



Meeting report of the JAKFISH workshop on 21 October 2009 at the Rathbone hotel, London.

Opening of the meeting

The meeting was opened by Clara Ulrich at 9:00 who welcomed the participants (annex 1). She would chair the meeting together with Kjellrun Hiis Hauge and Aukje Coers was appointed rapporteur. In response to a request from Kjellrun Hiis Hauge the meeting agreed that a recording was made, for purpose of analysis by two students from Tenerife University, who were evaluating how uncertainty was addressed in these types of scientific issues.

Data collection / assessment

The scientific assessment showed decreasing recruitment over the past years. However, fishermen had the impression that there were juvenile fish increasingly abundant in most recent years, and that the fishing patterns had dramatically changed, which was not showing in the assessment results. Reine Johansson suggested that an initiative should be taken to improve the data available to the assessment, by starting a collaboration with fishermen to this purpose. From the 1st of January 2010, e-logbook information would be available, which, although it should be handled with discretion, could be used by the scientists. Mark Payne noted that such an initiative to collect a new type of data would only be useful when at the same time tools for processing that data would be (made) available as well. After some debate, it was decided that the scientists would look into possibilities for resources to support such an initiative. Reine Johansson would provide the scientists with information from an initiative that was taken in the Bothnian sea, to set up a reference fleet, which might be helpful in preparation to this. If all went well, the scientists could discuss with some industry representatives which type of data should be collected and in what format. Lotte Worsøe Clausen offered to have a coordinating role in that.

The EC proposal for a LTM plan

The scientists explained that they had been involved in the ICES process of testing the plan. It should be noted that ICES had been tasked to evaluate six LTM plans for Baltic sea stocks at once, and that due to limited time and resources available, they had had only one week to do so. This meant that they had only been able to very briefly test the HCR including the values for [A], [B] and [C] as proposed by the Commission and had had no time to explore whether these values were the only or optimal choice. It was worth mentioning that tests with different values for a trigger biomass (B_{trig}) had shown no difference in effect on the risk of SSB falling below B_{lim} . Therefore, perhaps if $F=0.25$ was chosen, no special action below B_{lim} was needed. All simulations had been done with an $F=0.1$ under B_{lim} , while the EC proposal suggested a total closure of the fishery. Basically, they thus felt that the current proposal for the LTM plan had a far from rigorous basis.

After some debate, it was decided that the scientists would endeavour to explore alternative HCRs with different values for the [A], [B] and [C] parameters in the EC plan. In response to a suggestion by Mark Payne, it was decided to also test HCRs which would set TACs for more than one year (as with the Western horse mackerel plan). Clara Ulrich and Lotte Worsøe Clausen noted that, in a later stage, it would be interesting to address species interactions and spatial aspects related to the management of the stock. The exact options for parameter values should be discussed and decided by correspondence after the meeting, because this would take some effort to come up with a sensible set of combinations (annex 2). It was furthermore decided that, in order to facilitate the industry to weigh the different options afterwards, the results of the simulations should be presented in terms of:

- Average catch in the long term
- Average size of individuals in catch (for the scientists to be decided how an indication of this can be given)



- Risk of SSB falling below B_{lim} (if possible, an indication should be given of differences in duration of time that SSB was under B_{lim})
- Actually realised Inter Annual Variation in TAC

Finally, it was concluded that it was important, basically for any management plan, that there was a possibility to make changes to the plan, as soon as new information became available, to avoid at all times that the plan would be based on assumptions that were outdated. Aukje Coers added that she thought that the NGOs, in the end, would probably find it important that the finally chosen HCR would be tested by ICES before it was implemented. This should be kept in mind for when the time came that the RACs would be making recommendations to the Commission.

Uncertainty

In order to help identify in more detail which aspects in the assessment were related to different levels of uncertainty, the scientists had prepared a 'pedigree' matrix, to facilitate a discussion on this (see annex 3). The most important remark made by the industry was that the matrix did not specifically reflect the uncertainty in juvenile abundance, while they were particularly feeling that there must be high uncertainty in that, since the assessment was not reflecting the view of the fishermen. It was otherwise concluded that the industry's and scientists' perception on levels of uncertainty were quite similar. Although the group agreed that such a table was useful to communicate specifics about uncertainty in the assessment, there was no need to further follow up on this, because the industry was well informed on the details of the assessment of this stock. Kjellrun Hiis Hauge would send out a final version of the matrix to the group, to be agreed upon, which she would use for her research addressing different types and levels of uncertainty in assessments.

Allocation between different fleets (area IIIa and 22-24)

Clara Ulrich explained that setting the overall TAC for the IIIa management area was done in three steps: (1) the overall TAC for Western Baltic herring was decided based on the assessment, (2) the part to be allocated to IIIa was determined (following a political annual agreement, which for a great number of years had been 50-50%) and then (3) an appropriate amount was added from the North sea herring TAC, based on the average ratio in which the two stocks had been caught together in the past three years. Christian Olesen pointed out that the result of this procedure was that larger fluctuations in the TAC from one year to another were possible in area IIIa, even when a IAV rule of +/- 15% was in place for the entire stock. A short discussion was held on whether or not the industry wanted to investigate different alternatives to this procedure. Lotte Worsøe Clausen noted that she was interested to look into the ratio of mixed catches, to see whether it showed a clear relationship with stock sizes. If this would be the case, then possibly, a more realistic prediction of the catch composition could be made, rather than using the average of the last three years. The industry responded that they found this interesting and it was decided that the results should be presented at the next meeting of the group. It was noted, however, that first an analysis should be done of how accurate the currently used predictions had turned out to be, to have an impression of how important this issue was for the Baltic herring stock, but also for the North sea herring stock. The meeting decided to further address this issue during the next meeting.

RACs recommendation

It was agreed that Reine Johansson and Aukje Coers would draft a letter (by the middle of November) to the EC, including comments on: (1) the ICES report (HCRs were based on very crude explorations); (2) the likeliness that alternative HCRs were possible; (3) JAKFISH would have preliminary results available before May 2010; and (4) to ask the EC to postpone their proposal until then.

Closure of the meeting

Clara Ulrich thanked the participants and expressed that she thought that it had been a very fruitful meeting. The next meeting was set on 18 January 2010. She closed the meeting at 17:00.



Annex 1: participants list

Aukje Coers	PeIRAC
Carl Jesper Hermansen	Danish Fishermen's Association; PeIRAC
Christian Olesen	Denmark Pelagic PO; PeIRAC
Clara Ulrich	DTU Aqua, DK
Jesper Juul Larsen	Danish Fishermen's Association; PeIRAC
Kjellrun Hiis Hauge	IMR Bergen, NO
Lothar Fisher	German Cutter & Coastal Fishermen's Ass; BSRAC
Lotte Worsøe Clausen	DTU Aqua, DK
Mark Payne	DTU Aqua, DK
Reine Johansson	Swedish Fishermen's Federation; BSRAC

Annex 2: Template for different HCRs to be evaluated (to be completed by correspondence)

Input variables							
No	F _{target}			Biomass refs		IAV	
	SSB>B _{trig} [A]	B _{low} <SSB<B _{trig}	SSB<B _{low}	B _{trig} (kt) [C]	B _{low} (kt)	% [B]	applied
1	0.25	-	-	110	-	15	SSB>B _{trig}
2	0.25	?	?	?	?	?	?
3		?	?	?	?	?	?
4		?	?	?	?	?	?
5		?	?	?	?	?	?
6	0.30	?	?	?	?	?	?
7		?	?	?	?	?	?
8		?	?	?	?	?	?
9		?	?	?	?	?	?
10	0.35	?	?	?	?	?	?
11		?	?	?	?	?	?
12		?	?	?	?	?	?
13	0.40	?	?	?	?	?	?
14		?	?	?	?	?	?
15 (?)		?	?	?	?	?	?

Results				
Mean catch	Risk SSB<B _{lim}	Duration SSB<B _{lim}	Mean weight	IAV (realised)
1				
2				
3				
4				
5				
6				
7				
...				
15 (?)				

Annex 3: Pedigree matrix of uncertainties as proposed by the scientists

HYPOTHESIS	Stock-Recruitment relationships	Biological parameters	State of the stock at the beginning of the simulations	Error in the forecast due to the stock assessment
4:GOOD KNOWLEDGE, LITTLE UNCERTAINTY				
3:MEDIUM KNOWLEDGE BUT UNCERTAINTY IS ALREADY INCLUDED		Taken from HAWG 2007. Some uncertainty in the growth.	Taken from ICES HAWG 2007. Some uncertainties, especially in the final assessment year.	The simulations include some effect of assessment uncertainty
2:LOWER KNOWLEDGE AND NOT WELL ADDRESSED	No visible relationship. Two scenarios were used : average over all years (optimistic), average since 1999 (pessimistic)			
1:BAD KNOWLEDGE, NOT ADDRESSED				
HYPOTHESIS	Stock-Recruitment relationships	Biological parameters	State of the stock at the beginning of the simulations	Error in the forecast due to the stock assessment
4:GOOD KNOWLEDGE, LITTLE UNCERTAINTY	Relationship built on understood processes	Growth model including processes (e.g density-dependence etc)	Low uncertainty in the assessment model, good convergence of alternative models	Full feedback model
3:MEDIUM KNOWLEDGE BUT UNCERTAINTY IS ALREADY INCLUDED	Relationships built on SSB-R with good fit and long time series	Taken from HAWG 2007. Some uncertainty in the growth.	Taken from ICES HAWG 2007. Some uncertainties, especially in the final assessment year.	The simulations include some effect of assessment uncertainty
2:LOWER KNOWLEDGE AND NOT WELL ADDRESSED	No visible relationship. Two scenarios were used : average over all years (optimistic), average since 1999 (pessimistic)	Large uncertainty in the growth	No analytical assessment	
1:BAD KNOWLEDGE, NOT ADDRESSED	Constant recruitment.	“Slicing” age weight relationships	No assessment	Perfect assessment