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## Background

The 2021 HELCOM Ministerial Meeting (20 October 2021) adopted the updated Baltic Sea Action Plan (BSAP). The full 2021 BSAP can be found through [this link](#).

The List of Decisions of the Ministerial Meeting can be found in the HELCOM Meeting Portal through [this link](#). Additional information associated with the BSAP actions, which specifies further details about the implementation of the actions, can be found through [this link](#).

Annex 1 to this document contains the actions of particular relevance for the Fish Group, as well as the additional information associated with those actions.

Annex 2 to this document includes a template for more detailed planning of the implementation of the actions.

HOD 61-2021 discussed the implementation of the BSAP and guidance for the Working Groups to plan their future work based on the proposal by the Secretariat. The meeting agreed to continue the discussion on the guidance at HELCOM 43-2022. The meeting invited the Secretariat to prepare a technical document for HELCOM 43-2022 on the guidance for the implementation of the BSAP clarifying the role of the leads and also taking into account the considerations at the Meeting of the Chairpersons. The following short guidance is based on the draft guidance document

The detailed planning will focus on the joint actions that have the earliest target years (2025 or earlier) as well as actions with later target years that require long term consideration. In addition, there can be a general discussion on the implementation of the national actions and the other joint actions that have later target years.

Leads and concrete steps for implementation to meet the criteria for achievement will be identified for the joint actions with the earliest target years. In addition to a lead country, the implementation of a joint action can be led e.g. by a project, drafting group, expert group or the Secretariat.

The roles of the Working Groups will be clarified for the actions that are the shared responsibility of several groups. Also, the role of the expert groups in implementing the actions will be made clear.

HOD 61-2021 acknowledged that planning of the implementation of the actions has already started in some of the main groups and should continue in the meetings to be held prior to HELCOM 43-2022 to ensure that the implementation of the actions is not delayed.

## Action requested

The Meeting is invited to take note of the information and to exchange views on how to contribute to their implementation of relevant actions in the 2021 BSAP by considering in particular Annex 2 and taking into account the above guidance.

## Annex 1 Actions in the 2021 Baltic Sea Action Plan of particular relevance for the Fish Group, as identified by the Secretariat

Code	Action	Target year	Type of Action	Rationale	Potential effect	Implemented by	Overseen WG/EG	Criteria for achievement	Cross-reference to actions in other segments
<i>Theme: Spatial conservation measures</i>									
<i>Topic: Spatial conservation management</i>									
B5	Develop, implement and share information on effective management measures, including compliance/control measures, to reduce the impact of fisheries inside marine protected areas (MPAs) in order to contribute to achieve their conservation objectives.	2030	Measure	Further development, implementation and information sharing of management measures for fisheries inside marine protected areas (MPAs), including exclusion zones for specific fishing gears, such as mobile bottom contacting gear or static nets, and no-take zones, is needed.  It would also be important to document the fisheries management in the HELCOM MPA Database.	Improved fish stocks and biodiversity within MPAs.	National/Joint	FISH	Management measures for fisheries inside MPAs, contributing to the area's conservation objectives, are more widely in place. (National measure)  Fisheries measures are documented in the HELCOM MPA Database. (Joint supporting action)	S42, S47, S54

Code	Action	Target year	Type of Action	Rationale	Potential effect	Implemented by	Overseen WG/EG	Criteria for achievement	Cross-reference to actions in other segments
<i>Theme: Conservation of species</i>									
<i>Topic: Conservation of fish</i>									

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B15	<p>Develop and coordinate monitoring and assessment methods, where ecologically relevant, for specified representative coastal fish species, populations and communities, by 2023. Based on these assessment methods, to regularly assess the state of the coastal fish community through selected coastal fish species and groups, including threatened species, by at latest 2023.</p> <p>Based on the results of the assessment, develop and implement management measures with the ambition to maintain or improve the status of coastal fish species, including migratory species by 2027.</p>	2023, 2027	Measure/Supporting action	<p>Assessing the state supports monitoring effectiveness of existing measures and identifying the need for further measures to ensure good environmental status. Successful implementation requires involvement of experts from all Contracting Parties, and improved monitoring. Coordinated methods and monitoring efforts ensure that assessment can be done at a scale and resolution which is ecologically relevant and can support management and the implementation of measures. Concrete management measures are needed.</p>	<p>Results of a status assessment can be used to identify the need for further measures and/or indicate the effectiveness of existing measures. Data stemming from coordinated monitoring would improve the assessment results and ensure consistent, data-driven information of high confidence is available to guide further measures and/or indicate the effectiveness of existing measures. Measures to manage human activities or prevent increased mortality detrimental to coastal fish stocks are likely to improve the status of stocks, the resilience of the coastal food web and, for those species which are threatened or declining, improve the conservation status.</p>	National/Joint	STATE & CONSERVATION; FISH; FISH Pro	<p>By 2023 assessment, presenting information in a format that contributes to the effective implementation of measures is ready and publicly available. (Joint supporting action)</p> <p>Interval for the next assessment is agreed by 2023. (Joint supporting action)</p> <p>Where ecologically relevant, data and assessment of coastal fish is available by 2023 for the full distribution of the species, at a resolution suitable for management and the implementation of measures. (Joint supporting action)</p> <p>By 2027 appropriate management measures have been implemented with the ambition to maintain or improve the status of coastal fish species. (National measure)</p>	S53

Code	Action	Target year	Type of Action	Rationale	Potential effect	Implemented by	Overseen WG/EG	Criteria for achievement	Cross-reference to actions in other segments
B16	<p>To strengthen native strains and to reinstate migratory fish species:</p> <ul style="list-style-type: none"> <li>-By 2023 identify rivers where management measures for migratory fish species, including eel, would have the greatest positive impact.</li> <li>-Starting from 2023, in line with relevant international commitments, iteratively review and prioritize effective mitigation measures in the identified rivers and/or dams, including removal of dams and migration barriers where relevant and possible, especially in small waterways.</li> <li>-Develop and implement habitat restoration plans of spawning sites for anadromous species in relevant rivers by 2025.</li> </ul>	2023, 2024, 2025	Measure	<p>Eel populations in the Baltic Sea region are in critical state and mitigation measures to improve migration need to be prioritized and implemented urgently.</p> <p>The action is intended to address strengthening of native strains as well as reintroductions in potential habitat rivers for migratory fish species. It should be up to Contracting Parties to decide which rivers are in need of restoration plans. Informing of the relevant rivers should be part of reporting on implementation of the action.</p> <p>Priority rivers have already been agreed as part of Recommendation 32-33/1 for salmon and sea trout, but such priority lists are not available for other migratory fish species.</p> <p>While the migratory fish populations breed in/inhabit specific rivers, the populations are Baltic Sea populations (as opposed to populations of a specific Contracting Party). Therefore, having HELCOM as a platform for following up and considering the work already being conducted on the national level provides added value in considering prioritisation of measures and where to focus resources at a level that best benefits the populations as a whole.</p>	<p>Increased numbers of out-migrating eels from the Baltic Sea region and strengthened eel stock.</p> <p>Strengthened native strains of migratory fish as well as reintroduced populations in potential habitat rivers for migratory fish species.</p>	National	FISH; FISH-M	<p>By 2023 rivers, where management measures for migratory fish species, including eel, would have the greatest positive impact, have been identified.</p> <p>Mitigation measures are widely in place including removal of dams and migration barriers where relevant. Where this is not possible, mitigation measures at dams (e.g. in connection with hydropower plants), especially in small waterways are being prioritized and applied by 2023.</p> <p>By 2025 national habitat restoration plans in relevant rivers are in place, in order to strengthen native strains and to reinstate migratory fish species.</p> <p>Migration barriers have been removed or mitigated by 2024 in at least three rivers of</p>	

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								each Baltic Sea coastal countries, as applicable.	
B17	With the aim to protect and restore eel population, determine which measures set out in the Convention on the Conservation of Migratory Species of Wild Animals (CMS), EU Eel Regulation and other relevant instruments would benefit from regional cooperation on a Baltic-wide level. Finalize by 2024 and implement by 2025 a Baltic coordinated programme of such measures.	2024, 2025	Measure/Supporting action	<p>Eel populations in the Baltic Sea region are in critical state and a HELCOM programme is needed to ensure successful eel migrations from the Baltic Sea drainage basin to their spawning grounds by late 2021 with implementation starting by 2022 and intermediate assessments e.g. in 2024 in order to identify problems and address them.</p> <p>The effectiveness of the programme could be followed up by a monitoring and post-evaluation process of levels of pressures affecting eel that begins no later than 2024.</p> <p>BALTFISH involvement is relevant in implementation of the programme.</p>	Increased numbers of out-migrating eels from the Baltic Sea region and a strengthened eel stock	National/Joint	FISH; FISH-M	A coordinated programme of protective measures ensuring successful eel migrations, aligned with CMS, the EU Eel Regulation and other relevant instruments is in place by 2024 (Joint supporting action) and being implemented by 2025 (National measure).	
B18	Restore functional populations of Baltic sturgeon by 2029 implementing the HELCOM Baltic Sea Sturgeon Action Plan.	2029	Measure/Supporting action	The Baltic sturgeon was an integral part of the Baltic fauna until the middle of the 20th century. The species is an anadromous, migratory fish spending most of its life in marine waters while returning to its native river for reproduction. Populations of the species have dramatically decreased during the last centuries. Subsequently, the species became extinct in the Baltic range states during the second half of the 20th century. The aim of the action is to prevent the Baltic	Sturgeon remediation extends beyond a recovery measure for a single species. The complex life cycle, its long life span, late maturity and the utilization of diverse habitats in this diadromous species render it both an indicator and an umbrella species for the quality of habitats as well as the effectiveness of management for sustainability. Thus, this measure would also make an important	National/Joint	STATE & CONSERVATION; FISH	<p>Consistent ex-situ conservation programme is implemented, taking advantage of the specimens already secured. (National measure)</p> <p>In situ conservation programme is implemented and enforced, preventing further loss of the</p>	

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				sturgeon from full extinction, and in the mid-term, to re-establish viable populations of the Baltic sturgeon in its historic range.	contribution to protecting and maintaining biodiversity.			<p>remaining specimens. (National measure)</p> <p>A strategic long-term monitoring programme for population development and habitat use, to support adaptive management, is in place in all relevant countries. (National supporting action)</p> <p>A dedicated programme on habitat protection and rehabilitation has been developed, in order to ensure that spawning and nursery sites meet the needs of the species and are accessible for the respective life cycle stages. (Joint supporting action)</p> <p>A dedicated programme on habitat protection and rehabilitation, ensuring that spawning and nursery sites meet the needs of the species and are accessible for the respective life cycle</p>	

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								<p>stages, has been implemented where relevant. (National measure)</p> <p>Successful, self-sustaining, re-introduced population of Baltic sturgeon is in its potential spawning rivers and in key areas of its former natural range. (National measure)</p>	

Code	Action	Target year	Type of action	Rationale	Potential effect	Implemented by	Overseeing WG/EG	Criteria for achievement	Cross-reference to actions in other segments
<i>Theme: Hazardous substances</i>									
<i>Topic: Legacy pollutants</i>									
HL14	Encourage the use of alternative less toxic metals and other materials to replace lead in fishing gear and shooting bullets with the aim to minimize harmful use of metallic lead.	2030	Measure	Large areas of the Baltic Sea remain in bad status in terms of lead. Loss of fishing equipment to the Baltic Sea as well as spreading of lead from ammunition is a direct emission source, which causes unacceptable effects on the marine life. Input of lead must be stopped on a regional scale. This concerns both professional and recreational activities.	Reduction of lead input to the aquatic environment in the Baltic Sea region.	National/Joint	PRESSURE; FISH	<p>Regional guidelines and recommendations on substitution of lead in fishing gear and ammunition are adopted. (Joint)</p> <p>National guidelines and recommendations on substitution of lead in fishing gear and ammunition are issued. (National)</p>	

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				Alternatives are partially already available on the market, but in some cases, they are not yet an equivalent substitute.				Related regional and national outreach campaigns are arranged. (Joint and national)	

## Actions in the Sea-based activities segment

Code	Action	Target year	Type of action	Rationale	Potential effect	Implemented by	Ove-seeing WG/EG	Criteria for achievement	Cross-reference to actions in other segments
<i>Theme: Fisheries management</i>									
S39	Develop guidance by 2026 in cooperation with the Regional Coordination Groups within the EU Data Collection Framework and the International Council for the Exploration of the Sea (ICES) on how to improve data collected on recreational fisheries in a cost-effective way, with a view to evaluate the impacts of recreational fisheries on the marine environment, where there is a need.	2026	Supporting action	By improving the data collected from recreational fisheries the impacts of such fisheries can be better evaluated. This in turn will facilitate planning and implementing relevant measures to reduce these impacts.	N/A	Joint	FISH; EG Fishdata	Guidance on how to improve data collected on recreational fisheries, taking into account the requirements on data collection in the EU Control Regulation, is adopted.	
S40	Identify by 2024 fish species for which there is a need for better data for identified purposes, such as setting threshold levels. Utilise dedicated programmes and projects to facilitate recording and reporting of data for these species by 2025 to support the identification and implementation of measures to achieve good environmental status.	2024, 2025	Supporting action	There are still gaps in recording and reporting of data for certain fish species, including non-target fish species, in particular from small fishing vessels and recreational fishermen. Such data is, however, needed in order to facilitate identification and implementation of measures to achieve good environmental status.	N/A	Joint	FISH; EG Fishdata	By 2024 fish species for which there is a need for better data for identified purposes have been identified. By 2025 programmes or projects are in place to facilitate	B35

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								recording and reporting of data from commercial and recreational fishermen on catch of non-target fish species	
S41	Further elaborate cooperation between the Baltic Sea Fisheries Forum (BALTFISH) and relevant HELCOM working groups by 2023 to facilitate a wide range of actions to achieve good environmental status.	2023	Supporting action	BALTFISH and other fisheries management bodies work with many of the same topics as HELCOM. An improved cooperation between HELCOM and fisheries management bodies can facilitate ecosystem-based management in line with the objectives of the BSAP and fisheries management measures in place.	N/A	Joint	FISH	A more structured or formalized cooperation and coordination between HELCOM and BALTFISH is elaborated. Such cooperation and coordination is carried out through practical means such as sharing meeting agendas, and feeding in to the appropriate processes between organizations.	
S42	Update and harmonize by 2024 the 2016 BALTFIMPA decision-support tool approach with ongoing initiatives e.g. in the International Council for the Exploration of the Sea (ICES) on a seafloor assessment framework for the Baltic Sea. This tool should also provide options on how to reduce the possible negative impact of fisheries on conservation values in the most cost-effective way, including in marine protected areas (MPAs).	2024	Supporting action	The BALTFIMPA generic tool developed under the BALTFIMPA Project is designed to evaluate the impact of fishing gear on habitats and species at a detailed spatial scale, using a best knowledge-based approach and to evaluate sustainability of each fishing gear and alternatives, if available, proposed to support managing decisions. The tool should be updated to provide options on how to reduce the possible negative impact of fisheries on conservation	N/A	Joint	FISH	BALTFIMPA decision support tool is updated.	B3, B5

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				values in the most cost-effective way, including in marine protected areas, and be harmonized with ongoing initiatives e.g. in ICES.					
<i>Topic: By-catch</i>									
S43	Reduce the negative impacts of fishing activities on the marine ecosystem and to this end, support the development of fisheries management including technical measures to minimize unwanted by-catch of fish, birds and marine mammals and achieve the close to zero target for by-catch rates of relevant species by 2024, especially the Baltic proper population of harbour porpoise by 2022.	2022, 2024	Measure	<p>By-catch of mammals, birds and non-target fish species continues to be a threat to a number of species in the Baltic Sea.</p> <p>The Roadmap on fisheries data, adopted by HELCOM 41-2020, will contribute to achieving this action which outlines a suite of possible actions, that can contribute to achieving this action. The action entails a process that spans from collecting data on by-catch to developing and implementing management measures to reduce by-catch.</p> <p>Technical measures such as acoustic deterrent devices should not compromise national security or defence capability.</p> <p>Development and implementation of measures should to the degree possible be supported and done in cooperation with the fishing industry.</p>	The action is intended to minimize unwanted by-catch of fish, birds and marine mammals and achieve the close to zero target for by-catch rates of relevant species, e.g. harbour porpoise	Joint	FISH	The action is of an ongoing nature and will be followed up by assessment of by-catch within regional assessments.	B8
S44	Invite the competent authorities to immediately, but no later than 2022, implement mitigation measures in the Baltic proper, in order for by-catch of harbour porpoise to be significantly	2022	Measure	Long-term by-catch mitigation measures both within and outside marine protected areas in areas of more than occasional harbour porpoise occurrence are urgently needed to protect the genetically	Drowning in fishing gear is a major pressure for the harbour porpoise with by-catch being the greatest source	National	FISH	Mitigation measures are implemented, and Baltic proper by-catch of harbour porpoise has been	B8

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	reduced with the aim to reach by-catch rates close to zero.			distinct, morphologically divergent, and ecologically separated management unit of harbour porpoises in the Baltic Proper to reverse the imminent risk of extinction and in the long term achieve a good environmental status of the species.	of mortality. The measure would reduce pressure on the harbour porpoise populations from by-catch by preventing or controlling the adverse impacts of fishing.			significantly reduced.	
S45	Invite the competent authorities to implement operational conservation measures for the Belt Sea population of harbour porpoise by 2024 such as permanent and/or spatial-temporal closures for relevant fishing métiers in risk areas where technical mitigation measures are insufficient to reach conservation goals.	2024	Measure	Long-term by-catch mitigation measures both within and outside marine protected areas in areas of more than occasional harbour porpoise occurrence are needed to protect the ecologically separated management unit of harbour porpoises of the Western Baltic, the Belt Sea and the Kattegat population in the Baltic Sea to reverse current threat status and in the long term achieve a good environmental status of the Western Baltic porpoise population.	Drowning in fishing gear is a major pressure for the harbour porpoise with by-catch being the greatest source of mortality. The measure would reduce pressure on harbour porpoise populations from by-catch, by preventing or controlling the adverse impacts of fishing.	National	FISH	Mitigation measures are implemented where conservation goals have not been met.	B8
S46	Promote effective mitigation measures to minimize by-catch of harbour porpoises in the Baltic Sea area inter alia via cooperation with the Baltic Sea Fisheries Forum (BALTFISH), and evaluate and promote adjusted measures as needed by 2025.	2025	Measure	Acoustic deterrent devices (ADD) in relevant fisheries could serve as an interim measure until efficient alternative fishing gear or other mitigation measures become available. In marine protected areas (MPAs), which are important for harbour porpoise, effective by-catch mitigation should preferably be established by other means than ADDs, such as e.g. permanent or	This action is expected to lead to reduced by-catch of harbour porpoise.	Joint	FISH	Effective mitigation measures to reduce by-catch of harbour porpoise in the Baltic Sea have been promoted inter alia in cooperation with BALTFISH.	B8

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				temporary exclusion of certain gear types or no take zones and promotion of alternative gears. Technical measures such as ADDs should not compromise national security or defence capability.					
S47	Continually test, promote and introduce new technical and operational by-catch mitigation measures such as alternative and seal safe gears in cooperation with competent authorities with the aim to, as appropriate, replace fishing gear proven to be problematic with respect to by-catch, with evaluation of measures every five years starting in 2023, and regularly update the HELCOM questionnaire on trials of alternative fishing gears and fishing techniques.	Starting 2023	Measure	<p>By-catch of mammals, birds and non-target fish species continues to be a threat to a number of species in the Baltic Sea. Developing new and improved mitigation measures and efficient alternative fishing gear, as well as evaluation of them, is therefore needed, in cooperation with competent authorities and relevant stakeholders.</p> <p>Implementing the action could also involve launching pilot projects to test the effectiveness of possible measures to reduce by-catch (using of kites, limiting the fishing periods, leaving fishing nets at night, etc.) of wintering birds to better understand the ecology of seabirds and their behaviour during the day.</p> <p>Information on trials of alternative fishing gears is also available through the reporting requirements of Regulation EU 2019/1241. The information collected in the HELCOM questionnaire can be complemented by relevant information received from the</p>	Implementation of this action is in the long run expected to reduce by-catch of mammals, birds, and non-target fish species.	National/Joint	FISH	<p>Ongoing tests of new technical and operational by-catch mitigation measures are evaluated every five years, starting in 2023. (Joint)</p> <p>New efficient alternative fishing gear have been developed and are used as appropriate. (National)</p> <p>HELCOM questionnaire on trials of alternative fishing gears and techniques updated regularly, at least every two years, starting in 2022 making also use, as applicable, of information collected through the reporting requirements of Regulation EU 2019/1241. (Joint)</p>	B3, B5, B8

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				European Commission, based on the reporting under Regulation EU 2019/1241.					
S48	Develop and implement an effective data collection for more reliable data on incidental by-caught birds and mammals and fishing effort consistent and fully in line with the data needs identified by the International Council for the Exploration of the Sea (ICES). Relevant sources of data are e.g. EU basic control Regulation and additional national or regional coordinated data collection programmes or projects for filling data-gaps outlined in the HELCOM Roadmap on fisheries data.		Supporting action	There is still insufficient data on incidental by-catch data and fishing effort, in particular from small fishing vessels. Such data is, however, needed in order to facilitate ecosystem-based management and identification and implementation of measures to achieve good environmental status, as incidental by-catches are one criterion which may affect the state of a species.	N/A	Joint	FISH	An effective system is in place for data collection of by-catch of birds, mammals, and fishing effort, taking into account data needs identified by ICES and data gaps outlined in the HELCOM Roadmap on fisheries data, as well as the requirements on data collection in the EU Control Regulation.	B8, B35
S49	Maintain, develop and extend regulatory or voluntary schemes to protect key seabird areas and seasons by establishing appropriate fisheries measures in line with conservation objectives and to monitor incidental catches of seabirds by 2025. Extend and develop outreach programmes for the fisheries sector concerning their possible impacts on seabird populations.	2025	Measure	By-catch of seabirds continues to be a threat to a number of species and populations. Appropriate spatial and seasonal fisheries measures are therefore needed, as well as improved data on by-catches.	The action is intended to minimize unwanted by-catch of seabirds.	National/Joint	FISH	Regulatory or voluntary schemes are in place and being implemented, as appropriate, to protect key seabird areas and seasons by establishing appropriate fisheries measures in line with conservation objectives. (Joint and national)	

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<i>Topic: Fish stock management</i>									
S50	Competent authorities to jointly further develop protective measures for Baltic Sea salmon to support the development of a new regional salmon management plan, and nationally establish salmon management plans by 2023, where appropriate. These management plans should be implemented by 2025 to achieve the set targets, including but not limited to smolt production, genetic diversity and distribution throughout the river habitat. In addition, nationally ensure that granting permits for activities in and near rivers does not compromise the ability to reach set river specific fish population targets.	2023, 2025	Measure	Recommendation 32-33/1 contains measures and targets for restoration of Baltic salmon and sea trout populations that have not been fully implemented yet. This action is intended to enhance the implementation of the Recommendation through the establishment of long-term national salmon management plans, where applicable. The measure could also support the development of a regional multi-annual management plan.	Salmon populations reach set target levels, with regard to inter alia smolt production, genetic diversity and distribution throughout the river habitat.	National/Joint	FISH; FISH-M	Protective measures for Baltic Sea salmon to support the development of a new regional salmon management plan have been further developed by 2023. (Joint) Long-term national management plans for salmon stocks are in place by 2023 and being implemented by 2025 and at least 10 threatened salmon rivers have active conservation. (National)  National procedures are in place to ensure that granting permits for activities in and near rivers does not compromise the ability to reach set river specific fish population targets. (National)	B16
S51	Competent authorities to improve data related to sea trout stocks and to	2025	Measure	Recommendation 32-33/1 contains measures and targets for	Sea trout populations reach	National	FISH; FISH-M	Active management, including effective	B16

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	improve populations of sea trout stocks by implementing national measures at the latest by 2025 with the view to achieve good ecological condition in sea trout streams.			restoration of Baltic salmon and sea trout populations that have not been fully implemented yet. This action is intended to enhance the implementation of the Recommendation through the establishment of long-term national management plans or other equivalent instruments with the view to achieve good ecological condition in sea trout streams.	set target levels, with regard to inter alia recruitment status, genetic diversity and distribution throughout the river habitat.			conservation measures of sea trout stocks, including habitat restoration, are in place in each Baltic Sea coastal country and being implemented.	
S52	Define necessary complementary measures by 2024 in relevant policy (fisheries, environment etc.) areas to improve the size/age structure for fish stocks, including cod.	2024	Measure	<p>Fisheries management, including setting fishing opportunities often do not set goals for improvement of size/age range of targeted stocks. However, considering especially the decline of the cod, complementary measures are needed. Fishing and by-catch are not the only pressures affecting the stocks, which is why ecosystem-based management is required, including focusing on food web dynamics, taking into account also linkages with other measures in the BSAP.</p> <p>Defining and implementing such complementary measures requires cooperation not only between Contracting Parties but also between national authorities and relevant stakeholders.</p>	Improve size/age-range and populations, improving food-web dynamics and bottom integrity. Improvement of production/spawning success.	National/Joint	FISH; STATE & CONSERVATION	Complementary measures are defined and can be implemented, in order to improve size/age structure, to reach healthy fish stocks, including cod.	B27
S53	Implement measures to restore coastal fish communities, including establishment of no-take areas, seasonal closures and catch	2026	Measure	To restore coastal fish communities, measures can aim to either support fish production (recruitment and/or growth) or	Restored coastal fish communities (local level). Increased	National	FISH	Measures are in place in specific coastal areas, as appropriate,	B15

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	regulations, as appropriate by 2026 for the specific coastal area.			reduce mortality. However, cumulative pressures typically impact coastal areas and different sets of pressures may predominate in different sub-areas. Based on species presence and locally identified need of measures, different actions may be advisable. Hence, for improving and sustaining the status of coastal fish in the Baltic Sea, a set of measures should be implemented, as appropriate for the specific coastal area. This action represents part of a set of measures for coastal fish. The measures can be implemented individually or together, as deemed most appropriate, noting however that implementing more than one of the measures in one area is expected to lead to synergistic effects and increase efficiency. It is considered important to follow up the effects of the set of measures in specific areas, as well as sharing the results with relevant meetings and stakeholders.	abundance of large predatory fish leads to improvements of the food web, increased capacity of the ecosystem to buffer other environmental impacts such as symptoms of eutrophication.			including establishment of no-take areas, seasonal closures and catch regulations.	
S54	Share information among Contracting Parties, the Baltic Sea Fisheries Forum (BALTFISH) and Baltic Sea Advisory Council (BSAC) on non-lethal mitigation measures or other ways to manage seals-fisheries interactions and implement those measures by 2025, as appropriate.	2025	Measure/Supporting action	While various non-lethal mitigation measures or ways to manage seals-fisheries interactions exist, they might be only locally used and known. This action could be implemented e.g. by creating a HELCOM-BALTFISH toolbox on non-lethal mitigation measures, involving relevant stakeholders, and by undertaking an overview of what actions are suitable within the	Reduced by-catch of seals and reduced impact of seals on fisheries.	National/Joint	FISH	HELCOM-BALTFISH toolbox, or other means of sharing information on non-lethal mitigation measures or ways to manage seals-fisheries interactions are in place (Joint supporting action)	B3, B5

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				existing legal framework aiming to implement these measures, as appropriate.				and such measures are being implemented, as appropriate. (National measure) Overview of actions that are suitable within the existing legal framework.	

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*Theme: Underwater noise*

S61	Develop and implement guidelines for the design and use of acoustic deterrent devices to avoid detrimental impacts on the environment from underwater noise by 2024.	2024	Measure	The action aims at the establishment of common HELCOM guidelines for the design and use of acoustic deterrent devices (ADD). Such guidelines should include a list of contexts where deterrent devices have been demonstrated to be efficient in mitigating other impact on marine mammals, or proven to be efficient in preventing undesired behaviour of marine mammals (in particular depredation and destruction of fishing gear). The guidelines should include specifications for recommended frequency ranges, maximum source levels and other relevant parameters, separated into the different uses of the	Despite well-documented undesired effects of some of these deterrent devices (so called scarers), such as risk of inflicting damage to the hearing of marine mammals, excessive disturbance of non-target species, and use of the devices in cases in which the positive effects are undocumented, there are no upper limits to how loud these devices can be and where and when they can be used. On the other hand, there are numerous studies, which have demonstrated large unintended effects of, for	Joint	FISH	Guidelines for the design and use of acoustic deterrent devices are in place and implemented in all Contracting Parties.	
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Code	Action	Target year	Type of action	Rationale	Potential effect	Implemented by	Overseeing WG/EG	Criteria for achievement	Cross-reference to actions in other segments
				<p>devices and target species, with the aim of maintaining their efficiency and reducing potential harmful effects to the environment.</p> <p>The use of ADDs should not compromise national security or defence capability.</p>	<p>example, seal scarers on harbour porpoises, and there are several suggested changes to the design, which could alleviate the unintentional effects. This includes changing the frequency range and decrease the source level of the signals.</p>				
<i>Theme: Seabed loss and disturbance</i>									
S64	<p>Enforce and implement by 2025, in line with the update of the marine protected area (MPA) management guidelines, effective management plans and/or conservation measures to not allow destructive and exploitative activities related to the seabed that may compromise the conservation objectives of MPAs.</p>	2025	Measure	<p>Limiting the impact of pressures through regulation of human activities is a cornerstone of marine protected area (MPA) management and an important measure to secure progress towards the conservation objectives of protected areas.</p> <p>The action is also in line with Guidelines annexed to HELCOM Recommendation 19/1 which states that permits for marine sediment extraction shall not be granted for: c) Areas to be included or which are proposed to the European ecological NATURA 2000 network according to the EC Habitats and Birds Directives (92/43/EEC and 79/409/EEC) except when the procedure of Art. 6 of the Habitats Directive is followed.</p>	<p>Reduction of the negative impact on the seabed that could compromise the conservation objectives of MPAs.</p>	National	<p>STATE &amp; CONSERVATION; FISH; HELCOM-VASAB MSP; EN DREDS</p>	<p>Effective management plans, conservation rules or other equivalent systems to not allow for destructive and exploitative activities related to the seabed compromising the conservation objectives of MPAs are implemented and enforced.</p>	B3

## Annex 2. Planning the detailed implementation of BSAP actions of relevance for the Fish Group

### Actions with the earliest target years and actions that require long term consideration

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	<i>Theme: Conservation of species</i>							
	<i>Topic: Conservation of fish</i>							
B15	<p>Develop and coordinate monitoring and assessment methods, where ecologically relevant, for specified representative coastal fish species, populations and communities, by 2023. Based on these assessment methods, to regularly assess the state of the coastal fish community through selected coastal fish species and groups, including threatened species, by at latest 2023.</p> <p>Based on the results of the assessment, develop and implement management measures with the ambition to maintain or improve the status of coastal fish species, including migratory species by 2027.</p>	2023, 2027	National/ Joint	<b>STATE &amp; CONSERVATION;</b> FISH; FISH Pro	<p>By 2023 assessment, presenting information in a format that contributes to the effective implementation of measures is ready and publicly available. (Joint supporting action)</p> <p>Interval for the next assessment is agreed by 2023. (Joint supporting action)</p> <p>Where ecologically relevant, data and assessment of coastal fish is available by 2023 for the full distribution of the species, at a resolution suitable for management and the implementation of measures. (Joint supporting action)</p> <p>By 2027 appropriate management measures have been implemented with the ambition to maintain or improve the status of coastal fish species. (National measure)</p>			
B16	To strengthen native strains and to reinstate migratory fish species:	2023, 2024, 2025	National	<b>FISH;</b> FISH-M	By 2023 rivers, where management measures for migratory fish species, including			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	<p>-By 2023 identify rivers where management measures for migratory fish species, including eel, would have the greatest positive impact.</p> <p>-Starting from 2023, in line with relevant international commitments, iteratively review and prioritize effective mitigation measures in the identified rivers and/or dams, including removal of dams and migration barriers where relevant and possible, especially in small waterways.</p> <p>-Develop and implement habitat restoration plans of spawning sites for anadromous species in relevant rivers by 2025.</p>				<p>eel, would have the greatest positive impact, have been identified.</p> <p>Mitigation measures are widely in place including removal of dams and migration barriers where relevant. Where this is not possible, mitigation measures at dams (e.g. in connection with hydropower plants), especially in small waterways are being prioritized and applied by 2023.</p> <p>By 2025 national habitat restoration plans in relevant rivers are in place, in order to strengthen native strains and to reinstate migratory fish species.</p> <p>Migration barriers have been removed or mitigated by 2024 in at least three rivers of each Baltic Sea coastal countries, as applicable.</p>			
B17	<p>With the aim to protect and restore eel population, determine which measures set out in the Convention on the Conservation of Migratory Species of Wild Animals (CMS), EU Eel Regulation and other relevant instruments would benefit from regional cooperation on a Baltic-wide level. Finalize by 2024 and implement by 2025 a Baltic</p>	2024, 2025	National/Joint	<b>FISH</b> ; FISH-M	<p>A coordinated programme of protective measures ensuring successful eel migrations, aligned with CMS, the EU Eel Regulation and other relevant instruments is in place by 2024 (Joint supporting action) and being implemented by 2025 (National measure).</p>			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	coordinated programme of such measures.							
B18	Restore functional populations of Baltic sturgeon by 2029 implementing the HELCOM Baltic Sea Sturgeon Action Plan.	2029	National/Joint	<b>STATE CONSERVATION; FISH</b> &	<p>Consistent ex-situ conservation programme is implemented, taking advantage of the specimens already secured. (National measure)</p> <p>In situ conservation programme is implemented and enforced, preventing further loss of the remaining specimens. (National measure)</p> <p>A strategic long-term monitoring programme for population development and habitat use, to support adaptive management, is in place in all relevant countries. (National supporting action)</p> <p>A dedicated programme on habitat protection and rehabilitation has been developed, in order to ensure that spawning and nursery sites meet the needs of the species and are accessible for the respective life cycle stages. (Joint supporting action)</p> <p>A dedicated programme on habitat protection and rehabilitation, ensuring that spawning and nursery sites meet the needs of the species and are accessible for the respective life cycle stages, has</p>			<p>Implementation of this action should commence during 2022 in order to meet the target.</p> <p>EG STUR should support the implementation of this action.</p>

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
					been implemented where relevant. (National measure)  Successful, self-sustaining, re-introduced population of Baltic sturgeon is in its potential spawning rivers and in key areas of its former natural range. (National measure)			
	<b>Theme: Fisheries management</b>							
S40	Identify by 2024 fish species for which there is a need for better data for identified purposes, such as setting threshold levels. Utilise dedicated programmes and projects to facilitate recording and reporting of data for these species by 2025 to support the identification and implementation of measures to achieve good environmental status.	2024, 2025	Joint	<b>FISH</b> ; EG Fishdata	By 2024 fish species for which there is a need for better data for identified purposes have been identified. By 2025 programmes or projects are in place to facilitate recording and reporting of data from commercial and recreational fishermen on catch of non-target fish species			
S41	Further elaborate cooperation between the Baltic Sea Fisheries Forum (BALTFISH) and relevant HELCOM working groups by 2023 to facilitate a wide range of actions to achieve good environmental status.	2023	Joint	FISH	A more structured or formalized cooperation and coordination between HELCOM and BALTFISH is elaborated. Such cooperation and coordination is carried out through practical means such as sharing meeting agendas, and feeding in to the appropriate processes between organizations.			
S42	Update and harmonize by 2024 the 2016 BALTFIMPA decision-support tool approach	2024	Joint	FISH	BALTFIMPA decision support tool is updated.			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	with ongoing initiatives e.g. in the International Council for the Exploration of the Sea (ICES) on a seafloor assessment framework for the Baltic Sea. This tool should also provide options on how to reduce the possible negative impact of fisheries on conservation values in the most cost-effective way, including in marine protected areas (MPAs).							
	<i>Topic: By-catch</i>							
S43	Reduce the negative impacts of fishing activities on the marine ecosystem and to this end, support the development of fisheries management including technical measures to minimize unwanted by-catch of fish, birds and marine mammals and achieve the close to zero target for by-catch rates of relevant species by 2024, especially the Baltic proper population of harbour porpoise by 2022.	2022, 2024	Joint	FISH	The action is of an ongoing nature and will be followed up by assessment of by-catch within regional assessments.			
S44	Invite the competent authorities to immediately, but no later than 2022, implement mitigation measures in the Baltic proper, in order for by-catch of harbour porpoise to be significantly reduced with	2022	National	FISH	Mitigation measures are implemented, and Baltic proper by-catch of harbour porpoise has been significantly reduced.			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	the aim to reach by-catch rates close to zero.							
S45	Invite the competent authorities to implement operational conservation measures for the Belt Sea population of harbour porpoise by 2024 such as permanent and/or spatial-temporal closures for relevant fishing métiers in risk areas where technical mitigation measures are insufficient to reach conservation goals.	2024	National	FISH	Mitigation measures are implemented where conservation goals have not been met.			
S46	Promote effective mitigation measures to minimize by-catch of harbour porpoises in the Baltic Sea area inter alia via cooperation with the Baltic Sea Fisheries Forum (BALTFISH), and evaluate and promote adjusted measures as needed by 2025.	2025	Joint	FISH	Effective mitigation measures to reduce by-catch of harbour porpoise in the Baltic Sea have been promoted inter alia in cooperation with BALTFISH.			
S47	Continually test, promote and introduce new technical and operational by-catch mitigation measures such as alternative and seal safe gears in cooperation with competent authorities with the aim to, as appropriate, replace fishing gear proven to be problematic with respect to by-catch, with evaluation of measures every five years starting in 2023, and	Starting 2023	National/Joint	FISH	Ongoing tests of new technical and operational by-catch mitigation measures are evaluated every five years, starting in 2023. (Joint)  New efficient alternative fishing gear have been developed and are used as appropriate. (National)  HELCOM questionnaire on trials of alternative fishing gears and techniques updated regularly, at			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	regularly update the HELCOM questionnaire on trials of alternative fishing gears and fishing techniques.				least every two years, starting in 2022 making also use, as applicable, of information collected through the reporting requirements of Regulation EU 2019/1241. (Joint)			
S48	Develop and implement an effective data collection for more reliable data on incidental by-caught birds and mammals and fishing effort consistent and fully in line with the data needs identified by the International Council for the Exploration of the Sea (ICES). Relevant sources of data are e.g. EU basic control Regulation and additional national or regional coordinated data collection programmes or projects for filling data-gaps outlined in the HELCOM Roadmap on fisheries data.		Joint	FISH	An effective system is in place for data collection of by-catch of birds, mammals, and fishing effort, taking into account data needs identified by ICES and data gaps outlined in the HELCOM Roadmap on fisheries data, as well as the requirements on data collection in the EU Control Regulation.			
S49	Maintain, develop and extend regulatory or voluntary schemes to protect key seabird areas and seasons by establishing appropriate fisheries measures in line with conservation objectives and to monitor incidental catches of seabirds by 2025. Extend and develop outreach programmes for the fisheries sector concerning their possible	2025	National/Joint	FISH	Regulatory or voluntary schemes are in place and being implemented, as appropriate, to protect key seabird areas and seasons by establishing appropriate fisheries measures in line with conservation objectives. (Joint and national)			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	impacts on seabird populations.							
	<i>Topic: Fish stock management</i>							
S50	Competent authorities to jointly further develop protective measures for Baltic Sea salmon to support the development of a new regional salmon management plan, and nationally establish salmon management plans by 2023, where appropriate. These management plans should be implemented by 2025 to achieve the set targets, including but not limited to smolt production, genetic diversity and distribution throughout the river habitat. In addition, nationally ensure that granting permits for activities in and near rivers does not compromise the ability to reach set river specific fish population targets.	2023, 2025	National/Joint	<b>FISH</b> ; FISH-M	Protective measures for Baltic Sea salmon to support the development of a new regional salmon management plan have been further developed by 2023. (Joint) Long-term national management plans for salmon stocks are in place by 2023 and being implemented by 2025 and at least 10 threatened salmon rivers have active conservation. (National)  National procedures are in place to ensure that granting permits for activities in and near rivers does not compromise the ability to reach set river specific fish population targets. (National)			
S51	Competent authorities to improve data related to sea trout stocks and to improve populations of sea trout stocks by implementing national measures at the latest by 2025 with the view to achieve good ecological condition in sea trout streams.	2025	National	<b>FISH</b> ; FISH-M	Active management, including effective conservation measures of sea trout stocks, including habitat restoration, are in place in each Baltic Sea coastal country and being implemented.			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
S52	Define necessary complementary measures by 2024 in relevant policy (fisheries, environment etc.) areas to improve the size/age structure for fish stocks, including cod.	2024	National/Joint	FISH; STATE & CONSERVATION	Complementary measures are defined and can be implemented, in order to improve size/age structure, to reach healthy fish stocks, including cod.			It is proposed that both FISH and STATE&CONSERVATION oversee this action, as the complementary measures to be defined are expected to stem from the areas of responsibility of both groups.
S54	Share information among Contracting Parties, the Baltic Sea Fisheries Forum (BALTFISH) and Baltic Sea Advisory Council (BSAC) on non-lethal mitigation measures or other ways to manage seals-fisheries interactions and implement those measures by 2025, as appropriate.	2025	National/Joint	FISH	HELCOM-BALTFISH toolbox, or other means of sharing information on non-lethal mitigation measures or ways to manage seals-fisheries interactions are in place (Joint supporting action) and such measures are being implemented, as appropriate. (National measure) Overview of actions that are suitable within the existing legal framework.			
	<i>Theme: Underwater noise</i>							
S61	Develop and implement guidelines for the design and use of acoustic deterrent devices to avoid detrimental impacts on the environment from underwater noise by 2024.	2024	Joint	FISH	Guidelines for the design and use of acoustic deterrent devices are in place and implemented in all Contracting Parties.			
	<i>Theme: Seabed loss and disturbance</i>							
S64	Enforce and implement by 2025, in line with the update of	2025	National	STATE & CONSERVATION;	Effective management plans, conservation rules or other			

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Lead(s)	Next steps	Comments
	the marine protected area (MPA) management guidelines, effective management plans and/or conservation measures to not allow destructive and exploitative activities related to the seabed that may compromise the conservation objectives of MPAs.			FISH; HELCOM-VASAB MSP; EN DREDS	equivalent systems to not allow for destructive and exploitative activities related to the seabed compromising the conservation objectives of MPAs are implemented and enforced.			

#### Actions with later target years

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Possible comments
	<i>Theme: Spatial conservation measures</i>					
	<i>Topic: Spatial conservation management</i>					
B5	Develop, implement and share information on effective management measures, including measures to ensure compliance/control measures, to reduce the impact of fisheries inside marine protected areas (MPAs) in order to contribute to achieve their conservation objectives.	2030	National/Joint	FISH	Management measures for fisheries inside MPAs, contributing to the area's conservation objectives, are more widely in place. (National measure)  Fisheries measures are documented in the HELCOM MPA Database. (Joint supporting action)	
	<i>Theme: Hazardous substances</i>					

Code	Action	Target year	Implemented by	Overseeing WG/EG (Proposal for the responsible body in <b>bold</b> )	Criteria for achievement	Possible comments
	<i>Topic: Legacy pollutants</i>					
HL14	Encourage the use of alternative less toxic metals and other materials to replace lead in fishing gear and shooting bullets with the aim to minimize harmful use of metallic lead.	2030	National/Joint	<b>PRESSURE; FISH</b>	Regional guidelines and recommendations on substitution of lead in fishing gear and ammunition are adopted. (Joint)  National guidelines and recommendations on substitution of lead in fishing gear and ammunition are issued. (National)  Related regional and national outreach campaigns are arranged. (Joint and national)	
	<b>Theme: Fisheries management</b>					
S39	Develop guidance by 2026 in cooperation with the Regional Coordination Groups within the EU Data Collection Framework and the International Council for the Exploration of the Sea (ICES) on how to improve data collected on recreational fisheries in a cost-effective way, with a view to evaluate the impacts of recreational fisheries on the marine environment, where there is a need.	2026	Joint	<b>FISH; EG Fishdata</b>	Guidance on how to improve data collected on recreational fisheries, taking into account the requirements on data collection in the EU Control Regulation, is adopted.	
	<i>Topic: Fish stock management</i>					
S53	Implement measures to restore coastal fish communities, including establishment of no-take areas, seasonal closures	2026	National	<b>FISH</b>	Measures are in place in specific coastal areas, as appropriate, including establishment of no-take	

Code	Action	Target year	Implemented by	Overseeing WG/EG <i>(Proposal for the responsible body in bold)</i>	Criteria for achievement	Possible comments
	and catch regulations, as appropriate by 2026 for the specific coastal area.				areas, seasonal closures and catch regulations.	