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ACFM COMMENTS ON STOCK ASSESSMENT WORKING GROUP REPORTS:
A SUPPLEMENT (FOR WORKING GROUPS) TO THE ACFM REPORTS
OF NOVEMBER 1984 AND MAY 1985

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1. Introduction

This paper deals with assessment Working Group reports to the November 1984 and May 1985 meetings of ACFM. For some Working Groups there was a change in timing of the meeting between 1984 and 1985. The North Sea Flatfish Working Group and Irish Sea and Bristol Channel Working Group met in summer/autumn 1984 giving predictions for 1985 and met again in spring 1985 giving predictions for 1986. In these cases only the last report, dealt with by ACFM in May 1985, will be commented upon.

2. Comments from the November 1984 ACFM meeting

2.1. General Comments

ACFM once again repeated that if ACFM should consider new data or analyses, these should be sent to the Secretariat to make it possible to circulate it in advance of the meeting. It was very difficult to deal with new information during the usually very busy ACFM Meeting. One example was the mean-weight at age data for the Sole Stocks in the Irish and Celtic Sea, where action might have been taken if they had been available for consideration before the meeting.

2.2. Arctic fisheries W.G. Report

The Group should try to perform a Separable VPA analyses to analyse the changes in exploitation pattern. It was suggested that an analysis of the growth rate by year class could explain the recent apparent changes in mean weights.

2.3. Atl. Scandian-Herring and Capelin W.G. Report

Some of the procedures were not described in sufficient detail. The Working Group should produce time series of catch, fishing mortality and stock estimates for all stocks like other working groups.

Norwegian Spring-spawning herring: No explanation is given of the 1977 0-group estimate, and the reasons for excluding it from the calculation of the conversion factor of 0 gr. to 3 gr. The Group should discuss how much reliance can be put on the tagging estimates. The tagging estimate of Z is approximately 0.2 indicating a M of 0.15. However, the Working Group has used a M of 0.1 in the prediction. The Working Group should produce a VPA going at least back to 1960, preferably to 1950. A closer examination of the weight at age data is needed.

Barents Sea Capelin: ACFM would like to have a full description of ^{the} reparameterization of the Hamre-Tjelmeland model and its abilities to predict situations departing from the average geographical situations of the stock.

2.4. Blue Whiting W.G. Report

The assessment of Northern Blue Whiting was this year accepted as an analytical one, and ACFM expressed its appreciation of the improvements the Group had achieved in the assessment of the stock.

The Group should have a closer look at the exploitation pattern assumed in the prediction. The Group did not comment on the industrial fishery with a 16 mm trawl mesh size, when discussing the effects of a 40 mm trawl mesh size. The Group should assess the effect of the industrial small-mesh fisheries on the yield from the Blue Whiting stock.

3. Comments from the May 1985 ACFM meeting

3.1. General Comments

ACFM experienced in some instances problems in dealing with a specific assessment because of inadequate descriptions of the reasoning and because some data were missing. ACFM wants to stress that the descriptions and the data given have to be adequate to make it possible to repeat the calculations. The Secretariat will issue a small paper with hints for Working Group Chairmen outlining minimum requirements and common inadequacies.

3.2. North Atlantic Salmon

The Working Group is asked to break down the total catches into catch in numbers by age group. It was noted that no data were given to substantiate the increase in non-catch mortality from 5 to 10%, and, strictly speaking, this percentage should not be applied to all age groups (as was done in Table 7).

ACFM expressed its appreciation of the quick response to the request for a more detailed analysis of the Maine tag data which significantly improved the basis for advice.

3.3. Herring Assessment W.G. for the area south of 62° N

In several standard graphs recruitment is given by year instead of by year class.

North Sea herring: ACFM noted that in the assessment the Working Group had not included the 0- and 1- group in its predictions and yield per recruit calculations. These exploited age groups should be included in order to illustrate the effects of the fishery for juveniles. ACFM re-ran the calculations, including 0- and 1- group in yield per recruit analysis and 1- group in prediction (0-group was not included in the prediction since year class strength was not known).

The Working Group should describe the fisheries responsible for the F on juveniles in the North Sea.

Celtic Sea herring: ACFM accepted the assessment with some reservations. Doubts were expressed as to the tuning of VPA. It was suggested that a lower input F for the autumn spawners might improve the correlation with the larval index.

Herring in Div. VIa North The regression for estimating recruitment was not accepted because of the few data points and high intercept. However, the estimate was identical to the geometric mean and was therefore used in the prediction.

Clyde herring ACFM accepted the assessment of the Clyde herring and the justification for assessing this unit separately. The procedure for calculating discards rate in the prediction was modified. It was suggested that available ICES programs should be used for the handling of discards.

Herring in Div. VIa (S) and VIIb,c The assessment was accepted with some reservations since it was completely dependent on a regression between larval index and spawning stock size which had a rather high intercept. ACFM ran an alternative prediction assuming F in 1985 would be equal to F in 1984 instead of assuming that the catch in 1985 would correspond to the TAC. *would*

Irish Sea herring Also in this case the assessment was accepted with reservations since the tuning of the VPA to the effort data available was not felt convincing. Also the Working Group recognized in its report the limitations of the use of nominal fishing effort data.

3.4. North Sea Flatfish Working Group

ACFM noted the difficulties the Working Group had with the disruption of an important catch and effort series (Netherlands).

ACFM agreed with the Working Group that advice on North Sea sole had to be postponed till the November 1985 meeting of ACFM in light of the uncertainties about the influence of the cold winter on the stock.

It was agreed to ask the Working Group to have a look at the possibility of combining the assessment of plaice in the North Sea and the Channel.

3.5. Mackerel Working Group

It is hoped that the Working Group next year finalizes the detailed examination of the tagging data in order to establish a more firm basis for splitting the catches in the different areas on stocks.

The assessment of North Sea Mackerel was accepted, but it was agreed to express some reservations about the very drastic decline in stock abundance predicted.

The Western stock assessment was also accepted, but ACFM preferred to base the predictions on geometric mean recruitment rather than taking the lowest level observed. Mackerel in Division VIIIC should not be included in the Western mackerel stock assessment.

The Working Group is asked to consider the question about safe biological limits for the two stocks in its next report.

3.6. Irish Sea and Bristol Channel Working Group

When using SEP VPA, the Working Group should include a table showing the input parameters, the log-catch ratio residuals and coefficient of variation of catch data.

ACFM could not accept the basis for the analytical assessments of Celtic Sea sole and Celtic Sea cod carried out by the Working Group.

It was questioned whether ACFM should continue to give advice on Celtic Sea plaice which is a by-catch species and commercially much less important than several others in the area (for example monk, megrim, rays, spurdog, hake). A rigid management system on plaice as a by-catch of these valuable fisheries causes major disruption of the latter.

3.7. North Sea roundfish

ACFM expressed appreciation of the response to the criticism of the Rho method. The "catability method" introduced this year was seen as a definite improvement.

The assessment of North Sea cod was accepted, but new evidence on especially the 1983 and 1984 year classes might lead to revisions at the November 1985 ACFM meeting. The Working Group should consider to include the F on the 2-group North Sea cod in the average F. It should further give a description of the changes in the fishery which have led to increased exploitation of younger fish.

ACFM rejected the assessment of haddock in Division VIa on the grounds of poor basic data, showing up especially in the catch at age matrix. The Working Group should have a critical look at this matrix. It should also critically review the evidence for links between the stocks in the North Sea and west of Scotland.

3.8. Saithe

The assessment of saithe in the North-East Arctic was accepted with some reservations since the amount of independent information to calibrate the VPA and estimate input values for the prediction was very limited. was

ACFM had difficulties in following the reasoning in the assessment of North Sea saithe. It was felt that there were large uncertainties in this assessment, and it was agreed to review it in November when there will be new data available from the fisheries and from acoustic surveys carried out in 1984 and 1985.

The Working Group indicated that it did not find the data on saithe west of Scotland adequate for an analytical assessment, and ACFM accepted this. The Working Group should evaluate evidence for links between the North Sea and west of Scotland saithe.

After the meeting of the Working Group some data for 1985 had been made available by the Faroese Laboratory on Faroese saithe indicating that the assumed level of fishing mortality in the Working Group assessment was too low. ACFM therefore agreed to defer any advice on Faroe saithe till the November 1985 meeting, and the Working Group has been asked to undertake a reassessment by correspondence.

ACFM expressed appreciation of the thorough description of the fisheries dealt with by this Working Group, and it was decided to make it available to fishery managers by appending it to the ACFM report.

3.9. Industrial Fisheries

ACFM discussed at length the terms of reference of this Working Group and concluded that this Group should compile, analyse and in detail from present the by-catch data to be used in assessment in other Working Groups. Further, it should maintain time series from and descriptions of the major industrial fisheries in the North Sea and adjacent areas and stock records for the main target species (Norway Pout, sandeel and sprat). It was agreed to have further discussions on the terms of reference, including the definition of industrial fisheries, during the consultations of ACFM at the Statutory Meeting in October. The need for more participation in this Working Group was stressed.

The Norway Pout assessment was accepted.

The natural mortality coefficient used for Sandeel was questioned, and it was agreed to indicate in the ACFM report that we are still waiting for a final evaluation of the predation data from the Multispecies Working Group and not change last year's advice based on yield per recruit considerations.

Although no analytical assessment of North Sea sprat was available, ACFM accepted the evidence that the stock at present is at a very low level.

3.10. Demersal Stocks in Division IIIa

The need for a meeting of this Group, which has worked by correspondence for several years, was expressed. This will be decided in October when discussing the meeting schedule for Assessment Working Groups in 1986. The stock borders are of particular concern in this area. Although the data series are improving they do still not allow analytical assessments.

ACFM expressed appreciation of the work the chairman of the Working Group has done during the years with no meetings.

3.11. Redfish and Greenland Halibut

The Working Group did not meet this year. ACFM expressed appreciation of the interim report the chairman of the Working Group had made, mainly updating the catch data for the different stocks. Based on those data ACFM found no reason for changing the assessments for 1986 made by the Working Group last year.

3.12. Baltic Pelagic Stocks

The Working Group should attempt to make the descriptions of the assessments more uniform and consistent throughout the report. In some instances the lack of details made it difficult to follow the reasoning. line

Dealing with the herring stocks in the inner Baltic, ACFM realized the need for a detailed discussion on the evidence for changing the stock boundaries. If changes are to be made, they should be consistent throughout the Baltic. The Working Group will be asked to undertake a general discussion on data on stock borders for both the herring and sprat stocks in the Baltic. The need for resolving the remaining problems blocking separate assessment of open sea and coastal herring in Sub-divisions 25-27 was also stressed.

For herring in Sub-division 31E the Working Group had problems using the Rho method, which gave estimates very different from those of last year. The assumption of linear trend in catchability seemed not to be fulfilled, and ACFM decided not to accept the assessment.

When discussing the sprat stocks, it was noted that a general discussion of biological management objectives for shortlived species should be initiated as soon as possible, and it was agreed to place this on the agenda for the November 1985 ACFM meeting.

ACFM did not accept the assessment of sprat in Sub-divissions 22-25 in detail but accepted the general conclusion of increasing stocks and low fishing mortalities.

Finally, it was agreed to ask the Working Group to have a critical look at the differences in M values used between stocks and years.

3.13. Baltic Demersal stocks

The Working Group should, as stated by the Group itself, have a critical look at the value of M used in the assessment of cod in Sub-divissions 22-32.

3.14. Baltic Salmon

Although accepting the assessment, ACFM noted the problems in some of the assumptions used in the assessment model for Baltic salmon. The Working Group is aware of these problems and will certainly have a further look on them at its next meeting.

