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North Western Waters Advisory Councils

PRESENTATION OF ICES ADVICE (JUNE 2014)
Carmen Fernández (ICES ACOM Vice-Chair)

Edinburgh, Tuesday 2 July 2014

SUMMARY DOCUMENT

QUESTIONS POSED BY THE NWWAC MEMBERS (25 July 2014)
AND RESPONSE BY ICES (2 September 2014)

1. Cod VIa

1.1. *Background (B): This stock has had a zero TAC for several years and yet there remains a major discarding issue (around 90% of total catches).*
If F was set in accordance with MSY values, this would allow at least a small TAC while being compliant with the scientific advice.

Question: Can ICES provide guidance on the setting of an alternative approach to zero TAC and associated measures linked to the dynamic of the stock (recruitment levels) to bring F in accordance with MSY?

ICES Reply
The data indicate that catch in the last decade has been much lower than before (and most the catch is discarded), but this is also a period when recruitment and stock biomass have been very low and the assessment indicates that fishing mortality remains very high. The first row of the Outlook for 2015 table (in the advice document) gives the catch value that would result from a formal application of the ICES MSY approach (38 t; this option corresponds to F(2015) well below Fmsy because current SSB is well below the biomass trigger point). However, given the very low estimates of recruitment and stock biomass in the last decade, ICES does not consider it possible to identify a non-zero catch that would be consistent with the MSY and precautionary approaches. This is the reason for the ICES advice that no directed fisheries should take place and bycatch and discards should be minimized. Given the very high F estimated by the assessment, finding ways to reduce F seems highly relevant for stock recovery and the advice document indicates that "further technical measures to reduce catches should be implemented".

1.2. *B: It is uncertain what percentage of total mortality of cod relates to seal predation. This had been discussed by several ICES WGs over a number of years, and some figures from Scotland and from Ireland were available, but there was felt to be a lack of information from the ICES Working Group on Marine Mammals.*

Q: Is there any updated data/studies on impacts of seal predation in relation to the total mortality for cod stocks in VIa?

ICES Reply

Work on cod consumption by grey seals was conducted by the Sea Mammal Research Unit (University of St Andrews) and presented at the latest cod benchmark (WKROUND 2012). The benchmark explored the use of this information in an extended assessment model. However, because only two years of seal consumption data are available, the benchmark considered estimation of the seal feeding parameters likely to be highly uncertain and inclusion of seal predation in the model to be potentially adding little other than noise to the assessment. It was concluded that the final assessment of VIa cod should not include seal predation estimation but that a supplementary run including the seal feeding model should be conducted to test the sensitivity of the assessment to model specification. This proposed procedure is followed by the Celtic Sea Assessment Working Group.

It now seems that a new year of seal consumption data may become available later this year. If it does become available, it will be one more aspect that the Assessment WG will take into account when considering a new benchmark for the stock. It is also understood that there is some bio-economic modelling work going on at Strathclyde University using the seal consumption data, the results of which may be ready for the next benchmark.

1.3. *B: In light of the migration/mixing of stocks between areas IV and VIa, is VIa Cod tied into the North Sea cod assessment and, if so, how? There was no clear conclusion on this.*

Q: Could ICES confirm if there is a certain mixing/migration of cod between areas VIa and IV, similarly to what happens with Haddock?

ICES Reply

This issue has not been addressed in the ICES advice documents for cod, but was examined at the cod benchmark in 2012 (WKROUND). Following a working document presented at the benchmark, it was considered that there is evidence that cod in Division VIa consists of two major components, one associated with the shelf break extending into Division IVa, and one more inshore from the Minch to the Firth of Clyde. However, it was concluded that the present evidence did not call for radical changes in the current assessment units. Comparing the current VIa stock assessment with separate assessments conducted on data split at 57°30'N was identified at the benchmark as part of future work, in order to test whether the current stock assessment is robust to concerns about sub-stock structure west of Scotland. Work in this direction has not been further developed, but it may occur for the next benchmark (also taking into account work that has developed in more recent years, such as from Heath et al in 2013, and Holmes et al in 2014, and any other new work that may be considered relevant).

2. Whiting VIa

2.1. *B: There was a similar question regarding the mixing of stocks between areas IV and VIa.*

Q: Could ICES provide more information on what is the situation with mixing/migration of stocks between areas IV and VIa?

ICES Reply
Both the Division VIa and the North Sea whiting advice documents indicate that there may be mixing between these stocks.
The following is additional information (not from the advice document): This issue was partly explored in the last benchmark for whiting in the North Sea (WKROUND 2013), who considered that there was evidence of stock mixing, as well as likely north and south subpopulations within the North Sea. The benchmark concluded that the issue of stock identity of whiting should be given priority and revisited in the future. Working Group chairs indicated that otolith microchemistry indicates potential mixing between northern North Sea & West of Scotland at the juvenile phase but analysis of survey data for different sub-populations (VIa compared to northern N Sea and also southern N Sea) show different trends in SSB and recruitment.

2.2. *B: There was also some surprise that discard levels were so high (particularly for the TR2 fleet) and that catch data did not reflect a reduction in discards. It is difficult to understand why discard levels remain so high in the ICES advice when technical measures (SMP) have been introduced for the TR2 fleet.*

Q: Can ICES explain why have improvements in selectivity (resulting in less discards) not been reflected in the advice?

ICES Reply
There are two paragraphs in the advice document that address discards of this stock:

Management considerations:
Despite widespread usage of large square mesh panels (200 mm) in the Scottish TR2 fishery since late 2012 the proportion of discarded fish remains very high. More than half of the annual catch weight consists of undersized whiting which are discarded. Nearly 90% of these discards come from the Nephrops (TR2) fishery. Introduction of square mesh panels in 2012 is expected to reduce discarding of whiting in the Nephrops (TR2) fleet. This has not been evaluated by ICES.

Data and methods:
Discard estimates are based primarily on sampling by Marine Scotland Science (MSS; covering around 16 trips). A parallel sampling programme organized by the Scottish Fishermen's Federation (SFF; covering around 34 trips) indicates lower discard rates (although not yet raised to fleet level), which may indicate more selective fishing practices.

The inclusion of the SFF data may improve the accuracy and precision of discard estimates used in the assessment; this process is currently hindered by methodological issues.

Interactions with Scottish scientists following this question from the NWWAC have indicated that the SFF are currently conducting targeted sampling of particular components of the Scottish fleet. MSS discard sampling scheme is being modified so that these components can be included as separate strata and discard estimates provided on this basis. The current plan is to be able to implement the new sampling design in 2015.

3. Anglerfish VI

B: There is no specific advice for anglerfish in area VI. There are concerns that the change of survey timing from spring to autumn in 2013, ostensibly due to the availability of human resources, could have an impact on the building of historical data/time series.

Q: Could ICES provide clarification on the change in timing of anglerfish surveys in Area VI, and any impact this change may have on the time series and validation of historical data?

ICES Reply
The timing of this survey changed from November to April in 2008, and has been in April every year since 2008 (with the only exception of 2013 when it had to be conducted in the autumn, due to operational circumstances). Clarification will be provided in the Working Group report, and possibly the advice document, in the autumn (when this stock will be assessed and advice provided).

4. Cod VIIe-k

B: *Very high recruitment is being observed at a level similar to that of 2009 that has not been fully taken into account for TAC advice for next year, at this stage. It was acknowledged that the information base was, therefore, only partial and there was an urgent requirement to put in place a mechanism to allow for the outcomes of scientific surveys carried out later in 2014 to be immediately integrated into advice for the December Council and 2015 TAC setting. It was agreed that the Irish and French members of the NWWAC would coordinate a request to their national institutes to assess various recruitment scenarios and the subsequent TAC advice associated with them. This could be presented to STECF and might offer a way of integrating the results of the late year survey results.*

Q: The input of ICES on this issue is requested.

ICES Reply
The advice sheet for this cod stock states the following under "Additional considerations":

"Information from the fishing industry and the UK beam trawl survey conducted in Divisions VIIfg in 2013 suggest that the 2013 year class [age 1 recruitment in 2014] is strong.

Groundfish surveys in November will provide the best measure of the strength of this year class. Because the current assumption [in the short-term forecast used to provide the advice] is that the 2013 year class is average, this could lead to an underestimate of the forecasted landings in 2015. An update of the forecast and advice may be requested in order to avoid the same situation as in 2011 when there was a strong incoming year class that was heavily discarded."

As explained during the presentation of ICES advice to the NWWAC on July 2, this statement is provided for transparency, to make completely clear what our knowledge (and uncertainty) is at the present time. As noted above, the groundfish surveys in November are expected to provide the best information about this. These surveys, however, take place too late in the year for ICES to consider a possible update of the advice (if it was appropriate) as part of the reopening of advice process (which takes place in early November). If a special request was received on this topic, ICES would endeavour to provide a response, as is always the case.

5. Haddock VIIb-k

B: There is a high dependency in the assessment model to identify recruitment levels and it is now clearly recognized that recruitment is difficult to accurately identify and assess. Therefore, there is an urgent need to put in place a mechanism that can integrate various recruitment levels into the advisory system. EAPO are working on assessing various additional technical measures looking specifically at improving juvenile haddock selectivity. EAPO would keep WG2 members updated through the NWWAC secretariat.

Q: The input of ICES on this issue is requested.

ICES Reply
In relation to selectivity, the ICES advice for this stock notes the following under "Advice considerations":

"Further technical measures to reduce bycatch discarding of the 2013 year class should be considered. These might include increasing the mesh size in the square mesh panels and/or increasing the mesh size in gadoid fisheries catching haddock."

The advice for the haddock stock also notes that management should focus on improving selection of haddock in the mixed fishery and deterring highgrading due to restrictive quotas.

In line with the latter and to achieve as much realism as possible, the short-term forecast (Outlook for 2015) assumes for 2014 and 2015 the average discard pattern over the whole time series (since 1993) instead of the more usual procedure based only on the most recent 3-year average (which would be years 2011-2013). Using the average of 2011-2013 is not considered appropriate because high grading was higher in those years because of restrictive quota.

In relation to recruitment: The stock size is determined to a large extent by recruitment, which is erratic, producing occasionally very large year classes. Given this recruitment pattern, a geometric mean of recruitment over the whole time series (excluding the most recent years) is considered the most appropriate recruitment assumption for the short-term forecast. Fish recruited (at age 0) in 2014 are almost exclusively below the minimum landing size in 2015, so their contribution to the landings in 2015 is very low, although they appear in the discards (and discards can be high when recruitment is high) and also contribute significantly to the projected SSB in 2016. The assessments conducted since the 2012 benchmark, have so far produced robust estimates of recruitment in the last assessment year (which is 2013, in this case), although performance is of course reviewed every year at the Celtic Sea Assessment WG.

6. Anglerfish VII

B: It would have been useful if ICES had displayed on its advice sheet the joint TAC advice (i.e. a single figure for management purposes) in addition to the two separate species advice (i.e. Lophius piscatorius and Lophius budegassa). It appeared that the combined TAC advice resulted in a decrease based on recent average landings rather than any science.
Given the positive qualitative trends (increase of abundance and biomass) in the assessment, the NWWAC considers it important to continue work on improving the quality of data.

Q: Could ICES add in future a figure for a combined TAC for both species? How could the NWWAC help ICES to improve quality of data for Anglerfish VII?

ICES Reply
This is the first year in which ICES advice for the two anglerfish species is presented separately, with an individual advice document for each of them. This is in line with the statement in the advice that: "Management of the two anglerfish species under a combined TAC prevents effective control of the single-species exploitation rates and could potentially lead to overexploitation of either species." The sum of the advice for the two species has also been displayed in the advice documents, although not at the start of the documents; it can be found in the "ICES approach to data-limited stocks" section.

As noted in the "ICES approach to data-limited stocks" section of the advice documents, the sum of the advice for the two species is 37450 t (this amount corresponds to landings, as total catches could not be quantified), which is the same advice given by ICES last year.

Therefore, there has been no decrease in the amount advised by ICES with respect to the advice given last year.
For both species, the stock trend, as indicated from research survey indices, has increased by more than 20% in the last 5 years. However, considering that a 20% increase in catch was advised last year, an additional 20% increase this year would give a risk that the catches increase faster than the biomass of the stock. For this reason, ICES considers that last year's advice should be repeated. Again this is noted in the "ICES approach to data-limited stocks" section of the advice documents.

Concerning data improvement for anglerfish stocks, there will be a Data Compilation Workshop for all anglerfish stocks this autumn. This will be a good forum to discuss and find ways forward on data issues, including how the ACs may help. It will take place during November 3-7 and the participation of the NWWAC is very welcomed.

7. Northern Hake

B: Despite the positive trends in the stock assessment due to the requirement to give MSY based advice there is likely to be a 4% reduction in the TAC proposed by the Commission. However, based on the ICES catch forecast tables in the advice, there could be continued improvement in stock biomass with "status quo" or increases up to a 15% in the TAC levels.

Q: Would a longer transition period to MSY (e.g. 2020 instead of 2015) be possible given the good state of the northern hake stock?

ICES Reply
ICES advice follows the MSY approach, in line with the Memorandum of Understanding with the European Union which requests advice in line with exploitation rates no higher than those corresponding to MSY. As noted by the NWWAC, the catch forecast table ("Outlook for 2015") also provides projections of the SSB in 2016 under alternative amounts of catch in 2015, but it is not ICES role to comment on potential alternative policy choices.

The following additional information will hopefully serve to provide some more insight:
From the stock assessment results, current stock biomass is well above precautionary biomass reference points. Since the 2010 benchmark, a faster growth and higher natural mortality are used in the stock assessment, compared to what was used in earlier assessments. This means that estimated stock dynamics will change more rapidly than had been estimated in the past, and also that the short-term projections of SSB and landings are very sensitive to variations in recruitment.

The benchmark that took place in 2014 produced a revised view of stock development. Although current stock biomass is clearly still estimated to be among the highest levels in the assessment time series (since 1978), the very sharp increase in biomass and decrease in F estimated in last year's assessment has now been moderated (see graphs on second page of advice document, which shows this year's assessment compared to last year's). This is one reason why ICES advice is a bit lower this year than it was last year (4% lower).

8. Undulate ray in the Channel (VIIde)

B: The NWWAC will discuss an incoming proposal from the French industry for a stepwise approach which aims to result in a regulated reopening of the undulate ray fishery following the lift of the ban adopted in December Council. The proposal will contain measures that are in accordance with the sustainable exploitation of this stock based on the outcomes of the Science-Industry Project RAIMOUEST (IFREMER/CRPMEM Basse Normandie).

Q: Will the ICES WG on Elasmobranchs incorporate the French data and outcomes of RAIMOUEST Project into its advice?

ICES Reply

Information on the RAIMOUEST project and results was presented at the ICES WG on Elasmobranch Fishes in 2014; therefore, the information is known to ICES scientists. Of course, as is always the case, the most appropriate use of any information in the ICES advice will be based on a determination made by the scientists at the WG, the Advice Drafting Group and the Advisory Committee.

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