



## Pelagic AC

Working Group II  
7<sup>th</sup> July 2021  
13:30 – 17:30 hrs CET  
Online platform

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### Participants

| <b>Representative</b>  | <b>Organisation</b>                   | <b>Country</b> |
|------------------------|---------------------------------------|----------------|
| Sean O'Donoghue, Chair | Killybegs Fishermen's Organisation    | Ireland        |
| Andrés García Bouteira | ACERGA                                | Spain          |
| Andy Campbell          | Marine Institute                      | Ireland        |
| Angela Fuentes Pardo   | GENSINC project                       | Sweden         |
| Anne-Marie Kats        | Pelagic AC                            | Netherlands    |
| Annelie Rosell         | Swedish Pelagic Federation            | Sweden         |
| Aurelio Bilbao         | Chair of SWWAC                        | Spain          |
| Chloé Pocheau          | Executive Secretary of SWWAC          | Frankrijk      |
| Colm Lordan            | ICES                                  | International  |
| Cristina Perdiguero    | Spanish Member State                  | Spain          |
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| Cristina Perdiguero    | Spanish Member State                  | Spain          |
| Colm Lordan            | ICES                                  | International  |
| Cristina Perdiguero    | Spanish Member State                  | Spain          |
| Emil Remisz            | North Atlantic Producers Organization | Poland         |
| Eric Roeleveld         | Jaczon                                | Netherlands    |
| Esben Sverdrup-Jensen  | Danish Pelagic Producers Organisation | Denmark        |
| Gaëlle RENARD          | SWWAC member                          | France         |

|                           |   |               |
|---------------------------|---|---------------|
| Gerard van Balsfoort      | Pelagic Freezer-Trawler Association                         | Netherlands   |
| Gonçalo Carvalho          | Sciaena   | Portugal      |
| Jacinto Insunza Dahlander | Federación Nacional de Cofradías de Pescadores              | Spain         |
| Jesper Raakjaer           | University of Aalborg                                       | Denmark       |
| John Ward                 | Irish Fish Producers Organisation                           | Ireland       |
| Jonathan Shrives          | European Commission   | International |
| José Beltran              | Organizacion de Productores de Pesqueros de Lugo            | Spain         |
| Juan Antonio Espejo Leña  | Spanish Member State  | Spain         |
| Justyna Zajchowska        | Pew charitable trusts                                       | International |
| Laurens van Balsfoort     | Pelagic Freezer-Trawler Association                         | Netherlands   |
| Leif Andersson            | GENSINC project   | Sweden        |
| Katrina Borrow            | Pelagic AC  | Netherlands   |
| Leon Bouts                | EFCA  | International |
| Linda Planthof            | North Sea Foundation  | Netherlands   |
| Luis Vicente              | SWWAC member  | Portugal      |
| Mads Larsson              | AIPCE   | Denmark       |
| María José Casáis Boo     | SWWAC member  | Spain         |
| Martin Pastoors           | Pelagic Freezer-Trawler Association                         | Netherlands   |
| Miguel Cunha              | SWWAC member  | Portugal      |
| Miren Garmendia           | Opegui  | Spain         |
| Nicolas Michelet          | Comité National des Pêches Maritimes et des Elevages Marins | France        |
| Patrick Murphy            | Irish South and West PO                                     | Ireland       |
| Pauline Joyeux            | Directorate for maritime fishing and aquaculture            | France        |
| Rob Banning               | Parlevliet and van der Plas                                 | Netherlands   |
| Rob Pronk                 | Rederij van der Zwan  | Netherlands   |
| Santiago Folgar Gutiérrez | SWWAC member  | Spain         |
| Sheila O'Neill            | National Seafood Centre                                     | Ireland       |
| Solene Prevalet           | Fonds Régional d'organisation du marché du poisson          | France        |
| Stella Nemecky            | WWF   | Germany       |
| Torcuato Teixeira         | Pescagalicia-Arpega-Obarco                                  | Spain         |
| Wietze Kampen             | European Transport Workers' Federation                      | International |

## **1. Welcome and introduction**

The meeting commenced with the Secretariat providing technical advice on use of the online platform. The Chair, Sean O'Donoghue, welcomed participants to the meeting at 13:31 CET.

He noted that the time available to cover the agenda had been curtailed by 30 minutes, and highlighted that strict time-keeping would be important across the course of the meeting.

## **2. Adoption of the agenda**

The Chair highlighted that there was a very full agenda for the day's meeting, sharing this with participants on the screen. Under 'AOB' on the draft agenda, an item on chub mackerel was included - in a previous iteration of the agenda this had been listed as a discussion around whether to incorporate this under the PelAC 'remit'. The Chair confirmed that, in fact, chub mackerel already falls under the remit of the PelAC, and a small change in the agenda wording had been made as a result. No objections to the agenda were raised, and it was adopted without amendment.

## **3. Follow-up on action items**

The first two action items had been discussed in WGI on the previous day - one being a mandate to seek a meeting with UK officials on data collection (ongoing, to be completed in the Autumn) and an analysis of the MoU between ICES and the UK (complete).

An action to 'continue working to reinvigorate the outcomes of the 2019 Bremerhaven meeting on NEA mackerel' was ongoing. In this context, the Chair highlighted an upcoming presentation from Claus Reedtz-Sparrevojn on research around disparities between the two main mackerel egg surveys - this was scheduled for the PelAC October meeting.

An action to contact the Commission regarding incorporation of genetics pilot studies into the Data Collection Framework (DCF) was ongoing, with an update anticipated at the October meeting on how the PelAC can best engage with Regional Coordination Groups (RCGs).

On western horse mackerel (WHOM), an action to contact the Commission and Member State fishery managers to advocate for the advice linked to the rebuilding plan evaluation to be used as the basis for the headline ICES advice for this stock, was complete.

On southern horse mackerel (SHOM), an action to hold a further meeting of the SHOM FG ahead of the WGHANSA meeting in May was complete.

An action to reach out to the GENSINC herring genetics project was complete - with a presentation from the project scheduled for later during the day's meeting.

A further meeting of the Herring 6a, 7b-c FG had been scheduled ahead of a benchmark for the stock - planned to take place on 5<sup>th</sup> October.

A long-term action to invite Cormac Nolan to provide an update on Celtic Sea herring genetics work, and the mixing issue between Celtic and Irish Sea herring, was ongoing - with the plan being for this presentation to be held within 2022 meetings.

Finally, an action to maintain a 'watching brief' on the impacts on the Landing Obligation of any curtailing of in-year quota swaps as a result of Brexit was also listed as 'ongoing'. However, the Chair noted that as the bilateral agreement between the EU and UK was complete, he assumed quota swaps would resume.

The Chair sought questions or comments on the action items. John Ward took the floor. He raised a question regarding benchmark processes for stocks such as herring in 6a, 7b-c, inquiring as to whether the UK is involved in benchmarks. The Chair confirmed that the UK is actively engaged in these processes, and additionally highlighted that Steve Mackinson (from the Scottish Pelagic Fishermen's Association) is also engaged in the PelAC 6a, 7b-c Herring Focus Group.

#### **4. Fishing opportunities 2022**

The Chair handed over to Colm Lordan of ICES, to present on 2022 fishing opportunities for WGII stocks.

Colm Lordan thanked the PelAC for the opportunity to present the advice. He briefly covered the principles of ICES advice, which had been explained during the course of the WGI meeting.

##### 4.1 Celtic sea herring

Lordan explained that catches for Celtic Sea herring are at the lowest in the time period. In terms of recruitment, the stock has suffered several very low year classes in the recent period. There is significant uncertainty around recent year classes, which show a slightly more positive trend, in the assessment. Fishing mortality has decreased to below FMSY in 2020. SSB has been at the lowest observed levels for several years, but as with recruitment is showing a slightly upwards trend in the last assessment.

The catch advice for this stock is zero catch in 2022. The catch options table provides perspective on SSB changes associated with this advice: it is expected to increase by 10% following the zero catch advice. Other scenarios provided includes the monitoring TAC of 869 tonnes, providing sufficient samples to continue with the assessment. This would result in a 7% increase in SSB in the short-term.

Lordan highlighted that SSB has been overestimated for Celtic Sea herring in recent years, and fishing mortality has been under-estimated. These inaccuracies would not have changed the advice for zero catches.

Patrick Murphy asked about influences on the stock, inquiring as to whether there were impacts on the stock health beyond the F-range. He commented that a 10% recovery of SSB seemed 'a little low'. Lordan said that natural mortality is assumed within the stock assessment: there is no information on other forms of mortality, so the drivers of the stock are fishing mortality and recruitment. He added that the stock has recovered rapidly in the past, but has never previously been at such a low biomass level. The monitoring of the stock will continue in 2021, and a further snapshot of stock development would be available from surveying activity towards the end of the year.

The Chair asked about the 'continual revision' of the SSB for Celtic Sea herring, and whether there were any concerns about a retrospective bias being present for the stock. He asked whether the Transparent Assessment Framework (TAF) had been fully applied to the stock. Lordan was not aware of the details in terms of quality assurance for the stock, but noted he could investigate and report back. In terms of retrospective bias, he said this was a major cause of concern, and should be looked into at the next benchmark for the stock.

The Chair concluded the brief discussion by noting that the PelAC would like to convey a general request for information about whether a stock is included in TAF to be added to ICES advice in future.

#### 4.2 Irish Sea herring

Catches for Irish Sea herring have increased by around 24% in the past year, reaching roughly 8,000 tonnes. Mortality has been below the FMSY target level for the last several years. Recruitment in the recent period has been quite high and continues to be good. SSB has been high in the recent period and shows an increasing trend towards the end of the time-series, associated with the stronger incoming recruitment.

ICES catch advice for 2022 is for catches of no more than 8,455 tonnes, resulting in a 9.4% decrease in SSB.

In terms of quality, the assessment for this stock has been consistent over time, with very small adjustments visible for SSB and mortality. The mixing issue between Irish and Celtic Sea herring - particularly for younger ages within the stock - is an ongoing quality concern and needs to be investigated further.

The Chair noted that the PelAC is a 'very small player' with regards to this stock, in light of Brexit.

#### 4.3 Herring in the West of Scotland and Ireland

The time series of catches for this stock shows low catches in 2020 - a new low in the time series of 1,397 tonnes. In terms of relative fishing mortality, since the introduction of the monitoring TAC, fishing

pressure has reduced down to its lowest level in the time series. In the past couple of years, there has been a slight up-turn in recruitment, resulting in a slight up-turn in predictions for SSB.

ICES advice for the stock is for zero catches in 2022. This is based on a Category 3 assessment (not a full analytical assessment and forecast, but a trends-based assessment). A benchmark for this stock will take place in November 2021 and January 2022, with a number of issues to address. A new assessment would then be available for the HAWG in March 2022.

A standing request for information on potential monitoring TAC scenarios is present for this stock. All monitoring TAC scenarios explored by ICES show an increase in SSB in 2022 and 2023.

The Chair asked Lordan if ICES could confirm dates for the data gathering workshop for the herring benchmark - which he understood to be provisionally scheduled for November 2021. This was taken as an action.

#### 4.4 Horse mackerel in 9a (Southern horse mackerel)

Catches in 2020 were just above 30,000 tonnes, representing a slight decrease on the previous year. The stock is characterised by a relatively high period of recruitment in the recent past, leading to a big increase in estimates of SSB - up to around 1,000,000 tonnes in recent estimates.

ICES advice, based on the MSY approach, is that catches in 2022 should be set at 143,505. Management of southern horse mackerel, blue jack mackerel, and Mediterranean horse mackerel under a combined TAC prevents effective control of the single-species exploitation rates and could lead to overexploitation of any of these species.

Lordan commented on a 'complicating factor' regarding this stock: a previous SHOM FG meeting had worked to align the ICES MSY advice and the FG's LTMS advice, leading to an amend in Article 5 of the PelAC's SHOM LTMS. A change in how the stock is assessed at the ICES level since that meeting (in April) had resulted in a revised MSY level for SHOM, which has again thrown the catch advice from ICES and the PelAC's LTMS out of alignment. The advised F rate for the stock has been increased by ICES from 0.11 to 0.15.

Lordan shared the catch options table for the stock, which included the agreed LTMS. Catches advised by the LTMS for 2022 would represent a 266% increase in catches.

Data collection for the stock has been impacted by the COVID-19 pandemic, and this means that the assessment for the stock is slightly more uncertain than in previous years. Assumed recruitment also represents a larger percentage of the catch advice than in previous years.

Under issues relevant for the advice, ICES provides further detail on mixing issues between different horse mackerel stocks in the area. The vast majority of the catch in 9a is 'regular' southern horse mackerel, with data from 2020 showing just over 2,400 tonnes of other horse mackerel species mixed into catches.

Miguel Cunha took the floor. He remarked that ICES needs to use the 'best science available' for generating advice, but surveys for the stock had not been run in 2019 and 2020. Based on this, he asked whether such a significant upwards revision of MSY catches and SSB was reliable. He understood the confidence interval for SSB to represent a range of 300,000 tonnes to 1,600,000 tonnes, and commented that this was very significant uncertainty. The only data point that seemed certain, to him, was the fishing mortality element within the assessment. He suggested it would be more astute to base catch advice on 2019 data, and stick to the F of 0.11.

Lordan thanked Cunha for the question, reinforcing the message that ICES aims to provide advice based on the best available science. He said that in addition to survey information feeding into the assessment, monitoring and 'catch at age' data is also included, as well as information from log books. He agreed that the confidence intervals for the assessment were 'large' and it was one of the 'more uncertain' of the assessments provided by ICES. However, ICES bases its advice and comments on the median of the confidence intervals shown.

Cunha thanked Lordan but said he still couldn't understand the 'huge change' in the level at which MSY is set for the stock. Lordan said that the change in MSY to an 'FP05 level of fishing mortality' was still considered precautionary, and should therefore still maintain the stock above blim in the long-term. He highlighted a workshop on reference points and setting of catch advice with regards to MSY objectives and precautionary measures that would take place later in the year.

The Chair understood the origins of Miguel Cunha's questions. He asked if the SHOM assessment had gone through the TAF system, and the level to which the stock working group had considered the implications of applying the 'FP05' level to the MSY target before issuing the advice.

Martin Pastoors commented that the advice for this stock demonstrates the need for a workshop on reference points. He commented that Lordan had said it was a 'very uncertain assessment' but the advice was one of the largest increases in catch he had seen. He added that the reference points for the stock were 'derived from the uncertainty' and were 'exceptionally low value'. He said the 'system of deriving reference points was problematic and needs to be reconsidered in a fundamental way'. He also raised the 'change in procedure by ACOM' on the re-calibrating of MSY reference points based on a rule: he felt that the scientific rationale was missing.

Gerard Van Balsfoort remarked that he was also very surprised by the change in the FMSY value. He underlined Pastoors' comment, and said that communicating these decisions outwards to advice recipients - including the industry - was very important. He asked if a possible result of the workshop on reference points could be a further change to the FMSY level for the stock.

Lordan explained that the new 'FP05' approach to setting a cap on MSY assesses the risk of catches driving a stock below blim, and requires this risk to be less than 5%. This replaces a previous reference point of FPA, and affects only a handful of stocks. He said that the next time any stock is benchmarked the new methodology for applying reference points would be brought in.

#### 4.5 Western horse mackerel (WHOM)

Lordan commented that the biomass for this stock has been fluctuating around the blim level, thus triggering the PelAC's work on a rebuilding plan for the stock.

The PelAC had completed and submitted a rebuilding plan, which had been assessed by ICES and found to be precautionary in the long-term. The plan leads to rebuilding by 2028, as opposed to the ICES zero catch option which delivers rebuilding by 2026.

Lordan detailed some of the ways in which the PelAC rebuilding plan had been assessed by ICES, and then moved on to show the various outcomes of an MSE, when applied to different proposed harvest control rules (HCRs).

The Chair commented that the WHOM rebuilding plan had been a 'huge piece of work' for the PelAC, and underlined his thanks for the work and support of the scientific community involved in it. He opened the floor to comments and questions.

Martin Pastoors commented that it had been a 'new process' whereby the PelAC had carried out the evaluation of the management plan within the PelAC FG for the stock, and then presented it to ICES for further evaluation. He said this had been a useful approach, with lots to learn along the way, and he was happy with the results. The Chair concurred.

The Chair asked whether ICES had been informed by the Commission that the PelAC was seeking inclusion of the WHOM rebuilding plan in the top-line advice for the stock. Lordan said there had been no direct communication in this regard. The Chair said the PelAC had written to the Commission on this subject, for both the WHOM and the SHOM. A direct reply had been received for the SHOM, but WHOM management was also affected by post-Brexit management dynamics: the UK administration would have to support the rebuilding plan for it to be included as top-line advice.

Goncalo Carvalho took the floor to suggest that outreach be conducted with UK stakeholders to try and seek agreement around the rebuilding plan bilaterally. The Chair agreed and said the Specialised Fisheries Committee may be an avenue for this. Jonathan Shrivess said the Commission response on incorporation of the WHOM rebuilding plan as the top-line advice for the stock would be similar to the response received on SHOM - whereby this was included as a catch option. He underscored that all parties involved in a fishery need to agree to a management strategy in order for it to become top-line advice - as noted vis a

vis WHOM - but added that the Commission would stick to MSY advice as its 'legal basis'. The Chair commented that this was a shame, due to the amount of work that goes into developing long-term management and / or rebuilding plans.

Lordan commented that the procedure is that ICES has a list of known management plans at the beginning of the year, and then reaches out to the parties engaged in fishing activity linked to those plans to secure their agreement or disagreement with regards to use of the plan. If any party disagrees, the plan is not then used as top-line advice. Jonathan Shrives noted a difference in opinion between ICES and the Commission on this process, saying that this was under discussion. The Chair took an action point to seek a clarification on this process following the meeting.

Aurelio Bilbao took the floor, transmitting 'the concerns of the Spanish fleet' with regards to management of Western horse mackerel (WHOM). He said this was an important stock for Spain, with many vessels depending on the fishery. He stated his concern about the situation with the stock in terms of biomass, but said his preference in terms of catch advice would be to choose the 'maximum possible exploitation' for the stock without putting it at long-term risk. He said the stock has 'explosive recruitment', bringing hope for a 'quick stock recovery'. He said fishing for the stock at MSY would be precautionary in the long-term, and he didn't see the necessity for applying the PelAC rebuilding plan. He reiterated that the Spanish industry is very concerned.

## **5. MSE for mackerel - Andy Campbell**

Andy Campbell provided a presentation on the management strategy evaluation conducted for the Northeast Atlantic mackerel stock. He had previously presented the MSE at PelAC meetings, focused on long-term outcomes of different combinations of reference points within management scenarios.

The MSE looks at different HCR parameters, and the application of TAC stabilising measures.

Without TAC stabilising measures, median inter-annual fluctuations in TAC were between 10-20%, with some years showing up to 50% changes in TAC. The TAC boundaries applied were +25% / -20%, and the effectiveness of these measures was linked to the Btrigger level selected within the HCRs.

In terms of short- and medium-term responses, Campbell shared several plots linked to an Ftarget of 0.29 and a Btrigger of 4.5Mt, with the TAC stabilisers applied and 5% banking and borrowing. Under this scenario, applied from 2021, the stock is predicted to peak at 2023, and then reach a long-term state several years on. Almost all procedures examined in the MSE would indicate stock growth in the near-term, recruitment then falls away to a long-term average.

Campbell showed all of the potential precautionary outcomes that the MSE delivered. Looking at the short- and medium-term, he highlighted the various trade-offs: these were intuitive, and focused on the

fact that a higher F-target in the short-term produced higher initial yields, but lower yields in the long-term. Adding TAC stabilising measures to this produces a smoother picture in terms of yields over time.

Results in the short- and medium-term for the MSE are dependent on the assessment, which is why the long-term outcomes are typically focused on - as these are independent of the model used. Short and medium term outputs are dependent on the assessment used to condition the MSE. When used for future advice, the HCR will be applied on the basis of the most recent assessment. These assessments may differ significantly and alter the relationship between current SSB and Btrigger.

In summary, Campbell stated that the MSE identified a range of precautionary F-target/Btrigger combinations with similar long term yield (950-970kt). The MSE indicates that the stock is projected to increase in the near term, due to good recent recruitment. However, short and medium term outputs are dependent on the output of the assessment used to condition the MSE (WGWIDE19). Future advice based on a management strategy will be derived from the output of the future assessments, which may revise the perception of the stock status. TAC stability mechanisms reduce yield in the short term but also reduce IAV, particularly extreme values. This is most evident with high F-target values. To ensure TAC stability measures are not suspended, an appropriate Btrigger should be selected to maximise the probability that SSB is above Btrigger.

Campbell concluded that it is 'very difficult' to pull out information in the short term. The Chair thanked Andy Campbell for presenting such a complex issue in a simple form, saying it would be very relevant when Coastal States 'get back on track' with an agreed management plan.

Gerard Van Balsfoort commented that it was 'really difficult' to choose between the options presented. He thanked Andy Campbell for his work in presenting the MSE and making it digestible.

The Chair asked Campbell to provide a combined version of his various presentations on the MSE for PelAC reference material, to which he agreed.

## **6. Southern horse mackerel (SHOM)**

The Chair provided a brief update of progress within the SHOM FG, and work on the LTMS for the stock. He noted that the FG had reached consensus on the LTMS during a meeting in May, and the resulting final plan had been shared with the Commission and ICES - but, as noted earlier in the meeting, a change in ICES methodology with regards to the application of MSY within the advice means that the LTMS and the ICES advice now no longer align.

The Chair sought perspectives from the working group as to whether the SHOM FG should attempt to further adapt the LTMS to the new ICES FMSY reference point, or whether it should be left in its current format. Members were also asked to supply their thoughts on how to progress the issue between July and October, when the PelAC would prepare its advice on the stock.

Aurelio Bilbao clarified that his intervention was regarding the WHOM, rather than the SHOM LTMS. He said a problem remained for both management plans, and he valued the approach of looking for resolution. He was pleased with the previous iteration of the SHOM LTMS, when it aligned with ICES advice, and now was keen to see how the two could be brought back in-line.

Jose Beltran agreed with the Chair's approach to the SHOM LTMS. He felt that looking into the impacts of the changed MSY reference point would be valuable and this could form the basis of consideration of changes to the LTMS. The Chair said the PelAC should contact Hugo Mendes with regards to this.

Goncalo Carvalho said the PelAC should await the outcomes of WKREF before considering this change. He felt the plan should stick to the current FMSY of 0.11 as this would still permit a 'huge' increase in catches - to more than three times the last registered catches of the stock - and be highly precautionary. This input was supported by Justyna Zajchowska.

Miguel Cunha added that the TAC for 2022 would be the same as in 2019, based on an F of 0.11. He agreed that the matter should wait until the October ICES meeting.

The Chair thanked Carvalho and Cunha for their interventions, and said that discussions on SHOM would be held between the day's meeting and the October meeting. He said this could be conducted via email correspondence, without a specific FG meeting.

Jose Beltran intervened, noting that an agreement was reached in April, but the basis of this agreement has now changed, due to the different reference point applied by ICES. Beltran said he would personally be in touch with Hugo Mendes about implications for the LTMS.

The Chair suggested informally contacting Colm Lordan for an answer on what the change in FMSY reference point would mean for the LTMS if the relevant Article was amended to reflect this new MSY target.

Colm Lordan said if the PelAC amended the F target in the plan to match the new level of 0.15, this would have to go through another formal MSE process.

Jonathan Shrives took the floor. He said although FMSY is the Commission's legal objective, they don't have to propose fishing at that level. A lower value can also be proposed. If there is a management strategy that the PelAC and the SWWAC agree on, this can be the proposed catch option. He suggested that it may be worth waiting to amend the plan, as there has been a lot of work in getting it to an agreed state and it could now be applied. He said that amends should perhaps wait until catch advice for 2023 is issued.

The Chair suggested taking the discussion offline and working to a consensus position ahead of the PelAC October meetings. He removed the action to contact Colm Lordan informally at this stage, noting that any change in the F in the management plan would require a new ICES evaluation.

## **7. 6a, 7bc herring**

### 7.1 GENSINC Project presentation

The Chair handed over to Leif Andersson to present the GENSINC project on herring genetics. The project has developed 'excellent tools' for genomic analysis in Atlantic herring. The presentation would focus on 'a comprehensive screen of genetic diversity', based on sampling from across Northeast Atlantic coastlines. 53 samples have been taken, with 40-50 fish in each sample, providing roughly 6,000,000 'SNPs' - a type of genetic marker. The research found that Atlantic herring has a set of very closely related populations that have colonised the Atlantic and the Baltic Sea.

The research had provided greater power to distinguish herring groups, using 700 'markers' to break the stock out into its component parts and different populations.

The project has identified four 'chromosomal inversions' linked to ecological adaptations - showing different parts of chromosomes that altered during the evolution of the stock, creating a block of genetic markers. Identifying these chromosomal inversions also helps to identify different populations: which have different frequencies of these variants. Some of these variants suggest responses to ecological circumstance, such as climate change - eg. herring found around Ireland and the UK show adaptations to cooler waters, meaning they will likely migrate northwards as waters warm.

The project is currently working on an extended analysis, including 19 new samples from the UK, Ireland and Norway. Andersson shared an example of herring from Milford Haven, in Wales, which breed in brackish, river waters and show genetic markers that are distinct from other herring in the area that breed in other coastal waters. Such examples can allow for a more granular analysis of regional populations.

Conclusions: neutral markers show low genetic differentiation between populations, but there is considerable local adaptation, with genetic differentiation at loci contributing to ecological adaptation.

He explained that it is now possible to design diagnostic SNP panels which can be used to classify populations - on the order of 500 SNPs to cover all populations, and a restricted number of SNPs (one or two markers) can be used for specific queries (eg. spawning period). We now have the technology to classify herring according to population.

Andersson added that he felt this type of work should be carried out on all fish species of major commercial interest. This requires funding, sample collection, construction of high quality genome assembly, and population whole genome sequencing.

The research group are also working on a number of other stocks, including European eel and Atlantic horse mackerel.

The chairman thanked Lief Andersson for his interesting presentation. He noted the PelAC had been proactive in the field of genetics with the work carried out by Ed Farrell on 6a herring and horse mackerel, and thought this approach should be considered for all commercial stocks. The work on genome sequencing for herring presented today, has enabled Farrell to verify his work which was great news. He opened the floor for questions from participants.

Martin Pastoors asked how much work would be involved to determine a first estimate of the genome of a species that has never been looked at before.

Leif Andersson replied that a budget of roughly €100,000 would be needed for sampling and resequencing of the required population, to get a first view of that population. It would take approximately six months to carry out. Andersson explained that lobbying towards the EU for research funding would be very helpful. In the context of sustainable fisheries and modern technologies, this research is very promising.

The chairman explained that a key issue for the PelAC is trying to get genetic research included as an accepted method under the Data Collection Framework, in order to access funding. The PelAC is just as keen to see this field progress in the context of fisheries.

The chairman asked Andersson if the full herring genome was now published and available? Leif Andersson replied that a first paper had been published in the journal Elife in December 2020, which he could share. An action was taken for the secretariat to circulate this paper to the Working Group members. He added that his colleague Angel Fuentes Pardo was finalising work on 20 more herring populations which was expected to be published at the end of this year, which would include a better resolution on Ireland and the UK.

The chairman looked forward to the final publications and thanked Andersson again for the presentation, assuring the PelAC would stay in touch.

#### 7.2 6a, 7bc herring FG update

The chairman gave an update on the Focus Group work. Ed Farrell had circulated some slides in advance to bring the Working Group members up to date, since he was unable to attend today's meeting.

The main aim for the focus group is the preparation for the upcoming benchmark for 6a herring. The EASME funded genetics project on herring was finalised in December 2020. The final report had been completed and published on the DG MARE website in April 2021. ICES SIMWG is currently reviewing the report, which was a key action from the last focus group meeting. During this meeting, a follow-up project

jointly funded by the industry, looking into the potential of a 6a North maturity staging issue, was briefly discussed. The analysis was well underway and priority tasks were identified.

The chairman concluded that the focus group was making good progress. The 2020 industry survey awaits analysis of final MSHAS samples which is expected to conclude by end of July. The work is thus expected to be finished well in time to feed into the benchmark data meeting next November. The final output will be looked at closely during the next focus group planned for October 5<sup>th</sup> 2021.

Due to the time restrictions of this online Working Group II meeting, the chairman proposed to divert the formulation of recommendations for 6a herring to the October meeting. The same would apply to Celtic sea herring.

## **8. Landing Obligation**

### 8.1 Regional Group updates

The chairman remarked that the regional MS groups were developing JRs and revising existing discard plans. He asked Jonathan Shrives from the Commission to update the meeting on the expected timing for their finalisation.

Jonathan Shrives explained that there was a new team at DG MARE dealing with stocks under Coastal States negotiations (team c5). Shrives is appointed to deal with stocks managed solely by the EU (e.g. horse mackerel). With regard to CS stocks, he had no information on the timing on the consultation with UK discard plans, nor UK's involvement in shared stocks, as that fell outside of his remit.

In terms of EU-only stocks, discard plans are currently underway for assessment by STECF. Once that assessment is done, the Commission and MS will discuss the results. Should the DA require amendment this would be in place for the beginning of next year and should cover 2022 and 2023.

The chairman remarked that two issues had emerged in the contact with regional groups:

- The de minimis exemptions for horse mackerel, mackerel and blue whiting applied in demersal fisheries have not changed compared to previous plans.
- The issue of boarfish closures has been taken up with the NWW regional group. The French presidency of the group is working actively to resolve this issue by aligning the closure that has been in place for years, into EU legislation. The chairman hoped this would soon be finalised.

Gonçalo Carvalho briefly mentioned he had attended meetings of the SWW regional group, but no real issue relevant for the Pelagic AC has been discussed this year. There were no relevant derogations nor changes to de minimis exemptions being discussed.

The chairman was pleased to note that the working relationship with the regional groups had significantly improved since a number of years ago. The groups are making efforts to keep the ACs well informed and the covid-19 crisis has facilitated remote participation in meetings, which was working well.

## 8.2 TAC deduction calculations by The Commission

The chairman invited Jonathan Shrives to present the Commission methodology for calculating the deductions in TACs for horse mackerel.

Jonathan Shrives briefly presented a file with the calculations for deductions in horse mackerel TACs for 2021. He explained that the process for 2021 was somewhat different than previous years. The Commission was still putting forward proposals from 2021, so no information on 2022 deductions were ready at this stage. He expected further information from STECF by September.

The chairman remarked that the process was difficult to follow in light of the bilateral negotiations with the UK. Once the TACs after the bilaterals were announced, they didn't include the deductions yet.

Jonathan Shrives said that 2021 data was being airbrushed out of history, as if a full year had been agreed. Deductions are based on a percentage so that shouldn't change. Due to covid, ICES lacked the detailed level of discards compared to previous years. It was therefore agreed with Member States to roll over deduction percentages from previous years, since there was no other data. This was the case for all the horse mackerel stocks, except for horse mackerel in 9a, to which a new method for deduction was applied. There was no ICES data for this stock, so data from FDI and discards and landings were used to calculate the deduction instead. The data on catches per gear type were derived from data from Member States.

The discard data was calculated based on FDI output and three types of discard data. This data was added to landing data to calculate the catches. The total deduction for horse mackerel in 9a resulted in a 4% cut off the topline MSY advice. In reality the actual catches were much lower, so the cut was not thought to be very restrictive. No TAC for discards will be issued, since this isn't possible to calculate at this time. Once the data for 2022 is compiled he could return to deductions for 2022.

The chairman said the Working Group would come back to this during the October meeting, and another presentation by Jonathan Shrives would be greatly appreciated. He asked the Working Group II members to review the excel-file circulated by the Commission and to ask any remaining questions on the calculations during the October meeting.

## **9. AOB**

The chairman moved to an item that was placed under AOB concerning the chub mackerel stock. He explained that this was a discussion item during the Brexit Focus group last May. The stock is under the remit of the PelAC but it is currently not being dealt with because it is a non-TAC/quota species. The focus

group believed the PelAC should actively pursue a way to deal with this stock more actively. The chairman asked Gonalo Carvalho for his ideas on how the PelAC could pursue advising on this stock.

Gonalo Carvalho thought a good first step would be to draft a paragraph in the 2022 PelAC recommendations, highlighting the importance of this stock and for getting a stock assessment in place. Carvalho took an action to draft a proposal for a paragraph for inclusion into the 2022 PelAC TAC recommendations, for further discussion during the next Working Group II meeting in October.

## 10. End of meeting

The chairman closed the meeting at 17:40 and thanked the interpreters, the participants and the secretariat for their flexibility in moving the meeting.

## 11. Action Items

| Action # | What  | Who                   |
|----------|---|-----------------------|
| 1        | Colm Lordan to convey to ICES a general request that information as to whether a stock is included in the Transparent Assessment Framework (TAF) should be added to advice sheets for all stocks.   | Colm Lordan           |
| 2        | Colm Lordan to confirm date of data-gathering workshop, understood to be provisionally scheduled for November 2021, as part of the herring 6a, 7bc benchmark process.   | Colm Lordan           |
| 3        | WHOM - clarify the process for securing agreement on use of the WHOM rebuilding plan, given post-Brexit context. Secretariat to write to Commission on this.  | Secretariat           |
| 4        | Andy Campbell to provide a combined presentation of his MSE presentations on short-, medium- and long-term implications of HCR and TAC stabilising combinations, for PelAC reference material.  | Andy Campbell         |
| 5        | SHOM - pursue discussions around the agreed LTMS ahead of the October meeting: to assess whether there is appetite to pursue an amend to the MSY target within the LTMS, in order to align this with the new ICES FP05 MSY cap, or whether the plan should be left with the current target FMSY value of 0.11. PelAC to contact Hugo Mendes in this regard. | Secretariat and Chair |

|          |   |                             |
|----------|---|-----------------------------|
| <b>6</b> | Circulate the paper published in Elife in December 2020 on herring genome sequencing to WGII members.                                   | Secretariat, Leif Andersson |
| <b>7</b> | Present calculations for deductions in horse mackerel TACs for 2022 at October meeting.   | Jonathan Shrives            |
| <b>8</b> | Review spreadsheet with TAC deduction calculations shared by Jonathan Shrives and ask questions during October meeting.                 | Working Group II members    |
| <b>9</b> | Draft proposal for paragraph to be included in the PelAC TAC recommendations on how the chub mackerel could be dealt with by the PelAC. | Gonçalo Carvalho            |