



▶ Pelagic AC

Western Horse Mackerel Focus Group

26 June 2018
14:30-16:15 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 | Andrew Campbell | Marine Institute Ireland |
| 3 | Ashleen Benson (by WebEx) | Landmark Fisheries Research |
| 4 | Gerard van Balsfoort | Pelagic Freezer-Trawler Association |
| 5 | Guillaume Carruel | Pelagic AC |
| 6 | Patrick Murphy (arrived late) | Irish South West PO |
| 7 | Rob Pronk | Willem van der Zwan |
| 8 | Sean Cox | Landmark Fisheries Research |
| 9 | Steven Mackinson (by WebEx) | Scottish Pelagic Fishermen's Association |
| 10 | Verena Ohms | Pelagic AC |

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

The chairman opened the meeting at 14:30 hrs. A tour de table followed.

2. Adoption of the agenda

The agenda was adopted.

3. Follow-up on action items

The chairman said that the minutes from the last meeting on 30 May have been cleared and are available on the website. Before discussing the Landmark proposal he suggested addressing the list of action items.

The first action item was to schedule a WebEx meeting to discuss in how far Landmark Fisheries Research could support the Focus Group in developing a rebuilding plan for the stock. This meeting took place in early June and a contract with Landmark Fisheries Research has since been signed.



The second action item was to draft a letter to the Commission asking them to publish a DCF call on Western horse mackerel. This had not yet been completed and it was decided to keep the item on the list and to follow up on it before October.

The third action item was in regards to Spain and France not having collected samples in recent years. Martin Pastoors was supposed to find out more about it, but he was on holiday and there had been no response from him so far. It was decided that Gerard van Balsfoort will check with him.

Claus Reedtz-Sparrevohn was supposed to draft a letter to ICES asking ICES to deal with recruitment spikes at the upcoming MSE workshop. This action item has not been completed either and it was decided to remind him to send the letter before September.

The next action item was for Andrew Campbell to continue looking at other stocks and areas where spasmodic recruitment occurs, including sablefish.

Andrew Campbell said that he had done some more reading, but so far has not found much information.

The chairman wanted to know how the South Africans deal with it.

Andrew Campbell replied that they use a fairly simple model and that in the most recent years they backed away from modelling recruitment spikes.

The chairman remembered that José de Oliveira in his previous analysis first took out one spike and then both and it did not seem to make the situation better or worse.

Andrew Campbell said that assuming a spike again like the one in 1982 is unrealistic and that it would be better to model the stock without. However, the 2001 year class could be assumed.

The final action point was for Claus Reedtz-Sparrevohn to circulate a paper on sablefish which he has not done yet. It was decided that Verena Ohms will chase after people to complete their action items.

The chairman announced that once the July meeting has passed, he will have a look at drafting a letter to the Commission to ask them to publish a call. It was important to frame the issue in the right way.

4. Presentation by Andrew Campbell

The chairman invited Andrew Campbell to present an update on the modelling work he has been doing.

Andre Campbell said that the results are very preliminary and the simulation is still fairly basic. The simulation model he uses is called F-PRESS and has been conditioned on the 2017 stock assessment. The reference points used are from the 2017 benchmark. F-PRESS is designed to look at lots of different options rather than following a full feedback approach. He ran the simulation with constant F and projected the stock development 100 years into the future. The model outputs the usual things like SSB and risk, but it also looks at recovery time above a pre-determined reference point.

The chairman wanted to know whether the definitions for short, medium and long-term were provided by Andrew Campbell or whether they have been defined by ICES.

Andrew Campbell replied that the exact same timeframes have been used last time as well, but that differs on the species what is appropriate. ICES has not defined time ranges. Some people use overlapping timeframes, others run them sequentially. Observation errors and a number of other things have not been included yet. For the simulation initialization Piera Carpi has generated 1000 populations representing stock variability. This gives an idea of the spread of the assessment.



To model recruitment a segmented regression has been fit through 1000 SSB-recruitment sets with an elbow at Bloss. The 1982 spike has been excluded and no spikes are assumed in the future. Autocorrelation has been included.

The chairman wanted to know whether it makes sense to force a stock-recruitment relationship when there is none.

Andrew Campbell explained that there is no classic stock-recruitment relationship and a segmented regression is probably the most appropriate way to deal with that. Also, this forms just the basis and at the end there probably won't be a big difference between different stock-recruitment relationships. He also showed a graph of the model fitted to the data excluding both the 1982 and the 2001 year class as well as only the 1982 year class. There was not a big difference between the two.

Other model inputs to consider are natural mortality, maturity, catch weights and stock weights. For now these parameters are the same as used in the stock assessment. They are based on most recent data and fixed for now.

Different statistics and indicators measure how the model is working. These include SSB, yield, realized fishing mortality, risk to Blim, recovery time and failure rate. ICES defines three types of risk and the focus group had to decide which one to use.

Andrew Campbell subsequently showed a plot of how SSB, F, yield and recruitment would develop under zero fishing mortality according to his model. He said that there are still a few things that don't look quite right, but it seems that with no fishing SSB would recover. He also pointed out that the model fits quite well to real observations.

The chairman remembered that last time the Focus Group tried to develop a management strategy, it seemed that the stock would not recover even with no fishing.

Andrew Campbell was aware of that and he was not sure why that is. He planning to have a closer look at this.

The chairman wondered whether it could be explained by the new stock assessment model.

Andrew Campbell said that it could be due to the stock-recruitment relationship that is provided by the new assessment model.

The next slide showed what would happen with a fishing mortality of 0.1. In this case the risk will be increasing over time. While the results don't look great yet, there is still a lot of modeling to be done. In the next steps uncertainty has to be incorporated into the model and he will have to look at other recruitment relationships. It was also necessary to define appropriate timelines and targets and candidate harvest control rules (HCRs). Andrew Campbell was planning to show this to WGWISE and to get feedback from them.

The chairman wanted to know whether there is any overlap between what Andrew Campbell is doing compared to what Landmark is doing.

Sean Cox confirmed that there is some overlap, but that the biggest difference is probably that Landmark is modeling the assessment. That means they are simulating the data generation and assessment models every year to set the TAC. Otherwise the setup is very similar. Their model has been conditioned on the stock synthesis model output. He wanted to know whether the initialization, i.e. the 1000 populations, are from an MCMC sample. This was confirmed.

5. Landmark proposal

The chairman wanted to know how far Landmark has gotten with the contract.



Sean Cox replied that the model has been initialized and is matching the period 1982 to 2016. The match is almost identical to the assessment output. The assessment is operational now and produces very similar results. He wanted to know where the catch at age data are coming from that have been provided to him.

Andrew Campbell was not sure, but he thought that Martin Pastoors can answer the question.

The chairman suggested following up with Martin Pastoors as soon as possible and provide an answer by the next day.

Sean Cox said that the IBTS data are highly variable. Yet, the model seems to fit it quite well. It seemed to him that the selectivity function is time varying and that the output is not coming from the stock synthesis model, because that model assumed constant selectivity.

Andrew Campbell explained that that index is just a recruitment index and hence only covers age 0.

Sean Cox replied that he was not able to match that.

Andrew Campbell did not know how Piera Carpi does it. It was agreed that Sean Cox will contact Piera Carpi directly with his question.

Sean Cox had received a sketch of a HCR that shows the ICES HCR and overlaid a rebuilding HCR.

Andrew Campbell said that this has been provided by Martin Pastoors.

Sean Cox pointed out that the standard ICES HCR looks like a hockey stick where the upper limit is MSY and there is only one control point, i.e. MSY Btrigger which in this case is equal to Bpa. He wanted to know what people were proposing the rebuilding HCR should be? The plan he received has a zero fishing mortality when SSB is zero and increases to about half Blim. From there it is constant until Btrigger and then increases again until Fmsy. He needed to have some idea of what values people want to test for these control points.

The chairman responded that until now the group has never discussed a two-stage HCR for Western horse mackerel before. This has previously been discussed for blue whiting, but not for any of the other stocks.

Ashleen Benson said that Landmark had received the proposed rebuilding HCR from Martin Pastoors and she assumed that it had been discussed in the Focus Group.

However, the chairman clarified that this was new information and that possible candidate rules have not been discussed yet. A two-stage rule was an option nevertheless.

Sean Cox explained that it is possible to look at different control points, but he did not want to test too many combinations, because it takes a very long time. He therefore asked for feedback on the values to be tested. He also wanted to know whether people have any preferences for diagnostics and what standards they use.

Andrew Campbell promised to email that information to Sean Cox.

Sean Cox also said that there are different methods for implementing recruitment, but he was not sure yet which one would be best.

Ashleen Benson wanted to know more about the three types of risk ICES defines, i.e. what are they and are they defined differently for rebuilding stocks?

Andrew Campbell had to dig out the ICES document before answering the question. From what he remembered not a lot of deep thinking has gone into this and most people use the same type of risk.

Ashleen Benson asked whether this would constrain Landmark's work in any way, but Andrew Campbell did not think that it will. He promised to forward the ICES report as soon as possible.

The chairman said that one of the deliverables of the contract with Landmark is to explore potential elements of a rebuilding plan with key stakeholders. He wanted to know how Landmark planned to approach this, i.e. how, when and with who?

Sean Cox replied that he intended to discuss the HCR and elements of performance, particularly in this group.

After some further discussion it was decided that Landmark will provide a draft report by 30 July. People can subsequently submit questions and comments on the draft before it will be discussed during a WebEx meeting on 13 August at 17:00 Amsterdam time. Assuming that the 13 August WebEx is successful it was agreed to set the 24th August for the final report.

Andrew Campbell planned to do more work before the 13th of August and hoped that he would have as much details by then as previously.

The chairman wanted to avoid parallel processes and suggested that Andrew Campbell will use the same range of HCRs as Landmark will use.

Andrew Campbell confirmed that this was his plan and that he will coordinate with Landmark accordingly.

Ashleen Benson wanted to know whether F-PRESS is accepted by ICES for providing advice.

Andrew Campbell replied that ICES does not have a list of accepted models. It has used F-PRESS before, but it was hard to know whether ICES will accept it or not.

6. List of agreed action items

- Draft letter to the Commission asking them to publish a DCF call on Western horse mackerel (chairman, Verena Ohms)
- Find out why Spain and France did not collect samples in recent years (Gerard van Balsfoort, Martin Pastoors)
- Draft letter to ICES asking ICES to deal with recruitment spikes at the upcoming MSE workshop (Claus Reedtz-Sparrevohn)
- Continue looking for other stocks and areas where spasmodic recruitment occurs, including sablefish (Andrew Campbell)
- Circulate paper on sablefish (Claus Reedtz-Sparrevohn)
- Inform Landmark where provided catch-at-age data are coming from (Martin Pastoors)
- Contact Piera Carpi regarding the IBTS recruitment index (Sean Cox)
- Provide values for reference points to be tested in the HCR and preferences for model diagnostics to Landmark (Andrew Campbell)
- Send ICES document on risk to Landmark (Andrew Campbell)
- Submit draft report to Focus Group by 30 July (Landmark)
- Submit comments and questions on the draft proposal to the secretariat before 13 August (all)
- Set up WebEx meeting on 13 August at 17:00 Amsterdam time to discuss Landmark's draft report (secretariat)
- Provided the WebEx on the 13th August is successful the 24th August is set for the final report.

- Find out how the outcomes can be submitted to WGWIDE (Martin Pastoors, Andrew Campbell)
- Ask Working Group II and ExCom for a mandate to go submit outcomes to WGWIDE (chairman)

7. AOB

There was no other business.

8. End of meeting

The chairman closed the meeting at 16:15 and thanked the participants for attending.

