



▶ Pelagic AC

Focus Group Western horse
mackerel
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Participants

1	Sean O'Donoghue, chairman	Killybegs Fishermen's Organisation
2	Andres Uriatre	AZTI
3	Andrew Campbell	Marine Institute Ireland
4	Claus Reedtz-Sparrevohn	Danish Pelagic Producers Organisation
5	Ed Farrell	University College Dublin
6	Gerard van Balsfoort	Pelagic Freezer-Trawler Association
7	Goncalo Carvalho	Pew Charitable Trusts
8	Ian Gatt	Scottish Pelagic Fishermen's Association
9	José de Oliveira	CEFAS
10	Patrick Murphy	Irish South and West Producers Organisation
11	Verena Ohms	Pelagic AC

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

The chairman opened the meeting and explained that the reason for this WebEx was that it had been agreed to have a discussion on progress made before the next WG II meeting. Given that some people had to leave early he immediately moved on to agenda item 2.

2. Follow-up on action items of the last meeting on 10 December 2015

The first action item was to find out whether the Marine Institute considers the western samples of horse mackerel spawning samples. Ed Farrell talked to people from the Marine Institute and all indications are that these are spawning samples and are suitable for analysis.

The second action item was to seek support from ICES and WGMEGS to standardize genetic sampling and routinely include it in data collection. Ed Farrell has not followed up on this officially with ICES. He thought that the first step should be to develop an easy tool for collecting genetic samples. In this regard he is planning a sampling trial with Martin Pastoors and researchers from Australia.

The chairman wanted to know what would have to be done to convince ICES and WGMEGS to routinely include genetic sampling.

Ed Farrell said that this would be easier once the results from the current sampling are available and it can be shown that the stocks can indeed be differentiated. These results should be available before WG WIDE.



Claus Reedt-Sparrevohn thought that WGMEGS will meet approximately two weeks prior to WGWIDE.

The chairman concluded to send a request to the ICES mailbox in regards to genetic sampling with the question to distribute the request to all relevant Working Groups.

The next action item was to contact Gersom Costas and Manuela Azevedo in regards to collecting horse mackerel samples in area IX. This has been completed and Ed Farrell has been in contact with the relevant person from the Portuguese marine institute who promised to collect samples in area IX.

Regarding samples from IVa Ed Farrell pointed out that he did not know who to contact for collecting samples. Gerard van Balsfoort said that only the Norwegians fish for horse mackerel in area IVa. However, as far as he knows they have not been successful this year, but he promised to follow-up on this.

Ed Farrell explained that there is no spawning in IVa and therefore any samples will do. The chairman said that there could be some horse mackerel bycatch in the mackerel fishery and Gerard van Balsfoort promised to check this.

The next action item was in regards to carrying out retrospective analysis of acoustic surveys in southern waters and was going to be dealt with under agenda item 4.

In relation to Blim the WKMSYREF4 report has been circulated and the chairman asked whether anything in the report has implications for the proposal of calculating Blim.

José de Oliveira explained that in section 3.1 on page 11 of the report there was a paragraph on calculating Blim by dividing B_{pa} by 1.4 rather than the other way around. This was identical to what he has suggested for Western horse mackerel. Even though the resulting Blim is only a proxy value this is still useful if nothing else is available. So, if anyone questions the method of calculating Blim for Western horse mackerel the group can point to the WKMSYREF4 report.

Ciaran O'Donnell had circulated his survey document within WGIPS and the questions to WGIPS have been submitted to the ICES Secretariat who forwarded them. A response has been received and will be dealt with under agenda item 4.

The next action item on the usefulness of CPR data as well as the information received on mortality was also going to be dealt with under agenda point 4.

Andrew Campbell said that unfortunately he has not been able to progress the modelling work on the groundfish surveys. The earliest that he can go back to this work is March or April. However, he was certain to have some results before the PELAC July meeting and it was agreed that he would present at that meeting.

Another action item was to ask the benchmark to define short, medium and long term. This has not been done yet, but given that the data collection workshop will not take place before the autumn there was enough time to submit the request.

The last action item was to check with Stefano Mariani whether the samples he had analyzed were spawning samples. Gerard van Balsfoort said that the samples had not been spawning samples and this might be part of the reason that the genetic analysis did not yield good results.

3. Update on genetics project (Ed Farrell)

Ed Farrell explained that not much progress has yet been made on the genetics project since December. At the moment he is waiting for the sequencing results to come back and he expected to receive them by the end of the week. After that he can start right away with marker development

which hopefully can be completed in the first half of March. Afterwards he can order the primers and start the actual genotyping. He will definitely have the results available by July and it was agreed that he would present them at the July meeting.

4. Utilization of new data sources and possible use of industry surveys, e.g. acoustic surveys

- **Response WGIPS**

The chairman asked Andrew Campbell to provide a summary of the response received from WGIPS regarding the available data from existing acoustic surveys that could be analyzed for abundance and distribution of horse mackerel.

Andrew Campbell explained that the majority of acoustic surveys does not encounter horse mackerel. However, the northwestern herring survey and the boarfish survey do come across horse mackerel and he was going to prepare some maps. Especially the boarfish survey comes across a lot of horse mackerel, but because it is not directed at horse mackerel there are almost no samples. While some length-frequency data is available, there is no age data which makes it difficult to provide a biomass estimate. So, at the moment the information is very preliminary and he was not sure yet about the outcome. WGIPS said that the southern surveys are far more relevant and Pablo Carrera promised to work up some estimates.

The chairman was concerned that the efforts of analyzing acoustic surveys might be a waste of time given that WGIPS suggested that none of the national surveys are suitable.

Andrew Campbell considered the exercise useful at this stage since it can provide a quick overview of what is going on and the results could be brought into the benchmark as a working document. WGIPS is always very pushed for other things and the PELAC request is not part of their terms of reference. He also was not sure that WGIPS had much time to look at the request in the first place and he only got a quick response from the current chair, Sascha Fässler. Furthermore, WGIPS does not cover all surveys and Andrew Campbell was not sure if this group covered the boarfish survey or not, but he promised to follow-up on this and to circulate the response. It was also agreed that he would provide an update on the northwestern herring and boarfish survey at the April meeting.

The chairman explained that in relation to the survey design WGIPS responded that further analysis is necessary to find out whether changes to the survey design could make the surveys more suitable for horse mackerel. He wanted to know who would have to address this question and Andrew Campbell said that this probably has to be done by WGIPS again and he promised to follow-up on this as well.

Gerard van Balsfoort also offered help by talking to the chair of WGIPS.

- **Response IEO**

In relation to the southern surveys Pablo Carrera from IEO was positive that a retrospective analysis of acoustic data could be carried out.

Andres Uriarte confirmed that what Pablo Carrera said sounds very promising. He can provide results from 2002 until today and he can provide them before the benchmark.

The chairman wanted to know whether it will be useful to carry out the analysis at all given that it only covers a small area of the stock.

José de Oliveira said that it will not be useful for the assessment and the chairman therefore wondered whether this would be a good use of resources.

However, Andres Uriatre said that it is too early to draw any conclusions and that the benchmark had to decide if and how the information can be used.

The chairman then suggested to link the analysis of the southern surveys with the work Andrew Campbell is doing on the boarfish survey. This would provide a better picture. He suggested that Andrew Campbell, Andres Uriatre and Pablo Carrera should sit down to look at the possibilities.

Andres Uriatre and Andrew Campbell agreed that this would be a worthwhile exercise and it was decided to discuss the issue with Pablo Carrera at the WGWIDE meeting where Andrew Campbell will show him the work he has done by then.

- **CPR data**

The chairman wanted to know if CPR data could be used for western horse mackerel. So far they have only been used for North Sea horse mackerel.

José de Oliveira said that it depends on the specifics of the species and the behavior of the larval stages. Some people think that CPR data would be useful for blue whiting and maybe western horse mackerel. However, there are some issues.

The chairman wanted to know if genetics could solve some of these issues.

José de Oliveira pointed out that some of the issues are related to larval drift and he did not know if genetics could help with that. He said that the probability of detecting horse mackerel larvae is not so good with CPR data due to the small volume of water sampled. There has been a study focusing on North Sea horse mackerel and he thought that the authors will now try to repeat the study in the Celtic Sea. He was not sure about the details, but thought that they wanted to do a comparison with the North Sea. However, the samples in the North Sea are much denser and therefore better suited. He did not know if genetics could help with any of this.

Ed Farrell said that CPR samples cannot be used for genetic analysis, because they are conserved in formalin. If it was possible to develop a stock identification method, collect samples and just do a screening for these two stocks, then that could be done.

The chairman wanted to know whether it would be worthwhile to continue pursuing CPR data.

José de Oliveira thought that it would be better to wait what will be done for mackerel. The chance to encounter horse mackerel in CPR samples is very low given the small volume sampled.

The chairman concluded to come back to this issue once it has been figured out for mackerel. He considered it unlikely that any new information will be available before the benchmark.

José de Oliveira said that that depends on how much Mark Payne has progressed with the work for mackerel. He suggested that Claus Reedtz-Sparrevohn should talk to him about this. He also pointed out that CPR data are available until 2005 and José de Oliveira was willing to find out how much it would cost to work up the data for another 10 years. Ed Farrell asked José de Oliveira to also inquire how samples are prepared and stored.

- **Mortality estimates**

The chairman moved on to the mortality estimates provided by WGSAM in area IV which indicated huge unexplained mortality.

Jose de Oliveira explained that WGSAM used a balanced model which means the group included natural mortality and fishing mortality and everything that is left was termed unexplained mortality.

He could not explain what exactly it is other than a result of the Ecosim model and something that is not covered by the things that go into the model. He said that these estimates are only for area IV and hence do not cover the entire stock, but mostly the North Sea.

The chairman said that if the estimates are correct and apply to the western stock then there is a huge amount of unexplained mortality and the current efforts are all in vain. With a total mortality that high there would be a zero TAC in the future.

José de Oliveira promised to ask Steve Mackinson for more information. He said that these estimates are very new, however, they did come from the key-run accepted by the ICES working group. He furthermore pointed out that in the past the SMS model has been used, but in that model western horse mackerel has been included as external factor and no mortality estimates were provided. This is the first time that mortality estimates are provided.

The chairman emphasized the importance to follow-up on how realistic these estimates are.

José de Oliveira said that he was not sure these figures would get published in the working group report, but the model run itself will and the model has been accepted. In the Celtic Sea the Ecopath model has been applied and came up with a mortality estimate of around 0.6. However, this figure has not been published, because it did not received the same scrutiny.

Gerard van Balsfoort pointed out that if fishing mortality only accounted for 20% of total mortality, then it would be pointless to come up with a management plan.

The chairman stressed the need to verify these estimates and to find out whether this a problem with the model or a real problem. He asked who could provide guidance on this issue.

José de Oliveira suggested submitting a question to WGSAM and asking for more information on the model that produced the key run given the large estimates of unexplained mortality. He offered help drafting the question and also to talk to Steve Mackinson about this.

Andrew Campbell said that people had to wait and see what will be included in the working group report.

José de Oliveira added that a change in mortality would have to go through a benchmark and that it was not possible to change mortality because of the WGSAM report.

- **Feedback on the possibilities to carry out an industry acoustic survey**

The final point under agenda item 4 was to provide feedback on the possibilities to carry out an industry acoustic survey. Martin Pastoors had submitted a document which in essence said that such a survey would be a waste of time. Gerard van Balsfoort agreed with this interpretation.

The chairman concluded that the most promising new data sources are the groundfish surveys currently being analyzed by Andrew Campbell, and maybe the boarfish, northwestern herring and southern acoustic surveys. These sources might provide additional information to the triennial egg survey.

5. Preparation benchmark 2017

In terms of preparing for the benchmark the chairman assumed that the groundfish and acoustic surveys will provide new data to be considered during the benchmark. In addition a request will be submitted on the definition of short, medium and long term as well as the B_{lim} value calculated by José de Oliveira. There might also be questions put forward in relation to WGSAM's mortality estimates.



6. Development of a new management strategy

The chairman suggested to keep this item on future meeting agendas given that ultimately the ongoing work should lead to the development of a new management strategy.

7. AOB

The chairman said that there will be a presentation on biological reference points for southern horse mackerel at the upcoming PELAC WG II meeting. He wanted to have another WebEx meeting before the PELAC July meeting, possibly in June. The Secretariat will send out a doodle.

8. End of meeting

The chairman closed the meeting at 17:00 and thanked everyone for their participation.

Action items

- Send request to ICES mailbox regarding genetic sampling and ask ICES to distribute the request to all relevant working groups (chairman, secretariat)
- Find out if Norwegians caught horse mackerel in area IVa (Gerard van Balsfoort)
- Check if there was horse mackerel bycatch in the mackerel fishery in IVa (Gerard van Balsfoort)
- Present groundfish modelling work at PELAC July meeting (Andrew Campbell)
- Ask benchmark to define short, medium and long term (chairman, secretariat)
- Present results of genetic analysis at PELAC July meeting (Ed Farrell)
- Check with WGIPS if this group covers the boarfish survey (Andrew Campbell)
- Present update on the usefulness of the northwestern herring and boarfish acoustic survey in relation to horse mackerel at PELAC April meeting (Andrew Campbell)
- Follow-up with WGIPS (chair: Sascha Fässler) on acoustic surveys design (Andrew Campbell, Gerard van Balsfoort)
- Evaluate the usefulness of combining retrospective analysis of southern acoustic surveys with analysis of boarfish and northwestern herring acoustic surveys as well as groundfish survey modelling work at WGWIDE (Andrew Campbell, Andres Uriatre, Pabo Carrera)
- Revisit CPR data once they have been addressed for mackerel (Focus Group)
- Talk to Mark Payne about CPR data and mackerel (Claus Reedtz-Sparrevohn)
- Find out how much it would cost to analyze 10 years of CPR data (José de Oliveira)
- Find out how CPR samples are processed and stored (José de Oliveira)
- Ask Steve Mackinson for more information on the Ecosim model and why it provides such a high estimate of unexplained mortality (José de Oliveira)
- Draft request to WGSAM to ask for more information on the key run of the Ecosim model that provided the mortality estimates (chairman, José de Oliveira, secretariat)
- Arrange another WebEx meeting in June (secretariat)

