

**BSAC Joint Working Group (Demersal + Pelagic)
8th – 9th June 2021
Virtual via Zoom**

Report

1. Welcome by the Demersal WG chair Michael Andersen

The Demersal WG chair Michael Andersen chaired the meeting. He welcomed all the participants. He welcomed Colm Lordan, ICES/ACOM vice-chair invited to present the 2021 ICES advice for the Baltic stocks and to answer questions on specific issues. He also welcomed the European Commission and the representatives of the Member States. He informed that the task of the Working Group was to discuss the ICES advice and to start preparing comments and recommendations from the BSAC. The BSAC recommendations would be produced through written procedure and submitted to the European Commission in July 2021.

2. Formalities for the start of the meeting:

The list of participants and apologies is on the website¹.

The agenda was adopted without changes.

3. Update from BALTFISH Presidency (Estonia)

Kaire Märtin, Ministry of the Environment, Estonia updated the meeting on the BALTFISH Estonian Presidency work². It had been a busy year, covering 7 meetings. The work included the preparation of Joint Recommendations on the 2021 TACs, measures for harbour porpoise protection, new gear to avoid cod bycatch, and a derogation from the landing obligation for plaice. The drafting group dealing with the new gear to avoid cod, chaired by Germany, will continue its work in June to finalise the recommendation. She gave an update on the state of play with the first joint recommendation on harbour porpoise. It had been sent to the European Commission and STECF for assessment. After long discussions BALTFISH had agreed on some areas designated for obligatory use of pingers and all-year closures for static nets. Discussion on outstanding issues will continue in the BALTFISH meetings planned in June.³ The obligatory use of pingers in some areas is still an issue, as well as national defence considerations concerning widespread use of pingers and their possible negative impact on the surveillance capability of defence installations. An overview of the work will be given at the BALTFISH meetings in June. She welcomed Latvia as the new BALTFISH Presidency, starting 1st July 2021 and wished the incoming Presidency a lot of patience and glory.

¹ [BSAC - BSAC Joint Working Group](#)

² [PowerPointi esitlus \(bsac.dk\)](#)

³ [http://www.bsac.dk/Meetings/External-events/BALTFISH-Forum-meeting-\(1\)](http://www.bsac.dk/Meetings/External-events/BALTFISH-Forum-meeting-(1))

The Chair of the Working Group asked whether the proposal was to make pingers compulsory in the entire SD 24. **A representative of the OIG** asked about the area around the Åland Islands, which is a de-militarised area. Kaire Märtin replied that the distribution area went to 13⁰ E with a proposal to exempt coastal areas. The Åland Islands is a sensitive area where there is potential conflict.

The Chair of the Working Group thanked the representative of the BALTFISH Presidency for the update.

4. The 2021 ICES advice for the Baltic

Colm Lordan, ACOM vice chair, presented the advice on fishing opportunities in the Baltic Sea 2022.

He explained the advice by stocks (cod, flatfish, pelagic stocks, sprat, salmon), and gave a power point presentation⁴. He explained the principles of the advice, underlining that it is based on the best available science and agreed by ACOM by consensus. He explained that the advice for **western Baltic cod** is delayed until September. This is because the 2020 stock estimates in the assessment were biased compared to previous assessments. This created the need to do an inter-benchmark. The advice for **salmon in the Main Basin and the Gulf of Finland** is also delayed until September.

A representative of OIG asked about the retrospective bias for the western Baltic cod. Colm Lordan explained the process involving updating the assessment; if revisions are above 20% there is a need to look into the causes, which are usually due to conflicting information relating to the input data.

Presentation of demersal stocks

Eastern Baltic cod [EBC]

Colm Lordan pointed to the decrease in fish size and fatness of the eastern cod. The biomass of commercial cod (above 35 cm) has been decreasing. Fish are maturing at a much smaller size. Natural mortality is now the major cause of mortality. Spawning sites have shrunk, and some have disappeared due to oxygen depletion and the spread of anoxic waters. Catches increased over time and declined in 2020 to the lowest observed levels. ICES advises zero catch for 2022 in SDs 24-32. This will result in a 7% increase of SBB in 2023, with a high probability that the stock will remain below B_{lim} .

⁴ <http://www.bsac.dk/Meetings/BSAC-meetings/BSAC-Joint-WG>

Questions

A fisheries representative asked if the numbers of eastern Baltic cod (EBC) have increased, and how uncertainty or changes in growth have been taken into account in the assessment. Colm Lordan referred to the data on stock numbers of EBC at age, available in the report of the Baltic Fisheries Assessment Working Group⁵ (WGBFAS).

Referring to age definition, he stated that quite a lot of studies are ongoing to improve knowledge on the eastern cod. The information is also included in the WGBFAS report. The assessment models are based on the best available parameters. Assessment models take into account information on length and age. The growth of eastern cod is expected to have declined since the 1990s, due to reduced size at maturation, poor condition, hypoxia, and parasite infestation (ICES WKBEBCA 2017, WKIDEBCA 2018)⁶. The same factors have presumably contributed to an increase in natural mortality. Recent changes in growth and natural mortality are estimated in stock assessment model.⁷

A representative of the OIG asked whether assumptions on recent recruitment are based on actual monitoring. Colm Lordan replied that these assumptions are based on the input data from surveys and on estimates. The assumption on incoming recruitment is assessed on the basis of average recruitment from the last 5 years.

A representative of small scale fisheries asked whether the impact of parasites from seals has been factored in the assessment of EBC. Colm Lordan referred to the information in the ICES advice sheet on EBC.⁸ The parasite infestations coincide with an increased abundance of grey seals. It is unknown whether the parasite infection is the cause or an effect of the poor condition of cod. These drivers are interrelated, and their cumulative effect on the cod stock is unclear.

A fisheries representative asked if it is possible to predict when the state of EBC will improve. Colm Lordan underlined that if the biological drivers mentioned persist, the EBC stock has little chance of improving. At the moment there is no sign of recovery. **Another fisheries representative** stated that since the poor state of the cod stock coincides with the growing population of seals, the problem with cod will get worse and worse if the abundance of seals continues to increase.

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https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2021/WGBFAS/WGBFAS_2021.pdf

See Table 2.11. Eastern Baltic cod in SDs 24-32. Stock numbers at age (in the beginning of the year). (Pg77) A plot developed from the Table is provided at the end of this meeting report – see page 16.

⁶ ICES WKBEBCA 2017, WKIDEBCA 2018

https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2018/WKIDEBCA/WKIDEBCA_2018.pdf

Extracts from the WGBFAS report 2020 are at the end of this meeting report – see page 16.

⁷ WGBFAS report 2021, Section 2.1.5, pp. 53-55

⁸ Full extract from the ICES advice sheet at the end of this report – see page 17.

Another fisheries representative stated that the cod stocks cannot be expected to improve fast under the existing unfavourable spawning conditions.⁹

Presentation of flatfish stocks

Plaice SDs 21-23 and SDs 24-32

Colm Lordan explained the basis for the advice for both stocks. For plaice in SDs 21-23, the SSB is showing an increasing trend, the fishing mortality in 2020 decreased below F_{MSY} and recruitment has improved. The advice is based on F_{MSY} approach. For plaice in SDs 24-32, recruitment in 2020 has been the strongest in the time series and the SSB has also increased. The TAC advice is increased by 20% compared to last year.

The ICES assessment of stock status for **brill, dab, turbot and the flounder** was also presented: ICES has not been asked to provide advice on these stocks.

Questions

A representative of the OIG asked whether the increased number of small plaice recorded in the surveys is due to limited fishing opportunities for plaice in previous years or a massive increase in the stock. **Colm Lordan** replied that the incoming recruitment had been confirmed by the survey; changes in the fishing activity had not been analysed in the assessment.

Replying to a question by **a fisheries representative** on the management of plaice in different subdivisions, **Colm Lordan** stated that there is a mismatch between the biological and management units for plaice. The management areas for plaice in the Baltic Sea (i.e. SDs 22–32) are different from the stock areas (i.e. SDs 21–23 and 24–32) Given the positive stock assessment, the quotas could be transferred between these different areas. He informed that discarding is high in this fishery and will be the subject of a benchmark. If all discards were landed, it would result in a higher level of mortality and lower catch advice for the future.

Presentation of pelagic stocks

With respect to the western Baltic herring, **Colm Lordan** stated that the assessment of this stock is consistent with last year's assessment. The stock is still close to the lowest level in the time series. Recruitment has been decreasing in recent years. The stock is below B_{lim} and there is no chance to rebuild it in the short term. The rebuilding timeframe is expected to be longer than 3 years. The ICES advice is zero catch. Catches should be minimised in all units where western spring spawning herring is caught in order not to impair recovery.

⁹ <https://www.slu.se/en/ew-news/2021/1/thesis-on-voracious-flounder-awarded/> Provided by a Working Group member, who highlights: These results point to a food competition between cod and flounder, likely augmented by recent increased abundance of Baltic flounder stocks. This competition could decrease the availability of benthic prey for cod, which, in turn, can lead to low condition factor, a reduction of cod growth and ultimately accentuate the negative effects of hypoxia on cod. Because of all of these reasons, cod and flounder competition could be another factor explaining the current bad status of the eastern Baltic Cod stock.

Referring to herring in SDs 25-32, **Colm Lordan** explained that the stock had undergone a benchmark at the beginning of 2020, taking into account new natural mortality estimates. The reference points had been re-estimated. There is no indication of strong incoming year classes. The F_{MSY} has been reduced, and the change in the advice is -23%.

With reference to sprat, **Colm Lordan** noted that the incoming year class is strong, SSB has been increasing in the recent decade and is well above $MSY B_{trigger}$. ICES advice based on F_{MSY} (291 745 tonnes) is an increase of 18% compared to last year's advice.

With reference to the herring in Gulf of Bothnia **Colm Lordan** informed that the stock had been benchmarked, the stock upgraded from Category 5 to 1, with a revision of the TAC in 2021.

With reference to the Gulf of Riga herring, there is strong recruitment and increase in the stock size.

Questions

A representative of the OIG referred to the fact that some of the sub-populations of herring in SDs 30-31 are weak. He asked whether, given this situation, the advised F_{MSY} range can be considered precautionary.

Colm Lordan replied that herring in SDs 30-31 is a mixed population and the impact of fisheries on smaller populations has not been explored by ICES. At present there is insufficient data on these sub-populations to provide advice on them. In the future, scientists could potentially explore whether the commercial fishery has any effect on those sub-populations of herring in SDs 30-31 considered to be at a low level.

The representative of DG Mare informed about the in-year revision of the Gulf of Bothnia TAC for 2021. The proposal entails an 81% increase of the TAC, and is expected to be adopted by the Council in June 2021.

Responding to a question from **a representative of the OIG**, on the conditions for using the upper limit of F_{MSY} option, **Colm Lordan** referred to Regulation 2016/1139 which lays out 3 conditions for using the upper F_{MSY} option when setting the TAC.¹⁰

The representative of DG Mare clarified further that according to Article 4.5 of Regulation 2016/1139 two sets of conditions must be met: biomass must be above $B_{trigger}$, and one of the 3 conditions met.

¹⁰ [REGULATION \(EU\) 2016/ 1139 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL - of 6 July 2016 - establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation \(EC\) No 2187 / 2005 and repealing Council Regulation \(EC\) No 1098 / 2007 \(europa.eu\)](#) .

The upper limit of the range is capped, so that the probability of the stock falling below the limit spawning stock biomass reference point (B_{lim}) is no more than 5 %. That upper limit also conforms to the so-called ICES advice rule, which indicates that when the spawning stock biomass is below the minimum spawning stock biomass reference point ($MSY B_{trigger}$), F is to be reduced to a value that does not exceed an upper limit equal to the F_{MSY} point value multiplied by the spawning stock biomass in the TAC year, divided by $MSY B_{trigger}$. ICES uses those considerations and the advice rule in its provision of scientific advice on fishing mortality and catch options.

For clarity, ICES had been asked to include the sentence: According to the MAP, catches higher than those corresponding to FMSY can only be taken under conditions specified in the plan, whilst the entire range is considered precautionary when applying ICES advice rule.

A representative of national administration asked why the central Baltic herring has decreased, despite the application of the MSY fishing mortality ranges, while the same approach has delivered good results with respect to the Gulf of Riga herring. She referred to a seasonal ban on trawling in two Member States and which scientists consider to be a good tool for ensuring productivity. She also asked why ICES is not taking into account the mortality of fish escaping from the nets in the assessment. This may influence the quality of the assessment.

The representative of ICES stated that for central Baltic herring the perception of the stock had been over-optimistic. The stock had been benchmarked to address the retrospective bias in the fishing mortality. Recent year classes were weak. He also referred to misreporting which may impact the quality of the assessment. The assessment model is also old. New assessment models can better deal with some uncertainties. The stock will be benchmarked again in 2023. A roadmap to improve the assessment will be prepared, also for sprat. Colm Lordan underlined that the advice is based on the best available science. ICES does not dispose of reliable data on underwater mortality in gears. He stated that this issue can be looked at as a high priority issue at during the benchmark.

A fisheries representative underlined that research and data on underwater mortality of fish escaping through the nets is available. **Another fisheries representative** referred to research findings according to which up to 90% of pelagic fish escaping from pelagic trawl nets die. This underwater mortality should be taken into account in the advice.

Colm Lordan commented that if such a level of mortality persists for a long time and in a relative way, it would not affect the assessment.

The WG Chair commented that if underwater mortality is a constant percentage, it has no impact on the relative development of the stock. The BSAC has earlier recommended removing the minimum mesh size in pelagic fisheries. He stated that a workshop to discuss this and the assessment of pelagic stocks with ICES could be organised by the BSAC in spring 2022, before the publication of the ICES advice for 2023.

A fisheries representative referred to recent research¹¹ indicating that conditions during herring spawning may have cascading effects on the whole Baltic ecosystem. Data collected for over two decades shows that rising Baltic Sea water temperature is one of the main factors in the increasingly earlier appearance and faster growth of Baltic herring larvae.

A representative of the OIG underlined that much more radical measures are needed to protect the central Baltic herring and mitigate the impact of several factors affecting the stock, one of which is misreporting.

¹¹ <https://www.luke.fi/en/news/baltic-herring-larvae-appear-earlier-and-grow-faster-due-to-climate-change/>

Colm Lordan stated that the advice is based on the best available assessment. However, very often the assessment models do not follow the changes occurring to the stock, and the size of the stock spawning biomass is over-estimated and the fishing pressure underestimated. ICES will try to improve the assessment models during the benchmarking process of the central Baltic herring planned for 2023. He underlined that benchmarking is an open process, so stakeholders can take part.

The WG Chair stated that the expertise of fishermen should be included in the benchmarking to help bridge some of the knowledge gaps. He applauded ICES for its open approach to benchmarking.

A fisheries representative asked the ICES representative to explain what prevents the western spring spawning herring stock from recovering.

Referring also to the western Baltic herring, **a representative of the fishing industry** stated that the management of this stock is difficult because the stock is composed of different sub-populations which constantly mix. Nevertheless, the fishing industry would like to see a more flexible management of western Baltic herring, in particular with regard to the reference points.

The representative of ICES replied that the western spring spawning herring is composed of different sub-components, which mix together. The impact of environmental changes on the recruitment of the Rügen herring has been recognised. Temperature and timing of spawning are probably the two factors affecting the most the Rügen herring sub-component. Colm Lordan underlined that ICES is working on impacts of different drivers on productivity of fish stocks. A workshop planned for September 2021 will deal with the impact of temperature on productivity. There is a need for a lot of background work to bring these factors into the advice.

A representative of the OIG referred to the misreporting of pelagic species and underlined that the scale of this misreporting should not be neglected. In his view, any increase in the fishing opportunities for sprat could further increase the problem. A number of tools is available to manage the stocks that need to be safeguarded. One of the solutions could be to move the sprat fishery further north. Other measures include area and time closures and gears to be avoided.

With reference to bycatch of herring in sprat fisheries, **a fisheries representative** underlined that fishermen apply different methods to avoid by-catch. Areas of high concentration of herring are avoided by fishermen targeting sprat. Fishermen can avoid aggregations of some species, adapt their fishing pattern and affect to some extent the catch composition. Misreporting is rather a misinterpretation of the composition between sprat and herring.

A representative of the OIG stated that misreporting of herring and sprat should be taken into consideration in the stock assessment and when setting fishing opportunities.

A fisheries representative indicated that Swedish fishermen are cooperating with the control authorities to eliminate misreporting in the pelagic fisheries. A lot of bias had been noted in the reporting and more data is needed. Sampling schemes will continue this autumn.

A representative of the Swedish authorities referred to a study conducted in spring 2021 by the Swedish University of Agricultural Sciences (SLU) on the catch composition in pelagic fisheries. When available, the results can be communicated to the BSAC.

Salmon

Colm Lordan explained that ACOM had considered the advice from the ICES salmon Working Group and concluded that it was not compliant with MSY.

A representative of the OIG asked for clarification whether the advice was consistent with the Common Fisheries Policy.

Colm Lordan did not provide details. He explained that ACOM considered that some issues with the advice did not meet the current advisory framework.

Sea trout

Colm Lordan presented the advice for sea trout. ICES advises to reduce the catches to safeguard the remaining wild sea trout populations in the Baltic region. Existing fishing restrictions and management measures in SDs 23, 28, 30, and 32 (which have high recruitment indices) should be maintained. In recent years recreational catches have increased, and the assessment would benefit from more accurate information on recreational sea catches. This migratory behaviour of sea trout requires international cooperation in the management for sea trout stocks. Predation from seals has been increasing.

Replying to a question put forward by a **representative of national administration**, Colm Lordan stated that the issue of misreporting of salmon and sea trout has been solved to a large extent and is not mentioned as having an impact on the advice.

At the end of the first day, **the Working Group** thanked Colm Lordan warmly for taking part at the meeting, for the presentation and his input to the discussion.

5. The Working Group will start drafting its recommendations to send to the Executive Committee

The Working Group met on the second day to discuss and draft preliminary recommendations from the BSAC.

The participants discussed some outstanding issues concerning the Baltic stocks.

Selectivity in the fisheries

The Working Group recognised that the limited commercial fishing opportunities for Baltic cod, in both east and west, together with the fact that the cod fishery in SDs 24-32 is exclusively for by-catches, brings into focus the imperative need to find technical solutions to improve gear selectivity.

A representative of the German administration gave an update on the trials of new gears and developments currently underway with respect to developing the so-called roofless trawl gear. The draft Joint Recommendation will soon be sent to BALTFISH. Two options for a codend will be proposed to completely eliminate the bycatch of cod.

Several fisheries representatives underlined that the gears currently being used are no longer suited to the prevailing stock situation. New gears are urgently needed in the Baltic. All the proposed modifications (such as the roofless gear designed by German scientists, and different panels tried out in Sweden) to reduce the bycatch of cod should be tested by fishermen. The work on the Joint Recommendation should be finalised as soon as possible. However, further trials on commercial vessels are essential. Fishermen should participate in these trials on a voluntary basis.

Such tests may require additional financial means in order to finance the participation by the scientists. Several options should be tested before the gears become obligatory and replace the current gears. ¹²

A representative of the OIG pointed out that everybody should understand the urgency to find technical solutions to avoid unwanted catches of cod. The ultimate goal should be to preserve the cod stocks.

A fisheries representative referred to the trials of new gears developed to avoid cod catch, carried out in Sweden by the Swedish University of Agricultural Sciences in co-operation with fishermen. The report is expected soon.

Another fisheries representative underlined that the socio-economic aspect should be taken into account with respect to the development and adoption of new gears. Fishermen had already been strongly hit by the decrease in the fishing opportunities for cod. Therefore, the new gears should also be tested on a large scale in the commercial fishery for their effectiveness in catching flounder.

The WG Chair, speaking on behalf of the fisheries interests, referred to the legal process involved in the development and implementation of new gears. He underlined that the Joint Recommendation should be prepared without delay. The gears should be subject to a 6-month trial period on commercial vessels, during which fishermen using these gears would be exempted from area and time closures in SD 24 and from the bycatch rules. Compulsory options should be selected on the basis of trial results.

A fisheries representative pointed out that the modifications to the codend cannot be legally implemented, whereas the modifications to other parts of the gear are allowed by the rules. However, new options have to be tested for their catch effectiveness and profitability.

¹² A representative of fisheries informed by writing that the Danish Pelagic PO landed 51 kg cod as bycatch from the Baltic in 2020. Samples are taken by an independent third party. DPPO represents around 80 % of the Danish pelagic fishery in the Baltic.

The representative of DG Mare indicated that there are procedural requirements in place concerning the implementation of new gears. First of all, in line with the principles of regionalisation, BALTFISH should prepare a Joint Recommendation for the European Commission. The Joint Recommendation is then reviewed by STECF. This process may require long discussions. Then, the Parliament and the Council have an objection period of 2-4 months. Once the process is completed, the gear may be used. The European Commission is currently exploring if and how this procedure could be made quicker. Under the present legislation, new gears cannot be implemented by means of an implementing act, which does not involve the Parliament and the Council.

Referring to the idea of a general exemption from closures applied to fishermen using the modified gear, he stated it is important to remember that the objective of establishing closures was to protect the cod during spawning.

A representative of OIG underlined that in his view, there must be caution in applying any derogations related to fishing closures. He was against a full derogation applied with respect to the gear trails in particular sub-divisions.

The WG Chair explained that a derogation for fishing vessels which take part in the trials from area and time closure in Sub-division 24 is needed because the closed period for cod overlaps with the best periods for targeting flatfish. He underlined that there is no spawning of cod in SD 24, so a derogation can be applied without causing any harm to the cod. Closures should be maintained in those sub-divisions where spawning takes place.

A fisheries representative stated that Swedish fishermen are willing to co-operate with scientists and have the financial resources to finance the trials of new gears. Considering the present situation in the Baltic fisheries, there should be a fast-track system to adopt and implement new gears.

The Working Group decided to recommend to the ExCom to make a strong call on BALTFISH and the European Commission to approve, adopt and implement as soon as possible the new gears with selective entities developed in order to avoid the by-catches of cod in the fisheries targeting other species.

The Working Group concluded that the gears currently being used are no longer an option and are no longer suited to the prevailing stock situation. All the proposed modifications (such as the roofless gear designed by German scientists, or different panels tried out in Sweden) to reduce the bycatch of cod should be tested by fishermen. The final decision on which option(s) to choose as compulsory gear, should only be taken after trials have been carried out in the commercial fishery. Once tried, tested and selected, the gears can be implemented by means of a fast-track legislative procedure, and then replace the current gears. The current procedure under the Technical Measures Regulation is slow, cumbersome and not fit for purpose.

The Working Group decided to recommend to the ExCom to apply a derogation for the fishing vessels which take part in the trials from area and time closures in Sub-division 24.¹³ The new gears should also be tested for catch effectiveness and profitability. Once the compulsory options are selected, the gears should be implemented using a fast-track legislative option and replace the current gears in use.

The Working Group decided to recommend to the ExCom to encourage the Commission to investigate every possibility to find options to replace or complement the procedure of Delegated Regulations.

Further discussion on the fish stocks

With reference to eastern cod stock, **the fisheries representatives** agreed to a bycatch TAC of 2.000 t, and at the same time underlined the need to implement new gears with selective entities developed in order to avoid the by-catches of cod in the fisheries targeting other species. Some fisheries representatives drew attention to the fact that the proposed bycatch TAC is too low to allow Polish fishermen to conduct a regular flatfish fishery.

The representative of OIG expressed concern about the fact that in the present situation such a bycatch TAC could negatively impact the eastern cod stock. He underlined that a group of OIG¹⁴ recommends a zero catch option for the eastern cod stock in 2022, together with other measures to strengthen control and monitoring, minimising cod bycatches in active demersal flatfish fisheries and closing a wider area around the only known spawning ground in Bornholm basin. A roll-over of the bycatch quota would seem a much more reasonable option.

The representative of anglers underlined that any potential increase in the allowed bycatch TAC for eastern cod stock must be connected to a suitable catch bag limit for recreational anglers.

With reference to pelagic stocks, **a representative of the OIG** stated that there is a lack of stringent approach to protecting the stocks in poor condition. He expressed his dissatisfaction with the ICES advice on some of these stocks. More cautious decisions on the TAC than advised by ICES as well as other measures should be taken with relation to the central Baltic herring and the sub-populations of herring in SDs 30-31.

The representative of anglers stated that herring sub-populations in SDs 30-31 should be taken into account in the management of herring in SDs 30-31. He supported the proposed in-year revision of the 2021 TAC.

¹³ According to Article 25 of the Technical Measures Regulation 2019/1241¹³ such derogations from the provisions of the technical measures regulation are possible in order to carry out scientific research with a limited number of vessels. The BSAC refers to its recommendations for a trial fishery for stickleback: <http://www.bsac.dk/BSAC-Resources/BSAC-Statements-and-recommendations/BSAC-recommendation-on-a-trial-fishery-for-stickle>

¹⁴ CCB, WWF and Fisheries Secretariat

A fisheries representative stated that some natural phenomena affect pelagic stocks, mainly herring and stickleback in the Gulf of Bothnia. Approximately every 50 years the population structure in this area changes from being dominated by spring spawning herring to autumn spawning herring, also causing fluctuations in the population size. Climate change could also contribute to this.

Another fisheries representative expressed the view that the sub-populations in SD 30-31 spawn at different times and can be managed separately at national level, by the Member States concerned.

The Honorary Chair of the BSAC stated that in his opinion a decrease in the sprat TAC will not necessarily have a positive impact on the cod stock by increasing the food availability for cod. In his opinion, the cod in the Baltic does not lack food, and the fact that sprat preys on a limited number cod eggs is definitely more harmful for the stock. An increase of the sprat TAC to a maximum MSY level is therefore a logical step. Referring to sub-populations of herring, he indicated that due to the mixing, a separate management cannot be successfully implemented.

Several **fisheries representatives** stated that in view of the growing Baltic sprat stock, the catches of sprat should be maximised to the highest level recommended by ICES, which is the F_{MSY} upper in order to reduce the negative impact of sprat preying on cod eggs and to help fishermen and processors. They also referred to the need to decrease the growing biomass of stickleback in order to minimise its impact on the ecosystem.

A representative of the OIG underlined that there are very few reasons to believe that maximising the catches of sprat is a good solution for cod and the ecosystem.

With reference to western herring, the fisheries representatives did not support setting a zero TAC for 2022. They supported a roll-over of the 2021 TAC for this stock. They also underlined the need to improve knowledge on the herring stocks in order to improve the management. They also mentioned the need for recreational fishermen to take responsibility with respect to the western herring stock.

A representative of the OIG underlined that western spring spawning herring is a very problematic case. The deterioration of the stocks justifies a zero catch in 2022. The stock cannot be recovered alone by managing the Baltic fisheries. Measures should also be taken in the areas outside the Baltic.

The WG Chair proposed to continue the discussions on the management of pelagic stocks in the Pelagic Working Group.

The representative of DG Mare informed that despite a delay in the advice for western Baltic cod and Baltic salmon, the Commission's proposal on the fishing opportunities in the Baltic will be published according with the usual timeline in August for those stocks for which advice is available.

The Working Group reached consensus on the levels that should be set for central Baltic herring, herring in the Gulf of Riga, and plaice. Apart from plaice, the Working Group agreed to follow the ICES EU MAP F_{MSY} advice. Representatives of OIG had additional comments and caveats to the recommendations for some stocks, and these were provided to the meeting.

With reference to herring in SDs 30-31, sprat, eastern cod and western herring, the views amongst the BSAC members were varied and were noted by the Secretariat.

A representative of anglers expressed frustration about the delayed advice for salmon and repeated the need for a long term management plan. This should be raised at ExCom.

Participants were invited to submit written comments to the BSAC recommendations for 2022 after the meeting.

The WG Chair thanked the participants for good discussions and reaching a high degree of consensus in the advice. All the caveats will be included in the BSAC recommendation.

The Working Group asked the Secretariat to produce, after the meeting, draft BSAC recommendations for the fishery in the Baltic Sea in 2022. Participants were asked to submit input to the recommendations. The draft would be sent to the WG and ExCom for comments and adoption through written procedure. The final recommendations will be sent to the Commission early July.

6. Other work in the realm of the Demersal, Pelagic and Ecosystem Based management WGs

Wolfgang Albrecht, Association of Fisheries Protection referred to the FLAG transnational project on seals and cormorants. “*The future of Baltic Sea small-scale fisheries: tackling the increasing impact of seals and cormorants predation*”¹⁵. This project focused on seals and cormorants and the scale of damage in different regions as well as their social and economic impact. The final seminar concluding the project took place on 26th May 2021. He underlined the need to take action to minimise the negative impact of seals and cormorants on Baltic fish stocks and fisheries. The Baltic Sea seal and cormorant populations have grown dramatically in recent years and they are causing serious damage for traditional small-scale fishing. The problem will not disappear by itself. A discussion about different ways forward to manage seals and cormorants and the interactions with fisheries issues had started a few years ago. No actions have been taken since then. The politicians and decision-makers should take a clear position. In his view, compensation for fishermen is not the best solution, because it will not solve the problem of the impact of the seal related worms on the growth and mortality of the Baltic cod and other species.

¹⁵ https://balticfisheries.com/?fbclid=IwAR28r0GMG8d2xqSDvFxiqN97Bd3GEBEO7nazghYQe_b_iARjhhVOnhmuPcE

In his view, the BSAC should make a clear declaration on the need to reduce the seal population in the Baltic.

The WG Chair referred to the discussions on seals taken up at the BSAC in 2018 in the framework of the EBM working group and adopted by the ExCom¹⁶. This had addressed input to a HELCOM/BALTFISH workshop on seals, the illegal killing of seals and trade in seal products. There is a need to continue raising the problem on every occasion in view of the reluctance of some organisations and politicians to take a firm position on the need to reduce the seal and cormorant population. A statement from the BSAC could address practical solutions to the problem, including some non-lethal measures such as stopping the programmes aimed at enhancing the seal populations. He stated that culling programmes had been introduced in some Member States to reduce the seal population, but there is no agreement on culling amongst the Member States and the BSAC members. There is a need to communicate to the general audience that the purpose of seal management is to keep their population in balance and not to exterminate them. There is a need to continue the discussion and find solution to this problem.

Several fisheries representatives recognised the sensitive and complicated character of the problems caused by the growing populations of seals and cormorants. They referred to the fact that a huge part of natural mortality of cod, poor condition of fish and lack of recruitment are probably a result of parasite infections spread by seals in the Baltic. In their view, actions need to be taken without delay. The persisting conflict between coastal fishermen and seals excludes co-existence, unless the population of grey seals is reduced. In their view, the descriptor for reaching Good Environmental Status relating to grey seal, which is set at carrying capacity for this species, is both unrealistic and set without looking at the consequences and should therefore be discussed with and reviewed by HELCOM. Marine predators such as seals should be regulated in the same way as predators living on land. Cormorants cause great damage to the catches and action should be taken to reduce their population. The BSAC should prepare a recommendation together with HELCOM and BALTFISH. In the view of some fisheries representatives, the annual hunting quota should be equal to the annual increase of the population of grey seals. They underlined that there is data on the negative impact of seals and cormorants on Baltic fish stocks and fisheries. In their decisions concerning seal management, decision-makers should consider both fishermen and the ecosystem.

A representative of anglers stated that trap nets had proven to be a good non-lethal method of mitigating the seal-fisheries interactions in Sweden. Management measures may have different efficiency in different parts of the Baltic.

¹⁶ <http://www.bsac.dk/BSAC-Resources/BSAC-Statements-and-recommendations/BSAC-outputs-on-seals>

Reference also to the report from the EBM WG on 4th September 2018

<http://www.bsac.dk/Meetings/BSAC-meetings/BSAC-Ecosystem-Based-Management-Working-Group>

A representative of the Swedish national authorities referred to the fact that the management of seal populations does not fall under the Common Fisheries Policy. The trade in fish products is regulated by the World Trade Organisation and cannot be addressed under a BALTFISH Joint Recommendation.

A representative of the OIG underlined that seals and cormorants cannot be considered the key drivers of the abundance of fish populations in the Baltic. In the past seal populations were much higher and at the same time fish populations were more abundant. All management measures need to be scientifically proven. In his view, there is a number of questions to be answered with regard to the management of the seal and cormorant populations, among others what is the carrying capacity for these populations in the Baltic and what can be done under the existing regulations. The BSAC asked for a relevant GES level for cormorants in HELCOM and to set this in the new Baltic Sea Action Plan. This has unfortunately been disregarded.

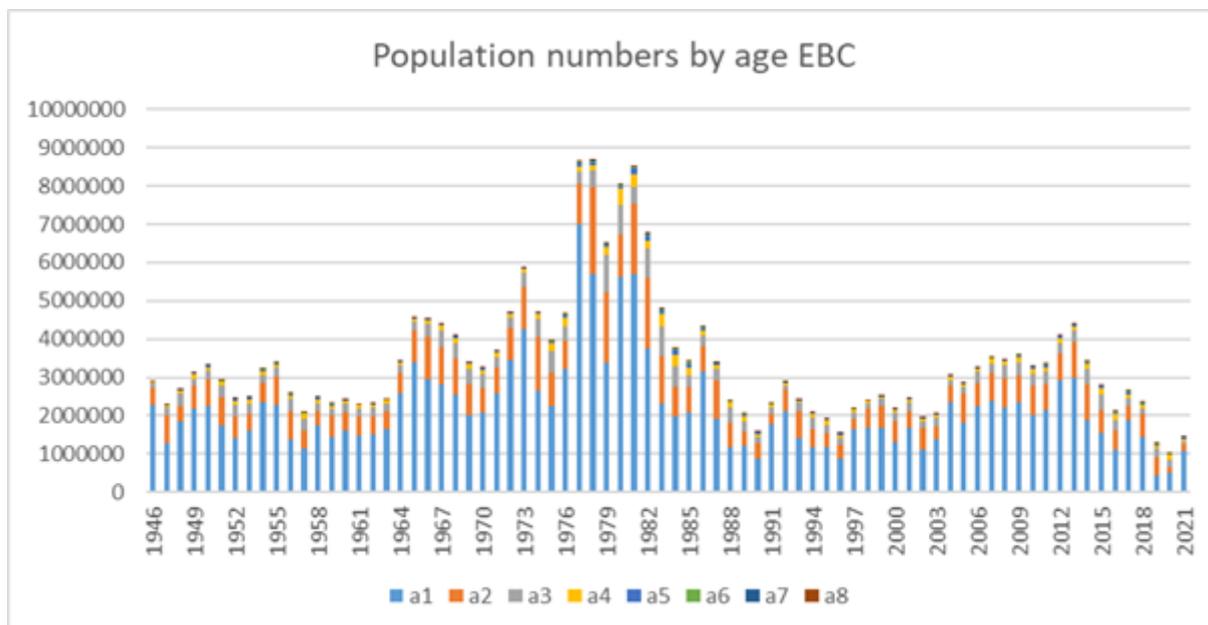
The WG Chair proposed to continue the discussion on how to minimise the impact of seals and cormorants in the framework of the EBM Working Group, and include presentation of the FLAG project. The BSAC should aim at finding a well-balanced solution to the problem which causes a wide-spread frustration of fishermen.

The WG Chair thanked all participants for discussions and asked them to respect the deadlines with regard to the providing input to the recommendation.

7. AOB

There was no other business.

This relates to Footnote 5:



This relates to Footnote 6:

How have uncertainty/changes in growth been taken into account in the assessment?

Growth and natural mortality

The growth of the Eastern Baltic cod is expected to have declined since the 1990s, due to a reduced size at maturation, poor condition of cod, hypoxia, and parasite infestation (ICES WKBEBCA 2017, WKIDEBCA 2018). The same factors have presumably contributed to an increase in natural mortality. Recent changes in growth and natural mortality are estimated in stock assessment model (see section 2.1.5).

[Found that this comes from WGBFAS 2020 Section 2.1.3 page 48:

https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WGBFAS_2020.pdf

Age length keys are used in Stock Synthesis model from 1991 onwards to inform the estimated deviations in Von Bertalanffy growth parameters. The ALKs used are based on age readings from BITS surveys, available in DATRAS. Both ALKs from Q1 (1991-2020) and Q4 (1998-2020) were included. The average length at age in the individual fish data from BITS, used as basis for ALK, are presented in Fig. 2.1.12 (See page 83).

[Found that this comes from WGBFAS 2020 Section 2.1.4.3 Conditional age-at-length (age-length key) page 49:

https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WGBFAS_2020.pdf

Growth

Growth parameters were fixed for the period 1946-1990, at the values estimated using historical tagging data. The tagging estimates covered the period 1955-1970 ($L_{inf} = 125.27$, $k = 0.10$). Deviations in both L_{inf} and k were estimated between 1991 and 2020 when age-length keys were available from BITS surveys. Age-Length Keys (ALK) are used to inform the estimation of growth deviations from 1991 onwards. Numbers of fish in ALK are used as sample size for each year. The variance in length-at-age was fixed for older fish and estimated for younger individuals (Table 2.1.8 – on page 62).

The parameters a and b in length-weight relationships are estimated from Q1 BITS survey, pooled for SD 25-32. The parameters were estimated for each year, after which the data were averaged by 3-year blocks. These externally estimated parameters were used as inputs in the model (Table 2.1.8).

[Found that this comes from WGBFAS 2020 Section 2.1.5.1 page 50:

https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WGBFAS_2020.pdf

Figure 2.1.14. Eastern Baltic cod in SDs 24-32. Estimated change in von Bertalanffy growth parameters L_{inf} (left panel) and K (right panel) from Stock Synthesis model. We can't reproduce these two figures – please find them on page 84 of WGBFAS 2020:

https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WGBFAS_2020.pdf

This relates to Footnote 8 on whether ICES has factored in the impact of parasites in the assessment for EBC?

From the advice sheet: (page 3)

The low growth, poor condition, and high natural mortality of cod are related to changes in the ecosystem that include:

- i) poor oxygen conditions that can affect cod both directly through altering their metabolism and indirectly through a shortage of benthic prey, as well as the survival of offspring;
- ii) reduced availability of fish prey in the main distribution area of cod. Sprat and herring have had a more northerly distribution in recent years, and there is less overlap with the distribution of the cod stock. It is, however, unclear whether the small remaining cod stock would be impacted by this shift of distribution¹⁷.
- iii) high levels of parasite infestations; these coincide with an increased abundance of grey seals. It is unknown whether the parasite infection is the cause or an effect of the poor condition of cod.

These drivers are interrelated, and their cumulative effect on the cod stock is unclear.

¹⁷ Comment made by the Honorary Chair after the meeting: There is significantly reduced availability of prey for young forms of cod, so the starving process starts at a very early stage.