



Baltic Marine Environment Protection Commission

Continuation of the project on Baltic-wide assessment of coastal fish communities in support of an ecosystem-based management

FISH-PRO III 1-2019

Helsinki, Finland, 12-14 February 2019

Outcome of the 1st Meeting of the continuation of the project for Baltic-wide assessment of coastal fish communities in support of an ecosystem-based management (FISH-PRO III)



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Introduction

01. With reference to FISH-PRO II 5-2018, the first Meeting of the Continuation of the Project for Baltic-wide assessment of coastal fish communities in support of an ecosystem-based management (FISH-PRO III 1-2019) was held on 12-14 February 2019 at the premises of the HELCOM Secretariat (Katajanokanlaituri 6 B) in Helsinki, Finland.
02. The Meeting was attended by participants from Denmark, Estonia, Finland, Latvia, Lithuania, Poland, Russia and Sweden. No Observer organization attended the Meeting. Consent for publication of the list of participants and the information contained therein (**Annex 1**) was received by all participants.
03. The Meeting was chaired by FISH-PRO III Project Manager Jens Olsson, Swedish University of Agricultural Science (SLU), Sweden. Henri Jokinen, HELCOM Secretariat, acted as secretary of the Meeting.
04. The Meeting of HELCOM FISH-PRO III was welcomed by the Chair, and the main topics of the Meeting were presented (**Presentation 1**), including inter alia finalizing the update of the coastal fish monitoring guidelines, current and future work on existing indicators as well as possibilities for development of new indicators (e.g. size-based indicator and fish habitat status indicator), recreational fisheries impact evaluation, and planning the activities and work for the FISH-PRO III project.
05. HELCOM Professional Secretaries Jannica Haldin (HELCOM State and Conservation) and Markus Helavuori (HELCOM Fish) welcomed the participants to the Meeting and to Helsinki on behalf of HELCOM Secretariat, and highlighted the important work done by FISH-PRO, including the continuous work supporting coastal fish indicators and the recent publication of the third thematic assessment on coastal fish.
06. Additionally, the following matters were raised by the Professional Secretaries:
- There is ongoing work on Essential Fish Habitats within the Pan Baltic Scope project including the recent regional expert workshop on essential fish habitats, organized by Pan Baltic Scope project and HELCOM.
 - A remark by Denmark that additional species and additional seasons could be considered in the next thematic assessment on coastal fish was given at HOD 55-2018.
 - There is an ongoing HELCOM BaltiCheck project (2018-2019), with the aim to consolidate and make the data within HELCOM about species and their distribution publicly available. Information related to distribution of species in form of an updated HELCOM Checklist of Baltic Sea Species shall be ready by July 2019. For this purpose, the Meeting was presented with the potential need for Contracting Parties to contribute with additional national data if available, by responding to a possible request on the matter to be sent by Project coordinator Jana Wolf.
 - Dedicated climate change work is starting at HELCOM, with the aim of charting the resilience of the Baltic Sea ecosystem to climate change effects. In this regard, input from FISH-PRO III regarding climate change effect on fish will possibly be needed and asked for during the work process.
07. Following a round of introductions and practical instructions, the Chair declared the Meeting opened.

Agenda Item 1 Adoption of the Agenda

Documents: 1-1, 1-2

The Meeting adopted the Agenda of the Meeting as contained in document 1-1.

Agenda Item 2 Information of relevance to FISH-PRO III

Documents: 2-1, 2-2, 2-3, 2-4, 2-5

2.1 The Meeting took note of information on the outcomes of recent HELCOM meetings (document 2-1), as presented by the Secretariat, and agreed to discuss issues of relevance to the FISH-PRO III under relevant Agenda Items. The Meeting *inter alia* welcomed that STATE & CONSERVATION 8-2018 approved the '*Abundance of coastal fish key functional groups 2018*' and '*Abundance of key coastal fish species 2018*' indicator reports for publication on the HELCOM indicator webpage, and that HOD 54-2018 approved the third draft thematic assessment on coastal fish for publication in the Baltic Sea Environment Proceedings.

2.2 The Meeting took note of information on the ongoing work within HELCOM to review the catalogue of HELCOM indicators, particularly those used in the 2018 State of the Baltic Sea report or those pressures and gaps identified within the report – including matching of the existing indicators to policy requirements (e.g. the Baltic Sea Action Plan, the Sustainable Development Goals and the Marine Strategy Framework Directive). The overall purpose of the 'future work on HELCOM indicators' is to further develop a suitable set of indicators that are operational and functional in time for the Baltic Sea Action Plan update (2021) and the third holistic assessment (2023).

2.3 The Meeting noted that the current major focus of the HELCOM indicator work is to define where existing indicators may need to be adjusted and where clear gaps are identified that require indicator development. In this respect, the Meeting took note that a workshop for detailing the planned work on indicators and the relevant milestones is tentatively planned for 13-15 May 2019.

2.4 The Meeting further recalled that of specific relevance to the FISH-PRO III, are the coastal fish indicators (these are operational and were updated in 2018) and indicators that currently are not operational but may be considered as important knowledge gaps, such as '*Proportion of large fish in the community*'.

2.5 The Meeting took note that the planning for a joint OSPAR-HELCOM bycatch indicator workshop is progressing and noted that it will tentatively take place in 9-11 September 2019, hosted by Denmark.

2.6 With regard to the bycatch indicator workshop, some questions were raised about potential overlap with the work conducted by ICES WGBYC. The Meeting took note of a clarification by the Secretariat that the planned workshop will serve the need of regional indicator development that is not directly accounted for by ICES WGBYC but has similarities and aligned interests between HELCOM and OSPAR. However, the aim is to streamline the work avoiding unnecessary overlaps, and coordinate with ICES WGBYC to capitalize on their expertise on the matter.

2.7 The Meeting took note of the publication of the HELCOM State of the Baltic Sea report – Second holistic assessment 2011-2016 (BSEP 155) available on the website <http://stateofthebalticsea.helcom.fi/>. The Meeting was also reminded that the third thematic assessments on coastal fish, prepared by FISH-PRO II, contributed to the final HOLAS II report.

2.8 The Meeting recalled that HELCOM thematic assessments on coastal fish have been produced since 2006, and noted that the third assessment (BSEP 161; document 2-2) has been prepared by FISH-PRO II, and following consideration by FISH 8-2018 (Outcome para. 2.6), support by STATE & CONSERVATION 8-2018 (Outcome paragraph 3J.58), and finally approval by HOD 54-2018 (Outcome paragraph 4.34), it was published and made available on HELCOM [website](#) late in 2018.

2.9 The Meeting took note of information on a project entitled "*Actions to evaluate and identify effective measures to reach GES in the Baltic Sea marine region*" (HELCOM ACTION), which is co-funded by the EU and will run in 2019-2020 (document 2-3). Following the submission of the HELCOM-led project proposal, approved by HOD 54-2018, the project has now been approved and is in the initial stages, with an internal project meeting kick-off taking place on 25-27 February 2019.

2.10 In this regard, the Meeting further took note that the ACTION project shall contribute to the update of the BSAP and implementation of *Programs of Measures* for Contracting Parties being EU members, with a specific objective to analyze the effectiveness and sufficiency of existing measures with particular focus on bycatch, impacts on the seabed, marine protected areas, and eutrophication.

2.11 The Meeting also noted that of the organizations active in FISH-PRO III, SLU, Sweden is involved in Work Package (WP) 1 about bycatch and in WP 2 about impacts on the seabed. In WP 1 SLU will focus on mapping high risk areas for bycatch in fisheries of harbor porpoise and measure to reduce bycatch. In WP 2 SLU will review existing cost-efficient measures for restoring coastal ecosystems and identify priority coastal areas in the Baltic Sea in need of such measures. For WP 2, input from HELCOM FISH-PRO III is likely needed via for example shorter video meetings.

2.12 The Meeting agreed that achievements from the ACTION project will be presented at the next FISH-PRO III meeting 2020.

2.13 The Meeting took note of the Outcome of the regional expert workshop on essential fish habitats, organized by Pan Baltic Scope project and HELCOM (HELCOM Pan Baltic Scope EFH WS 2018), on 12-13 December 2019, in Riga, Latvia (document 2-4), as presented by the Secretariat. The Meeting noted that the purpose of the workshop was to consider existing knowledge on essential fish habitats at the Baltic Sea regional scale, needed inter alia for the work of Pan Baltic Scope project to develop a concept of green infrastructure for supporting maritime spatial planning in the HELCOM region, and that the workshop focused on a selection of key species for which Baltic-wide spawning/recruitment habitat maps have been developed within the Pan Baltic Scope project.

2.14 The Meeting took note of the revised descriptions and maps of the essential fish habitats considered by HELCOM Pan Baltic Scope EFH WS 2018 (document 2-5), as introduced by the Secretariat on behalf of Pan Baltic Scope Project Coordinator. The revised essential fish habitat document (2-5) was based on recommended changes as described in the workshop Outcome (document 2-4).

2.15 The Meeting considered the proposed maps on essential fish habitats, and the following views were expressed:

- Latvia commented that mature European flounder during spawning season are regularly encountered in the Gotland Deep area (indirectly delineated from Baltic flounder by the know differences in spawning depth), hence the area could be considered as ‘high probability spawning area’ instead of ‘potential spawning area’ in the maps. However, this information needs to be verified.
- Poland commented that Vistula Lagoon is known to be one of the most important spawning areas for the Central Baltic herring, and that it should be indicated in the map as ‘high probability spawning area’ instead of ‘potential spawning area’.
- Finland commented that based on credible anecdotal information spawning of sprat has been evidenced in the outer archipelago on the Finnish south coast in waters shallower than 30 m.
- Finland and other contracting parties commented that young-of-the-year perch have been observed also in more exposed coastal areas, especially during years with high water temperatures as in 2018. These occurrences are, however, temporally variable between years. As such the depth interval in the models predicting perch recruitment areas might need to be widened.
- Estonia commented that young-of-the-year perch occur in Pärnu Bay and south of island Saaremaa and that the mapped distribution of perch recruitment areas in Gulf of Riga might be too restricted as well. The failure of the approach to map these areas could relate to the <4 m depth threshold used, and the current map might underestimate the recruitment areas especially during warm years.
- Lithuania commented that pikeperch juveniles occur practically all over the Curonian Lagoon and additionally also in the coastal areas outside the lagoon.
- Poland commented that Vistula Lagoon is a very important area for pikeperch recruitment, and that juvenile pikeperch are found throughout the lagoon, not only along the shores as presented in the current maps.

2.16 In addition, the Meeting agreed that detailed comments on the document as well as important substance issues to the explicit spatial information on the selected species, should be sent as soon as possible, directly to Pan Baltic Scope project coordinator Lena Bergström (lena.bergstrom@helcom.fi).

2.17 The Meeting noted, as informed by the Secretariat, that the maps on essential fish habitats are being further developed and will be sent to the State and Conservation Working Group for consideration. The Meeting also noted that the work on this matter will continue, acknowledging the importance of such spatial data for many HELCOM processes.

2.18 The Meeting took note of the information on the ongoing national revision of the coastal fish monitoring programme, as presented by Noora Mustamäki, Sweden (**Presentation 2**).

2.19 The Meeting took note that the coastal fish monitoring methods currently used in Sweden are depth-stratified sampling with Nordic Coastal multi-mesh gillnets used in most areas, gillnet series used in some areas, and fyke nets used only on the Swedish west coast.

2.20 The Meeting took note that the aim of revisioning the monitoring programme in Sweden is to harmonize the methods and increase comparability between areas, and to potentially release resources within the current program by reducing the effort (number of stations) in each area to allow for initiating new monitoring areas. The new programme, likely to be implemented in 2018-2020, does not include repeated sampling anymore using gill net series as the samples are not independent replicates and repetition brings no added information.

2.21 Additionally, the Meeting took note that the long-term goal in Sweden is to replace the gillnet series with Nordic coastal multi-mesh gillnets after a minimum 5 years transition period with parallel sampling as recommended by ICES, and that based on statistical evaluation the number of stations will be reduced and equalized. In the updated program yearly monitoring might not be undertaken annually in all monitoring areas. Rather bi-annual monitoring might be advocated in favour of an increased spatial coverage of the program. The Meeting noted that the consequences of such a change in methodology is a matter of further investigations in Sweden, and agreed that Sweden will inform FISH-PRO III during upcoming meetings on the final version of the revised monitoring program in Sweden.

2.22 The Meeting thanked Sweden for the presentation and noted the comment by Estonia that in similar evaluations have been done in Hiiumaa, Estonia, but that no clear conclusions could be made due to high temporal variability in the monitoring catch, which emphasizes the importance of seasonal changes in the context of coastal fish monitoring. This notion was supported by similar outcomes from methodology evaluations in Lithuania.

2.23 The Meeting took note that revisioning of national coastal fish monitoring programme is ongoing also in Poland, and that Denmark is testing the effect of protecting the fyke nets used in monitoring from seal predation by comparisons between gear with and without seal protection.

2.24 The Meeting took note of the following recent activities and information regarding coastal fish, as presented by the Contracting Parties:

- Denmark: There has been ongoing work on a testing of seal protection in monitoring fyke nets, and preliminary work on possibilities for using eelpout as an indicator for the status of coastal ecosystem health.
- Estonia: Coastal fish monitoring was also carried out during 2018. The most marked thing was a sharp decline in round goby numbers in 2018 if compared to previous years. At the same time the perch population is still in relatively good condition. It is also evident that a strong year class of sea-spawning whitefish has entered the catches during 2017 and 2018 in Hiiumaa and Saaremaa. The Sindi dam in the lower reach of Pärnu river that disembogues to Pärnu Bay Gulf of Riga, is being removed during the fall and winter 2018/2019. That should have a positive effect to the status of several fish species of this system, especially river-spawning whitefish, salmon, sea trout, vimba bream, smelt, river lamprey etc. Several inventories of recruitment areas are undertaken during 2018-2020. A perch population assessment project was started for Pärnu Bay in 2018.

- Finland: Experimental fishing with Nordic coastal gillnets was carried out as usual in all three monitoring areas, Brunskär, Tvärminne and Helsinki. The 0+ age group of perch was abundant in the catch due to the high temperatures in the summer. Round gobies were more common in Tvärminne compared to previous years, also as prey of perch. A pilot trial with Danish fyke nets in Tvärminne indicated that the species composition and length distributions of perch and roach were quite similar to those in the gillnet catch, but the effectivity of gillnets was considerably higher.
- Latvia: Coastal fish monitoring was carried out as usual. A new monitoring site has been created in southwestern Gulf of Riga, where monitoring is performed by contracted fishermen all year round. Round goby catches keep growing reaching a new record (over 1000 tons) in 2018. This development might be explained with increased coastal fishing effort. Fish samples have been taken for biological analyses and age reading from all Latvian coast. Fish monitoring in the port of Liepaja have been carried out in 2018 in different seasons to collect data on fish, zoobenthos and seafloor, in order to estimate the loss to fish resources in the future since there's a plan to deepen the port. The project will continue also in 2019. Recreational cod fishery has been observed in 2018, data on cod and bycatch have been collected.
- Lithuania: Coastal fish monitoring in Lithuanian coastal waters was done by Nature Research Centre experts again in August 2018 after a long interruption (since 2012). Monitoring was done using a set of coastal nets (mesh sizes: 17; 21,5; 25; 30; 45; 50; 70 mm) in the traditional two monitoring sites: Monciskes and Butinge (sites are monitored since 1994); two new sites in addition were sampled: Nemirseta and Juodkrante. Also the status of coastal waters was assessed according to fish indicators within this project; for the assessment the new data obtained in 2018 and data obtained implementing different other projects from previous years (2013-2017) were used. The assessment was based on data from Monciskes and Butinge sites, as data available for these sites only are adequate to date (long enough data series). Four indicators of fish communities were used: size, abundance, diversity and trophic indices. Status of three indices was estimated to be in good condition; however, Fish Community Size Index was in bad condition. In parallel similar sampling in two long-term monitoring sites (Atmata and Dreverna) was done in the Curonian Lagoon. For the assessment five fish indicators were used: Abundance of Piscivorous Fish, Abundance of Cyprinids, Trophic Index, Diversity and Size indices. Abundance of Piscivorous Fish and Trophic Index were in good condition, however, Abundance of Cyprinids and Indices of Diversity and Size were estimated to be in bad condition. The monitoring of fish communities in marine waters in 2018 was funded by Environmental Protection Agency under Ministry of Environment, monitoring of fish communities in the Curonian Lagoon was funded by Ministry of Environment.
- Poland: In 2018 National coastal fish monitoring surveys were carried out on the stations located in nine transitional water bodies: Puck Lagoon, Puck Bay, Inner Gulf of Gdansk, Vistula Lagoon, Szczecin Lagoon, Kamienski Lagoon, Świna River mouth, Dziwna River mouth and Vistula River mouth. No new non-indigenous species has been observed during monitoring surveys. During the coastal fish monitoring a significant share of juvenile perch has been observed. It corresponds with strong recruitment, which could be correlated with early started spring and high survival of perch fry. Since 2014, only Nordic coastal multi-mesh gillnets are used for coastal fish monitoring in Poland, except from Vistula, Dziwna and Świna river mouths where bottom trawl has been used. Currently, financial support for coastal fish monitoring is ensured until end of 2020.
- Russia: Coastal monitoring is carried out in the Curonian and Vistula Lagoons of the Baltic Sea. The traditional method is trawl surveys 1-2 times a year, which have been carried out for the last 40 years in summer and autumn. The target species are bream, pike perch, roach, perch. The states of these stocks are in relatively stable condition and the stocks are used by commercial and recreation fisheries. The study is funded by the state budget on a regular

basis. There is monitoring of brood stock of whitefish in frame of its artificial breeding. This task is funded both by government and private companies for compensation of negative impacts of their activity on fishes and their environment.

- Sweden: The fieldwork of 2018 was completed successfully. The warm summer resulted in record catches of YOY perch, and also the catches of YOY pikeperch were higher than usual. The perch YOY were at least 10 cm in length in August while they normally have reached the length of 7-8 cm in August (one of the potential reasons to higher catches due to higher recruitment to the sampling gear). The catches of flounder were unusually low in many areas, but high catches were obtained in a new monitoring area in Gotland. Round goby has not spread further north on the Swedish east coast, currently it is caught south of Stockholm. The catches of round goby were lower than in 2017. In October, water was unusually cold which probably explains the low total catches in autumn. During 2018, there have been several reports regarding the mass death of round goby (mainly males) in several part of Swedish coastal area mostly around Kalmarsund, Blekinge, and Gotland. July 2018 was the warmest ever recorded in Sweden, and oxygen deficiency at the bottom, occurrence of some form of disease, and/or high male mortality during spawning have been discussed as potential causes for the mass death. Two new fishing areas were initiated in 2018: Gotland (Herrvik) is fished in August and Skåne (Trelleborg) in October. The new areas are fished with Nordic Coastal multi-mesh gillnets and are planned to be fished annually. The fishing method was changed in two areas; fishing with gillnet series was only conducted over one night and not repeated in Muskö and Kvädöfjärden. In addition, a Nordic Coastal multi-mesh fishing was initiated in the same two areas. The long-term goal for the two areas is to replace the gillnet series with the Nordic Coastal multi-mesh gillnets.

Agenda Item 3 Update of the Baltic Sea Action Plan

Documents: 3-1

3.1 The Meeting took note of information on the Update of the Baltic Sea Action Plan (BSAP), as presented by the Secretariat. The Meeting took note of the strategic plan for updating the Baltic Sea Action Plan approved by HOD 54-2018 as well as the work plan approved by HOD 55-2018 (document 3-1), and noted that the update of the BSAP is a priority for the HELCOM working groups, and that the update will be based on the existing expertise in the HELCOM working structure according to the mandates of the working groups and will be overseen by the Heads of Delegation.

3.2 Regarding FISH-PRO III, the Meeting noted that FISH 9-2019 considered that FISH-PRO should be engaged on a needs basis, as what comes to the BSAP update work under Fish Group.

3.3 The Meeting expects FISH-PRO III to be kept informed well in advance of any specific needs for contribution to the work related to BSAP update.

Agenda Item 4 Updated coastal fish monitoring guideline

Documents: 4-1

4.1 With reference to FISH-PRO II 5-2018, agreeing that Sweden will lead the activity of updating the coastal fish monitoring guideline and that the final draft of the updated guideline will be presented at FISH PRO III 1-2019, the Meeting take note of the final draft of the updated coastal fish monitoring guidelines, as presented by Noora Mustamäki, Sweden (document 4-1; **Presentation 3**). The Meeting was invited to review the draft guideline and agree on further tasks for the update work, with the view of sending the updated guidelines for approval to STATE & CONSERVATION 10-2019, and with the goal to publish the guideline during spring 2019.

4.2 Noting that the final draft has already taken into account comments and amendments from reviews invited from all Contracting Parties, the Meeting considered and discussed the draft guideline. Inter alia the following views were expressed:

- As commented by Denmark and Estonia, clarifications about the different types of fyke nets used are needed, and the changes to be done should follow throughout the document also covering the definitions and calculations of fyke net CPUE. Inclusion of a schematic figure about different fyke net types used was also supported.
- A new data collection category ‘citizen science-based monitoring’, needs to be added in order to correctly address the monitoring based on recreational fishermen surveys applied in Denmark. The adjustments to be made should follow throughout the document accordingly.
- Latvia does not use net series anymore, which need to be corrected in the guideline.
- Information about coastal fish monitoring in Russia should be included in the guideline.

4.3 The Meeting additionally agreed that the updated guideline should also include a map on the HELCOM Baltic Sea monitoring areas, similar to a map used in the previous HELCOM coastal fish monitoring guidelines.

4.4 The Meeting further discussed the remaining tasks to be taken for the update work, with the goal to publish the guideline during spring 2019. The Meeting agreed that any additional comments or changes can be sent to Noora Mustamäki, SLU, Sweden (noora.mustamaki@slu.se) for incorporation in the guideline, and that the FISH-PRO III Project Manager will send out a reminder regarding this after the meeting. The deadline for the comments from the Contracting Parties was agreed to 22 February 2019, after which the revised version will be sent out again to the Contracting Parties for a final view by 18 March 2019, to be replied to with final comments at the latest by 25 March 2019.

4.5 The Meeting agreed that based on the final comments to be received, Sweden will finalize the updated guideline and send it for approval to STATE & CONSERVATION 10-2019 that will be held on 6-10 May 2019, in Finland. With regard to this, it was noted that the deadline for submitting the updated guide to STATE & CONSERVATION 10-2019 is on 10 April 2019.

Agenda Item 5 Indicators

Documents: 5-1, 5-2

HELCOM core indicators for coastal fish

5.1 The Meeting took note of the latest versions of the core indicator reports for ‘Abundance of coastal fish key functional groups’ (document 5-1) and ‘Abundance of key coastal fish species’ (document 5-2) for the assessment period 2011-2016, published on the HELCOM indicator [webpage](#) after approval by STATE & CONSERVATION 8-2018.

5.2 The Meeting noted that FISH-PRO III is expected to continue the work to develop and fully operationalize indicators in line with the decisions taking place within the future work on HELCOM indicators (see HOD 54-2018 Outcome para. 4.25-4.27 and document 4-5; GEAR 19-2018 Outcome Agenda Item 4).

5.3 The Meeting noted that within the context of current HELCOM work on indicators, the two operational core indicators on coastal fish are most likely to be updated by 2021. Regarding further development of these indicators for the next assessment period, the Meeting discussed the matter and concluded that while most Contracting Parties have the possibilities to increase the spatial coverage by potentially including more already existing areas/stations in the assessment, the matter is also subject to resource allocation and funding decisions.

5.4 Specifically, the Meeting welcomed the investigations on the possibilities to include Russia in the indicator work and future assessments by making use of the available data, e.g. from commercial fisheries.

5.5 On this matter the Meeting finally agreed that Contracting Parties should, until the next FISH-PRO III meeting, investigate in detail what kind of data to include in the future assessments, considering the availability of such data as well as funding and resource aspects.

5.6 Recalling the agreement that data updating for the indicators will be done annually to the COOL database, the Meeting took note of the latest updates to the coastal fish database (COOL), as presented by the Project Manager. The Meeting took note that the database currently includes monitoring data up to 2017 from each monitoring area used for the coastal fish indicators and additionally from Polish sites included in the last thematic assessment.

5.7 The Meeting agreed that the coastal fish CORE indicator data should continue to be annually updated in the COOL database and that updating for 2018 will be done via an excel template to the Project Manager (jens.olsson@slu.se) by 30 June 2019.

5.8 With regard to the earlier discussion about possible incorporation of additional monitoring stations in the coastal fish indicators, the Meeting agreed to continue with the current data coverage in the 2019 update and consider and prepare inclusion of new data and stations for 2020, in accordance with what the was agreed above (paragraph 5.5), although leaving open the possibility for Denmark to include new data already during 2019 as if readily available.

Size-related indicators

5.9 The Meeting recalled that FISH-PRO II 4-2017 was of the opinion that it is relevant to continue the work on developing size-related indicators, and that it would be good to test the indicators developed by Sweden using data from the other countries as well. The topic was further discussed at FISH-PRO II 5-2018 and was agreed to be considered again at FISH-PRO III 1-2019 to review potential new results from the analyses and to discuss more in detail what to do as regards size-related in indicators in the future.

5.10 The Meeting took note of the recent activities regarding the development of size related indicators, as presented by Örjan Östman, Sweden (**Presentation 4**). The Meeting acknowledged that the rationale for developing size-based indicators would be that such indicators are easy to measure for all species and that the use of size-based indicators could serve as important complementary information to the abundance-related indicators for the state of coastal fish communities. The presented approach included five size-based measures extractable from the length distribution of the fish communities, being: mean and median length, length at 90% quantile (L90), Large Fish Index and slope of size-spectra. A minimum size threshold is applied to the data to remove the influence of variable recruitment. The approach has been developed with data on cod, flounder, perch, pikeperch, and whitefish from around 50 fishery independent surveys from Poland, Estonia, Finland, and Sweden, and with commercial data on pikeperch, perch and whitefish from Estonia and Finland.

5.11 Meeting thanked Sweden for the presentation and the work done on the size-based indicators, considered the information provided and discussed how the matter can be brought forward. Inter alia the following views were expressed:

- Latvia has suitable size data but needs to consider what the national data show before taking a stand on if and how the matter could be advanced. To progress with this, such data could initially be sent to Örjan Östman, SLU, Sweden, for preliminary analyses.
- Lithuania informed that size data are available and that such data could initially be sent to Örjan Östman, SLU, Sweden, for preliminary analyses.
- Related to this matter Russia presented (Sergey Shibaev; **Presentation 5**) research from Russian inland waters on size distribution of fish from sampling using bottom and pelagic nets with differing mesh-sizes, emphasizing that such data are important for estimating size distribution of different species as well as to know species distribution per size-classes in the community.

5.12 The Meeting agreed to investigate whether it would be possible to distribute the R-script used for the size-based analyses to all interested FISH-PRO III members.

5.13 The Meeting concluded that size-based indicators provide more information than just abundance-based indicators, but that it is important to consider what the size-based indicators indicate and what spatial and temporal changes in the indicators reflect, when progressing with this matter.

5.14 Based on the discussions, the Meeting agreed that size-based indicators, especially L90, have large potential to provide valuable added knowledge on coastal fish, and that the matter should progress intersessionally by initial work on national data to be reported and further considered at next meeting 2020.

Additional indicator work: habitat status and extent

5.15 The Meeting took note of information about habitat status and extent as potential indicators, as presented by the Chair (**Presentation 6**).

5.16 The Meeting acknowledged that as part of future development of HELCOM indicators there is a need to consider fish habitat status and extent, as indicated by different HELCOM bodies, and noted that similar work is being done nationally, e.g. in Sweden, and regionally for the Baltic Sea area by the Pan Baltic Scope project. Important aspects to consider in this regard would be the definition of EFH, the choice of species to include and assess, the issue of managing various data and methods, etc.

5.17 The Meeting discussed how and if indicators for habitat status and extent for coastal fish should be developed by FISH-PRO III. Inter alia the following views were expressed:

- Denmark: Important to clearly state that this matter explicitly concerns *fish* habitats. A project is ongoing in Denmark on validating predictive modelling maps by comparisons with realised habitats based on observations. The project covers seasonal spawning and adult feeding habitats as well as juvenile habitats for ten common species. It is important to acquire knowledge on which habitats are the effective ones, including aspects of connectivity between habitats utilized during different life stages. How this information could be utilized for developing an indicator remains unclear, although one possibility could be to evaluate the degree of match between predicted and realized habitats. As an initial stage, gathering information about the habitat characteristics for different coastal fish species would be very useful.
- Estonia: Fisheries catch and effort data could be used to assess fishing pressure as one habitat restricting factor, although noticing that several problems exist with using catch data (e.g. behaviour of fishermen). In this context, not only spawning areas are important, but instead all habitats used by fish during the life-cycle. Information on essential habitats currently exist for some species, e.g. whitefish.
- Finland: To develop such an indicator would be quite a difficult task for coastal fish species in Finland but could be more applicable e.g. for migrating species as the spawning areas are better known than for coastal fish species in general. The knowledge existing usually concerns potential habitats but there is not information if the potential habitats are realised or not. Essentially this is a data problem; there is not enough knowledge of the real spawning areas of many coastal species such as, perch, pikeperch and pike. In this context it is also important to highlight that also flads and brooks should be considered as important habitats for coastal fish species as they are known to potentially contribute substantially to the reproduction. In addition, the monitoring of the quality of the spawning areas is challenging.
- Latvia: It is important to consider freshwater basins/lakes as habitats for coastal fish species, as being important spawning areas for e.g. pikeperch and perch in Latvia. Additionally it is important to ensure connectivity between habitats of different life stages.
- Lithuania: Lithuania has a relatively small coastal area and spawning sites for e.g. herring are fairly well known. Additionally, knowledge about turbot spawning sites also exists. Regarding fresh water species some knowledge exists but field work would be needed to validate prediction based potential habitat maps against real observations.

- Poland: Annual ichthyoplankton surveys are carried out in the Polish coastal area. Vistula Lagoon is an important recruitment and spawning area for pikeperch and herring respectively.
- Russia: There are good information on fish habitats from the Soviet time, e.g. in form of distribution maps on spawning grounds and recruitment for herring in Vistula Lagoon and Curonian Lagoon.
- Sweden: Fish habitat data is available from certain areas. There are possibilities to make predictions of potential recruitment areas but assessing the real status in the habitats is still challenging.

5.18 The Meeting acknowledged the importance of first deciding and knowing the definition of *habitat* in this context, including the choices of which factors to interpret as habitat characteristics (e.g. habitat structure, temporal fluctuations in e.g. temperature and salinity, biotic interactions, fishing pressure, etc.).

5.19 The Meeting also noted that to assess fish habitat status information on the pressures over time is needed, and such information requires data that is currently not available to sufficient extent.

5.20 The Meeting further took note of a suggestion by Finland as simple approach to assess stock changes and assuming reproduction is a critical phase, obtaining information on whether the habitats for reproduction are in good or bad status. The Meeting noted that such an approach could give indirect information on the habitat status but does not discern the causes behind the development, and further noted that changes in fisheries will affect these interpretations.

5.21 The Meeting took note of a general suggestion by Finland to also focus on catches of the coastal fish species in addition to concentrate on abundance from monitoring. The Meeting considered the suggestion worth being investigating further, and welcomed the offer by Antti Lappalainen, LUKE, Finland to send a request to Contracting Parties about commercial catch data as a first step. The Meeting further noted that the catch and effort data could potentially also be used as a pressure factor for assessing fish habitat status but that the data for such purposes would need to be spatially explicit.

5.22 The Meeting concluded that developing indicators for fish habitats is a very difficult task, with identified challenges regarding inter alia habitat and threshold definitions in a dynamic system. The Meeting agreed not to explicitly focus on this, but recognizing the generally positive response from most Contracting Parties, agreed to start investigating possibilities for taking the work forward. The Meeting welcomed the offer by Lithuania to take the lead on this activity, and agreed to revisit the matter by sharing the progress done at next meeting 2020.

Additional indicator work: Ecological Assessment from Time Series (EATS)

5.23 The Meeting took note of recent information on the status classification concept EATS (*Ecological Assessment from Time Series*) developed and presented by Örjan Östman, Sweden (**Presentation 7**). As HELCOM indicators use a time series approach, comparing the median value from an assessment period with resampled median distributions from a reference period, there might be issues with trends or structural changes during the baseline period and with the certainty of assessments. The EATS concept clearly considers these issues, and could together with potentially additional concepts be used in future assessments of coastal fish status using time-series data. EATS also offers a free R-script for assessments.

5.24 The Meeting thanked Sweden for the presentation and the work done and agreed that when ready and published this concept would be useful for the work of FISH-PRO and could be adopted as a common approach in the indicator assessment work.

Agenda Item 6 Other activities

Documents: 6-1

6.1 The Meeting took note of a Polish pilot study on development of methods for monitoring recreational fisheries, as presented by Adam Lejk, Poland (**Presentation 8**). The recreational fishing is increasing in comparison with some sectors of commercial fishing activity, hence presenting a growing need for functioning monitoring methods. The aim of the pilot study was to increase the understanding of recreational catches of important species such as cod, eel, salmon and trout using different monitoring methods.

6.2 The Meeting thanked Poland for an interesting presentation and wished to have an update of the study showing data from the progress of the work at the next meeting 2020.

6.3 The Meeting recalled that HELCOM FISH-PRO II prepared a compilation of information on coastal recreational fisheries in the HELCOM countries. The compilation was considered by FISH 6-2017 noting that FISH-PRO can support the updating of the information also in the future. As background for discussions on recreational fisheries impact evaluation, the Meeting took note of the latest version of the compiled information on coastal recreational fisheries in the HELCOM countries (document 6-1).

6.4 The Meeting noted that FISH 9-2019 (Outcome paragraph 2.4) considered the matter of recreational fisheries in relation to FISH-PRO in the contexts of the BSAP noting that it contains a not accomplished action on the harmonization of data collection, and that FISH 9-2019 specifically agreed that it would be useful to receive information on whether FISH-PRO also considers this to be an issue or whether the action is still considered to be valid and if there are any suggestions on further steps to be taken.

6.5 With regard to this, the Meeting was of the opinion that addressing the issue of harmonization of recreational fisheries data collection is beyond the scope and mandate of FISH-PRO III.

6.6 The Meeting took note of a summary on the work on recreational fisheries impact, as presented by the Project Manager (**Presentation 9**). Recognizing some regional and national studies and overviews that are related to recreational fisheries impact on coastal fish in the Baltic sea, the Meeting took note of the following aspects of concern with regard to possible regional work recreational fisheries impact evaluation within FISH-PRO III:

- Data for recreational fishing pressure would be needed for each monitoring area.
- Fishing mortality needs to be addressed and separated in mortality shares from recreational vs. commercial fisheries. Also other sources of mortality are needed to assess the true impact of different mortality sources.
- The outtake vs the impact from recreational fisheries need to be evaluated.
- A comprehensive literature compilation would be required.
- Is there funding for such work and who should lead the work?

6.7 Based on the information provided on recreational fisheries (document 6-1; **Presentation 9**), the Meeting discussed the matter and considered how and if this should be incorporated in the work of FISH-PRO III, expressing inter alia the following views:

- Denmark: There is a yearly monitoring through interviews to estimate effort and amount of recreational catch. The information is reported to EU based on EU regulation on data collection. There is currently also a project for improving the method for collection of data on recreational fisheries as well as to calibrate these estimates with those obtained by the interview approach.
- Estonia: There is an ongoing process to assess recreational fisheries of perch in Pärnu bay area by counting the number of fishermen and observing individual daily catches.
- Finland: In Finland recreational fishermen also use gillnets, and the impact of recreational fisheries are difficult to separate from the impact of commercial fishery. However, there is a possibility to assess these issues based on catch statistics.
- Latvia: Recreational fisheries might have the greatest impact on flounder of all coastal species in Latvia, as it is one of the most important recreational fish. Non-commercial gillnet

fisheries are obliged to fill in log-book data, hence these data are available. Additionally, recreational fisheries impact is difficult to assess also due to the high spatial and temporal variability.

- Poland: To initiate work on recreational fisheries impact evaluation is to a large extent also a matter of funds and resources.
- Russia: No observed effect of recreational fisheries during a 15-year assessment period because of very low fishing intensity. Commercial and recreational fishermen often also target different species.
- Sweden: Recreational fishery potentially poses a high pressure on certain coastal species, e.g. rod fisheries outtake of pike is tenfold compared to commercial fisheries catch.

6.8 The Meeting also noted that ICES has a working group on recreational fisheries, however only focusing on certain commercial fish species excluding many important coastal species relevant in HELCOM context.

6.9 The Meeting concluded that the matter of recreational fishery is difficult to advance at this point with any common approach, and that the extent of the work would require a dedicated project for substantial progress to be realistic. The Meeting agreed to continue sharing information about national projects and advancements on the matter, and to consider updating document 6-1 in the future by adding an overview on existing data and expanding to address which potential impacts are known to exist. Such an update could additionally include a summary on existing literature on recreational fishing impacts.

6.10 The Meeting took note of information on the pilot studies using Danish traps in Tvärminne (Finland) with the purpose of comparisons with gill-net catches, as presented by Outi Heikinheimo & Antti Lappalainen, Finland (**Presentation 10**). The results presented showed very similar main species catch in both gears and similar length distribution in perch catches with the exception of the smallest and the largest size classes that were missing from the trapnets. The Meeting took note that survival of fish is better in trapnets, which would enable non-lethal sampling, and that trapnets were easier due to handling and releasing of fish. The Meeting noted the conclusion by Finland that based on the generally positive experience, trapnets could be worth considering in the future development of national coastal fish monitoring.

6.11 The Meeting thanked Finland for the presentation and noted that although trapnets bring clear benefits e.g. regarding animal ethics issues, gillnets still are useful to serve for additional purposes. It was also mentioned that the pilot comparison and evaluation done in Tvärminne only considered the amount of fish, but that it would also be good to account for the variability in catches in order to assess precision.

6.12 As an additional matter raised by the Professional Secretary for State and Conservation during the opening of the Meeting, the Meeting discussed and considered possibilities for contribution to the ongoing work on an updated Baltic Sea Checklist of macro-species conducted within the HELCOM BaltiCheck project.

6.13 The Meeting noted that within this work there is a need for point data on observations of (rare) fish species, and shared information on the national possibilities to support this, as follows:

- Finland: There is a Finnish web service (<http://kalahavainnot.fi/kartta>) provided by LUKE on public observations of fish species that could serve better this purpose than information from monitoring data bases.
- Estonia: There are several Estonian datasets from coastal fish monitoring that could serve this purpose.
- Denmark: University of Copenhagen, Natural History Museum of Denmark should have the best knowledge on this matter in Danish waters. Includes also other data sources besides monitoring data.
- Latvia: There is a national fish species list based on records from coastal gill net surveys, Baltic trawl surveys and fishermen records.

- Lithuania: There are suitable survey-based data available upon request.
- Poland: A national list of fish species is available.
- Russia: A list of fish species is available in form of a publication.
- Sweden: Compilation of a national list of fish species is easily available from monitoring data, and recreational fishermen observation.

6.14 The Meeting concluded that most Contracting Parties have information of potential use for this purpose, but it would be important to know more precisely what the criteria for the needed data are. After clarifying these issues, the Contracting Parties can then better consider whether they can comply or not when such data are being asked for. The Meeting pointed out that in order to provide any information, this should be first requested by a formal data request sent to Contracting Parties.

Agenda Item 7 Future work

Documents: 7-1, 7-2

7.1 The Meeting considered the matter of including additional species and seasons as well as migratory species in the work of FISH-PRO III.

7.2 The Meeting recalled that FISH-PRO II 5-2018 discussed the inclusion of the status of migratory fish species in the fourth thematic assessment of coastal fish and suggested closer cooperation between Fish-M and FISH-PRO II (e.g. back-to-back meetings), especially when developing the next thematic assessment. To this end, the Meeting found this stand still valid but noted that how and to what extent migratory species should be incorporated within the work of FISH-PRO III, need to be specified.

7.3 The Meeting discussed the matter and inter alia the following views were expressed:

- Denmark: It is generally a good idea to include more species for environmental indicators, currently being assessed in Denmark is only one species; the European flounder. It would be especially beneficial to include a species sensitive to main pressures such as eutrophication. Denmark have done trials with eelpout as an indicator (see AI 8; **Presentation 13**).
- Estonia: Round goby would be an interesting species to be added for assessment and indicator work; the species is already assessed within the D2 (MSFD) as a non-indigenous species.

7.4 The Meeting concluded that migratory species are not in the scope of FISH-PRO III as they are being sufficiently addressed already by other HELCOM and ICES bodies, that there is no purpose for duplication of such work, and that the monitoring programmes that serves the basis for FISH PRO III commonly do not catch migratory fish species. The Meeting agreed to continue focusing on the current species and seasons but proceeding with national investigations on the possibilities and benefits of including additional species and/or seasons in the future work.

7.5 Recalling that STATE & CONSERVATION 7-2017 considered and endorsed, FISH 7-2017 considered and supported, and finally HOD 53-2017 (Outcome paragraph 3.58) approved the project proposal for the continuation of the FISH-PRO II project as FISH-PRO III for years 2018-2023, the Meeting took note of the project proposal (document 7.1) to be used as basis for the planning of FISH-PRO III work.

7.6 The Meeting was further reminded that that future tasks of FISH-PRO III should, in addition to the specified monitoring and assessment issues, also take into account possible contributions of the project to the implementation of the work of the project's supervising bodies, the Working Group on the State of the Environment and Nature Conservation (HELCOM State and Conservation) and the Working Group on Ecosystem based Sustainable Fisheries (HELCOM Fish).

7.7 To be used as background for discussions and planning for the future work of FISH-PRO III, the Meeting took note the current work plans of HELCOM State and Conservation (document 7.2 Annex 1) and

HELCOM Fish (document 7.2 Annex 2), as approved by HOD 55-2018 (Outcome para. 4.10) and HOD 54-2018 (Outcome para. 4.58), respectively.

7.8 Based on the project proposal (document 7-1) and the current work plans of State and Conservation and Fish Groups (document 7-2), the Meeting discussed and planned the future work of FISH-PRO III, as supported by a presentation by the Project Manager (**Presentation 11**).

7.9 The Meeting agreed that the work should focus on the following tasks:

- Further development of Core indicators
- Development of additional indicators (e.g. size-related indicators)
- Contribution to HELCOM Thematic assessments and Red list of species
- Providing recommendations for EBM for coastal fish
- Producing fourth thematic assessment on coastal fish
- Considering alternative data sources for status assessments and monitoring
- Expanding spatial coverage of monitoring
- Updating coastal fish monitoring manual when needed
- Providing expert proposals and management measures for coastal fish
- Supporting the development of relevant research (especially the effects of essential habitats and external pressures for coastal fish CORE indicator responses)

7.10 The Meeting approved and agreed to use the Work Plan of FISH-PRO III including the specified tasks, deliverables and a tentative schedule, as prepared and presented by the Project Manager (**Annex 2**).

The Meeting agreed to include the following topics to the Agenda of FISH-PRO III 2-2020:

- Revision of work plan if needed
- Continued work on size related indicators
- Continued discussion/work on future habitat indicator
- Discussion on alternative assessment methods besides the one currently applied
- Data update COOL including 2019 data and potentially additional monitoring areas and data
- Discussion on alternative data sources, additional monitoring areas and trends in commercial catches
- Intermediate status assessment, CORE indicators (data until 2019)
- Presentation of national projects on recreational fisheries

Agenda Item 8 Any other business

Documents: 8-1

8.1 The Meeting took note of the following presentations:

- Lauri Saks, Estonia: 'The analysis of efficiency of methods for catching low-valued fish species and alien species' (**Presentation 12**)
- Josianne Støttrup, Denmark: 'Eelpout as indicator for the status of coastal ecosystem health' (**Presentation 13**).

8.2 The Meeting considered the information presented and thanked for the presentations. The meeting especially encouraged Denmark to continue the work on eelpout abundance as an indicator for coastal ecosystem status, and in future meetings inform FISH-PRO III on advances in the work.

8.3 The Meeting reviewed and updated the list of nominated contacts for the FISH-PRO III (document 8-1). Taking into account the EU General Data Protection Regulation (GDPR, (EU) 2016/679), the Meeting agreed that the contact address list will be made available on the HELCOM Meeting Portal upon receipt of consent for publication by all contact persons.

8.4 The Meeting invited Contracting Parties and Observer organizations to inform of any new, or changed, nominations to the Secretariat (henri.jokinen@helcom.fi).

8.5 The Meeting welcomed the offer by Lithuania to investigate the possibilities to tentatively host the FISH-PRO III 2-2020 meeting in Vilnius, Lithuania, and agreed that this should be confirmed to the Project Manager and the Secretariat.

Agenda Item 9 Outcome of the Meeting

9.1 The Meeting adopted the Outcome of the Meeting. The Outcome of the Meeting, together with the documents and presentations considered by the Meeting are available on the [FISH-PRO III 1-2019 meeting site](#).

Annex 1. List of participants

Representing	Name	Organization	E-mail
Chair			
Chair and Project Manager	Jens Olsson	Swedish university of Agricultural Science	jens.olsson@slu.se
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Observer organizations			
HELCOM Secretariat			
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Annex 2. Work Plan for FISH-PRO III

Year	2019	2020	2021	2022	2023
Activities					
Meeting	First FISH PRO III meeting	Second FISH PRO III meeting	Third FISH PRO III meeting	Fourth FISH PRO III meeting	Fifth FISH PRO III meeting
Monitoring guideline	Finalize updated monitoring guideline				Start updating monitoring manual?
Workplan	Agree on Workplan for FISH PRO III	Revision of Workplan if needed	Revision of Workplan if needed	Revision of Workplan if needed. Application for new project?	
Indicators	Continue work on size related indicators	Continue work on size related indicators	Finalize work on size related indicators?		
	Discuss habitat indicator	Continue discussion/work on habitat indicator	Continue discussion/work on habitat indicator??	Continue discussion/work on habitat indicator??	
		Discuss alternative assessment methods	Start work on alternative assessment methods	Implement alternative assessment methods	
Data	Data update in COOL (2018 data)	Data update in COOL (2019 data)	Data update in COOL (2020 data)	Data update in COOL (2021 data)	Data update in COOL (2022 data)
		Discuss alternative data sources, additional monitoring areas and trends in commercial catches	Further work on alternative data sources and additional monitoring areas and commercial catches	Implement alternative data sources	
Status assessments		Intermediate status assessment, CORE indicators (data until 2019)	Updating HELCOM CORE indicators (data until 2019) and indicator reports	Status assessment, CORE indicators (data until 2021)	Updating HELCOM CORE indicators (data until 2021) indicator reports
Thematic Assessment			Start draft 4th Thematic Assessment	Continue work on 4th Thematic Assessment	Finalize 4th Thematic Assessment (data until 2021)
Other	Discuss recreational fisheries impact assessment	Presentation of national projects on recreational fisheries	Presentation of national projects on recreational fisheries	Presentation of national projects on recreational fisheries	
Deliverables					
	Updated monitoring guideline	Intermediate status assessment, CORE indicators (data until 2019) in COOL	Updated HELCOM CORE indicators (data until 2019) and indicator reports	Status assessment, CORE indicators (data until 2021)	4th Thematic Assessment (data until 2021)
	Workplan FISH PRO III			Contribution to HOLAS III	Updated HELCOM CORE indicators (data until 2021) and indicator reports

List of documents

Name	Agenda Item	Category	Submitted by
1-1 Provisional Agenda.pdf	AI 1 <i>Adoption of the Agenda</i>	DEC	Secretariat
1-2 Provisional Annotated Agenda.pdf	AI 1 <i>Adoption of the Agenda</i>	DEC	Secretariat and Chair
2-1 Extracts of relevant HELCOM meeting outcomes.pdf	AI 2 <i>Information of relevance to FISH-PRO III</i>	INF	Secretariat
2-2 The third thematic assessment on coastal fish (BSEP 161).pdf	AI 2 <i>Information of relevance to FISH-PRO III</i>	INF	Secretariat
2-3 Overview of the HELCOM ACTION project.pdf	AI 2 <i>Information of relevance to FISH-PRO III</i>	INF	Secretariat
2-4 Outcome HELCOM PanBaltic Scope EFH WS 2018.pdf	AI 2 <i>Information of relevance to FISH-PRO III</i>	INF	Secretariat
2-5 Essential fish habitats in the Baltic Sea.pdf	AI 2 <i>Information of relevance to FISH-PRO III</i>	CMNT	Secretariat
3-1 Update of the Baltic Sea Action Plan.pdf	AI 3 <i>Update of the Baltic Sea Action Plan</i>	INF	Secretariat
4-1 Updated guidelines for coastal fish monitoring.pdf	AI 4 <i>Updated coastal fish monitoring guideline</i>	DEC	Sweden
4-1 Att. FINAL DRAFT Coastal fish monitoring guidelines 2018 (Word version).docx	AI 4 <i>Updated coastal fish monitoring guideline</i>	DEC	Sweden
5-1 Core indicator report on Abundance of coastal fish key functional groups.pdf	AI 5 <i>Indicators</i>	INF	Secretariat
5-2 Core indicator report on Abundance of key coastal fish species.pdf	AI 5 <i>Indicators</i>	INF	Secretariat
6-1 Compiled information on coastal recreational fisheries in the HELCOM countries.pdf	AI 6 <i>Other activities</i>	INF	Secretariat
7-1 FISH-PRO III project proposal.pdf	AI 7 <i>Future work</i>	INF	Secretariat
7-2 Work Plans of State and Conservation and Fish Working Groups.pdf	AI 7 <i>Future work</i>	INF	Secretariat
8-1 List of contacts and observers of FISH-PRO III.pdf	AI 8 <i>Any other business</i>	CMNT	Secretariat