



▶ Pelagic AC

Western Horse Mackerel Focus Group

20 June 2019
14:00-17:00 hrs
World Trade Center Schiphol
Room G3.02
The Netherlands

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Participants

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| 1 | Sean O'Donoghue, chair | Killybegs Fishermen's Organisation |
| 2 | Martin Pastoors | Pelagic Freezer-trawler Association |
| 3 | Claus Reedtz-Sparrevohn | Danish Pelagic Producer Organisation |
| 4 | Andrew Campbell | Marine Institute Ireland |
| 5 | Michaël Gras | Marine Institute Ireland |
| 6 | Dankert Skagen | Skagen Fisheries consultant |
| 7 | Vanessa Trijoulet | DTU Aqua |
| 8 | Lisa Readdy (by WebEx) | Cefas |
| 9 | Glwadys Lambert (by WebEx) | Cefas |
| 10 | Steven Mackinson (by WebEx) | Scottish Pelagic Fishermen's Association |
| 11 | Anne-Marie Kats | Pelagic AC |

1. Opening of the meeting by the chairman, Sean O'Donoghue

The chairman opened the meeting at 14:10 hrs. A tour de table followed.

2. Adoption of the agenda

The agenda was adopted without amendments. The focus of the meeting will be around the work carried out by the ad-hoc working group on evaluation techniques for rebuilding plans which has gathered for a two-day meeting, starting this morning.

3. Follow-up on action items

The chairman went through the action items from the last meeting which took place about one year ago. Some actions items have therefore long been covered or no longer apply.

The action item to draft letter to the Commission asking them to publish a DCF call on Western horse mackerel is no longer valid, so can be taken off the list.



The chairman asked Martin Pastoors if he had any information on why Spain and France did not collect samples in recent years. Martin Pastoors confirmed there were no age samples from France, and it is still on his list to follow up on this. He promised to do this before WGWIDE this year (**action 1**).

The action item to ask ICES how to deal with recruitment spikes had been followed up on, as well as the action items regarding sablefish.

Following up with Piera Carpi regarding the IBTS recruitment index has been done.

Landmark Fisheries was informed about where the catch-at-age data are coming from and were provided with values for reference points to be tested in the HCR and preferences for model diagnostics. The ICES document on risk has also been sent to Landmark, and all the deadlines regarding the Landmark drafts and final report have been met.

Martin Pastoors and Andrew Campbell would submit outcomes of the Landmark work to WGWIDE, which they did.

The Pelagic AC got a mandate from Working Group II and the Executive Committee during the July 2018 meeting.

There were no further outstanding action items from previous meetings.

4. State of play since the last meeting in June 2018

The chairman reminded the meeting that Landmark had been contracted last year to do some work on evaluating HCRs. This had gone well, and the report of this work had been finalized late August 2018. Landmark was subsequently asked to carry out a full MSE on the draft report, but for a number of reasons this ended up getting delayed. When asked in January to carry out the follow-up work, Landmark was unavailable to start before July 2019.

The Focus Group had to rethink its course, and the chairman was pleased that Martin Pastoors and Claus Reedtz-Sparrevohn took the initiative to start a collaboration with scientists to pick up the work. The focus of this meeting will be on the next steps in relation to this collaboration.

5. Presentation Landmark work & follow up collaboration on MSE

The chairman invited Martin Pastoors to present the work carried out by Landmark last year.

Martin Pastoors took the floor and indicated he would first give a bit of background to the recently set up ad-hoc working group with scientists, and to then continue with a presentation on the Landmark report.

Background and follow-up collaboration

Martin Pastoors and Claus Reedtz-Sparrevohn invited a group of scientific experts for a 2-day meeting around this Focus Group to discuss rebuilding plans. Western horse mackerel will be the key focus, but scientists working on different stocks have been brought together to benefit from the experience in different areas. Vanessa Trijoulet is currently involved in the rebuilding plan for Western Baltic Spring spawning (WBSS) herring, Michaël Gras and Andrew Campbell are working on Celtic Sea herring and have experience with the Pelagic AC in the development of the 6a, 7bc herring rebuilding plan. The situation with the 6a herring rebuilding plan that could not be evaluated is something that is key to avoid in this case.



Martin Pastoors went on to explain that ICES has been recommending the development of rebuilding plans for many years, while not having the tools to carry out evaluations of such plans. Pastoors showed a slide depicting the timeline with the history of Western horse mackerel management. There have been several attempts over the years to come up with a management plan that is precautionary and fulfills the ICES criteria. In 2017, a benchmark was carried out resulting in a perception of the stock that is close to Blim.

As a result, a collaboration was started with Landmark Fisheries Research to look for an alternative way of generating a rebuilding plan for Western horse mackerel. This had been done, but at the same time a retrospective error in the assessment was identified, resulting in a TAC increase instead of the expected 0 TAC advice.

Martin Pastoors and Claus Reedtz-Sparrevohn attended the ICES workshop on MSE's last February 2019, where they brought up the issue of rebuilding plans a number of times. They explained the conflict that now exists between the requirements of needing a low probability of being below Blim and being at or under Blim at the start. It is therefore unclear what the criteria are for evaluating when a rebuilding plan is precautionary. The point had been identified as an issue during the workshop, but had not been resolved or discussed in detail.

Fortunately, ICES has agreed yesterday to organize a new workshop, that addresses the history of scientific advice and evaluates the tools needed to evaluate rebuilding plans. This workshop will be chaired by Martin Pastoors and Vanessa Trijoulet and is expected to take place in February 2020.

Martin Pastoors went on to explain the rationale for bringing together the group of experts for the follow-up work in Western horse mackerel. Part of the aim of this collaboration is to make a start for this workshop next year, and also to present the outcomes to WGWIDE in at the end August 2019.

Presentation Landmark work

Landmark Fisheries carried out some work for the Pelagic AC in 2018, which has been submitted to WGWIDE in September 2018.

After the evaluation carried out in 2015, the conclusion was that it would take 40 years before Western horse mackerel could be fished again. This is partly linked to recruitment, but also to the uncertainty in the assessment. The uncertainty was so high that the probability of falling below the Blim reference point at the time, would be too high. The conclusion was therefore that the uncertainty was too large to carry out a meaningful MSE.

After the 2017 benchmark, the reference points were re-estimated. The assessment has increased ever since. Now, the stock is estimated to be close to Btrigger due to this re-scaling, even though it is at the lowest point in the time series. The situation remains very uncertain.

Martin Pastoors and Claus Reedtz-Sparrevohn met with Ashleen Benson from Landmark last year. She had an approach of evaluating MSEs and developing harvest rules that were usable. Landmark had worked on sablefish in Canada, and looked at ways to stop the stock decline and define a meaningful time period for rebuilding. That led to the contracting of Landmark to do some work for the Western horse mackerel focus group.

Landmark developed a full-feedback approach, where they conditioned the evaluation on the accepted assessment (SS3) and replicated the assessment in the simulation framework. They tried to mimic the outcomes of SS3 which worked partially, but not entirely.

Michaël Gras added that the same approach was adopted for the North Sea haddock MSE, but the results were not completely conclusive.



Martin Pastoors continued that the mimicking worked in some areas but not in others, but Landmark was more or less able to mimic the trend in SSB. Two different recruitment scenario's were taken into account, one containing the 1982 and 2001 recruitment spikes, and one that excluded them. Leaving out the spikes in 1982 and 2001 gives a very different perspective on recruitment.

Landmark also looked at different harvest control rules: evaluating what happens when fishing below the trigger biomass is continued, a very steep slope below Btrigger, or if you let it go down to 0. Landmark looked at this on a relative scale and an absolute scale.

The problem with the outcomes is that the starting conditions did not include uncertainty but started with a full-known stock composition. This gives a start that is very precise followed by a projection that is very disperse. In all cases Landmark found that the stock is expected to increase given the target fishing mortalities and reference points. There is more variability in the catches when the reference points are jumpy, but overall the values are pretty similar.

Fisheries closures make it more difficult to assess the stock. It limits the ability to understand what is going on with the stock. There's a trade-off between conserving the stock and knowing what the stock is doing.

The conclusions were that the approach was a feasible way of working. The HCRs are interesting and could be further evaluated, but uncertainties in the starting conditions were not taken into account which is a key element in this type of work. Further work was therefore needed and that's where the process got stuck.

Discussion

The chairman asked whether having more variability in the starting point, would mean a similar outcome as was the case in 2015?

Martin Pastoors clarified that an important difference is that different metrics of rebuilding would be looked at in this case. You can look at different types of strategies to ensure the stock is not declining or at least somewhat increasing. The timeframe for rebuilding is what needs to be looked at.

The chairman asked if Landmark had done the follow-up work, whether this part would have been fully developed? Martin Pastoors confirmed this was the case, and should now be focus of this discussion.

With regard to the rebuilding plan workshop in February 2020, the chairman wanted to know if it is likely ICES will say to wait until the outcomes of this workshop before looking into any follow-up work? To what extent does it still make sense to present something to WGWIDE?

Martin Pastoors confirmed this would be likely, but the Focus Group could guide that workshop by preparing work in advance.

The chairman brought up the situation with ICES with regard to the 6a, 7bc herring stock. During the ADG Celtic one week ago, the advice for a rebuilding plan was taken off the table on the basis that 6a herring now became a category 3 stock. ICES never answered the Commission's request to evaluate the rebuilding plan, even though a lot of work went into the development of the plan. Based on what has been learned in this case, he wanted to know if it's likely to end up in a similar situation after doing all this work, if it turns out the starting point or the stock ID is wrong?

Martin Pastoors said that the conclusion for Western horse mackerel is that there are two stocks: a North Sea and Western stock, and there's also debate around the boundary of the Southern stock. It's not clear where the boundary is between the North Sea and Western stock. The genetics work that is ongoing at the moment is doing research on that to identify the proportion of the Western and North Sea mixture.



The chairman asked that if it turns out that there's a lot of mixture between these two stocks, could we end up in the same situation as with 6a herring?

Martin Pastoors said that one big difference between Western horse mackerel and herring is the size of the stock. The North Sea is only a small part of the Western stock. Another big difference is the uncertainty in the assessment.

Andrew Campbell added that Piera Carpi's work on two fleets showed contradictions in catches from the South. So far, the work has focused on fishing mortality, but selectivity in different fleets was also looked at. Of the 3 mixing components, the best discrimination was found to be between the 9a and 8c areas.

The chairman argued that could be part of the problem, since 8c is part of the Western area. He wanted to know where this leaves us at this stage. Andrew Campbell replied that the biggest difficulty is the assessment, and the fact that ICES has no tools to evaluate the rebuilding plan.

The chairman recalled the Research Roadmap for mackerel workshop and the discrepancy between ICES and industry views. The same applies to Western horse mackerel, where the industry cannot believe the ICES advice. In this case, ICES's view is that Western horse mackerel is not in a rebuilding mode, but the industry believes it is. The vessels are having a very hard time catching horse mackerel and catch areas have significantly changed, but there are good signs of juvenile fish on the grounds. Andrew Campbell confirmed this is also reflected in the surveys. Martin Pastoors added that according to Dankert Skagen, there is no apparent recruitment failure.

The chairman asked what the concrete objective is of the ad-hoc working group, and asked if the objectives for Landmark work are still the ones that are now being pursued.

Martin Pastoors confirmed that the objective is to look at providing meaningful HCRs for the short term, and a meaningful timeframe for rebuilding. What the group also wants to do is evaluate the consequences for taking different routes.

He further explained that Andrew Campbell is leading the inter-benchmark for Western horse mackerel, which will start very soon. The benchmark will look at the reference points for Western horse mackerel, and if anything significant comes out of the benchmark, this will be proposed for review for WGWIDE. Ideally, this outcome could be merged with the work for the management plan. He added that he would circulate the TOR for this benchmark (**action 2**).

The chairman asked if we move forward under the assumption that the stock is in a rebuilding mode.

Martin Pastoors agreed that formally, the stock is not in a rebuilding phase, but there are arguments to prepare for it. Claus Reedtz-Sparrevohn proposed to take a precautionary route, which seems like a sensible course of action considering the overall low biomass of the stock. Andrew Campbell agreed this was the right way to go. Martin Pastoors showed a plot that demonstrated Western horse mackerel is at the lowest point in the time series, which is a strong argument for a rebuilding plan. The stock increase from this point on, needs to be ensured.

The chairman wanted to know how much work would be involved to have something to present to WGWIDE.

Martin Pastoors answered that in this ad-hoc working group, the work done on different herring stocks is being put together. The idea is to come up with a standardized method to use as an add-on to the EqSim model used by ICES. Dankert Skagen was asked to offer extra guidance in this.

The chairman asked how the work done for other stocks like the Celtic or WBSS herring, will be integrated into the Western horse mackerel work. Will the methods be combined or looked at



separately? Martin Pastoors replied the methods will be looked at separately, and parameterized for Western horse mackerel.

The chairman asked how recruitment comes into play. Dankert Skagen replied that recruitment is variable but not exceptionally low. The SSB is heavily influenced by large year classes. Now the situation is different and there's a need to act.

The chairman asked if the 1982 and 2001 years will be excluded when running the models. Martin Pastoors believed this would be sensible, as estimates of how often these events will occur should be avoided. Alternatively, the exploitation pattern should be changed to harvest the fish when they are bigger.

The chairman asked if it would be worth looking at voluntary closures for juveniles by the Irish and Dutch fleet. Could these closures be modelled to see what effect they would have?

Martin Pastoors said closures are difficult to incorporate, but what can be done is to look at changes in selectivity patterns. Dankert Skagen didn't recommend it, but confirmed it is possible to manipulate juvenile exploitation.

The chairman asked how long it would take to apply existing models to Western horse mackerel. Vanessa Trijoulet said this would depend on the assumptions that affect the method. A similar approach as what Landmark did will be tried with the SAM model used for WBSS herring. Michaël Gras said the model used for Celtic Sea herring could also work. Martin Pastoors said it's relatively easy to rescale to more or less uncertainty, and would be interesting to look at different models because the SAM model can be quite impenetrable sometimes. As a minimum, Martin Pastoors would like to explore how sensitive the models are to the method used.

The chairman wanted to agree on a timeframe and a way forward. He also noted that Martin Pastoors would be unavailable to present the work from the Focus Group during upcoming Working Group II meeting in Lisbon. He needed a simple/understandable overview of this work for Working Group II in July, in order to get a mandate for Martin Pastoors and Claus Reedtz-Sparrevohn to present the work to WG WIDE on behalf of the Pelagic AC. Ideally, he hoped to see a range of different management options coming from the Focus Group, but understands that this may not be ready at that stage. He asked if this could be explained to Working Group II.

Claus Reedtz-Sparrevohn volunteered to provide an update about the collaboration and the work at the July Pelagic AC meeting in Lisbon (**action 3**). He would include some outcomes of the benchmark if available.

The chairman presumed the work that is going to be undertaken, will be done in time to feed into WG WIDE 2019. Martin Pastoors confirmed that is the ambition, and was confident the methods are straight forward enough to meet this timeframe (**action 4**). The real work will be making sense of the obtained results.

6. AOB

There was no other business.

7. End of meeting

The chairman closed the meeting at 16:35 hrs and thanked the participants for their contributions.



List of agreed action items

1. Find out why Spain and France did not collect samples in recent years (Martin Pastoors)
2. Circulate the TOR for the inter-benchmark on Western horse mackerel to the Focus Group (Martin Pastoors, secretariat)
3. Present an update about the work carried out by the ad-hoc collaboration during the July Pelagic AC meeting (Claus Reedtz-Sparrevohn)
4. Submit outcomes of the ad-hoc work into WGWIDE (Martin Pastoors, Claus Reedtz-Sparrevohn)

