

**DRAFT**

**MINUTES OF THE  
ADVISORY COMMITTEE ON FISHERIES MANAGEMENT**

**ICES  
25 May – 1 June 2000**

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International Council for the Exploration of the Sea  
Conseil International pour l'Exploration de la Mer

## TABLE OF CONTENTS

| Section   | Page |
|---|------|
| 1 THURSDAY 25 MAY 2000 .....  | 1    |
| 2 FRIDAY 26 MAY 2000 .....  | 1    |
| 2.1 Baltic (Jake Rice) .....  | 1    |
| 2.2 Deep Sea (Nils Hammer).....   | 2    |
| 2.3 North-western WG (Steve Cadrin) .....                               | 2    |
| 2.4 Northern Pelagic (John Molloy).....                                 | 2    |
| 2.5 Herring (Frans van Beek) .....                                      | 2    |
| 2.5.1 New Schedule and Working Procedures for ACFM .....                | 2    |
| 3 SATURDAY 27 MAY 2000 .....  | 2    |
| 3.1 Shading in Management OptionTables .....                            | 2    |
| 4 MONDAY 29 MAY 2000 .....  | 3    |
| 4.1 NEAFC observers report .....  | 3    |
| 4.2 The Follow up Meeting to the 11 <sup>th</sup> Dialogue Meeting..... | 3    |
| 4.3 IBSFC WG on strategic plans for herring, sprat and cod .....        | 3    |
| 4.4 Harmonisation of PA terminology .....                               | 3    |
| 4.5 ACFM-ACME matters for coordination .....                            | 4    |
| 5 NOMINATIONS AS CHAIRS OF AWGS.....                                    | 4    |
| 5.1 Form of Advice .....  | 4    |
| 5.2 Formulation of Advice .....   | 6    |
| 5.2.1 Baltic Herring.....   | 6    |
| 5.2.2 Baltic Sprat.....   | 6    |
| 5.2.3 Baltic Cod.....   | 6    |
| 5.2.4 Baltic Salmon .....   | 6    |
| 5.2.5 Sea Trout in the Baltic Sea.....                                  | 6    |
| 6 TUESDAY 30 MAY 2000 .....   | 6    |
| 6.1 North-east Arctic Cod .....   | 6    |
| 6.2 North-east Arctic Haddock.....                                      | 7    |
| 6.3 Herring WG.....   | 7    |
| 6.3.1 Herring 22-24+IIIa .....  | 7    |
| 6.3.2 Herring North Sea .....   | 7    |
| 6.3.3 Herring Division VIa (North and west of Scotland).....            | 7    |
| 6.3.4 Herring Division VIa (South) and VIIb,c.....                      | 7    |
| 6.3.5 Herring Division VIIa (Mann and Mourne) .....                     | 7    |
| 6.3.6 Herring Division VIIf&g (Celtic Sea) .....                        | 7    |
| 6.3.7 Herring Division VIIj.....  | 7    |
| 6.4 Sprat .....   | 7    |
| 6.4.1 Division IIIa .....   | 7    |
| 6.4.2 North Sea.....  | 7    |
| 6.5 NWWG.....   | 8    |
| 6.5.1 Cod Iceland .....   | 8    |
| 6.5.2 Haddock Iceland.....  | 8    |
| 6.5.3 Saithe Iceland .....  | 8    |
| 6.5.4 Greenland halibut .....   | 8    |
| 6.5.5 Redfish .....   | 8    |
| 6.5.6 Deep Sea <i>Sebastes mentella</i> .....                           | 8    |
| 6.5.7 Pelagic <i>Sebastes mentella</i> .....                            | 8    |
| 6.5.8 Faroe Plateau Cod .....   | 9    |
| 6.5.9 Faroe Bank Cod.....   | 9    |
| 6.5.10 Faroe haddock .....  | 9    |
| 6.5.11 Faroe saithe .....   | 9    |
| 7 WEDNESDAY MINUTES 31 MAY 2000 .....                                   | 9    |
| 7.1 Norwegian Spring Spawners .....                                     | 9    |
| 7.1.1 Icelandic herring.....  | 9    |
| 7.1.2 Capelin Iceland Greenland .....                                   | 9    |
| 7.1.3 Blue whiting .....  | 9    |
| 7.1.4 NSS Herring special request.....                                  | 10   |
| 7.1.5 Blue whiting special request.....                                 | 10   |

| <b>Section</b>   | <b>Page</b> |
|--|-------------|
| 7.1.6 Salmon post smolt special request.....                               | 10          |
| 7.2 Deep Sea Species.....  | 10          |
| 7.3 Blue ling.....   | 10          |
| 7.3.1 Ling.....  | 10          |
| 7.3.2 Roundnose grenadier.....   | 11          |
| 8 ELECTION OF CHAIRS.....  | 11          |
| 8.1 North-east Arctic Cod.....   | 11          |
| 8.2 Baltic special Requests.....   | 11          |
| 8.2.1 Sprat $Z_{pa}$ .....   | 11          |
| 8.2.2 Herring and sprat maturity.....                                      | 11          |
| 8.2.3 Separate herring 25-29+32 excl Golf Riga.....                        | 11          |
| 8.2.4 Minimum landing size of sprat and herring.....                       | 11          |
| 8.2.5 BACOMA.....  | 11          |
| 9 THURSDAY 1 JUNE.....   | 11          |
| 9.1 Agenda 5).....   | 12          |
| 9.2 Item 5c) TOR Methods WG.....   | 12          |
| 9.3 Item 5a) Report of Concerted actions.....                              | 12          |
| 9.4 ICCAT Methods WG.....  | 12          |
| 9.5 Certification of Software.....   | 13          |
| 9.6 Item 9b) Review of advisory procedure.....                             | 13          |
| 9.7 Item 9c) Timing.....   | 13          |
| 9.8 Item 9 b) Mid-year problem.....  | 13          |
| 9.9 ACFM return to the final round of reviewing drafts for the advice..... | 14          |
| 9.10 Agenda Item 10).....  | 15          |
| 9.11 Agenda item 12).....  | 15          |
| 9.11.1 Advisory structure proposed BWGADV.....                             | 15          |
| APPENDIX I Agenda.....   | 16          |
| APPENDIX II List of Participants st Spring Meeting 2000.....               | 18          |
| APPENDIX III Shading Policy.....   | 22          |
| APPENDIX IV Certification of Stoftware used for assessment purposes.....   | 23          |
| APPENDIX V Nominated Chairs for the next three year term.....              | 25          |



# Minutes

## 1 THURSDAY 25 MAY 2000

ACFM was called to order on 25 May 2000 at 10:00. Tore Jakobsen was in the chair. ACFM was welcomed by the ICES General Secretary David Griffith. ACFM was introduced to Bodil Chemnitz who had recently joined the ICES secretariat and as secretary will work with ACFM.

In adoption of the agenda a new point was added 7d) **ACME activities in fisheries related environment advice**. There were several points to be clarified on where various issues would be addressed. There was no comment on the timetable.

The Chair reminded ACFM of the timetable for releasing the report as described in a working paper. Everybody agreed to the scheduled proposed.

The Chair informed ACFM that the Bureau WG on Advisory procedures (BWGADV) had met in February 2000 and that Joe Horwood would be with ACFM on Tuesday afternoon to present the proposal for committee structure and working procedures of the ICES advisory work.

The Chair reminded ACFM that nominations for new WG chairs would take place on Monday with a view to do the elections on Wednesday. He urged members already now to make contact as appropriate with possible candidates to ensure that nominees would be both available and willing to serve as chairs.

The Chair finally informed ACFM that there would be a visit to ICES by a Norwegian journalist. He would come around midday. The Chair reminded ACFM on the need not to talk to the press prematurely. The Chair would appreciate if members would be around by 1 pm for a photograph of ACFM in session.

Kevin Stokes and Frans van Beek informed ACFM that there had been a recent EC meeting that discussed the form of the ICES advice, e.g. the ICES shading policy in the catch option tables. They offered to distribute a draft report of this meeting as further background to agenda 6b) **Follow-up 11<sup>th</sup> Dialogue Meeting (London February 2000)** an offer that was received with gratitude by ACFM.

Frans van Beek proposed that ACFM would draft a press release. He thinks that there is a pressing need to respond to the request from the 11<sup>th</sup> Dialogue meeting on more transparency in the ICES advisory process and he saw a press release as an element in this process. In discussing this point. Jake Rice gave some background information on the Canadian experiences: DFO had set up a web page with general information on the stocks and stock status. This web site had about 1200 visits per month. This however would be a general form of information to the public compared to what could be told in a press release. Several members were of the opinion that a press release would be uninteresting for the public and what was needed was much in line with what DFO had done. The Fisheries Adviser reminded ACFM of the proposal for compiling and disseminating general information on stock and stock trends that was loosely sketched for the September 1999 Consultations. He also mentioned an initiative to establish cooperation between FAO, ICCAT, NAFO and ICES under the FAO FIGIS umbrella to establish precisely this form of a website. The chair concluded that he did not find a press release of particular value but that he clearly saw the need to respond positively to the request from the 11<sup>th</sup> Dialogue meeting. He therefore proposed that ACFM thinks about these problems until next meeting.

Plenary was closed for lunch and the rest of the day was spent in subgroups.

## 2 FRIDAY 26 MAY 2000

The Chair opened the meeting on 9:00. He reviewed the progress in the subgroups in the working groups. On Thursday the following groups had met

### 2.1 Baltic (Jake Rice)

Progressing on schedule. The absence of Willy Vanhee was a significant disadvantage since the group lacked an outsider review of the assessment.

## **2.2 Deep Sea (Nils Hammer)**

Have finished most of its task and will finish on schedule on Saturday. Require guidance from plenary on how advice should be formulated for stocks where indicators show declining stocks. Nils Hammer thought that ACFM needs the report and summary sheet but he found that ACFM needed a policy in such data poor situations. Frans van Beek agreed that a general policy is needed and he drew ACFMs attention to the PA and its application in data poor situations.

## **2.3 North-western WG (Steve Cadrin)**

This group was delayed in starting but is progressing well.

## **2.4 Northern Pelagic (John Molloy)**

The group is developing as scheduled. There is a particular problem with the blue whiting assessment. The particular problem relates to the use of a Spanish survey index. This survey only covers the southern outskirts of the stock. However, the introduction of this index in the assessment changes the perception of stock status significantly. The main point is that two strong year classes seen elsewhere are not seen in the Spanish Survey. It was agreed to take a further look on this assessment based on documentation provided by the subgroup.

## **2.5 Herring (Frans van Beek)**

This work is progressing but behind schedule.

The chair concluded the session by announcing a new plenum by 9:00 Saturday morning. At this plenum he would review progress in the subgroups and depending on the documentation made available on particular assessment take up certain particular assessments.

### **2.5.1 New Schedule and Working Procedures for ACFM**

The Chair opened the discussion and summarised that ICES is met with an increasing demand for more timely response. Rather than seeing a trend towards multiannual advice, ICES finds itself faced with requests for in-year revisions of the advice (in 2000 cod in the Baltic Sea, NEA cod and haddock). He found that there are two problems that should be considered separately 1) in-year ad hoc revisions 2) surveys that take place after the ACFM meeting. The latter problem becomes more prominent if the autumn ACFM meeting is moved forward in response to the request for more timely advice by the Commissions. Several participants emphasised that the in-year revisions were potentially dangerous to the quality of the advice. Assessments are subject to variability and a procedure should be found whereby it would be avoided to indicate changes that are simply reflections of this noise in the assessments. ACFM generally agreed that this would require an agreed general procedure to be adopted by ACFM. There were also several participants who were afraid of the increased demand for more timely advice. Quality is based on available data and expertise and the expertise is already under heavy pressure. Meeting the demand for timely advice would place an extra burden on key experts.

There were several specific proposals in particular it was agreed to move AFWG to the May ACFM. There might be a need for an update of the saithe and capelin assessments in late autumn.

## **3 SATURDAY 27 MAY 2000**

The Chair held a short round to establish the status of the Subgroups. He realised that that the Subgroups needed most if not all of Saturday to finish their business. He therefore decided to have only a short plenum and then return in subgroups.

### **3.1 Shading in Management OptionTables**

A paper by Tore and Hans was presented. In the presentation of this paper it was noted that some managers do not like shading and have expressed their concerns. They consider that the shading being based on a PA concept is mixing a short term consideration (the management option table) with a long term strategy (PA), other managers find shading quite acceptable. Based on a recent discussion in Bruxelles between EC countries it was reported that it seems that the majority of managers accept the shading policy. It was however noted that because of the difference in time perspective

management might decide on options in the shaded area for one or maybe two years. It was realised by ACFM that a better explanation of the system is required.

It has been suggested that only those options with short term forecast SSB below  $B_{pa}$  should be shaded. This will at least partly be a return to the old ACFM procedures of only focusing on SSB as in the MBAL procedures.

There are situations when the stock is on a very low level and it is unlikely that  $SSB > B_{pa}$  in the short term. When there is a rebuilding plan the SSB will be below  $B_{pa}$  but rebuilding plans are consistent with the PA. An alternatively shading policy could be to indicate whether the stock and the fishery are within safe biological limits in the text and having no shading at all, e.g. an extra column in the forecast table where it is possible to give a more graded indication.

ACFM agreed to keep the shading and to base shading on short term projections in relation to PA reference points. An alternative proposal will be made by Tore and Hans to be discussed later in the meeting.

#### **4 MONDAY 29 MAY 2000**

The chair welcomed Rob Stephenson (Chair RMC, Canada), Carmela Porteiro (Spain) and Olle Hagstrom (EC observer) to the plenum of ACFM. He drew attention to the revised time table that was distributed. He noted that time was very pressed and that it would be difficult to have in-depth discussion of several of the topics on the agenda. He would make the formulation of the advice his top priority.

**Minutes and Technical Minutes** of the October-November 1999 meeting were approved.

##### **4.1 NEAFC observers report**

The Fisheries Adviser introduced this report briefly. The main new element is the request for advice by 15 October. This should be discussed in a broader context including also the request for advice by a similar date by EC DG Fish and by the Norwegian-Russian Commission. There was no specific comment to the report.

##### **4.2 The Follow up Meeting to the 11<sup>th</sup> Dialogue Meeting**

The Fisheries Adviser introduced the report of that meeting. The Chair decided to postpone the discussion until Joe Horwood has presented the report of BWGADV. Kevin Stokes noted the general dissatisfaction with the ICES advice expressed at the London meeting and drew attention to the notes on a recent meeting in Bruxelles by himself and Frans van Beek.

##### **4.3 IBSFC WG on strategic plans for herring, sprat and cod**

The Assessment Scientist introduced the observer's report. He noted in particular that the BACOMA results had been discussed at this meeting. The selection experiments seem to give very clear results while for the impact studies it was unclear how ACFM would interpret these results. Sakari Kuikka was not entirely happy on the comments on BACOMA that had been presented at the IBSFC meeting. It was explained that ICES comments simply reflected that a discussion had taken place where different views were expressed and that it was therefore difficult to know precisely which conclusions ACFM would draw from the study.

##### **4.4 Harmonisation of PA terminology**

Reference was made to both the CWP meeting in February and the NAFO meeting in March. The reports were briefly introduced. Olle Hagstrom found that there was movement in the positions but no agreement has yet been reached. ICES should actively pursue this topic further. ACFM recognised that ICES is more advanced than the other organisations (NAFO, ICCAT). In the discussion that followed Rob Stephenson raised two issues 1) harmonisation between organisations where the initiative now is with the Commissions and 2) the internal ICES development of PA. This latter point will be discussed in the context of the ICES practice.

The Chair announced an extended coffee break that will allow people to look into the Secretariats papers on the use of reference points.

#### **4.5 ACFM-ACME matters for coordination**

Janet Pawlak introduced the ACME agenda on the ecosystem approach. (ACME agenda pkt. 7). Except for the 4<sup>th</sup> Periodic Assessment by HELCOM there was nothing on the agenda for ACME that would require direct cooperation. Bengt Sjöstrand asked concerning the idea that has been floating of letting S-R relationship be part of the ACME agenda. Janet Pawlak answered that this was not the case at this stage although she was aware that the ACME chair was very interested in this issue. Kevin Stokes noted that there are many conflicting initiatives and there is a need for some coordination. This was not confined to ICES but also OSPAR, FAO and other organisations had a stake in this issue. Jake Rice considered that biodiversity would be a more dominating concept and that this may become very important in decision making in the future and in this area lacks a scientific framework. ACFM is looking to CONC to coordinate the initiatives and recognised the efforts so far.

The Chair noted that communication between various disciplines was still lacking and that this led to lack of understanding and also hampered the drive towards an integrated approach. It was recognised that also management had not yet clarified its position viz-a-viz the need for advice on a broader scale. Olle Hagstrom found that the importance of environment considerations is rapidly increasing.

Finally Janet Pawlak introduced an OSPAR request on effect of fisheries on seabird and sea mammals. She also noted that ICES is requested to address ECOQOs (ACME) and that in these objectives there would be fisheries elements.

The Chair thanked Janet Pawlak for her introduction.

#### **5 NOMINATIONS AS CHAIRS OF AWGS.**

ACFM went through a formal nomination procedure (the election for nomination would be held on Wednesday):

HAWG: Marinelle Basson and Kevin Stokes were nominated. Kevin Stokes thanked for the nomination but informed ACFM that he would not be available. He was consequently deleted from the nomination list.

SGDEEP: Odd Aksel Bergstad and John Gordon. Sigfus Schopka and the Chair informed ACFM that John Gordon would not be available and he was deleted from the list.

WGNPBW: Asta Gudmundsdottir was nominated.

WGBFAS: Maris Plikshs and Jan Horbowy were nominated. Jan Horbowy thanked for the nomination but informed ACFM that he would not be available for election and he was deleted from the list.

##### **5.1 Form of Advice**

The Fisheries Adviser introduced three papers that had been prepared for discussion under this agenda item. The first paper proposed a strategy for formulating advice, the second paper looked at ACFM practice during the 1999 round in formulating advice and the third paper was a technical description of how to calculate reference points. The papers were well received and ACFM found it very useful that such background papers would be available for its deliberations. The need for better documentation of ACFM reasons for dealing differently with different stocks was widely recognised. Table 1 in papers longer term consistency in the form of advice. Much of the apparent inconsistency for which ACFM have been criticised is based on lack of explanation of the basis on which ACFM has advised. It was proposed to pay more attention in the ACFM report to reference points and in particular to the rationale for the advice. Several noted that it would be difficult to stick to a single approach to formulate advice there are differences in which data are available and there are biological and exploitation differences between stocks. There were also different levels of ambitions between customers that would be reflected in the form of advice. The Chair proposed that ACFM should have basic guidelines that could be published in the introduction to the ACFM report and that ACFM inside the report makes clear statements when ACFM deviates from its general policy. This proposal was accepted. ACFM decided to have a second look on the general proposal in the paper with a view to adopt this in October. It was noted that USA has standard guidelines and that ACFM might get useful ideas by reviewing these.

Several participants found that ICES in its principles for formulating advice had ignored the growth overfishing ( $F_{MSY}$ ) considerations there are several stocks where such considerations would be important. ICES need to revisit the MSY concept re-introduced in the Agreement on High Migratory and Straddling Stocks. ICES general remark on the lack of use of MSY because the uncertainty of the S-R relationship was found to be inconsistent with the general strategy adopted by ICES. Both estimation procedures use S-R relationships. The Chair concluded that growth overfishing



considerations should be included in the advice. This should be introduced as a comment to the advice but cannot be directly incorporated in the TAC advice. Frans van Beek suggested that ICES should distinguish between 1) advice based on recruitment overfishing considerations and 2) information that would include growth overfishing considerations. As a final note it was emphasised that Y/R plots routinely should be included as customers are requesting them.

ACFM found that there are several issues that needed to be studied within the PA and proposed a resurrection of the PA SG. Membership of this SG should be wider than ACFM involving people from outside the region e.g. from the USA west coast. The Chair and Fisheries Adviser were asked to draft a set of TORs for consideration by CONC. Topics to be discussed include: use of MSY, data poor situations (Deepwater species), reference points in a multispecies context. There was also made reference to the Methods WG that RMC will establish and several topics relevant to PA usage could be dealt with by that group (Medium term projections, sensitivity of low % fractiles, time span for medium term projections, important time horizon not necessary 10 years anything 3-15 years, influence on the medium term projections of variance estimates and form of the stochastic process (white noise, log normal noise, ...), Kevin Stokes and Dankert Skagen considered that the Medium term projection cannot be used for advice of absolute values but are very useful for comparison between different approaches.

Kevin Stokes found that the approach of a standard for formulating advice was very useful, it would become simpler to explain the advice to the industry. He also noted that the language used by ACFM should be reviewed. He mentioned a particular problem with the phrase "be reduced to the lowest possible level". He wanted to make sure that this phrase was not taken as an advice to close a fishery but rather that the biology suggests that caution is required but that there may be other considerations to balance the biological concerns. He found that the use of the phrase should be clarified. ACFM agreed that Kevin's interpretation of the phrase was what also other members understood.

Jake Rice made the last contribution to this topic. He thinks that S-R question is turned upside down as he considers environment to be the determining factor. Also he considered that the advice question may be wrongly posed: rather than adopting a standard model on which to formulate the advice we should ask: what is the strategy that under the widest possible range of models would be beneficial to the stock (and other elements of the system).

**The Methods WG (TORs)** were briefly discussed. There was general support for the RMC initiative and the RMC chair was urged to go forward with his proposal. There were numerous proposals for TORs, many more than can be accommodated during a single meeting. The Fisheries Adviser together with the ACFM and RMC Chairs will summarise the proposals for further discussion and agreement at the ASC 2000. The topics included among other elements: standardising of software for Medium term projections, possible bias and its detection in the assessment methods, influence of form of errors in the SSB-R relations.

Kevin, Jake and Frans: Methods group on shrinkage. The assessment of Baltic Cod cannot reflect the trends at a sufficient fast rate.

Theoretical work is required before it is meaningful to call a meeting. Leading to bias.

The role of **rebuilding plans** in the ICES advice was discussed. Several noted that such plans are highly stock specific, but also that ICES should provide such rebuilding plans. ICES cannot rely entirely on input from management. Two situations were considered 1) the specific situation when the stock is depleted when a rebuilding strategy is required and 2) the harvest control rule. The question if we develop rebuilding plans without taking socio-economic considerations was raised. Several answered that while it may be desirable to include expected socio-economic consequences in the deliberations leading to management decisions this was not ICES current task. Among other things it was noted that ICES assessment does not include the relevant data to include such analyses, e.g. fleet information would required including fleet selectivity.

The Chair concluded that ICES should provide recovery plans and that ICES should not include socio-economic considerations. This meant that ICES would rather provide recovery scenarios than recovery plans. It would then be a management task to choose between the scenarios and accepting the involved risks. He considered that ACFM should develop a set of guidelines that could form a general framework: timeframe, how far should you go down in F, fishing pattern, all dependent on the seriousness of the situation. The detailed plan needs to be developed in a close dialogue with management and industry.

Again Jake Rice had the last intervention on the general topic of **form of advice**. He considered that ACFMs reluctance to use the two C words, Collapse and Closure, was ill advised. There are examples, he found, when ACFM should be more open and clear in its message and the C-words might be one route to better convey the information to the managers.

## 5.2 Formulation of Advice

**Blue-whiting.** A Spanish paper was presented. ACFM identified the problem with the assessment as being because the strong yearclass does not appear in all areas and not in particularly in the southern range of the distribution. The Spanish CPUE series is from a directed fishery, Spanish/Portuguese surveys are not included. Kevin Stokes noted that this is an example of the weighting problem inherent in the ICA when dealing with CPUE series that does not cover the entire range of the distribution something that is inevitable for these wide ranging stocks. ACFM based on the presentation considers the Spanish CPUE as a valid series and therefore the assessment should be based on inclusion of this series. Dankert Skagen raised the problem of what to do when the tuning series are in conflict between the different areas. The Working Group and possibly also the future Method WG should address this problem. The series is kept. WGNPBW should look more deeply into the problem.

### 5.2.1 Baltic Herring

**Divisions 25-29 and 32.**  $B_{pa}$  and  $B_{lim}$  should be reconsidered by WGBFAS in 2001.

**Gulf of Riga.** The assessment was accepted and the advice formulated based on the assessment. There were no comments.

**Division 30.** The Subgroup had proposed new PA reference points, these were accepted and advice formulated based on these reference points.

### 5.2.2 Baltic Sprat

WGBFAS should consider how the  $F_{pa}$  of 0.40 had been derived and the extent to which this value is still relevant. The reference value should be considered in the light the changing  $M$  reflecting the changes in the cod stock in particular.  $F_{lim}$  should also be considered by the WGBFAS.

### 5.2.3 Baltic Cod

**Divisions 22-24:** Advice required for 2001. Assessment, Reference point table to be included. Medium term

**Divisions 25-32:** It was not possible to finalise the advice as there was doubt about the Medium term projections that need to be checked. ACFM asked WGBFAS to consider if  $B_{pa} = 240,000$  t SSB is an achievable target under current productivity regime. There was also a need to check Y/R and recruitment calculations.

### 5.2.4 Baltic Salmon

**Divisions 24-31:** Apart from some minor editorial points the text was adopted as final.

**Division 32:** Apart from some minor editorial points the text was adopted as final.

### 5.2.5 Sea Trout in the Baltic Sea

Apart from some minor editorial points the text was adopted as final.

## 6 TUESDAY 30 MAY 2000

### 6.1 North-east Arctic Cod

There was a considerable discussion of the proposed text. Arguments concentrated on if there is a basis for a change in last year advice or not. The surveys suggest approximately 20 % improvement in the two most recent year classes (975 – 818, 1995 age 3 and 697 – 627, 1996 yc). However, it was argued that this might just be within the stochastic variation of the survey. Even if the survey results did indicate that the WG and ACFM had underestimated the stock in October 1999, the assessment still indicated a very low stock that was in need of rebuilding and that the fishing mortality levels proposed would be relevant in such a rebuilding plan. It was agreed to have a redraft of the text from the stand point that this was a revision and only if there were proven evidence of an over/underestimation of the stock the advice from October 1999 would remain valid as far as ACFM is concerned. Drafting team: Rob and Tore.

## **6.2 North-east Arctic Haddock**

Apart from some minor editorial points the text was adopted as final.

## **6.3 Herring WG**

The Group was commended with producing a very good report.

### **6.3.1 Herring 22-24+IIIa**

In case where there is no accepted assessment ACFM should probably be more cautionary than the committee has been hitherto for this stock. New studies are under way and will probably next year mean improved assessment. The draft was approved.

### **6.3.2 Herring North Sea**

It was discussed whether it was time for an evaluation of the procedures used in the past 5-10 years regarding the split by fleet and area. Maybe also the spawning grounds performance should be evaluated. This is related to the PA approach in relation to diversity. The use of the current ACFM advice in management might be useful for such an evaluation. These points should be added to the TORs for the HAWG.

The prediction spreadsheet should be sent to EU and Norway.

Catch tables are very detailed. The evaluation of the assessment should included in the evaluation of whether these are all needed.

### **6.3.3 Herring Division VIa (North and west of Scotland)**

Apart from some minor editorial points the text was adopted as final.

### **6.3.4 Herring Division VIa (South) and VIb,c**

Apart from some minor editorial points the text was adopted as final.

### **6.3.5 Herring Division VIIa (Mann and Mourne)**

Apart from some minor editorial points the text was adopted as final.

### **6.3.6 Herring Division VIIf&g (Celtic Sea)**

Apart from some minor editorial points the text was adopted as final.

### **6.3.7 Herring Division VIIj**

Apart from some minor editorial points the text was adopted as final.

## **6.4 Sprat**

### **6.4.1 Division IIIa**

Apart from some minor editorial points the text was adopted as final.

### **6.4.2 North Sea**

Apart from some minor editorial points the text was adopted as final.

## 6.5 NWWG

### 6.5.1 Cod Iceland

Large change in perception of stock size since last year. Table 3.2.2.b.2 is wrong (recruitment has been shifted 3 years. ACFM should consider this stock when the errors have been corrected. The text looked ok.

### 6.5.2 Haddock Iceland

The Icelandic Institute had reviewed the assessment and some minor input errors in the WG report had been discovered and correction presented. Sigfus Schopka and Jesper Boje confirmed that these corrections were agreed with the NWWG. The subgroup accepted the assessment but not the proposed  $F_{pa}$  based on  $F_{med} = 0.47$ . ACFM understood the problem that was facing the assessment but in lack of a better yardstick agreed that for the time being the  $F_{med} = 0.47$  would be used as the basis for advice.

### 6.5.3 Saithe Iceland

The logic of the proposed advice was questioned. The philosophy is 1) to advice a  $F$  that in the short term will bring the stock at or above  $B_{pa}$  2) if this is not possible at  $F = 0$  then a recovery plan should be proposed. For saithe this is not possible to achieve  $SSB > B_{pa}$  in the short term. The advice was rephrased to reflect 1) no directed fishery, minimal by-catch in mixed demersal fishery and in any case below 25,000t.

### 6.5.4 Greenland halibut

The assessment in 1999 was much more pessimistic than that presented last year. Text needs to be expanded about the comparison with the assessments last year. VPA was indicative but not accepted.  $F$  is below reference points. XSA seems to have a scaling problem. Assessment is unstable.

Proposal to formulate the advice that catches should not be allowed to increase. Note that we do not have a firm basis but advice refer to recent catch levels. It was commented that any advised catch will lead to TAC that will be exceeded

### 6.5.5 Redfish

*Sebastes marinus*: There were no substantial comments to this assessment.

### 6.5.6 Deep Sea *Sebastes mentella*

Discussion whether the 25 % reduction refers to the 1998 level and if some reduction of  $F$  has been achieved in 1999. The advice is formulated relative to the 1998 series. ACFM has agreed to define  $U_{pa}$  on the commercial CPUE series.

ACFM discussed what would be expected as a signal of recovery? This should be found in the size composition.

Effort series should be included in the report, the series are presented in the Working Group report, p. 300. Standardised effort shall be returned to the level in 1986-1990 when the stock was stable and CPUE around 50 %  $U_{max}$ . Effort then was less than half of the current level.

ACFM found that the advice should be based on 1) The stock is at present below  $U_{pa}$  2) the stock should be rebuilt 3) Effort should be reduced until the indicator (CPUE) shows a response with increased CPUE 4) The target should be to bring CPUE to  $U_{pa}$ . The effort level when the stock was stable and CPUE was above  $U_{pa}$  was 1 the 1986-1990 period.

### 6.5.7 Pelagic *Sebastes mentella*

The advice was edited, no major changes. The discussion focused on the subpopulation question and how the PA would apply. It was argued that until demonstrated otherwise PA require that the possible subunit be handled as separate subpopulations.

Jesper Boje proposed that these redfish stocks should be subject to multiannual assesments, e.g. along the same lines as how *nephrops* is assessed.

### **6.5.8 Faroe Plateau Cod**

The text was accepted with minor editorial comments. ACFM had problems with the objective as stated and found that that is this objective is inconsistent with PA.

### **6.5.9 Faroe Bank Cod**

No comments. Text was accepted as final.

### **6.5.10 Faroe haddock**

As for Faroe Plateau Cod the management objective is inconsistent with PA. Some editing was done to the text.

### **6.5.11 Faroe saithe**

As for Faroe Plateau Cod the management objective is inconsistent with PA. The text was accepted with minor editorial comments.

The remainder of the afternoon was occupied by a presentation of the report to the Bureau of the proposal on a revised structure for the advisory committees. There were a number of clarifying questions the discussion of the proposal was postponed to Thursday when ACFM members had had time to consider the proposal in some details.

## **7 WEDNESDAY MINUTES 31 MAY 2000**

### **7.1 Norwegian Spring Spawners**

A management target exists:  $F=0.125$  associated with a SSB target ( $> 5$  mill tons) and a management threshold 2.5 mill tons. ACFM discussed how the language should be to distinguish between the management targets and the biological reference points. The basis is that  $F_{pa}$ ,  $B_{pa}$ , ... are biological reference points while management decisions are targets. Management should not talk about  $F_{pa}$ . These terms should be reserved for the biological reference points. Jake Rice reminded ACFM that the reason for using the word "proposed" was that management has the option to choose their level of risk taking (based on input from the assessment).

ACFM also discussed whether an accept (as being consistent with PA) of a management plan to fully comply with the PA also requires that actions have been agreed also for the SSB region of 2.5-5 mill tons SSB. ACFM considered that this would be preferable but not absolutely required.

ACFM found that some editing of the proposed text would be required including more elaboration for the perception of the stock and a statement on the estimate of the year class strength and the quality of this estimate. Furthermore, the management agreement shall be summarised in the ACFM report under the heading Management objectives. Rob Stephenson undertook to propose a draft.

The actual text of the agreed long-term management plan for this stock is copied in Appendix VII.

#### **7.1.1 Icelandic herring**

The text accepted with minor editorial comments.

#### **7.1.2 Capelin Iceland Greenland**

The procedure associated by advising of this stock should be reviewed. Rob Stephenson undertook to develop a proposal for the November meeting.

#### **7.1.3 Blue whiting**

Following the discussion on Tuesday a new draft was available. This draft was accepted with minor editorial comments.

#### **7.1.4 NSS Herring special request**

The text was found to be acceptable but ACFM found that it was not easy to reach any conclusions but the text probably including the needed information.

#### **7.1.5 Blue whiting special request**

The text was accepted with minor editorial corrections.

#### **7.1.6 Salmon post smolt special request**

The text about Salmon post-smolts by-catch in pelagic fisheries was accepted with minor editorial corrections and is shown in Appendix VI. However, it was not included in the ACFM report as the issue was considered as already covered by the ACFM report to NASCO made in April May 2000:

### **7.2 Deep Sea Species**

Initially, it was noted that these "new" fisheries have now been going on for quite some time and there are similar fisheries around the world with similar assessment and management problems. It was suggested that ACFM and the WG should take more account of work done outside ICES particularly of the management experiences in other areas. The WG should be asked to look into this. Also this research field is an area where Bayesian approach have been used and that this may help the WG.

CPUE series are available for many of the deep water fisheries and often these series are the only stock abundance indicator. It is unfortunate that CPUE series are especially dubious as stock indicators as these fisheries are new fisheries and thus quick increases in catchability can be expected, especially decreasing CPUE should be worrying.

Because of the problems with using CPUE series as stock indicators it would be particularly useful to data get from acoustics and egg surveys. Research on the use of these methods in relation to deep water species should be encouraged. ACFM considered if setting up a survey SG would help the process to get better abundance indices. It was agreed that ACFM will not in isolation take an initiative but ask RMC and LRC to discuss this topic in September.

The deep water fish assessment is faced with the lack of knowledge of stock structure but also have indications that groups of fish relatively stable in distribution in a particular area. There is little knowledge of the links genetically, in stock features or in general of relationship to other "stocks". There is a need to agree on a term for this phenomena. "Localised aggregation" could be a candidate. ACFM concluded to use "**Sub-units of the population**".

Olle Hagström commented that EC member countries are not apparently very interested in management measures on deep sea fisheries but found that the Commission needs more input from ICES to build arguments around the need for more effective measures. Closed areas were discussed and could be brought to the front of the discussions. He found that there was a need to think creatively and not be restricted to the traditional approaches. These fisheries have some distinct features that suggest that several of the traditional measures may not be applicable or the required information for their implementation will be available only after the collapse of the stocks. Creative management might be a possibility in this field of fisheries.

ACFM accepted this statement but also found that the NEAFC request was received only after the SGDEEP had met and that the SG and ACFM need time to deal with. It seems clear that there are data, information and experience elsewhere which have still not been used.

### **7.3 Blue ling.**

The text was accepted after some minor editing

#### **7.3.1 Ling**

More data available which the SGDEEP should look more into and maybe a special project should if possible be set up like the former Nordic Council project. The Hatton Bank sub-unit should be explored more in terms of CPUE, Z and status. The text was accepted after some minor editing.

### **7.3.2 Roundnose grenadier**

F was estimated by combining yield and stock size as estimated by the production model.

There were several stocks for which there is little but catch data available and for which no assessment is possible. These stocks were quickly reviewed and the proposed texts adopted.

## **8 ELECTION OF CHAIRS**

ACFM elected four new chairs (to be confirmed by the Council) as the first agenda item after lunch on Wednesday 30 June and based on the nominations that were done on Monday 29 May.

David Griffith conducted the election. He outlined the procedures. This is a nomination and the actual appointment will be at the Council meeting in September. Only one candidate for each group were available for nomination. As the present process is a selection there was no need for a voting. Instead the GS asked whether the candidates were acceptable for everyone. This was indeed the case. The nominated persons will be brought forward for the Council considerations in September 2000. The list is given in Appendix V.

ACFM continued with the task of **formulating advice for specific stocks**.

### **8.1 North-east Arctic Cod**

Following the previous discussion of this assessment a new text had been prepared and this was accepted with a small text addition.

### **8.2 Baltic special Requests**

#### **8.2.1 Sprat $Z_{pa}$**

#### **8.2.2 Herring and sprat maturity**

No complete data were available, the text summarised the information that has been collected so far. It was noted that the SG had not met simply because the data to be processed had not been forthcoming.

ACFM wondered why IBSFC has not asked for growth effect on PA points. The reason being that west data are used in the assessment but until now not maturity. WGBFAS should consider PA points sensitivity to growth changes.

#### **8.2.3 Separate herring 25-29+32 excl Golf Riga**

This is the second time ICES gets the requests and increasing the work load on WGBFAS. IBSFC should be asked whether it is really needed.

#### **8.2.4 Minimum landing size of sprat and herring**

There were a number of editing point, maps need to be inserted. Nothing of very substance. Final.

#### **8.2.5 BACOMA**

The text proposed was discussed and was found to be unsatisfactory. A revised version was needed that Jake undertook to produce. There was a detailed discussion of table B-3. An alternative version of the table was distributed by Sakari Kuikka.

## **9 THURSDAY 1 JUNE**

The meeting was opened at 9:00 and the agenda business items were addressed.

## **9.1 Agenda 5)**

**Quality Policy:** The start of this discussion was that ACFM very much agreed “Quality requires adequate data and time” The analysis would be too narrow if it was restricted to the SG, WG and ACFM meetings and how these are organised. Quality requires commitment to the task and time at home.

A particular recurrent problem is to make the reports and summary sheets available in good time prior to the ACFM meeting. The Secretariat promised for future meetings to include draft summary sheets as early as possible at the ICES web, i.e. shortly after the SG, WG meeting.

Comments from WG on the assessment deficiencies should be communicated to RMC to allow this committee to react on the research issues. Short term problems can be commented directly to the WG and the WGs have in practice responded positively to such comments. Longer term problems research should be reacted to through RMC.

ACFM agreed that it needs a formal procedure for approval of methods and saw this to be structured as 1) new methods 2) checking and verifying existing methods 3) training of participants in the WG. ACFM noted that RMC has already taken an initiative on the training issues.

The Secretariat is asked to send requests to be handled to the WG chair for commenting before the advice is accepted.

## **9.2 Item 5c) TOR Methods WG**

In setting up a Methods WG ACFM hopes to create a forum where proposed methods can be tried out outside the assessments and where specific questions on the applicability of methods in particular cases can be addressed. ACFM recognised that RMC saw the scope of the Methods Group as being wider than this and found that there is a need for a forum for general discussions of assessment methods. This might however better be done within the ASC theme sessions system. ACFM will maintain the final control of adopting methods, this will not be delegated to a Methods WG.

There was a rather long discussion of the Methods WG. This discussion concerned the form of the initiative that everybody agreed was needed. Would a WG be the best forum or would a series of SG/WK or perhaps a Methods WG could serve as a general umbrella running a series of specific WKs. The tendency of the discussion was to make sure that the individual ToRs get ample time for a throughout analysis and that a series of specific workshops would be the preferred option.

The list of topics was extended but the priorities were identified as medium term issues and IVPA). It was noted that in order for this initiative to be successful the researchers need time in the laboratories not just the time of SG/WK.

It was proposed that a first initiative would be to create an overview of methods development around the world.

In conclusion ACFM considered that a Methods WG should be created. It should work on a series of focused topic 1-2 topics per meeting TORs should be developed in cooperation with RMC and ACFM. It was also found important that coordination be secured with the concerted actions etc.

## **9.3 Item 5a) Report of Concerted actions**

Dankert Skagen summarised the reports available and focused on the second report that compared different methods to estimate uncertainties. He noted that the report included a very useful table of the characteristics of a number of methods. However, the action has not been concluded yet and he would prefer to wait with a more full discussion when the project has been completed and when more time for discussion would be available.

## **9.4 ICCAT Methods WG**

The Fisheries Adviser had participated in the first meeting of the ICCAT Methods working group. He gave a short presentation and pointed out that this group also discussed quality assurance issues.



## 9.5 Certification of Software

The Fisheries Adviser introduced the proposal. The need for more control of the software used in assessment was recognised and although the problem was considered to be only a minor one, the procedure proposed was adopted, see Appendix IV. Dankert Skagen noted that the certification procedure was limited to software that could be executed on the ICES Secretariat computers. Other laboratories, e.g. IMR, Bergen and MRI, Reykjavik use UNIX and software running on these systems may not be transferable to the ICES system. This would in particular be a problem for the very big multispecies simulation software, e.g. BORMICON and FLEXIBEST. ACFM did not reach any conclusions but noted that such software would be a major task to verify anyway and that the problem was confined to some few very specialised computer programs. The Fisheries Adviser noted that the adopted procedure should be seen in the context of developing quality Handbook and Manual.

## 9.6 Item 9b) Review of advisory procedure

This discussion reviewed the subgroup procedure followed by an e-mail discussion. Such a procedure had been used for the first time for the NASCO advice and for the in-year revision advice for Baltic Cod.

**NASCO** The Chair concluded the brief discussion that this went well but the subgroup meeting was too short, it should be expanded from 2 to 3 days. Also a second reviewer (the plan was to have two reviewers but one dropped out due to reorganisation in the Irish laboratory) would be preferable. Few comments from ACFM on the final draft. The time between the conclusion of the WG and the start of the subgroup was too short, about 10 days are required

**Baltic Cod** This was considered almost as being a worse case scenario. There were problems with the assessment that were discovered after the subgroup meeting as a result of the review done at the subgroup and correcting these errors changed the perception of the stock. The first draft had to be completely redrafted based on the comments from ACFM members. This however also indicated a very active participation in the e-mail discussion. Also for this review the two days were too short.

The Chair concluded this part of the discussion: In both cases another day of subgroup would be required. More time between end of WG and start of subgroup 10 days.

Frans van Beek considered that ACFM has not found a fully satisfactory solution but saw the need for a procedure that allows ACFM to react flexibly. He split the discussion into two: How do we handle the 1) recurrent advice that are required at times outside the ordinary ACFM meetings, e.g. advice on the North Sea roundfish and for NASCO and 2) ad-hoc requests for in-year advice and other situations when a quick response is needed. In general he considered that the ad-hoc requests strains the system and should be kept at a minimum. ACFM was reminded of the risk of reacting on noise in the assessment rather than changed perception of the stock status. Olle Hagström assured ACFM that management is aware on the risk of reacting on noise. The example of the North Sea plaice was recalled.

ACFM did not reach any conclusion but realised that it would need to think before the consultations in September when the problems would need to be dealt with.

## 9.7 Item 9c) Timing

Fisheries Adviser introduced the sketch of a plan. He suggested that the plan should be distributed to WG chairs for comments when ACFM's comments had been taken into account. The structure was not considered acceptable Frans van Beek summarised WG structure is at stake and in particular WGNSSK timing conflicts with survey timing. There would be too few experts available in August because they are on surveys. The proposal of moving AFWG to May was found to be reasonable.

We have to accommodate the clients. We need ideas on the table.

## 9.8 Item 9 b) Mid-year problem

ACFM has previously agreed that the default will be status quo F for projection in the immediate coming year but there are many examples when TAC constraints have been used for estimating the F in the mid-year. This is not only a methodological problem but also a presentation problem. What is Status quo F, we need a definition. There is a need for

more transparency on this issue. The basis for the discussion was that there are several examples when the  $F$  corresponding to a TAC constraint and the  $F_{sq}$  are quite different.

ACFM found that it would be unable to give a general answer but that this question has to be dealt with at the Working Group level. The WGs are in particular asked to consider the catch already taken when the WG meets and to look at consequences of different assumptions of catch in the mid-year. ACFM advised WGs to make a realistic assumption as possible concerning the mid year catch(/fishery) the status quo  $F$  is not a general solution but may be relevant to consider.

It was considered that this would be an example of a topic that could be addressed by a Method WG and that we need to develop a prediction that takes this uncertainty into account.

Olle Hagström found that the problem was only minor because management is aware of the problem and can deal with the options.

## **9.9 ACFM return to the final round of reviewing drafts for the advice**

*Icelandic haddock*: The text was accepted. NWWG should revise the maturity ogive for 2000.

*Icelandic saithe* Text accepted.

*Norwegian spring spawning herring*: The text was accepted and it was agreed that the entire management plan for minutes. We shall comment also next year on the implementation of the plan.

Olle asked for a comment on the validity of the 1998 year class, it looks good but this needs to be confirmed before it is advisable to take this into account in management. A comment was inserted.

*Icelandic summer Spawning herring*: Text accepted, No comments

*Capelin* Text accepted, No comments

*Blue whiting*: Reference points will be revisited next year because doubt about of the productivity of the stock. The draft was taken to final.

### *Herring Assessment Working Group*

Irish Sea herring: The assessment was quite unstable and this was reflected in the advice.

### *Baltic Fisheries Assessment Working Group*

Jake went through the major revisions.

*Cod in Kattegat* No comments

*Sole IIIa* No comments

*Central Herring* Text accepted, No comments

### BACOMA

A significantly revised new draft was made by Sakari and Jake. This was accepted.

### *DEEP WATER SPECIES*

Sections 1-4 no comments

Assessment accepted with some editorial changes.

Concerning the management advice it was agreed to insert a general note in the introduction “There is no management objectives for these stocks”.

#### **9.10 Agenda Item 10)**

Shading policy adopted, see appendix V. To be applied also for the October meeting.

Agenda 11 ACFM consultations

ACFM meeting in October. A preliminary list of task was circulated, to be made available on the web shortly.

#### **9.11 Agenda item 12)**

ASC Theme sessions, There were no particular points.

##### **9.11.1 Advisory structure proposed BWGADV**

The chair reminded ACFM of the presentation that was made by Joe Horwood on Tuesday where there was very little time for discussion. He would now allow some time for discussion with a view to comment to the Bureau that was due to meet in about 2 weeks time.

Several interventions considered that the approach taken by CGADV and by BWGADV was fundamentally flawed. They found it wrong to assume that the problem is structural instead they considered that the problem is time, resource and commitment. ACFM in general did not consider the proposal to have any greater time saving grace. Ad-hoc committees may be a useful tool. Also the Chair considered that the Sub chair of ACFM would not help much unless fragmentation would result.

Several also noted that peer review of the work was very much in the forefront in the presentation but they found the presentation unclear. It may be that ICES will have to pay for this work if expert really out the ICES circle will be requested to review the process.

The new committee ACE was discussed. ACE is seen as potential benefit but the membership should be carefully chosen and should have the right balance of expertise.

In conclusion the Chair summarised that he found that there was general support for the idea of the three committees system. That the system perhaps will not help in resolving the general strain on resources. ACFM will support the system and help to get it to work.

Under any other business ACFM discussed the EC request on Management of Deep Sea fisheries.

ACFM considered that it would be possible to put a team together that could come up with a set of possibilities on management. A short term approach was needed. The fisheries are very widespread and the group may need wide membership to be able to deal with its TORs.

ACFM supported the idea and wanted ACFM to push forward. Nils Hammer was nominated as the potential candidate for chair. ACFM identified Jakup Reinert, Andre Forest and Carmela Porteiro as potential candidates.

The meeting was closed at 19:15.

## APPENDIX I

Agenda item: A.2

ACFM MAY 2000

### Agenda

#### Advisory Committee on Fishery Management ICES Headquarters, 25 May – 1 June 2000

##### A. Plenary Sessions 25 May and 29 May – 1 June 2000

1. Opening
2. Adoption of agenda and timetable
3. Approval of minutes and technical minutes from October 1999 ACFM meeting and sub-groups in April and May
4. Documentation and Requests for Advice
5. Quality control
  - a) Report from the EC Concerted Action looking at medium term projections
  - b) Forecast – the mid-year problem
  - c) ToRs for Methods WG (input to RMC)
  - d) Handbooks and manual
  - e) Certification of assessment software
  - f) ICCAT – Approach to Quality Control meeting 8-11 May
6. Reports from meetings with Cooperative Organisations
  - a) Report of the 1999 NEAFC Annual Meeting
  - b) Follow-up 11<sup>th</sup> Dialogue Meeting (London February 2000)
  - c) IBSFC Working Group on Long Term Management Objectives and Strategies for Cod, Herring and Sprat – Turku, Finland, 22-24 May 2000
  - d) CWP – Precautionary Approach Terminology and CD-Rom Publication of Integrated Catch Statistics for the Atlantic
7. Matters requiring ACFM/ACME coordination
  - a) Fifth International Conference on the Protection of the North Sea and intermediate ministerial meeting
  - b) OSPAR
  - c) HELCOM
  - d) ACME activities in fisheries related environment advice
8. Election of Working Group Chairs
  - a) HAWG - Marinelle Basson (UK) nominated by WG

- b) SGDEEP – Odd Aksel Bergstad (Norway) nominated by WG
- c) WGNPBW – Asta Gudmundsdottir (Iceland) nominated by WG
- d) WGBFAS – Maris Plikshs (Latvia) nominated by WG

9. ACFM working protocols

- a) Advice Principles and Consistency
- b) Review of new advice procedure

- NASCO

- Baltic cod

- c) Timing of WGs and advice
- d) BWGADV – Joe Horwood presenting proposal

10. ACFM report

- a) Form of advice
  - Framework for Advice
- b) Format of the report
- c) Introductory items
- d) Table of contents

11. ACFM Consultations at the 88th Annual Science Conference 2000 in Belgium

12. ACFM meeting in October 2000

13. Matters related to 2000 Annual Science Conference

14. Working and Study Group Reports

- a) Ecosystem Effects of Fishing Activities (ACME)
- b) Study Group on Market Sampling Methodology (RMC)
- c) Study Group on Estimation of the Annual Amount of Discards and Fish Offal in the Baltic Sea (ACME)
- d) Study Group on Discard and By-catch Information (ACFM)
- e) Baltic International Fish Survey Working Group (BCC)

g) Marine Mammal Population Dynamics and Trophic Interactions (LRC)

h) Mackerel and Horse Mackerel Egg Surveys (LRC)

i) SGFIRENS

j) Planning Group for Herring Surveys

15. Preparation of Advice to Commissions and Member Governments

- a) Recurrent status and advice on stocks
- b) Non-recurrent requests

- HELCOM Fourth Periodic Assessment

16. Any Other Business

17. Closing

## APPENDIX II

### ADVISORY COMMITTEE ON FISHERY MANAGEMENT PARTICIPANTS AT MEETING, SPRING 2000

| PARTICIPANTS  |  | A | B |
|---------------|--|---|---|
| T. Jakobsen   | Chair  | X | X |
| E. Aro        | Replacing Chair, Baltic Committee                                  | X |   |
| R. Stephenson | Chair, Resource Management Committee                               |   | X |
|               | Belgium  |   |   |
| J. Rice       | Canada   | X | X |
| H. Hovgaard   | Denmark  | X | X |
| T. Saat       | Estonia  | X | X |
| S. Kuikka     | Finland  | X | X |
| A. Forest     | France   | X | X |
| C. Hammer     | Germany  | X | X |
| S. Schopka    | Iceland  | X | X |
| J. Molloy     | Ireland  | X | X |
| M. Plikshs    | Latvia   | X | X |
| F. van Beek   | Netherlands  | X | X |
| D. Skagen     | Norway   | X | X |
| J. Horbowy    | Poland   | X | X |
| F. Cardador   | Portugal   | X | X |
| V. Shleinik   | Russia   | X | X |
| C. Porteiro   | Spain  |   | X |
| B. Sjöstrand  | Sweden   | X | X |
| K. Stokes     | UK   | X | X |
| S. Cadrin     | USA  | X | X |
| O. Hagström   | Observer European Commission                                       | X |   |
|               | Observer NAFO  |   |   |
| J. Reinert    | Observer Faroe Islands and Greenland                               | X | X |
| J. Boje       | Chair of North-Western WG and Observer Faroe Islands and Greenland | X | X |
| R. Bowering   | Chair of Arctic Fisheries WG                                       | X |   |
| T. Raid       | Chair of Baltic Fisheries Assessment WG                            | X |   |
| T. Pakarinen  | Chair of Baltic Salmon and Trout Assessment WG                     | X |   |
| J. Gordon     | Chair of Deep-sea Fisheries SG                                     | X |   |
| J. Carscadden | Chair of Northern Pelagic and Blue Whiting Fisheries WG            | X |   |
| J. Simmonds   | Chair of Herring Assessment WG for the Area South of 62°N          | X |   |
| H. Lassen     | ICES Fisheries Adviser   | X | X |
| H. Sparholt   | ICES Fisheries Assessment Scientist                                | X | X |

**A Sub-Groups 25-27 May 2000    B Plenary Sessions 29 May– 1 June 2000**

## ADVISORY COMMITTEE ON FISHERY MANAGEMENT

ICES Headquarters, 25 May – 1 June 2000

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## APPENDIX III

ACFM MAY 2000

Revision 1

### Shading Policy

#### General

- ❖ Shading shall reflect whether ACFM considers the option to be consistent with the precautionary approach.
  - Options outside safe biological limits shall be shaded.
  - Shading is based on both the  $F < F_{pa}$  and the projected SSB in the short term  $< B_{pa}$ .
- ❖ Shading is independent of a management plan
- ❖ Shading takes a recovery (rebuilding) plan into account

#### Proposal for ACFM Policy

- **No recovery plan or recovery plan not accepted by ACFM as being consistent with PA**
  - $F(\text{option}) < F_{pa}$ 
    - *Shading* if SSB in short term projection  $< B_{pa}$
    - *No shading* if SSB in the short term  $> B_{pa}$
  - $F(\text{option}) > F_{pa}$ 
    - *Shading* if SSB in short term projection  $< B_{pa}$
    - *Shading* if SSB in the short term  $> B_{pa}$
- **ACFM accepted recovery plan**
  - *No Shading* for all options that are consistent with the plan
  - *Shading* for all options that are inconsistent with the plan
- **ACFM recommended recovery plan but no plan adopted by management**
  - This will have no effect on the shading. ACFM will comment on which shaded options could be consistent with a medium term (3-5 years) recovery plan.

## APPENDIX IV

### Certification of Software used for assessment purposes

Based on the report of the Workshop on standard assessment tools for working groups, March 1999, ICES CM 1999/ACFM:25, section 4 "Programming Guidelines and Acceptance Protocol" and in particular section 4.4 "Acceptance Protocol".

ACFM is invited to discuss, modify and adopt the following quality procedure

- The proposed acceptance protocol applies to assessment software. Testing of new methods is not part of this protocol. Assessment tools vary considerably in sophistication. For new sophisticated analytical methods, it would be expected that ACFM would refer the task of scientific endorsement to a working group such as a Methods Working Group, which possesses the appropriate expertise. Such a group would undertake detailed testing of the method and also would also recommend the context in which the method should be appropriately applied. Methods may be accepted without the software meeting appropriate documentation and coding standards and required ease of operation. In such cases the software cannot become part of "standard" endorsed package.
- ACFM will be responsible for endorsing assessment software.
- Endorsed programs would be the preferred tools to be used by assessment working groups. Other tools would only be used if the standard library did not provide the necessary method and working groups would need a strong justification for using such tools. As a minimum, any non-standard method should be used in addition to one of the standard tools so that results could be compared.
- The Secretariat maintains a library of endorsed "standard" software. These programs together with documentation and source code is public available as part of the transparency requirements for the assessment work. Commercial code under copyright will not be in the public domain.
- In order for a program to be accepted as part of the standard it would need to go through the following process:
  - The Secretariat must be provided with:
    - Documentation of the analytical method which gives a complete description of the approach. This can be in form of a peer reviewed paper in the prime literature
    - Documentation of the program which gives sufficient information on how to install and run the program, and how to interpret the output
    - Documentation of the input and output files
    - The program source code
    - Example data sets to check that the program is running correctly.
  - The Secretariat will check that the program installs and runs correctly on the ICES system, i.e. that the software gives the results claimed when applied to one or more test data. Such test data set t must accompany the software.
  - If the software installs and runs under the ICES system then the ACFM chair will nominate two reviewers, preferably drawn from ACFM membership to check the software. The reviewers need to be satisfied that the program developer has undertaken adequate testing of the program and expect documentation from the developer outlining the testing which has been undertaken. Their written reviews together with the software and documentation will be forwarded to ACFM through the ACFM home page. ACFM will be invited to comment on the review and to conclude if the software meets sufficient quality standard and can be accepted.

The above process cannot guarantee that every program is free of bugs and it is expected that the program source code will be available at the Secretariat. This will enable working groups to check any problems against the source code.

After inclusion in the "standard" package it is likely that programs will need some support, particularly where bugs need to be fixed. It is the responsibility of the developer to fix bugs. Where a bug comes to light and is corrected, this will need to be recorded in the program documentation at the Secretariat and a new version of the program identified in the standard library. However, this will not require a renewed certification process.

Where a substantial revision or update is introduced to a program it will be necessary for the new revision to undergo the same acceptance protocol as the original program. However, depending on the nature of the change, ACFM may identify a simpler endorsement procedure than that originally carried out.

**Software that might be acceptable as of May 2000**

The Workshop on Standard Assessment Tools for Working Groups, March 1999 (ACFM 1999/ACFM:25) proposed that the following programs form the initial standard set of assessment tools:

| <b>Program</b>      | <b>Function</b>                                      |
|---------------------|--|
| Lowestoft VPA suite | Catch-at-Age analysis                                |
| ICA                 | Catch-at-Age analysis                                |
| CEDA                | Catch/Effort data analysis -Production model fitting |
| RCT3                | Recruitment calibration                              |
| PA-soft             | Estimation of reference points                       |
| ICP                 | Medium-term projection, ICA base assessment.         |

In addition, pending the development of programs which conform to the required standards, the following are suggested for interim use:

| <b>Program</b>             | <b>Function</b>                             |
|----------------------------|---|
| WGFRAN4 (+Insens)          | Short-term forecast                         |
| MSFPMO                     | Short-term forecast                         |
| Refpoint (+Insens)         | Yield-per-recruit                           |
| MSFY                       | Yield-per-recruit                           |
| WGMTERMA+Recruit (+Insens) | Medium-term projection, XSA base assessment |

Most of the above programs have been developed by scientists from within the ICES community. In addition, it is envisaged that there will also be standard programs to pick-up output from these programs and produce standard tables and plots for inclusion in Working Group and ACFM reports. However, as these would be presentation rather than analysis tools it would be appropriate that such programs are developed by the ICES secretariat.

## **APPENDIX V**

### **Nominated Chairs for the next three year term**

**HAWG:** Marinelle Bassons, CEFAS, Lowestoft, UK.

**SGDEEP:** Odd Aksel Bergstad IMR, Flødeviken, Norge

**WGPNBW:** Asta Gudmundsdottir IMR, Reykjavik, Iceland

**WGBFAS:** Maris Plishs, Fisheries Research Institute, Riga, Latvia

## Appendix VI

### Salmon post-smolts by-catch in pelagic fisheries

The following text was produced during the ACFM May 2000 meeting but was not included in the ACFM report as the issue was considered as already covered by the ACFM report to NASCO made in April May 2000:

#### Salmon post-smolts by-catch in pelagic fisheries

NASCO requested ICES to update what is known on salmon by-catch in the pelagic fisheries .

#### Post-smolt surveys

Post-smolt sampling cruises have been undertaken by the Institute of Marine Research (IMR), Norway since 1990 with the primary aim of describing the post-smolt distribution in the Northeast Atlantic. Similar cruises were undertaken by Fisheries Research Services Scotland in 1996 and 1997. The results of these surveys were reported in 1998 (ICES 1998/ACFM:18) and 1999 (ICES 1999/ACFM:18). In summary, a surface trawl technique was developed and proved successful in capturing post-smolts. Over 1,000 hauls were undertaken covering an area from the south west of Ireland (50°N) to the east of Bear Island (75°N), and in the order of 1,000 post smolts and 25 1SW salmon were caught. The highest concentrations of post-smolts catches were found within the strong north-east running slope current along the north-west European continental shelf edge. In the central and northern Norwegian Sea post-smolts have been found in varying concentrations. In 1999 for the first time some post-smolts were caught in the Barents Sea (ICES 2000/ACFM:13).

Analyses of the hydrographical regimes at the capture sites show a strong concentration of the captures to the 9.0-10.9°C temperature interval and in salinities of  $\geq 35.000$  ppm, indicating a preference for the warm, saline, productive Atlantic water masses over the colder and less saline Arctic water in the north west and the warmer but less saline waters of the Norwegian coastal current in the east.

#### Estimates of post-smolt by-catch in pelagic fisheries

Only one country (Faroe Islands) implemented dedicated sampling of post-smolts in its pelagic fisheries and reported that no by-catch of salmon was found (ICES 2000/ACFM:13).

The Fishery Laboratory of the Faroes and the Russian Polar Institute (PINRO) have initiated a bilateral collaboration on the by-catch of salmon post-smolts north of the Faroes, but to date no joint report is available.

Observing post-smolts in large herring and/or mackerel catches is extremely difficult due to their resemblance both in size and coloration with the target species. To be certain of the absence of post-smolts in such catches and due to their seemingly low occurrences the whole catch must be screened. Assessment of by-catches on board commercial fishing vessels may prove too time consuming to be carried out in practice, however, efforts should be made to arrange screening of whole catches at landing sites.

Although some preliminary investigations have been carried out, ICES was unable to provide estimates of the by-catch of post-smolts in pelagic fisheries. While observations on catch on pelagic fishing vessels is a possibility, in reality this is likely to provide only a qualitative assessment of post-smolt by-catch. An alternative approach would be to carry out directed research fisheries with similar gear, locations and time as commercial fishing boats or carry out co-operative fishing with a commercial fishing vessel.

ANNEX II

**ARRANGEMENT ON THE LONG-TERM MANAGEMENT OF THE NORWEGIAN  
SPRING SPAWNING HERRING (ATLANTO-SCANDIAN HERRING) STOCK.**

The Parties agreed to implement a long-term management plan for the Norwegian spring spawning herring (Atlanto-Scandian herring) stock, which is consistent with a precautionary approach, intended to constrain harvesting within safe biological limits and designed to provide for sustainable fisheries. The plan shall consist of the following:

1. Every effort shall be made to maintain a level of Spawning Stock Biomass (SSB) greater than the critical level ( $B_{lim}$ ) of 2 500 000 tonnes.
2. For the year 2001 and subsequent years, the Parties agreed to restrict their fishing on the basis of a TAC consistent with a fishing mortality rate of less than 0.125 for appropriate age groups as defined by ICES, unless future scientific advice requires modification of this fishing mortality rate.
3. Should the SSB fall below a reference point of 5 000 000 tonnes ( $B_{pa}$ ), the fishing mortality rate, referred to under paragraph 2, shall be adapted in the light of scientific estimates of the conditions then prevailing. Such adaptation shall ensure a safe and rapid recovery of the SSB to a level in excess of 5 000 000 tonnes.
4. The Parties shall, as appropriate, review and revise these management measures and strategies on the basis of any new advice provided by ICES.

