
	AB.H3L3	Baltic aphotic muddy sediment dominated by ocean quahog (<i>Arctica islandica</i>)	CR			X							
	AB.B1E4	Baltic aphotic hard clay dominated by <i>Astarte</i> spp.	EN			X							
	AB.H3L5	Baltic aphotic muddy sediment dominated by <i>Astarte</i> spp.	EN			X							
	AB.H2T1	Baltic aphotic muddy sediment characterized by sea-pens	EN			X					X		
	AB.H1I2	Baltic aphotic muddy sediment dominated by <i>Haploopsis</i> spp.	EN			X	X				X		
	AB.J3L3	Baltic aphotic sand dominated by ocean quahog (<i>Arctica islandica</i>)	VU			X			X				

Baltic Sea seasonal ice	AC	Baltic Sea seasonal ice	VU										
Baltic Sea aphotic pelagic	AE.O5	Baltic Sea aphotic pelagic below halocline oxic	EN			X	X						

Threatened biotope complexes			Covered by HELCOM measures on		Impacted by							
Biotope complex code	Biotope complex name	Threat category	Conservation, restoration and reintroduction of species	Spatial Protection	Inputs of nutrients and organic matter	Inputs of non-/synthetic contaminants ; systematic intentional releases	Accidental pollution from maritime activities	Physical loss and damage of seabed habitats	Introduction of non-indigenous species	Selective extraction of species including incidental non-target catch	Inputs of litter	Inputs of energy*
BIOTOPE COMPLEXES												
1130	Estuaries	CR			X		X	X	X	X		
1180	Submarine structures made by leaking gases	EN			X	X		X		X		
1150	Coastal lagoons	EN			X	X	X	X		X		
1110	Sandbanks which are slightly covered by sea water all the time	VU			X	X		X		X		
1140	Mudflats and sandflats not covered by seawater at low tide	VU			X	X	X	X				
1160	Large shallow inlets and bays	VU			X	X	X	X		X		
1170	Reefs	VU			X	X		X		X		
1650	Boreal Baltic narrow inlets	VU			X			X				

Annex 3 Further actions to be considered

HELCOM Contracting Parties and Working Groups used the following template to identify and propose actions that are still needed to reach the HELCOM target(s) and objectives. The “further actions to be considered” relate to the analysis of planned national measures (Annex 1 of this document) and to gaps identified in HELCOM work.

Name of action / measure	<i>Including a short title and numbering for quick referencing</i>
HELCOM type of action	<i>As proposed to GEAR 8 for the purpose of implementation control of actions agreed in HELCOM*</i>
Type of coordination	<i>As defined in the Joint Document: (1) regional coordination of national measure, (2) regional measure, (3) sub-regional measure, (4) joint regional action in relation to third parties.</i>
Short description of the action / measure	<i>Including its purpose and a description of the mechanism of how the action / measure improves the state of the environment.</i>
Spatial coverage	<i>E.g. European, whole Baltic Sea, sub-basin(s).</i>
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	
Contribution of the action / measure to achieve the target	<i>Possibly including reference to available studies on effectiveness.</i>
Proposed activities for implementation (<u>very</u> briefly)	<i>E.g. technical requirements, milestones including reference to ongoing activities.</i>
Obstacles to implementation (at regional and CP level)	<i>E.g. relating to resources, lead country, policies</i>

* Type of actions proposed to GEAR 8:

- a. Measures [directly aimed at reducing pressures or improving the state of the environment]
 - i. Reduction of pressures
 - ii. Spatial protection
 - iii. Restoration/Reintroductions of habitats and species
 - iv. HELCOM Recommendations that require implementation through measures
 - v. Joint actions with the aim of influencing international regulations
- b. Management coordination [aimed at establishing joint HELCOM principles for management of the marine environment]
 - i. HELCOM Recommendations not included under Measures
 - ii. Plans, guidelines and manuals
 - iii. Assessment tools
 - iv. Classification systems, reporting systems
 - v. Follow-up/assessments of agreed actions and plans
- c. Monitoring and assessment [i.e. the implementation of]
 - i. Monitoring and surveillance
 - ii. Assessments
- d. Data and information
 - i. Data
 - ii. Databases
- e. Knowledge
 - i. Promotion of research
 - ii. Reviews and evaluations
 - iii. Development of supporting information [e.g. modelling]

4.1.1 Assess the role of [internal nutrient reserves] [accumulated nutrients] [stored nutrients] in the Baltic and potential management measures Short title: Management of [internal load / endogenous nutrient reserves] Short title: Management of [accumulated nutrient loads / stored nutrients]	
HELCOM type of action	e d
Type of coordination	2 - Regional measure
Short description of the action / measure	<p>Transport of nutrients to surface layers from both deep water and sediments accentuates and prolongs eutrophication in the central Baltic Sea and potentially also in some coastal waters. The scale and dynamics of the problem varies from small coastal basins suffering from hypoxia/anoxia to the main deeps of the Baltic Proper. Remedial measures are a potential complement to the external load reductions. It is timely to examine and evaluate these precautionary measures, because external loads as well as inputs of stored nutrients to the productive layer of the Baltic Sea are likely to further exacerbate due to climate change.</p> <p>The first step consists of a scientific workshop on the state of art regarding the nutrient dynamics and management in sediments with the aim of formulating questions that need to be answered and understood about the nature of stored nutrients, dynamics of their transport to the productive layer as well as potential measures to regulate these storages, including requirements for Environmental Impact Assessment.</p> <p>The second step is mapping significant nutrient stores/stocks and appropriate modelling to answer questions identified in the previous step, as well as to inform the general public and policy makers.</p> <p>The third step is:</p> <ul style="list-style-type: none"> • to identify different type of experimental sites and methods for prototype scale tests. Furthermore, to investigate the environmental, legal, technical and economic challenges that need to be taken into account for prototype scale tests and • to suggest the design of appropriate standardized monitoring strategies for the respective types/methods. <p>Description of these challenges should form a basis for guidance documents to be used by environmental authorities when evaluating future applications to use in situ management methods.</p> <p>Available experimental results from prototype scale tests need to be evaluated against the benchmarks identified in the third step to inform the further development of promising techniques. Both successful and failed remedial approaches will inform the technical guidance in the 'cookbook -toolbox'.</p>
Spatial coverage	Whole Baltic Sea
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	2016-2019
Contribution of the action / measure to achieve the target	The initiative contributes to the reaching of good environmental status in regard eutrophication.
Proposed activities for implementation (<u>very</u>	HELCOM initiates an activity under PRESSURE group to accomplish the objectives set out in the description.

briefly)	
Obstacles to implementation (at regional and CP level)	Lack of resources for implementation, including the involvement of scientists, environmental layers or engineers.

4.1.2 Intensifying HELCOM work to reduce airborne transboundary nitrogen input from outside of HELCOM area, in particular the Gothenburg Protocol	
HELCOM type of action	a) v.
Type of coordination	4 - Joint regional action in relation to third parties
Short description of the action / measure	<p>Airborne nitrogen deposition originating from outside HELCOM area is a significant source of nitrogen input to the sea. This source is managed under the Convention on Long-Range of Transboundary Air Pollution (CLRTAP) and more specifically its Gothenburg Protocol. Prompted by BSAP, HELCOM has previously informed bodies implementing the Protocol of eutrophication requesting action. This has not resulted in desirable action.</p> <p>In this initiative HELCOM will engage firstly in resolving the most effective ways of influencing the work under the Protocol. Most likely that will involve both national contacts as well as the formal bodies responsible for the Convention. In the second step appropriate action will be taken, using HELCOM material, such as eutrophication indicators, PLC- and LOAD input related assessments and indicators, as well as the MAI/CART related follow-up information as the basis. There is also a linkage to the NEC Directive in this work for those CPs that are also EU Member States.</p>
Spatial coverage	Whole Baltic Sea air basin
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	2016-2021
Contribution of the action / measure to achieve the target	The initiative has substantial potential to contribute to the reduction of input of nitrogen to the Baltic Sea and to improve eutrophication status.
Proposed activities for implementation (<u>very</u> briefly)	As a starting point, GEAR supported by PRESSURE and STATE & CONSERVATION could design the work in further detail and identify which bodies in HELCOM should assist in carrying out the work.
Obstacles to implementation (at regional and CP level)	No right communication channels will be opened and right people found and initiative stays idle.

Section 4.2 – Inputs of synthetic and non-synthetic contaminants and systematic and/or intentional releases of substances

4.2.1 Micropollutants in effluents from wastewater treatment plants	
HELCOM type of action	d. i; Data c. ii. Assessment e.
Type of coordination	2 - Regional measure
Short description of the action / measure	Micropollutants despite low (ng/L to µg/L) concentrations in environmental samples, due to their environmentally hazardous properties including for example high persistence, high toxicity to aquatic organisms, or endocrine disrupting properties, may pose risk to the environment. Depending on the level of treatment, WWTPs' effluents can be a significant pathway of micropollutants to the environment, in particular for those that originate from household products and -articles, or personal use. As knowledge of the environmental situation with regard to those pollutants can be improved, survey based on existing national data, screening studies and monitoring programs should be considered as a first step. The other activity should concentrate on knowledge on wastewater from treatment plans as sources of micropollutants in the environment and evaluation of existing and novel WWT techniques by compiling existing information on e.g. feasibility, costs, and good practice.
Spatial coverage	The Baltic sea (and possible coordination with OSPAR)
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	Start during 2016, until 2017
Contribution of the action / measure to achieve the target	The activities are aimed on identification of micropollutants problem scale facilitating the analysis of the need for future measures in the BSR countries as well as indicate possible and feasible measures.
Proposed activities for implementation (<u>very</u> briefly)	<ul style="list-style-type: none"> • Step 1: Compilation and assessment of available information and data of micropollutants of concern for Contracting Parties in the Baltic Sea – during 2016 (PRESSURE) • Step 2: Compile information from CPs of treatment techniques and experiences– during 2016/7 • Step 3: Summary report on advanced treatment techniques, including consideration of feasibility, costs, good practice and management options – during 2017
Obstacles to implementation (at regional and CP level)	Lack/incompleteness- of national data on micropollutants

Section 4.3 – Accidental pollution from maritime activities

4.3.1 Regional risk assessment tool for ships	
HELCOM type of action	b. i) assessment tool

Type of coordination	2 – Regional measure
Short description of the action / measure	<p>In the recent past (2012), HELCOM BRISK and BRISK-RU projects delivered an assessment of risks for shipping accidents and resulting spills of oil and hazardous substances as well as proposed improvements in the response capacities and safety of navigation for consideration by the Contracting Parties. No Baltic Sea risk assessments have been carried out since these projects. A regional risk assessment tool for ships is needed to enable more frequent update on the risks for shipping accidents and spills from the Baltic Sea perspective to cater for constantly changing ship traffic patterns.</p> <p>In order to enable continuous development by the wider Baltic response community (including academia) the tool should be flexible, based on open source coding, and be run frequently (annually/biannually) with less resources than is typically done when using commercial applications.</p> <p>The main function would be to detect changes in shipping risks and point to the hot spot areas as a basis for:</p> <ul style="list-style-type: none"> – optimizing the preparedness and response capacities on regional and sub-regional levels (according to the Helsinki Convention and HELCOM Response Manual); – detailed national/sub-regional/regional investigations and efforts to improve safety of navigation. <p>Such a tool should have application potential worldwide and for this reason this development could be undertaken together with one of the other regional seas. It could well be a further development of existing tools such as the IALA IWRAP and/or other approaches to risk assessment such as those utilized by FSA. The Baltic Sea could be a pilot area for a test run of the tool.</p>
Spatial coverage	The Baltic Sea (action to be possibly undertaken together with one of other regional seas)
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	Preparations for the activity could be started 2015/2016. Implementation could start in 2017 and end by 2019
Contribution of the action / measure to achieve the target	The action would contribute to building more efficient emergency and response capability and safer maritime traffic without accidental pollution.
Proposed activities for implementation (<u>very</u> briefly)	<p>Specification of the tool would be based on the needs of the Contracting Parties as well as availability of the data (e.g. HELCOM AIS).</p> <p>Existing suitable risk assessment models and tools should be mapped, including in other regional seas.</p>
Obstacles to implementation (at regional and CP level)	

4.4.1. Coordination of management measures of pressures and impacts on MPAs, in particular for adjacent transnational MPAs	
HELCOM type of action	b. Management coordination ii. Plans, guidelines and manuals
Type of coordination	Not applicable (Regional coordination of management of MPAs)
Short description of the action / measure	<p>HELCOM Recommendation 35/1 (para m) recommends that HELCOM MPA related guidelines and guiding documents should be updated as necessary in order to keep them in line with new knowledge and compatible with other international criteria</p> <p>Coordinated management guidelines for the same pressures in the same area gives adjacent transnational MPAs better and more comprehensive protection of species the marine nature values in these areas.</p>
Spatial coverage	Baltic Sea
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	<p>Provide a first insight to coordination of management of measures in adjacent transnational MPAs by 2016.</p> <p>If the action is expanded to include a review and revision of HELCOM guidelines for management plans in general (point 9, step 3), the action is estimated to take several years and will need implementation through a project.</p>
Contribution of the action / measure to achieve the target	When management plans in adjacent transnational MPAs are well coordinated the pressures can be dealt in a cost-effective way in the whole area. The action will contribute to achievement of HELCOM Recommendation 35-1,
Proposed activities for implementation (<u>very</u> briefly)	<ol style="list-style-type: none"> 1) identify adjacent transnational MPAs using HELCOM MPA database and invite Contracting Parties to inform on any contacts between MPA managers, 2) make an inventory of the steps and management measures that Contracting Parties have already taken in MPAs, e.g. concerning fisheries and shipping, 3) investigate if existing management guidelines relevant for the Baltic Sea provide sufficient guidance to address pressure and impacts, including HELCOM guidelines and those related to the Habitats and Birds Directive, and as need may arise identify where HELCOM can provide complementary guidance, in particular for management of transnational MPAs. <p>The activity should be carried out linked to the development of conservation plans for e.g. HELCOM Red listed species, also considering the adequate protection of species in adjacent MPAs. The information in the HELCOM MPA database should be up to date regarding the MPA management plans, including for transnationally located MPAs. Network for managers responsible for these MPAs should be established.</p>
Obstacles to implementation (at regional and CP level)	There may be no management plans for these areas and not enough resources to do the work

4.4.2 How to consider MPAs in Maritime Spatial Planning and vice versa?	
HELCOM type of action	b. Management coordination ii. Plans, guidelines and manuals
Type of coordination	Not applicable. (Regional coordination of MPA/MSP processes).
Short description of the action / measure	The Ecosystem approach provides guiding principles for Maritime Spatial Planning (MSP). MSP is to consider any restrictions and regulations to MPAs provided through MPA management plans. Some activities are however allowed within MPAs, while conservation objectives may be affected by activities causing pressure outside the MPAs. Thus, MPA/MSP interaction is not delimited by the MPA borders and there is a need to consider activities both inside and outside MPAs in the MSP context and vice versa.
Spatial coverage	Baltic wide mainly
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	The action could start in 2016. Tentatively development of regional guidelines- could take up to 3 years.
Contribution of the action / measure to achieve the target	MPAs will be properly taken into account in MSPs and vice versa contributing to the application of HELCOM-VASAB Regional broad scale regional MSP principles.
Proposed activities for implementation (<u>very</u> briefly)	<ol style="list-style-type: none"> 1) Contracting Parties in HELCOM VASAB MSP WG could be invited to inform on how MPAs have been considered so far in national MSP plans as well as any background information already compiled by the group with a view to sharing information with State and Conservation, 2) set up a workshop or back-to-back meeting with State and Conservation and HELCOM-VASAB MSP Working Group to discuss how the action can be jointly taken forward. <p>The workshop could explore options for how to acknowledge MPAs in MSP and vice versa (possible options are protocol/guidance, amended workplans, ad hoc meetings etc. In the longer-term some form of joint regional guidelines could tentatively be developed.</p>
Obstacles to implementation (at regional and CP level)	There is little experience in establishing national MSP

4.4.3 Develop joint tools/approach for assessing effectiveness of spatial protection measures for individual sites as well as network level	
HELCOM type of action	3. b. Management coordination iii. Assessment tool
Type of coordination	Not applicable. (Regionally coordinated approach to assess effectiveness of measures).
Short description of the action / measure	HELCOM Recommendation 35/1 calls for assessing “the effectiveness of the management plans or measures of HELCOM MPAs by conducting monitoring, and where feasible scientific research programmes, which are directly connected to the conservation interests of HELCOM MPAs, including the placement of monitoring stations inside the MPAs “ (para k).

Spatial coverage	Whole Baltic Sea, and possibly for use in other marine regions as well.
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	The action could start in 2016 but the start will depend on resources. It can be noted that HELCOM is partner to a 2015 Life+ application where development of an approach to assess management effectiveness of MPAs is included.
Contribution of the action / measure to achieve the target	The action will contribute with information on the effectiveness of MPAs and MPA networks for future decision making. The action will contribute to the fulfillment of HELCOM Recommendation 35-1.
Proposed activities for implementation (very briefly)	1) Meeting to transfer lessons learnt from OSPAR process. 2) Develop criteria on how to assess effectiveness of management for single MPAs and for the network as a whole, making use of work carried out in OSPAR and elsewhere.
Obstacles to implementation (at regional and CP level)	To develop an approach to assess effectiveness is considered to require project support.

Section 4.5 – Conservation, restoration and/or reintroduction of species and biotopes/habitats

4.5.1 Activities to support conservation of Baltic Sea species and biotopes/habitats categorized as threatened according to the HELCOM Red List²⁰	
HELCOM type of action	b Management coordination ii. Plans, guidelines and manual, v Follow-up assessment of agreed actions and plans
Type of coordination	2- Regional measure

²⁰ Note the study reservation by Denmark on this action. Clarification to be discussed in the planned intersessional activity to elaborate the Recommendation on conservation plan for species (cf. paragraph 4.112 of Outcome of HOD 49-2015).

Short description of the action / measure	<p>A set of actions aimed at improving the state of Red listed species and biotopes/habitats in the Baltic Sea are included in this action. For effective conservation several supporting analyses are planned to be undertaken with the view of coordinating measures as relevant (State and Conservation 1-2014).</p> <p>Based on these analyses, area specific conservation programs to protect species and biotopes/habitats categorized as threatened according to the HELCOM Red List could be developed for the following basins: A,B,C,D. When applicable, the implementation of the programs will be coordinated by relevant contracting parties. In addition, the State and Conservation Working Group should develop “by 2017 guiding documents on conservation, recovery or action plans and/or related management measures for HELCOM threatened species, biotopes/habitats or species groups and their habitats”. These guidelines will directly support the implementation of area specific conservation programs and the improvement of HELCOM Red listed species and biotopes/habitats.</p>
Spatial coverage	Analyses and guidelines will be developed with a Baltic Sea perspective, however to consider a wider geographic perspective as needed for migratory species. Coordinated measures could furthermore be relevant on a sub-basin scale.
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	2016-2020
Contribution of the action / measure to achieve the target	The action will contribute to the BSAP goal to reach “A favorable conservation status of Baltic Sea biodiversity” [and more specifically to the implementation of the draft HELCOM Recommendation on conservation of the Baltic Sea species categorized as threatened ²¹ aiming at the protection and conservation measures for HELCOM threatened species.
Proposed activities for implementation (<u>very</u> briefly)	<ol style="list-style-type: none"> 1) to make an inventory of existing measures that will contribute to the improved status of threatened species and biotopes/habitats and analyze if they are sufficient to improve the state of those species 2) based on this gap analysis; identify the need for new measures and for which new measures it could be suitable to consider joint measures (regional plans) or coordinated measures (coordination of national measures) 3) Development of by 2017 guiding documents on conservation, recovery or action plans and/or related management measures for HELCOM threatened species, biotopes/habitats or species groups and their habitats <p>State and Conservation Working Group to lead the activities. Agreed analyses on existing measures to be carried out by Contracting Parties. A Lead Country approach to be considered for development of the guidelines. It should also be considered to set up an intersessional HELCOM group to address conservation of species and biotopes/habitats.</p>

²¹ Note that there is a study reservation by DK on the current draft Recommendation.

Obstacles to implementation (at regional and CP level)	Limited political support, capacity or resources to implement the actions
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Section 4.6 – Physical loss and damage to the seafloor

4.6.1 Development of joint principles for defining environmental targets for seabed habitats	
HELCOM type of action	b Management coordination, ii Plans, guidelines and manuals
Type of coordination	Not applicable (Regional coordination to define principles for determining reduction needs for pressures on seabed habitats)
Short description of the action / measure	<p>Through the BalticBOOST project HELCOM will develop joint principles and good practices for defining environmental targets for the anthropogenic pressures affecting seabed habitats. To support the development of such environmental targets the project will, as a starting point, explore ways to determine how much disturbance from different activities that specific seabed habitats can tolerate while remaining in Good Environmental Status (GES). The targets need to ensure a sustainable level of human activities (safe-guarding a sustainable future use of the marine resources), while not compromising progress towards GES.</p> <p>The work will focus on some of the major impacts connected with fisheries using mobile bottom contacting gears (otter trawls, Danish seines, Scottish Seines, dredges, beam trawls) but will also address other pressures from human activities on seabed habitats (e.g. dredging, construction etc.).</p> <p>Based on the information gathered the project will suggest principles and good practices for defining environmental targets.</p>
Spatial coverage	The joint principles will be developed with a Baltic Sea perspective. Environmental targets will eventually likely need to be developed with more restricted perspective (e.g. by sub-basins and further specified for specific habitat types).
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	BalticBOOST started in September 2015 and ends in December 2016.
Contribution of the action / measure to achieve the target	The activity will contribute to reaching the ecological objective under the biodiversity segment of the Baltic Sea Action Plan to “restoring and maintaining sea floor integrity at a level that safeguards the functions of the ecosystems”.

Proposed activities for implementation (<u>very</u> briefly)	The activities will be carried out under the BalticBOOST project. HELCOM GEAR and FISH Group as well as HOLAS II Core team will be consulted in the implementation of the project activity. Guidance for the development of principles will be provided through two workshops with expert participation from HELCOM Contracting Parties. Recommend to link the project actions to the update of the HELCOM Rec 36/2.
Obstacles to implementation (at regional and CP level)	NA (project resources available)

Section 4.7 – Selective extraction and incidental by-catch of species

4.7.1 Adjustment or utilization of EU data collection framework to retrieve data for assessments and the development of management measures related to by-catch of species	
HELCOM type of action	a. Measures v. Joint actions with the aim of influencing international regulations b. d. Data and information; i. Data
Type of coordination	a v.=4 - Joint regional action in relation to third parties For d_i: Not applicable (Regional coordination of data retrieval).
Short description of the action / measure ²²	<p>Joint HELCOM countries being also EU member states input to: the new EC proposal for Data Collection Framework, new multiannual programs for data collection and regional DCF groups.</p> <p>New DCF Regulation has been proposed in July 2015, in order to make DCF compliant with the reformed Common Fisheries Policy. It is proposed that the new DCF Regulation will define the frameworks for EU multiannual programme for data collection, which will be prepared after adoption of a Regulation. Multiannual programme for data collection will define only stable and basic variables, but other parameters will be more flexible and can be changed with time. The role of regional DCF groups will be strengthened and these groups will decide many of the details. This approach is in line with regionalisation under the reformed Common Fisheries Policy. Such an EU approach may provide room for HELCOM to provide and communicate needs for data collection with the view to be able to scientifically assess the impact of fisheries in the Baltic Sea.</p> <p>This action could facilitate in:</p> <ul style="list-style-type: none"> Contributing to enhance data collection on incidental catches of harbour porpoise, seals and water birds mainly in the Baltic Sea by-catch “hot spots”, for relevant fisheries (commercial/recreational fishing) <p>Identify the most relevant data collection needs on by-catch of</p>

²² Cooperation with Russia on the issue of by-catches is needed.

	protected fish species present in coastal waters
Spatial coverage	The Baltic Sea
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	To start in late 2016 depending on an EU progress on this issue
Contribution of the action / measure to achieve the target	<p>Consultation with BALTFISH, and cooperation with ICES and ASCOBANS, BSAC as well as NSAC and Scheveningen group regarding Kattegat is needed. Trust-building, cooperation and transparency in data use vis-à-vis fishers is equally needed.</p> <p>Currently DCF is designed for collecting fisheries data and is limited in collecting environmental elements. Therefore, in order to ensure that relevant data on by-catches of protected species are collected, priority should be given on the fleet segments, where the by-catch rate is the highest.</p>
Proposed activities for implementation (<u>very</u> briefly)	<p>1) Make an inventory of what kind of data is needed from DCF for the HELCOM purposes, and what kind of data will be needed for HELCOM Baltic Sea indicators and environment assessments.</p> <p>2) Ensure that data collected and used in scientific analyses is systematically used by HELCOM or relevant body;</p> <p>3) Preparation of a HELCOM letter to the EC indicating the preliminary needs of HELCOM in the framework of the reformed Data Collection Framework.</p> <p>Taking into account coordination importance in the implementation of the MSFD in the Baltic Sea region, it should be indicated, that within collection of the <i>“ecosystem data to assess the impact of Union fisheries on the marine ecosystem in Union and external waters, including data on by-catch of non-target species, in particular species protected under international or Union law, data on impacts of fisheries on marine habitats and data on impacts of fisheries on food webs”</i> (art. 5 point 2. (b) of the current DCF “bible”) HELCOM would like to be involved in future data collection process at a regional level;</p> <p>2. Providing HELCOM comments to the project of the Multiannual Community Programme to support the DCF, prepared after adoption of the new DCF regulation, regarding collection of the ecosystem data.</p> <p>3. Providing HELCOM expert knowledge on environmental issues within DCF though liaising with Regional Coordination Groups. This will provide an opportunity to use certain anonymized marine ecosystem data coming from DCF including data from recreational fisheries, in order to successfully implement environmental obligations for the Baltic Sea region including under MSFD for HELCOM countries being EU member states. Within the regional coordinating groups HELCOM should also aim at ensuring cooperation with Russia regarding the exchange of environmental data.</p>
Obstacles to implementation (at regional and CP level)	Currently DCF is designed for collecting fisheries data and does not take into account environmental elements. It is uncertain if focus on environmental aspects of new DCF could be achieved.

	Problems with obtaining by-catch data from commercial and recreational fisheries could appear. It might also be challenging to design sampling.
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4.7.2 Testing alternative fishing gears/fishing techniques to minimize incidental catch through joint project/projects	
HELCOM type of action	a Measures. iv HELCOM Recommendations that require implementation through measures and b. Management coordination ii Plans, guidelines and manuals
Type of coordination	a_iv:= 2 - Regional measure For b_ii: Not applicable (Regional coordination of national technical developments to reduce by-catch)
Short description of the action / measure	<p>The project HELCOM BALTFIMPA aimed at development of a selective and more environmental friendly fishing gears comparing to currently used, has not been continued after failing to obtain LIFE + financing. At the same time, measures in order to minimize negative impact of fisheries on protected species are urgently needed. Therefore, this is a proposal for continuation of activities proposed under HELCOM BALTFIMPA project with special emphasis on minimization of incidental catch problem. Several of the topics are already agreed as a work plan of the HELCOM FISH group.</p> <p>Information on planning the projects and its outcomes could be provided to BALTFISH.</p> <p>Information provided by the project should be useful for decision makers to implement measures to reduce incidental catch and by-catch of threatened and endangered species, especially in MPAs. MAMBO²³ project proposal should be taken into account.</p> <p>Relevant financial support for the project coordination should be ensured. National activities under the project for countries being also EU members, could be covered by EMFF 2014-2020.</p>
Spatial coverage	Baltic Sea
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	Start planning in 2016, start a project in 2017-2018
Contribution of the action / measure to achieve the target	Information provided by the project should be useful for decision makers to implement measures to reduce by-catch of threatened and endangered species, especially in MPAs

²³ MAMBO project – Management Actions and Conservation Measures for the Baltic Sea Odontocete.

Proposed activities for implementation (<u>very</u> briefly)	<p>HELCOM, in cooperation with other relevant organizations, to serve as an information exchange and coordination platform, for mainly nationally funded activities regarding alternative gear development and testing to minimize incidental catch and by-catch particularly in HELCOM MPAs²⁴ and identified hot spots.</p> <ul style="list-style-type: none"> • Define potential “hot spots” for incidental catch in the Baltic Sea, including spatial information regarding their location and estimated size • Make an inventory of available alternative fishing gears/techniques including traditional ones based on existing information, work in other fora and completed and ongoing projects and analyse their usefulness for addressing incidental catch, especially in “hot spots” areas. This should be done in cooperation with fishermen, scientists and nature conservation experts, • Consider a need for and added value of regional guidelines for fishing in MPAs based on the existing EU and national guidelines • If useful, prepare HELCOM guidance concerning friendly fishing techniques/gears to minimize incidental catch in HELCOM MPAs* (and possibly in “hot spot” areas) in the Baltic Sea • Prepare regional guidance for fishermen based on inter alia the HELCOM work on the issue.
Obstacles to implementation (at regional and CP level)	Relevant financial support for the project coordination should be ensured.

²⁴ Former BSAPs

Section 4.8 – Introduction of non-indigenous species

4.8.1 Regional monitoring programme on non-indigenous species in the Baltic Sea	
HELCOM type of action	b. ii; Plans, guidelines and manuals d. i, ii; Data, Databases
Type of coordination	2 - Regional measure
Short description of the action / measure	The Regional monitoring programme on non-indigenous species in the Baltic Sea will provide objective information needed for the evaluation of the progress made towards achieving management goals defined by EU MSFD, EU IAS Regulation, IMO BWMC, and other legislation acts.
Spatial coverage	The Baltic Sea
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	Start in 2016
Contribution of the action / measure to achieve the target	Regional monitoring program on NIS together with centralized NIS database is the only way to obtain objective, scientifically verified information needed for the evaluation of the progress towards management goals as well as for decision making (e.g. for granting ballast water management exemptions under IMO BWMC). National monitoring programmes to be taken into account.
Proposed activities for implementation (<u>very</u> briefly)	Milestones, selected, preliminary: <ul style="list-style-type: none"> • 2016 (beginning) Workshop to discuss the aim and structure of the monitoring program. • 2016/2017: Establishment of a regional database on non-indigenous species to accommodate monitoring data built on the existing AquaNIS database and the HELCOM/OSPAR risk assessment tool • 2017/8: NIS Monitoring Guidelines, including different monitoring methods based on existing experience to be reviewed.
Obstacles to implementation (at regional and CP level)	

Section 4.9 – Input of litter (Germany)

4.9.1 Regional Action Plan on Marine Litter (coordinated implementation)	
HELCOM type of action	a.i – Reduction of pressures a.iv – HELCOM Recommendations that require implementation through measures a.v – Joint actions with the aim of influencing international regulations b.ii – Plans, guidelines and manuals
Type of coordination	2 - Regional measure and 1 - Regional coordination of national measure
Short description of the action / measure	<p>The Regional Action Plan includes a set of</p> <ol style="list-style-type: none"> 1. collective regional actions 2. voluntary national actions (coordinated through the RAP) <p>to address:</p> <ul style="list-style-type: none"> - land-based sources - sea-based sources - removal actions - education and outreach on marine litter. <p>The RAP includes a requirement for reporting by Contracting Parties on the implementation of the agreed actions and their effectiveness.</p> <p>Link to RAP Link to HELCOM ML webpage</p>
Spatial coverage	The Baltic Sea and coordination with OSPAR and other regional seas convention regarding the implementation of marine-litter related activities of common interest.
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	Start in 2015
Contribution of the action / measure to achieve the target	The activities at both regional and national level target the reduction of marine litter from the major land- and sea-based sources as well as the removal of litter already present in the riverine and marine environment and will therefore contribute to reducing inputs of litter to, and amounts of litter in, the sea.
Proposed activities for implementation (very briefly)	Milestones, selected: <ul style="list-style-type: none"> • 2016: Making regional actions operational while developing them further into concrete measures • Different timelines for the implementation of regional actions (2016 - 2019)
Obstacles to implementation (at regional and CP level)	

Section 4.10 – Inputs of energy including underwater noise

4.10.1 Regional Baltic Underwater Noise Roadmap 2015-2017	
HELCOM type of action	b. ii; Plans, guidelines and manuals
Type of coordination	2 – Regional measure
Short description of the action / measure	The REGIONAL BALTIC UNDERWATER NOISE ROADMAP 2015-2017 outlines a stepwise approach for providing the necessary basis and preparation for the development of measures, including: <ol style="list-style-type: none"> 1. Knowledge gathering 2. Indicators 3. Explore possibility to determine acceptable levels of underwater noise for marine species 4. Evaluation and follow-up
Spatial coverage	The Baltic sea (and coordination with OSPAR on the establishment of a regional registry of sound)
Recommended start and duration, if appropriate, of action / measure (temporal coverage)	Start in 2015
Contribution of the action / measure to achieve the target	
Proposed activities for implementation (<u>very</u> briefly)	The work with the Roadmap will be led by the HELCOM Expert Network on Underwater Noise, under the Pressure group. Milestones, selected, preliminary: <ul style="list-style-type: none"> • 2015: Pre-core indicator development, coordination around registry of sound • 2016: Workshop to discuss the Roadmap • By mid 2016: Establishment of regional registry of impulsive sound
Obstacles to implementation (at regional and CP level)	