

**MINUTES OF THE
ADVISORY COMMITTEE ON THE MARINE ENVIRONMENT**

**Højstrupgaard
5–9 June 2001**

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

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1 OPENING OF THE MEETING

The Chair, S. Carlberg, opened the meeting at 9.30 hrs and welcomed the participants. The participants then introduced themselves and indicated their scientific specialities. The list of participants is attached as Annex 1.

2 ADOPTION OF THE AGENDA AND SCHEDULE OF THE MEETING; DESCRIPTION OF PROCEDURES

The Secretariat described the working procedures for the meeting in terms of the preparation of the report.

The agenda was reviewed and two new items were added: item 5.6 on monitoring in seabirds, and item 13.4 on interactions between seabirds and aquaculture facilities. With these additions, the agenda was adopted.

The Chair stated that he envisioned that three sub-groups would be formed to work on:

- a) the web-based ICES Environmental Status Reports, to consider how this material should be presented and what additional products could be included (Chair: S. Carlberg);
- b) items 7.1 to 7.3 on the EcoQOs (Chair: H. R. Skjoldal);
- c) item 20.7, a proposal from a Sub-group of Delegates concerning publication policy in ICES, for which the views of ACME should be prepared (Chair: R. Law).

Group 1 should review the presentation of the Environmental Status Reports on the ICES Website and make proposals for how this material could be better; members: Colijn, Møllergaard, Lang, Noji, Calabrese, Nunes, Loeng.

Group 2 will consider in greater detail the issue of EcoQOs.

3 REQUESTS FROM REGULATORY COMMISSIONS AND MEMBER GOVERNMENTS

3.1 OSPAR COMMISSION

The Environment Adviser reviewed the Work Programme for ICES for 2000 from OSPAR, noting the agenda items relevant to each request. She noted that material was available for all requests for scientific advice from OSPAR.

H. R. Skjoldal stated that the database issues are very important because they are relevant to the development of data products and assessments.

3.2 HELSINKI COMMISSION

The Environment Adviser reported that the requests to ICES from the Helsinki Commission for 2001 had not been formally provided to the ICES Secretariat so she had prepared the list from her understanding of what was requested, based on draft requests received early in the year. She pointed out that this was the first year for which the new Memorandum of Understanding between ICES and HELCOM was in effect, which stipulated full cost recovery for scientific advice. HELCOM decided to cut back in the amount for such advice, so only two requests were made for 2001, both relating to quality assurance of biological and chemical measurements and criteria for the acceptance of data for assessment. She pointed out the agenda items that are relevant to responses to these requests.

4 INFORMATION REGARDING OTHER FORA

4.1 NORTH SEA CONFERENCE PROCESS

The Environment Adviser reported that the Fifth North Sea Conference will take place in Oslo in March 2002 and ICES is participating in the preparations for this Conference in two ways: 1) participating in the Species and Habitats Issues Group, for which materials from several ACME reports and several Working Group reports have been provided; and 2) preparing an overview on fisheries in the North Sea, which will be an update of the fisheries material for the North Sea contained in the report prepared last year for the Nordic Council of Ministers: Fisheries and Related Environment of Northern Seas.

4.2 ARCTIC MONITORING AND ASSESSMENT PROGRAMME

H. Loeng provided information on the major activities under AMAP and presented a draft section for the report. He stated that in the future, this item should be headed Arctic Council rather than AMAP.

The ACME accepted this section for its report.

4.3 EEA AND ETC/MC INTER-REGIONAL FORUM

The Environment Adviser provided an update on the activities of the EEA Inter-Regional Forum during the past year. The Inter-Regional Forum created three working groups: 1) data strategy, 2) GIS, and 3) Indicators. The Working Group on Data Strategy completed its work in December 2000, recommending, among others, that ICES serve as the data centre for data on environmental monitoring data for the Northeast Atlantic; these recommendations have been presented to OSPAR and HELCOM groups for further consideration. The Working Group on Indicators has met several times and a Workshop on Indicators, co-sponsored by EEA and several of the Commissions, will take place in the second week of June 2001.

There has been no further progress in the negotiation of a MOU between ICES and EEA.

4.4 NORDIC COUNCIL OF MINISTERS

The report reviewed by ACME at its January 2000 meeting for the Nordic Council of Ministers, "The Status of Fisheries and Related Environment in Northern Seas", was published in autumn 2000.

4.5 UNEP CONVENTION ON POPS

The Environment Adviser reported that she had been invited to an Expert Consultation meeting concerning possible programmes to monitor the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs), that was signed in Stockholm on 23 May 2001. This meeting proposed a pilot project involving the North Atlantic area, in which long-established monitoring programmes coordinated under OSPAR and HELCOM as well as programmes in North America collect data on a number of contaminants in the marine environment and ICES serves as an international data centre for such data. A general outline of the pilot programme was developed, but no commitments could be made at this stage.

5 MONITORING TECHNIQUES AND GUIDELINES

5.1 BIOLOGICAL EFFECTS MONITORING

5.1.1 Guidance on procedures to test and validate new biological effects monitoring methods

K. Cooreman stated that WGBEC had no new information on this topic, but will prepare material for its 2002 meeting, partly in association with the Working Group on the Application of Genetics in Fisheries and Mariculture. The chairs of WGBEC and WGAGFM agreed to revise the existing table of methods which was last revisited by WGBEC in 1999 and which was adopted for publication in the 1999 ACME report.

5.1.2 Implications for marine biological effects monitoring of the EU Water Framework Directive

Draft material was prepared by M. Waldock, who was unable to attend the meeting. Based on this material from WGBEC, it was noted that there is concern that the biological surveillance associated with the new EU Water Framework Directive (WFD), would be focused on bioassays and not take account of the more modern developments in biological effects monitoring. K. Cooreman and F. Colijn agreed to work further on this draft item for the report. H.R. Skjoldal stated that the WFD is mainly focused on biological rather than biological effects monitoring, and we need to decide whether ACME should make any comments on this focus.

K. Cooreman thereafter presented a revised section for the report.

In the discussion, it was pointed out that on the basis of the WFD some countries may reduce their activities in biological effects monitoring and also in chemical monitoring. The efforts of ICES in biological effects monitoring were not taken into consideration in the development of the WFD.

It was felt that this WFD is a step backward as the techniques required have already been applied for the past two to three decades; thus, these techniques should be complemented with newer techniques.

J. Doyle stated that the EC has established several technical working groups to develop details of the implementation of this Directive and this material would be useful in this context.

The ACME felt that the statements expressing reservations concerning the impact of the WFD on monitoring programmes should be strengthened and, with this amendment, adopted this text for its report.

In terms of the continuation of work on this topic, the ACME noted that members of WGBEC (Dick Vethaak, Ludwig Karbe, and Ketil Hylland) will work intersessionally to produce a paper on this issue.

5.1.3 Sea-Going Workshop on the Effects of Contaminants in Pelagic Ecosystems

K. Cooreman presented a draft section for the ACME report briefly summarizing the status of this workshop, based on the SGSEA report. After the addition of more detailed material, this was accepted for inclusion in the ACME report.

In the discussion, it was emphasized that the BECPELAG constitutes a major ICES activity in relation to the study of effects of contaminants in marine ecosystems and the identification and assessment of methodologies suitable for monitoring purposes. Therefore, results of the workshop, once available, should be made widely available.

In this context, the ACME took note of a recommendation by the ICES Marine Habitat Committee to hold a Theme Session entitled "ICES/IOC Sea-Going Workshop on Pelagic Biological Effects Methods – Results and Conclusions" (co-conveners: P. Matthiessen (UK), T. Lang (Germany), K. Hylland (Norway) at the 2002 ICES Annual Science Conference in Copenhagen, Denmark. The ACME supported this recommendation because the Theme Session will provide an opportunity to present the results of the workshop to the ICES community and to raise the profile of ICES with regard to environmental issues.

5.1.4 Methods for the analysis of PAH metabolites in bile

Draft text for the report was produced by M. Waldock based on the MCWG report, and presented by R. Law. This will be revised somewhat to bring it into the standard for an ACME report.

5.2 INFORMATION ON MONITORING TECHNIQUES AND GUIDELINES RELEVANT TO OSPAR

K. Cooreman presented a draft section for the report based on material from WGBEC concerning new programmes on biological effects methods. The ACME accepted this for inclusion in the report.

5.3 INFORMATION RELEVANT TO THE HELSINKI COMMISSION'S MONITORING PROGRAMMES

E. Andrulowicz presented a draft section for the ACME report based on the reports of SGEAM, SGQAB, and SGQAC. After some small editorial changes, the ACME agreed to include this in its report.

5.4 TECHNIQUES FOR SEDIMENT MONITORING

5.4.1 Normalization annex of sediment monitoring guidelines and normalization report

K. Cooreman stated that WGMS prepared a new annex on normalization, but this material has now been circulated in the OSPAR framework for approval by the OSPAR Commission. It was agreed that this outside initiative should be ignored and the material from WGMS should be handled in the usual way.

Several errors were pointed out in the WGMS report and these comments will be prepared in greater detail for sending to the Chair of the WGMS.

After further work, K. Cooreman and T. Nunes presented an amended text for this item. K. Cooreman pointed out that, after the discussion of the earlier material from WGMS on normalization at the 2000 ACME meeting, WGMS has prepared an improved version of this annex. Most of the concerns expressed by ACME in 2000 have been taken into account in the new version, although WGMS did not agree with all of the ACME comments. Nonetheless, K. Cooreman and T. Nunes felt that ACME should adopt this material, particularly given the urgent need for this material by OSPAR.

There were several comments concerning the text of the section for the report and additional amendments were requested to provide greater specificity for the application of the annex. With these amendments, the ACME accepted this section and the associated annex on normalization for the report.

5.4.2 Methodology for spatial and temporal monitoring of sediment quality

T. Nunes presented a draft section for the report based on the WGMS report. It was agreed that this section should include the bullet points from the WGMS annex on temporal trend monitoring, with an indication that this work will be continued.

5.5 STATISTICAL ASPECTS OF MONITORING

5.5.1 Methods for the analysis of quarterly input data

S. Uhlig presented a draft section for the report based on material from WGS AEM; this section covers also agenda item 5.5.2. He pointed out that this work is a continuation of work conducted in the previous two years with regard to the analysis of data on inputs of contaminants to the marine environment. In addition to this section, Annex 7 from the WGS AEM report was proposed to be included as an annex to the ACME report.

The ACME accepted this material for its report, with a change in title to reflect the actual contents of the section.

5.5.2 Trend detection methods for the analysis of monthly data on inputs of contaminants

This item was merged with agenda item 5.5.1.

5.5.3 Spatial sampling design (e.g., to assess mean level in an area)

A. Bignert presented a draft section for the report based on material from WGS AEM. This is based on an example of a spatial study using satellite data.

Several questions were raised concerning this section. The ACME agreed to include this section in its report, after amendment.

5.5.4 Techniques for dynamic sampling in monitoring programmes

A. Bignert presented a draft section for the report based on material from WGS AEM. It was pointed out that this method is currently under discussion in the EC for application under a Directive.

The ACME accepted this section for its report.

5.6 MONITORING OF SEABIRDS

R. Alexander presented a draft section for the ACME report, which was accepted.

6 QUALITY ASSURANCE PROCEDURES AND INTERCOMPARISON EXERCISES

6.1 QUALITY ASSURANCE OF BIOLOGICAL MEASUREMENTS IN THE BALTIC SEA

J. Nørrevang Jensen presented a section for the report based on material from SGQAB.

A. Yurkovskis stated that the macrophytobenthos issue should be mentioned. At present, only two or three countries are following the HELCOM COMBINE monitoring guidelines and he felt that this should be noted.

The ACME felt that further evaluation should be added to this material to give HELCOM more evaluation of this work. Several members from Baltic countries agreed to assist in this work.

6.2 QUALITY ASSURANCE OF BIOLOGICAL MEASUREMENTS IN THE OSPAR AREA

F. Colijn presented a section for the report based on SGQAE material. With some additions, this was accepted for the report.

6.3 QUALITY ASSURANCE PROCEDURES FOR BIOLOGICAL EFFECTS TECHNIQUES, INCLUDING FISH DISEASES

K. Cooreman presented a draft section for the report based on material from WGBEC and WGPDMO.

The ACME discussed the recommendation that ICES consider a self-funding follow-up to BEQUALM with other organizations including OSPAR, and HELCOM. It was felt that ACME should express a clear interest in promoting a continuation of this project.

Accordingly, the ACME decided that it should state that ICES is interested in this work and would welcome follow-up arrangements.

6.4 QUALITY ASSURANCE OF CHEMICAL MEASUREMENTS IN THE BALTIC SEA

E. Andruliewicz presented a draft section for the report based on material from SGQAC.

S. Uhlig stated that WGSAM had been requested to review the Technical Note on Measurement Uncertainty of Analytical Methods and that it had made some comments on this Technical Note. He stated that he would work with the author of this Technical Note so that the final note would be available by late September. It would then be possible to transmit this note with the others that have been completed by SGQAC in the autumn.

R. Law mentioned some comments from MCWG on some of the SGQAC work, particularly on the usefulness of the measurement of dissolved organic carbon and on dissolved oxygen. MCWG suggested that the material on dissolved oxygen prepared by MCWG and included in the 2000 ACME report should be used instead of the SGQAC material, which was found to be confusing. This message was to be conveyed back to the SGQAC Chair by a member of both MCWG and SGQAC, P. Woitke.

Concerning the DOC issue, it was pointed out that this parameter is considered important for studies in the Baltic Sea and, given that MCWG did not have substantive comments on the Technical Note, the ACME agreed that it should go forward to HELCOM.

The ACME will need to resolve the question of which document should be submitted to HELCOM on dissolved oxygen measurements. After review of the two documents, the Chair pointed out that the SGQAC document relies on the Unesco tables which are slightly in error. The MCWG note on this topic takes this error into account and provides the correct formulas to program the calculators so that the correct values are obtained. This MCWG note was published in the 2000 ACME report. The ACME agreed that, rather than providing the SGQAC material which relies on incorrect tables and is more difficult to use, Annex 5 to the 2000 ACME report should be forwarded to HELCOM, after amendment, by reference to the calculator on the ICES website.

6.5 GUIDELINES CONTAINING CRITERIA FOR DATA SCREENING AND EVALUATION PRIOR TO ASSESSMENT OF CHEMICAL MONITORING DATA

R. Law presented some material for this item based on the MCWG report.

As this item was closely related to several other items on the agenda, it was agreed that R. Law would work with E. Andruliewicz, S. Uhlig, and J. Nørrevang Jensen to prepare an overall section covering QA data to be submitted and criteria for evaluating data sets in relation to these QA data.

6.6 CERTIFIED REFERENCE MATERIALS FOR ORGANIC COMPOUNDS FOR USE IN MARINE MONITORING

T. Nunes presented a draft section for the report, with an annex containing the tables with information on relevant certified reference materials (CRMs). She reported that MCWG has proposed a web-based means of informing about CRMs, containing a database of relevant CRMs and links to the websites of the producers of these CRMs.

In the discussion, it was proposed that this be taken in two steps, beginning with creating a link to the websites of the producers of CRMs, if this is feasible. The second stage would then be to create a relevant database.

This section was agreed for the report, including acknowledgement of the work of the persons who had prepared the tables that will be attached as an annex to the report.

6.7 DEVELOPMENTS WITHIN QUASIMEME

J. Nørrevang Jensen presented a draft section for the report based on material from MCWG.

6.8 STANDARDIZED PRESENTATION OF THE LONG-TERM PERFORMANCE OF A LABORATORY

S. Uhlig stated that this item was supposed to have been handled by MCWG, which was unable to do so owing to the lack of basic material. However, material in agenda item 7.6 is relevant.

6.9 QA DATA TO BE SUBMITTED TO DATABASE AND POTENTIAL FOR A DATA FILTER

R. Law stated that MCWG had received a draft template for QA information from SGQAC and had redrafted this template and returned it to SGQAC. This is essentially material for use in further development of the data reporting format and will not be included in the ACME report.

6.10 OTHER ISSUES OR ACTIVITIES

There was no material for this item.

7 ASSESSMENT METHODOLOGIES AND RESULTS

7.1 INITIAL OVERALL CONSIDERATION OF ECOLOGICAL QUALITY OBJECTIVES (ECOQOS)

H.R. Skjoldal stated that no text has been prepared for this item. He proposed that ACME focus on contaminant-related issues in regard to EcoQOs. He reported that a Planning Group for the EcoQO Requests, chaired by the Chair of ACE and comprising the Chairs of the relevant Working Groups, had met in October 2000 to consider the basic issues in relation to EcoQOs and provide guidance for the further treatment of this topic in the Working Groups. Subsequently, the Working Group on Seabird Ecology met and prepared several specific EcoQOs and the Working Group on Marine Mammal Population Dynamics and Habitats also met and prepared some EcoQOs.

WGSE prepared a set of criteria for the development of EcoQOs including the requirement of a clear relationship to human activities. These criteria were used by WGMMPH and WGECO as well.

A sub-group considered the material on EcoQOs from the reports of WGECO, WGMMPH, WGSE, and SGEAM intrasessionally during the ACME meeting. This was reviewed by ACME for transmission to ACE for final treatment.

Questions were raised about the treatment of "oil contaminants" in Tables 1 and 2; it was felt that this was intended to refer to oil spills rather than operational discharges of oil from regular shipping. The EcoQO target level of >2 % increase per annum over at least ten years for bottlenose dolphins seems to be very ambitious and it was questioned whether it would be possible to measure a change at this level.

H. R. Skjoldal replied that "oil contaminants" is used to cover oil slicks that occur usually without attribution to any particular ship; these are more frequent than oil spills and appear to have a greater overall effect. It is not clear whether monitoring oiled guillemots would be the most effective means to monitor for these slicks.

K. Cooreman noted that organic mercury is considered to be a serious contaminant. A recent US report stated that women of child-bearing age should not eat more than 50 g of fatty fish per week on average; this type of figure should be extrapolated to values for mammals for which fish and marine invertebrates represent their entire diet.

P. Keizer felt that Table 1 does not provide a connection back to the ecosystem objective that is intending to be measured by the items in this table. This is particularly the problem for the portion of the table on marine mammals. Also, societal issues need to be taken into account, in addition to the scientific considerations.

It was agreed that members should send their comments to H. R. Skjoldal within the next several weeks so that the paper can be finalized for the ACE meeting. With these amendments, the ACME agreed that this material should be transmitted to ACE for final consideration.

7.2 INITIAL CONSIDERATION OF DRAFT ECOQOS FOR MARINE MAMMALS IN THE NORTH SEA

This issue was covered under agenda item 7.1.

7.3 INITIAL CONSIDERATION OF DRAFT ECOQOS FOR SEABIRDS IN THE NORTH SEA

This issue was covered under agenda item 7.1.

7.4 WORKSHOP ON THE SCIENTIFIC BASIS FOR ECOSYSTEM ADVICE IN THE BALTIC

E. Ojaveer provided information on the plans for this workshop in November 2001, which will be held immediately after the Baltic Sea Science Conference in Stockholm in November. He recommended that ICES nominate a speaker to give an ICES presentation at the Workshop on the Scientific Basis for Ecosystem Advice in the Baltic and also invite speakers from HELCOM and IBSFC for this Workshop.

H. R. Skjoldal noted that the development of an ecosystem approach for the Baltic is very important and ICES should be involved in this work. He felt that this issue should be brought forward to the Consultative Committee meeting next week for further handling of this issue and nomination of an ICES speaker for the Workshop.

The ACME agreed that ICES should confirm its participation in the Baltic Sea Science Conference in November 2001 and nominate a speaker who will deliver the ICES presentation at the Workshop on the Scientific Basis for Ecosystem Advice in the Baltic.

7.5 APPROACH TO RISK ASSESSMENT METHODOLOGY FOR THE MARINE ENVIRONMENT

R. Law presented a draft section for the report based on material from MCWG.

In addition, the Environment Adviser reported that ICES was approached in early 2001 by a representative from FAO concerning possible ICES cooperation on a proposed GESAMP Working Group on Hazard Assessment of Contaminants in the Marine Environment in Relation to both the Quality of Seafood for Human Consumption and also Risk to the Marine Ecosystem. The supporting materials for this proposal were sent to the Chairs of MCWG, WGBEC, and WGSAM for consideration at their respective meetings, including identification of a possible representative from each group to serve on the GESAMP Working Group.

The three Working Groups responded positively to this initiative and MCWG and WGSAM nominated specific persons to participate in this work, while WGBEC expressed a general interest in contributing to this work.

The ACME agreed that an association of ICES with this proposed GESAMP working group would be valuable and that ICES is in a position to provide a positive contribution to this work. Accordingly, the ACME recommended that appropriate means for an ICES association with this work be found, with the preferred method that ICES sponsor the participation of two or three persons from the above-mentioned ICES Working Groups to attend meetings of the GESAMP working group on behalf of ICES and report back on the work of this group, both directly to the ICES Secretariat and to their respective ICES Working Groups. The ACME Chair agreed to bring this proposal forward to the Consultative Committee meeting next week, with the assistance of the Environment Adviser.

7.6 MEANS OF INCLUDING TEMPORAL DATA WITH VARIOUS DEGREES OF QUALITY IN A TEMPORAL TREND ASSESSMENT

S. Uhlig presented a draft section for the report based on material from WGSAM, which represented a reply to some statements in the MCWG report.

This material was considered to be very important and the dialogue between statisticians and chemists will be very welcome. However, there are clear divergences of opinion between statisticians and chemists on this topic.

The Chair pointed out that in a trend assessment, rejecting a large amount of data will weaken the assessment. However, allowing in data that are of poorer quality also weakens the value of the conclusions. The latter situation might be preferable if handled in a controlled way.

A. Bignert stated that if the precision of the chemical analysis is very precise in relation to the environmental variability or biological variation, then there will be more gain in allowing less precise analytical data in the assessment. Thus, in situations of very high environmental variability, taking into account data of poor QA will increase the power of the trend detection. R. Law stated that this should be tested using real data.

It was felt that each situation needs to be considered individually; for example, deviations from monitoring guidelines need to be evaluated on a case-by-case basis to determine the potential impact of the deviation on the statistical analysis. Also, for older data there are often no QA data available, so each case must be evaluated individually.

S. Uhlig and R. Law will work together to prepare a final text for this item, in association with the text for agenda item 6.5. This text was thereafter reviewed and accepted by ACME.

7.7 ENVIRONMENTAL INDICATORS

E. Andrulowicz presented a draft section for the report based on material from SGEAM. He noted that there are a number of activities relevant to the development of environmental indicators, including those under OECD, EEA, and GIWA. The EEA indicators in particular are not very clear and may result in confusion or misinformation.

He recommended that ICES become involved with indicator development and cooperate in ongoing efforts in the preparation of indicators. This development of indicators should be integrated with environmental assessment activities.

F. Colijn stated that he is involved in an EU-funded project that will utilize the EEA DPSIR approach. This will require the inclusion of land-based driving forces that impact on water quality.

H. R. Skjoldal agreed that this is important because it is a complex issue and clear scientific advice must be given to guide the development of indicators. He felt that indicators provide a simplistic approach to more complex assessments. Indicators are intended to be at the top of a pyramid aggregating data and information to aid in decision making. He agreed that ICES should be actively involved in the development of indicators and proposed that a paragraph be included covering the EEA Inter-Regional Forum work on indicators, in which ICES has been involved.

It was proposed that caution be expressed against developing indicators with a high degree of aggregation. This reduces the information to a meaningless figure that cannot be used. However, we should deliver a message that ICES is willing to participate in the development of scientifically valid indicators for the marine environment.

Considering whether socio-economic issues should be covered, it was stated that socio-economic considerations are an important aspect of environmental issues, but it would not be necessary for ICES to be involved in socio-economic issues.

E. Andrulowicz drew attention to Annex 4 of the SGEAM report, which describes a scheme of OECD indicators based on the Pressure-State-Response approach.

It was decided that this text should be revised for further review. The revised text was later accepted for the report.

7.8 REVIEW OF RECENT ENVIRONMENTAL ASSESSMENTS AND PRODUCTION OF ENVIRONMENTAL QUALITY STATUS REPORTS

R. Law presented a draft section for the report based on SGEAM material.

Although initially it was considered that much of this material could be transferred to other items, ultimately it was agreed to accept this section for the ACME report.

7.9 ICES ENVIRONMENTAL STATUS REPORT

7.9.1 Oceanographic conditions

H. Loeng presented a draft section for the report comprising the summary of the ICES Annual Ocean Climate Summary.

H. R. Skjoldal welcomed this product and felt that it was improving each year. He looked forward to the further development of this work so that it can better be used in fisheries assessment. This will be enhanced by updating this report more frequently than once per year, preferably on a quarterly basis, with an overall summary at the end of the year. He also proposed that the distribution of water masses be included in this report; this can be based on data from the International Bottom Trawl Surveys. There is also a regular survey of Nordic Seas from which such data are available. It is known that the distribution of fish stocks is related to water masses. Thirdly, the use of mathematical circulation models should be used in relation to fish stocks. There are examples of this application by the IMR, Bergen.

The Chair stated that the issue of more regular updating of information is relevant to other work in ICES and will be considered further.

E. Ojaveer expressed his appreciation that, for the first time, there is information on the Baltic Sea in this Ocean Climate Summary.

The ACME accepted this summary for its report.

7.9.2 Zooplankton monitoring results

The ACME agreed on a brief text for the report.

7.9.3 Harmful algal blooms

H. R. Skjoldal presented a print-out of “Algaeinfo”, a web-based presentation of the distribution of algae in Norwegian waters. This is updated weekly by the IMR, Bergen. He noted that many institutes prepare such distribution maps and recommended that they could be combined from all such institutes on a regular basis into an overall summary of algal distribution.

Subsequently, the ACME agreed on a brief text for the report.

7.9.4 Fish disease prevalence

S. Mellergaard stated that last year maps of the distribution of fish diseases in the Northeast Atlantic were prepared and published in the ACME report. These were intended to be placed on the ICES website, which was done in March. No new data were available for dab, but updates were available for the spatial distribution of *Marteilia refringens* and marine VHS. WGPDMO has decided not to expand the number of diseases illustrated for the ICES website at present. WGPDMO appointed T. Lang and S. Mellergaard to make an annual revision of the maps.

The ACME agreed to include the text on this item in its report, but the maps will be available only on the ICES website.

8 MARINE CONTAMINANTS

8.1 INFORMATION ON SPECIFIC CONTAMINANTS

8.1.1 Evaluation of lists of priority contaminants in regional and international organizations

There was no material from the Working Groups for this item.

8.1.2 *Tris*(4-chlorophenyl)methanol (TCPM) and *tris*(4-chlorophenyl)methane (TCPMe)

S. Patin presented a draft section for the report based on material from MCWG.

In the discussion, it was requested that some additional information on these compounds, as well as their biological effects, should be included in this section. This could be based on the overview on these compounds published in the 1996 ACME report, along with a reference to this overview.

R. Law stated that further work is being conducted on these compounds in MCWG.

8.1.3 Polybrominated diphenylethers (PBDEs)

A. Yurkovskis presented a draft section for the report based on material from MCWG.

R. Law pointed out that a conference on PBDEs was held recently and provided explanations for some of the information in the ACME report. A. Bignert also had some additional material from Sweden that shows that the concentrations are now beginning to decrease in Sweden.

8.1.4 New contaminants (e.g., booster pesticides, chlorinated or brominated PAHs)

P. Keizer presented a draft section for the report based on material from MCWG.

Several amendments were proposed and it was agreed that the overview by Kevin Thomas should be attached as an Annex to the ACME report.

8.1.5 Volatile organic contaminants

C. Lima presented a draft section for the report based on material from MCWG.

It was suggested that some additional material be added from the MCWG report, and that statement on the need for further research be made more precise, stating that it would be useful to have data from other areas than just the Belgian coast.

8.2 DIOXINS, FURANS, AND DIOXIN-LIKE PCBS IN FISH, WITH PARTICULAR REFERENCE TO BALTIC FISH

J. Ólafsson presented a draft section for the report based on material from MCWG. He also proposed that the annex to the MCWG report on dioxins be included in the ACME report.

In the discussion, a question was raised concerning the information on sources of dioxins to the environment. It was also stated that care should be taken with regard to the information presented on the use of fishmeal for fish farms. It was noted that there are large variations in the dioxin levels in fish from different areas and more qualification should be given to these statements. Also, more detail should be provided concerning the claim that PCB levels have been decreasing, as they may not be decreasing in all areas.

In terms of recommendations, it was proposed that more data are needed on dioxins and dioxin-like PCBs for the North Sea and especially the Baltic Sea on a broader basis.

Several amendments were made to this section, which was accepted for the ACME report along with the annex from the MCWG report.

8.3 WORKSHOP TO EVALUATE THE UTILITY OF ARTIFICIAL INTELLIGENCE PROCEDURES IN THE ASSESSMENT OF POLLUTION EFFECTS IN FLATFISH

K. Cooreman reported that the plans for this workshop have had to be abandoned owing to the problems with obtaining a suitable set of data to be used for the workshop.

Instead, WGBEC decided to compile a North Sea database on biological effects measurements in fish, status of the fish and contaminant levels in individual fish. The data are to be submitted to Werner Wosniok, University of Bremen before 1/10/2001.

With respect to data storage, WGBEC also expressed concern on the continuing delay in finalising reporting and storage formats for biological effects data.

8.4 PROCESSES, SUCH AS SPECIATION OF METALS AND THEIR DIAGENETIC INTERACTION, IN RELATION TO CONTAMINANTS IN SEDIMENTS

T. Nunes presented a draft section for the report based on material from WGMS. She pointed out that MCWG and possibly also WGBEC have considered the use of semi-permeable membrane devices (SPMDs) and that this material should be modified to include their considerations.

The ACME agreed to include most of this material in its report, with amendments and changing the title to reflect that this is work in progress.

8.5 METHODS TO DEFINE SEDIMENT QUALITY CRITERIA

T. Nunes presented a draft section for the report based on material from WGMS and WGBEC.

The material from the WGMS annex on sediment quality criteria was considered to be an interesting beginning, but will require more work. ACME comments on this material will be forwarded to WGMS. The ACME agreed to include part of this material in its report, with a somewhat briefer summary of the background to this issue. It was noted that it is proposed that WGMS and WGBEC hold a joint meeting in 2003 to consider this issue in more detail.

8.6 PROGRESS IN UNDERSTANDING CAUSES AND EFFECTS OF ENDOCRINE DISRUPTION IN THE MARINE ENVIRONMENT

R. Law presented a draft section for the report prepared by M. Waldock and based on material from WGBEC. Several amendments were proposed, and the ACME accepted this material for its report after amendment.

The ACME was informed that the European Commission is organising a European workshop on endocrine disruptors with sponsorship by the Swedish Ministry of the Environment, the Swedish National Chemicals Inspectorate, OECD, WHO and the European Environment Agency (18–20 June 2001). The goal of the workshop is to make recommendations for future work on the Community strategy of:

- international cooperation and exchange of information;

- establishment of monitoring programmes;
- development of test methods./testing strategies; and
- research development.

The ACME noted that a number of studies on endocrine disruption are under way worldwide. It is important to establish the causes of observed effects and whether or not the problem is increasing or decreasing.

9 FISH DISEASES AND RELATED ISSUES

9.1 RESULTS OF NATIONAL REPORTS AND ANALYSES OF DATA ON DISEASE PREVALENCE IN WILD FISH STOCKS

S. Mellergaard presented a section for the report based on material from WGPDMO.

J. Doyle reported an incidence of VHS in an offshore stock off the coast of Ireland, and noted that this is an important issue for salmon and flatfish farming in many countries.

T. Calabrese reported that the cause of the lobster mortality in Long Island Sound has not yet been determined, but money is being allocated to study potential causes.

It was questioned why the need for further research included particular reference to the prevalence of skin ulcerations in Baltic cod, when there are a number of other diseases that may have significant economic impacts on fisheries. S. Mellergaard stated that this statement was made owing to the possible impact of the added mortality of this disease on the cod stock in the Baltic Sea.

With these amendments, the ACME accepted this section for its report.

9.2 PROGRESS IN WORK ON FISH DISEASE DATA ASSESSMENT

T. Lang presented a section for the report based on material from WGPDMO and a paper presented at the 2000 ASC (ICES CM 2000/S:12). The ACME agreed to this section with minor amendment.

9.3 CAUSES OF THE M-74 SYNDROME IN BALTIC SALMON AND PROGRESS IN THE UNDERSTANDING OF RELEVANT ENVIRONMENTAL FACTORS; STATUS OF *ICHTHYOPHONUS* IN HERRING

S. Mellergaard presented a section for the report based on material from WGPDMO. The ACME accepted this material, but agreed that it should be placed as sub-sections under the agenda item 9.1 text.

9.4 SPATIAL AND TEMPORAL TRENDS IN PARASITES OF WILD FISH AND POTENTIAL ENVIRONMENTAL FACTORS IN VARIANCE

T. Lang presented a section for the report based on material from WGPDMO.

The recommendation was discussed in the light of the reservations of WGPDMO on the possibilities of using parasites in studies of environmental change. It was noted that there are existing studies that would be worthwhile to continue and that ACME should encourage the continuation of these studies, without making a broad recommendation to intensify such studies on a general basis.

10 ISSUES REGARDING INTRODUCTIONS AND TRANSFERS OF MARINE ORGANISMS

10.1 CURRENT STATUS OF FISH, SHELLFISH, ALGAL, AND OTHER INTRODUCTIONS IN AND BETWEEN ICES MEMBER COUNTRIES

J. Doyle presented a draft section for the report based on material from WGITMO. This provided highlights of controlled introductions that have spread into other areas.

It was noted that the heading of this section is "Status of controlled introductions" but the material presented concerns introductions that have gone out of control.

J. Doyle stated that WGITMO was created to review planned and existing introductions, but now ICES Member Countries no longer seek advice in relation to introductions. Informal introductions seem to be occurring on a regular basis in Member Countries.

The ACME agreed that the ICES Code of Practice on Introductions and Transfers should be reviewed and revised. H. R. Skjoldal stated that work in relation to the Convention on Biodiversity has prepared interim guidelines for introductions and transfers; these should be considered in the revision of the ICES guidelines.

S. Mellergaard pointed out that introductions that have previously been carried out according to the ICES Code of Practice have resulted in the species growing in the wild and spreading far beyond their area of initial introduction.

The ACME agreed that a list of tasks should be drawn up, including revision of the Code of Practice at the 2002 meeting, so that WGITMO can begin work intersessionally to carry out the work required for ACME.

The ACME accepted the draft section with a small addition.

10.2 SELECTED EXAMPLES OF CURRENT INVASIONS, THEIR CONSEQUENCES AND SIGNIFICANCE

J. Doyle presented a section for the report based on material from WGITMO. This covered the spread of the North American lobster in European waters and the spread of a toxic algae on the west coast of Canada.

This section was accepted for the report.

10.3 PROGRESS IN BALLAST WATER RESEARCH AND MANAGEMENT

T. Calabrese presented a draft section for the report based on material from SGBOSV.

The ACME noted the SGBOSV recommendation that an assessment be made of the effectiveness of mid-ocean exchange and that there are already several studies under way in North America. This recommendation will be checked to ensure what precisely should be stated. The section was accepted for the report, with amendment of the recommendation.

10.4 DIRECTORY OF DISPERSAL VECTORS OF EXOTIC SPECIES

T. Calabrese presented a draft section for the report based on material from WGITMO. This mainly covered an outline for the directory of dispersal vectors, without further explanation as work on the report has not yet begun.

The ACME noted that this report was intended to have been completed by now, but that the report was at the same state as it was last year at this time. It was agreed that the Chair should be contacted and given guidance by ACME, as the parent Committee concerning what the Study Group should produce and the relative priority.

The ACME decided not to include this outline of the directory of dispersal vectors in its report.

10.5 STANDARDIZED FORMAT FOR COLLATING DATA ON NON-NATIVE SPECIES AND THE METHOD AND FATE OF INTRODUCTION

T. Calabrese presented a draft section for the report based on material from WGITMO. This provided a reporting format for collating data on non-native species and the method and fate of their introduction. This section was accepted for inclusion in the ACME report.

11 BENTHOS ISSUES

11.1 GUIDELINES FOR SAMPLING AND OBJECTIVE COMMUNITY DESCRIPTION OF EPIBIOTA OF SOFT SEDIMENTS AND HARD BOTTOM SUB-STRATA, INCLUDING QA MATTERS

J. Nørrevang Jensen presented some information on progress in the preparation of these guidelines, but the progress was not sufficient for mention in the ACME report.

11.2 PROGRESS IN THE NORTH SEA BENTHOS SURVEY

J. Nørrevang Jensen presented a section for the report based on material from BEWG.

H. R. Skjoldal recommended that ACME give strong support for this project. He proposed that BEWG be requested to make a summary of on-going national activities, showing on maps the areas covered by national monitoring programmes, and providing the results of these programmes. He saw the North Sea Benthos Survey as a means of supplementing these national programmes.

T. Noji stated that it is important that the information collected in this type of survey be transferred onto maps easily and quickly and that there be good interaction between BEWG and WGMHM to ensure this capability.

The Environment Adviser commented on the recommendation of BEWG that the data from the North Sea Benthos Survey be handled by a provincial institute and not by ICES, which has spent considerable time and resources developing a reporting format and database for biological community data. Out of the four types of data included in this database, benthos is the only type for which ICES has agreed to serve as data centre for ICES data (as opposed to those collected under HELCOM or OSPAR).

The ACME agreed that the Chair of MHC should speak to the Chair of BEWG concerning this recommendation and request BEWG to reconsider its decision.

The ACME agreed that this draft section should be included in its report with the addition of more details concerning this survey.

12 NUTRIENTS, EUTROPHICATION, PLANKTON ECOLOGY

12.1 PHYTOPLANKTON ECOLOGY ISSUES

F. Colijn presented a draft section for the report based on material from WGPE.

The ACME felt that it was a good step for the phytoplankton and zooplankton groups to work closely together, and that the new Study Group on Modelling Physical/Biological Interactions (SGMPBI) should also work with these two groups and should particularly participate in the two workshops that have been planned.

The ACME accepted this section for its report, with some additions.

12.2 PROGRESS IN UNDERSTANDING THE DYNAMICS OF HARMFUL ALGAL BLOOMS, INCLUDING IMPLEMENTATION OF GEOHAB

F. Colijn presented a draft section for the report based on material from WGABD.

The ACME accepted this material, with some additional explanatory material to provide somewhat more information to readers who are not familiar with this work.

The ACME agreed that the work of WGABD is of high scientific quality, with an eye to incorporation of new and existing technologies to further improve the possibilities to monitor HABs and their effects.

12.3 SCIENTIFIC AND OPERATIONAL MERITS OF INCLUDING PRIMARY PRODUCTION MEASURES AND ZOOPLANKTON STUDIES IN OSPAR JAMP EUTROPHICATION MONITORING

F. Colijn presented a draft section for the report based on material from WGPE and WGZE.

It was noted that this is not a formal request from OSPAR, but that SGQAE requested WGZE several years ago to provide background material as a basis for a decision to include zooplankton measurements in a programme of monitoring the effects of eutrophication.

The material available from the 2001 reports of these working groups did not provide adequate justification for a recommendation to include zooplankton in the OSPAR Nutrients Monitoring Programme. The previous reports will be checked to determine if this material is available for inclusion in this section; if not, there will be no material for the ACME report.

A second version of the text was discussed. It was felt that this text did not provide a scientific justification for the inclusion of zooplankton and primary production in OSPAR eutrophication effects monitoring programmes. The ACME proposed that this issue be remitted to the relevant working groups to develop a more complete justification for this proposal. Accordingly, no text on this topic will be included in the report.

12.4 ZOOPLANKTON ECOLOGY ISSUES

F. Colijn presented a draft section for the report based on material from WGZE. The ACME generally felt that this was not adequate for its report, but would return to this again later in the meeting.

13 MARICULTURE ISSUES

13.1 ENVIRONMENTAL INTERACTIONS OF MARICULTURE, INCLUDING NEW RESEARCH AND MONITORING PROGRAMMES

There was no material on this item as WGEIM did not meet in 2001.

13.2 GUIDELINES FOR THE PREPARATION OF ENVIRONMENTAL IMPACT ASSESSMENTS AND MONITORING PROGRAMMES FOR LARGE-SCALE SHELLFISH FARM DEVELOPMENTS

There was no material on this item as WGEIM did not meet in 2001.

13.3 ISSUES REGARDING SUSTAINABILITY IN MARICULTURE, INCLUDING INTERACTIONS BETWEEN MARICULTURE AND OTHER USERS OF RESOURCES IN THE COASTAL ZONE

There was no material on this item as WGEIM did not meet in 2001.

13.4 INTERACTIONS BETWEEN SEABIRDS AND AQUACULTURE FACILITIES

T. Calabrese presented a draft section for the report based on material from WGSE. He noted that this contained an interesting review of the types of interactions between seabirds and aquaculture facilities

The ACME accepted this section for its report.

14 COASTAL ZONE WATER QUALITY ISSUES

14.1 EU WATER FRAMEWORK DIRECTIVE: OVERVIEW OF REQUIREMENTS AND IMPLICATIONS FOR MONITORING PROGRAMMES

Asger Muellengract Olsen from the Danish Environmental Protection Agency, formerly from the European Commission, provided a detailed overview of the new EU Water Framework Directive (WFD) that went into effect in December 2000. This presentation covered the areas of application of the WFD, the monitoring requirements, and the anticipated overlap with existing monitoring programmes in OSPAR and HELCOM. The time frame for implementation was also covered. The first generation of a monitoring programme should be operational by 2006. In 2009 the first River Basin Management Plan must be operational, after assessment of the major environmental problems of the basin and consultation with the public on these issues.

He noted that the work of SGQAE and SGQAB is relevant to a working group established to develop common procedures for monitoring activities. Niels Thyssen at the European Environment Agency is the contact person for this work.

H. R. Skjoldal noted that OSPAR has been working on ecological quality for several years and felt that this OSPAR work on Ecological Quality Objectives should be compatible with, and might ultimately converge with, the EU work in the coastal and estuarine areas. He also queried whether the WFD will supersede the Habitat Directive.

Mr Olsen stated that the WFD has a very structural approach to ecological systems, rather than a process-oriented approach. In terms of the Habitat Directive, the ecosystems covered by this Directive must be plotted on the River Basin maps and the requirements of these areas must be considered and the objectives of these areas must be met.

F. Colijn asked for a clear definition of coastal area under the WFD. This is the baseline plus one nautical mile; each state defines its baseline, so the actual area covered will be different for each country.

Contaminants are covered to 12 n.m. from the baseline. It was not clear as to how frequently contaminants should be monitored, but it could be as often as monthly measurements in the territorial waters. Comments were made that few persons who were involved with marine monitoring had been involved in the preparation of these requirements.

There was no material on this topic for the report, as the above was intended to inform the ACME on the general coverage and requirements of the WFD.

14.2 OTHER COASTAL ZONE ISSUES

T. Noji presented a section for the report based on the 2000 WGEIM report.

Several comments were made, and it was agreed that this section should be included in the report, but under the section on mariculture issues. The issue was revisited later in the meeting, and it was decided not to include the section in the report.

15 EFFECTS OF EXTRACTION OF MARINE SAND AND GRAVEL ON MARINE ECOSYSTEMS, INCLUDING EXTENT OF EXTRACTIONS AND IMPACTS ON BIOTA AND EFFECT OF TURBIDITY CAUSED BY DREDGING

15.1 CURRENT MARINE EXTRACTION ACTIVITIES AND RESULTS OF ASSESSMENT OF THEIR ENVIRONMENTAL EFFECTS

C. Lima presented a draft section for the report based on material from WGEXT.

The ACME discussed whether the data contained in the first part of this section should be included. It was decided that each member should check their national figures to make sure that they are correct, but nothing can be done for countries for which no data have been provided.

It was felt that this information is of use but that it should be put together in tabular form with gaps for those countries that have not provided data. It was proposed that WGEXT be requested to prepare an overall table for all ICES Member Countries and also that WGEXT be requested to provide some evaluation of the figures compiled as well as an evaluation of the environmental effects caused by the extractions. The ACME agreed to this proposal.

As such an overall compilation was not available at this time, the ACME agreed to accept the current compilation for its report.

15.2 PROGRESS IN UPDATING THE 1992 CODE OF PRACTICE FOR THE COMMERCIAL EXTRACTION OF MARINE SEDIMENTS AND THE GUIDELINES FOR THE PREPARATION OF ENVIRONMENTAL IMPACT ASSESSMENTS

There had been no progress in this work during 2001.

15.3 METHODS TO ASSESS LOCALIZED IMPACTS FROM AGGREGATE EXTRACTION ON FISHERIES

C. Lima presented a section for the report based on material from WGEXT.

There was some discussion of a paragraph on the need for further research, but J. Doyle was unsure whether the Irish study on the monitoring of herring spawning grounds would actually take place. This will be checked before this is mentioned in the report. With this proviso, the ACME accepted this section for its report. J. Doyle was able to check this with the Irish authorities during the meeting and it was confirmed that the study has been conducted.

16 DATA ISSUES

16.1 HANDLING OF DATA ON CONTAMINANTS IN MARINE MEDIA

J. Nørrevang Jensen reported on the recent developments in the database activities at the ICES Secretariat, in which the overall management of the databases has been changed and additional resources have been provided to upgrade the databases and the web interface. In this connection, he presented a draft section for the ACME report.

H. R. Skjoldal stated that there have been some problems with the fixed format for submitting data; nonetheless, many countries have developed conversion programs from their own databases into the ICES format. Thus, they requested that the change to a new format be made in one large step, rather than in several smaller steps. Also, the use of XML in data exchange was mentioned, and he encouraged ICES to seriously look into this possibility.

Concerning the recommendations from the OSPAR/ICES Workshop on Data Submissions to the ICES Environmental Data Centre, these recommendations are partly to the Secretariat and partly concerning the availability of the data held in the ICES Marine Data Centre. He also felt that ICES needs to develop a clear data policy that promotes openness and access to data. Reference should also be made to the requirements of the Aarhus Convention that environmental information be made available to the public; even though this does not apply to raw data, raw data are required to

prepare the types of products that should be made available to the public. In terms of requesting Member Countries to submit their data, he pointed out that there are two types of data: those required for the programmes of the Commissions and those that are submitted voluntarily; these latter should be encouraged so that ICES can prepare data products that can be used by Member Countries.

T. Lang stated that if ICES wants to give free access to data, this may result in a decrease in submission of data by Member Countries. Noting the decrease in submission of data, he felt that ACME should recommend that Member Countries be encouraged to submit their data to the ICES Marine Data Centre.

It was agreed that recommendations 5 and 6 from the workshop should be reworded to recommend that ICES Member Countries review their data policies to promote openness and access to their data.

16.2 HANDLING OF NUTRIENT DATA FOR THE OSPAR COMMISSION

No report section was available on this item, however, the document for item 16.3 showed that only two submissions of data on nutrients were received for the Northeast Atlantic and these were not flagged for use by OSPAR. The Chair will request a section for the ACME report on this topic. The Environment Adviser offered to write a short text based on the table in the report section for item 16.3 and include a table over national data submissions.

16.3 ADVICE AND STANDARD DATA PRODUCTS FOR DEVELOPING THE COMMON PROCEDURE FOR IDENTIFICATION OF THE EUTROPHICATION STATUS OF THE MARITIME AREA

The Environment Adviser stated that this request had been on the 2000 Work Programme from OSPAR, but at the 2000 meeting of ACME no detailed specification of the work required had yet been prepared. These specifications were developed at the meeting of the Eutrophication Committee (EUC) that took place in Brussels at the end of October 2000. In response to this, the ICES Oceanographer had prepared some data products in March 2001 and again for an Intersessional EUC/ETG meeting that took place on 30 to 31 May 2001; these data products are contained in ACME Doc. 16.3/2.

The ACME agreed to set up an intrasessional sub-group to discuss these data products, comprising H. R. Skjoldal, H. Loeng, and F. Colijn. This sub-group prepared a section for the ACME report based on the material in Doc. 16.3/2. It was felt that it would be useful to have a clear summary of this work in the ACME report to show that this work has been done for OSPAR and to give it more visibility.

H. R. Skjoldal presented the text prepared by the sub-group, based on Doc. 16.3/2. The sub-group proposed that a small group of experts be established to support the ICES Oceanographer in the further development of this work and the preparation of products and evaluations of these products. These persons could serve as an e-mail forum to assist the Oceanographer; there are proposals for several persons who could provide this assistance.

The ACME expressed appreciation to the Oceanographer for his work, which was considered to be very good.

The ACME agreed that a group of four experts on nutrients and eutrophication should be established to assist the ICES Oceanographer in providing evaluations and advice on the further development of the OSPAR Common Procedure. The group could be composed of experts from Germany, the Netherlands, Norway, and the UK. The group is expected to work by e-mail correspondence.

16.4 DEVELOPMENT OF BIOLOGICAL DATABASES

J. Nørrevang Jensen provided an update on the progress in this work, with a text for the report. This was accepted by ACME for its report. The reporting format for biological community data has now been finalized and is available on the ICES website.

16.5 ICES PHYTOPLANKTON CHECKLIST

F. Colijn stated that this topic has been covered in the text for agenda item 16.1.

16.6 DEVELOPMENT OF REPORTING FORMAT FOR BIOLOGICAL EFFECTS MEASUREMENT DATA

J. Nørrevang Jensen presented a draft section for the ACME report, indicating that further work on the development of this reporting format awaited the finalization of the BEQUALM programme that is developing QA procedures for the relevant techniques and testing out the recommended methods. As this has an influence on the data that need to be reported, the format development must await the completion of the specifications.

17 PHYSICAL HABITAT MAPPING

T. Noji presented a draft section based on material from WKDSST, WGEXT, and WGMHM.

In the discussion, it was noted that it is difficult to distinguish between physical and more biological habitat mapping, and that the work now is split between ACME and ACE.

It was decided that physical habitat mapping should be considered by ACE and thus this material should be forwarded to ACE for its consideration.

18 OTHER ISSUES FROM WORKING GROUPS

18.1 MARINE CHEMISTRY WORKING GROUP (MCWG)

There were no other items from the MCWG report for consideration.

18.2 WORKING GROUP ON MARINE SEDIMENTS IN RELATION TO POLLUTION (WGMS)

There was no additional material from this report for ACME.

18.3 WORKING GROUP ON BIOLOGICAL EFFECTS OF CONTAMINANTS (WGBEC)

Late in the meeting some material was prepared for this item, to be reviewed with the final draft of the report.

18.4 STUDY GROUP ON ECOSYSTEM ASSESSMENT AND MONITORING STRATEGIES (SGEAM)

T. Noji provided a summary of issues from the SGEAM report.

The ACME noted that the recommendations will be handled by the Marine Habitat Committee, the parent committee of SGEAM. The material concerning the review of the environmental assessments conducted by OSPAR, HELCOM, and EEA will be merged with the material for item 7.8. The material on GIWA and the Baltic GEF will be discussed under agenda item 19.

18.5 WORKING GROUP ON STATISTICAL ASPECTS OF ENVIRONMENTAL MONITORING (WGSAEM)

S. Uhlig presented additional material from the WGSAEM report. The first major issue covered was the results of the WGSAEM work on methods to analyse data in the ICES biological community database; this provided an overview of the various methods that could be used and an example based on HELCOM phytoplankton data at two stations in the Baltic Sea. The second major issue related to sampling design to control the risk of failing to detect hot spots of contamination. The third issue concerned further work to exploit the data from the Voluntary International Contaminant Monitoring in Temporal Trends (VIC) programme.

In the discussion of the portion of this section concerned with methods to analyse biological community data, a question was raised concerning the use of the word “indicator” in relation to diversity indices. Attention was drawn to Section 5.1 of the WGECO report that provides definitions of terms; this should be reviewed when finalizing this section. The ACME agreed to include this material in its report, although it was not clear exactly where in the report this section would fit.

The ACME decided that the material on statistical design to control the risk of failing to detect hot spots and the material on the VIC should be included in its report under the section on statistical aspects of monitoring.

18.6 WORKING GROUP ON INTRODUCTIONS AND TRANSFERS OF MARINE ORGANISMS (WGITMO)

J. Doyle presented a draft section containing a list of databases and websites with information on non-indigenous species. The ACME felt that this material was useful and agreed to include it in its report.

18.7 WORKING GROUP ON PATHOLOGY AND DISEASES OF MARINE ORGANISMS (WGPDMO)

T. Lang presented information concerning 1) the high mortality of lobsters in Long Island Sound, USA, in 1999, and 2) the effectiveness of salmon farming control methods for sea lice in Norway based on material from WGPDMO.

In the discussion, it was noted that the problem with salmon lice is quite severe in Norway and certain actions are being taken, particularly with regard to minimizing disease transfer between farmed and wild fish. Advice from ICES on this topic is important.

J. Doyle mentioned problems in Ireland, particularly with regard to the chemical treatment of lice, the possibility that the lice will develop resistance to the chemical, and the potential impact on the environment owing to the frequent release of these chemicals to the environment.

The final paragraph on the control of sea lice was discussed and it was agreed that the past two ACME reports should be checked to ensure that the conclusions are parallel with those previously made.

With these comments and amendments, this material was accepted for the ACME report, to be included in the section on fish disease.

19 ISSUES IN ENVIRONMENT AND OCEANOGRAPHY

19.1 GLOBAL OCEAN ECOSYSTEM DYNAMICS (GLOBEC), INCLUDING ICES/GLOBEC WORKING GROUP ON COD AND CLIMATE CHANGE (WGCCC)

K. Brander presented a section from the report on progress in the GLOBEC programme. In addition, he reported that the IGBP intends to establish a major marine programme in the next few years and GLOBEC may be absorbed into this major programme.

H. R. Skjoldal felt that this is valuable work and is science that should be important to fisheries work in ICES and will be useful in the work of ACE. He commented on the importance of short-term environmental variability on fish stocks, in addition to the longer-term aspects.

There was extensive discussion on this and related topics.

The ACME accepted this text for its report and recommended that ICES continue to support GLOBEC-related research and the synthesis of work to date within the Cod and Climate Change Programme.

19.2 GLOBAL OCEAN OBSERVING SYSTEM (GOOS)

H. Loeng presented a draft section for the report based on material from SGGOOS. Noting that the ICES involvement in GOOS will be discussed by the Delegates, he stated that a recommendation from ACME concerning stronger ICES involvement in GOOS should be brought forward to the Consultative Committee and ultimately to the Council.

H. R. Skjoldal pointed out that there are some sensitivities of EuroGOOS towards the involvement of ICES in GOOS activities. He felt that ICES has an important function, both at the ICES regional level to promote the development of GOOS, as well as promoting the development of GOOS on a broader level. There is a good case for ICES to bridge the North Atlantic region in GOOS issues.

The ACME adopted this text and agreed to the recommendation that ICES needs to strengthen its involvement in GOOS. This recommendation should also recall that GOOS was established by the UN on the basis of the Rio Conference in 1992 and has parallel climate and terrestrial observing systems.

19.3 GEF BALTIC SEA REGIONAL PROJECT

There was no material specifically on this project.

19.4 GLOBAL INTERNATIONAL WATERS ASSESSMENT (GIWA)

E. Andrulowicz presented a draft section for the report. He reported that, as there is no global convention on waters, the UN system decided to conduct a global assessment of all waters, marine and fresh waters. The world has been divided into 66 sub-regions and they will be assessed according to a set of concerns. This assessment will be done using an indicator-based approach, rating according to classes of impacts. Socio-economic impacts related to pollution will also be rated. He recommended that ICES follow the development of GIWA activities, but not become actively involved with GIWA work.

20 ORGANIZATIONAL AND PROCEDURAL ISSUES

20.1 ROLE OF THE MANAGEMENT COMMITTEE ON THE ADVISORY PROCESS

The General Secretary, D. de G. Griffith, provided the background for the creation of the Management Committee on the Advisory Process (MCAP). He noted that ICES has two “pillars”, science and advice. For the past few years, ICES has been considering how to handle questions coming from the Commissions on ecosystem-related issues. It became apparent that to have two separate Committees trying to handle these issues was not the best way. Ultimately, the Bureau Working Group on the Advisory Process developed the proposal to create a third committee, the Advisory Committee on Ecosystems. MCAP was established in order to control the flow of questions to the three Advisory Committees and to check the feasibility of handling those questions. MCAP should also conduct active dialogue with the Commissions to ensure that we are meeting their requirements. MCAP held its first meeting at the end of January 2001 and is still developing a method of working; thus, we are still in an early phase of this new structure.

J. Doyle commented that ACME and ACE need to have the correct composition of expertise and inquired how this would be ensured.

In response, it was pointed out that it is the responsibility of the ICES Delegates to appoint the members. The Delegates are requested to keep a close watch on the agenda for these Committees to ensure that proper expertise will be made available.

H. R. Skjoldal pointed out a statement in the MCAP report concerning the necessity of obtaining good expert participation in ICES Working Group meetings. Chairs of Working Groups were encouraged to indicate in their reports if the Working Group did not have an adequate number and range of experts attending the meeting.

20.2 COOPERATION WITH ACE AND ACFM

The Chair reported that the first meeting of the new Management Committee on the Advisory Process (MCAP) considered which issues should remain in ACME and which should be moved to the new Advisory Committee on Ecosystems (ACE).

H. R. Skjoldal, the Chair of ACE, reported that the first meeting of ACE will take place at the end of August 2001. ACE will begin the development of an ecosystem approach to fisheries and environmental management and a framework for ecosystem assessment. In addition, ACE will prepare responses to the OSPAR requests on Ecological Quality Objectives that ACME began at this meeting. ACE will also begin the consideration of concepts and applications in operational fisheries oceanography. Other issues such as marine habitat classification and mapping and biodiversity will also be covered.

Dr Skjoldal presented an overview of his approach to environmental monitoring, which is a topic that ACME considers on a regular basis, and assessment, which is relevant to ACME on a more specific level and ACE on a broader, more integrated level. Thirdly, there are the management issues. These require appropriate products for decision making and ICES needs to carefully consider what data products it can and should prepare to assist in environmental management. In addition to data products, there is a need for expert evaluation and assessment. He encouraged ACME to take an active role in the development of thematic assessments, such as the status of various types of biological communities (e.g., benthos, phytoplankton) that can ultimately be useful in more integrated assessments of the environment.

He noted that there should be a very broad interface between ACE and ACME and this would be facilitated by a certain degree of common membership between the two Committees, in addition to the interactions among the Chairs of the Advisory Committees in MCAP.

As ACE is a new Committee, MCAP decided that the EcoQO request from OSPAR should be handled in the first instance by ACME as an established Committee, but then finally handled by ACE for transmission to OSPAR. However, it was anticipated that in the future, issues would be handled in only one Advisory Committee.

20.3 ICES STRATEGIC PLAN

A. Maucorps reported on the developments in the preparation of the ICES Strategic Plan which was originally presented at an Open Forum at the 2000 ASC, after which it was agreed that a revised version should be prepared. These revisions were intended to clarify and streamline the document. Although the new draft has been out for review for several months, responses have only been received from fewer than half of the Member Countries. Some of the comments received are easy to handle, but others have raised more substantive comments. The aim has been to prepare this document for near-final acceptance at the 2001 ASC in Oslo.

The revised Strategic Plan gives a clearer recognition of the role of the Member Countries in ICES and the contribution of individual scientists in this work. The role of the databases in the work of ICES is clearly stated in this document. ICES must offer a framework for cooperation with other organizations on socio-economic issues, but it is clear that ICES will not provide advice with a socio-economic basis. Fisheries will be considered in a broader, ecosystem context.

In the discussion, it was commented that work on this Strategic Plan has gone on over about five years already and that enthusiasm for it has waned among the scientists, who have worked hard on it for several years. It is important to finalize it now, otherwise it will risk being ignored by the scientists.

20.4 REVIEW OF ACME SHADOWING SYSTEM FOR WORKING GROUPS AND OTHER INTERNATIONAL FORA

The ACME compiled a list of members who were willing to serve as contacts to each of the Working Groups that provide material for the ACME report. This list will be considered again at the ACME Consultations Meeting in September. This list is attached as Annex 2.

20.5 OUTCOME OF THE ENVIRONMENTAL DIALOGUE MEETING

The Environment Adviser provided a brief overview of the outcome of the First Environmental Dialogue Meeting, the report of which is published as *ICES Cooperative Research Report No. 243*. This was viewed as a very successful meeting that identified a number of topics on which Member Countries would like to see further work from ICES, particularly in the development of an ecosystem approach to environmental and fisheries issues, the preparation of integrated environmental assessments, and further development of the ICES databases to permit such integrated assessments.

The Chair pointed out that the establishment of ACE at the 2000 Statutory Meeting responded to some of the concerns expressed at the Dialogue Meeting.

20.6 ELECTION OF CHAIR

As the present Chair was serving in an interim position following his appointment at the 2000 ASC, an election was held and Stig Carlberg was elected Chair of ACME for the next three years, subject to confirmation by Council.

20.7 PUBLICATIONS

The Chair reported that the Chair of the Publications Committee had prepared a report for the Delegates concerning a new policy for publications in ICES. To follow this up, the Delegates created a small sub-group to consider the matter further and to develop in more detail a proposed publications policy. This proposal has been accepted by the Bureau, which requested the Consultative Committee to provide comments.

The proposal contained an analysis of ICES current publication practices but the analysis did not show any understanding of how the advisory system works and gave no recognition of ACME's constant strive to include in its report high quality material from various Working Groups.

The ACME report provides a great deal of high-quality information, peer reviewed and compiled. H.R. Skjoldal stated that he felt that the ACME report is not adequately used by others, thus, it deserves some publicity. He advocated that some means of advertising the report be considered. He also felt that a printed copy of this report is valuable.

A drafting group to consider this issue in greater detail was established (chaired by R. Law, with members T. Lang, S. Mellergaard, T. Nunes, K. Cooreman, E. Ojaveer, and J. Doyle) and was given the task to draft the ACME response to the proposal for further consideration by the Consultative Committee..

Subsequently, the Chair of ACME presented the outcome of the sub-group discussions as a written document. This document was agreed with a few amendments and is attached as Annex 3.

21 WORK PROGRAMMES FOR 2002

21.1 OSPAR COMMISSION

The Environment Adviser presented the list of draft items on the OSPAR Work Programme for ICES for 2002. The final decision on the Work Programme will be made at the OSPAR Commission meeting the last week of June.

21.2 HELSINKI COMMISSION

The Environment Adviser presented some proposals for scientific advice prepared by two HELCOM subsidiary bodies, MONAS and HABITAT. The final decision on the actual request will not be made until early 2002.

22 RECOMMENDATIONS FROM WORKING GROUPS

The ACME reviewed recommendations from its Working Groups and Steering Groups and revised them as required.

The Terms of Reference for the 2002 meeting of the Study Group on Ballast and Other Ship Vectors (SGBOSV) were amended to emphasize the need for the Study Group to evaluate and assess the material considered by the Group, so that its report is not simply a compilation of various presentations without clear assessment. As the Group had not presented scientific justifications for its terms of reference, the recommendation would be sent back to its Chair to prepare these justifications. Pending this addition, the ACME accepted this recommendation.

The terms of reference for the 2002 meeting of the ICES/HELCOM Steering Group on Quality Assurance of Biological Measurements in the Baltic Sea (SGQAB) were amended to request the Group to report on the items contained in its terms of reference. The 2001 report of SGQAB had been so brief that it was difficult for ACME to obtain substantive material for its report, which is required in response to a continuing request from HELCOM. With these amendments, the ACME accepted this recommendation.

The terms of reference for the 2002 meeting of the ICES/HELCOM Steering Group on Quality Assurance of Chemical Measurements in the Baltic Sea (SGQAC) were considered to be too brief and did not provide a clear indication of the work to be conducted by SGQAC. E. Andrulowicz agreed to contact the Chair of SGQAC to have her provide more details in the terms of reference.

In addition to the recommendation for its next meeting, SGQAC had made several recommendations to ICES that were considered by ACME. The ACME accepted the new Technical Notes prepared by SGQAC for transmission to HELCOM for inclusion (or amendment) in the COMBINE guidelines, with the exception of the material on units and conversions with regard to dissolved oxygen and oxygen saturation, for which Annex 5 of the 2000 ACME report should be used instead. The ACME also accepted the recommendation that ICES and HELCOM harmonize requirements for QA information accompanying relevant data sets on hydrochemistry, biology, and contaminants in biota and sediments, noting that this harmonization has already occurred for all data types with the possible exception of hydrochemistry.

Noting the SGQAC recommendation that QUASIMEME be requested to consider the possibility of including a test sample for trace metal analysis in sea water containing low metal concentrations, ACME requested the ICES representative on the QUASIMEME Advisory Board, J. Nørrevang Jensen, to convey this request to the QUASIMEME office.

The ACME also endorsed the recommendation that performance criteria for laboratories participating in the HELCOM COMBINE programme be developed, so that they may be used to give guidance on the level at which the laboratories are expected to perform.

The ACME noted and accepted the request of the ICES/OSPAR Steering Group on Quality Assurance of Biological Measurements related to Eutrophication Effects (SGQAE) to change its name to the ICES/OSPAR Steering Group on Quality Assurance of Biological Measurements in the Northeast Atlantic (SGQAE). The terms of reference for its 2002 meeting were reviewed and several amendments were made including the need to report on several of the topics that they would review. With these amendments, this recommendation was accepted. The ACME also endorsed the SGQAE recommendation that the OSPAR/ICES Guidelines for Quality Assurance of Biological Measurements should be published in the *ICES Techniques in Marine Environmental Sciences* series and requested the Environment Adviser to redraft this recommendation in the appropriate format.

The ACME noted that the terms of reference for the 2002 meeting of the Working Group on Introductions and Transfers of Marine Organisms (WGITMO) had been revised to reflect the ACME priorities for this Working Group. The highest priority task for WGITMO is the revision of the Code of Practice on Introductions and Transfers and this should be prepared so that it can be agreed in final form at the 2002 meeting of WGITMO and, pending review and adoption by ACME, published in mid-2002. The WGITMO review should take account of the interim guidelines under the Convention on Biological Diversity. The remaining terms of reference were listed in decreasing order of priority, with the second highest priority given to the finalization of a report on the status of introductions of non-indigenous marine species in North Atlantic waters from 1992 to 2001. It was noted that the term of reference on the initial recommendation from WGITMO to finalize the workplan to prepare an ICES Cooperative Research Report on the

“Directory of Dispersal Vectors of Exotic Species” had been removed from the recommendation as the ACME considered that the format in the 2001 WGITMO report was sufficient.

The ACME then noted three additional recommendations from the 2001 WGITMO report:

- 1) ICES should establish a formal dialogue with international agencies such as the European Commission, European Inland Fisheries and Aquaculture Commission, and the International Maritime Organisation to discuss matters of joint interest with the view to a) promote the Code of Practice on the Introduction and Transfers of Marine Organisms as a tool of minimizing the risk of unwanted species introductions by deliberate releases, and b) minimize accidental introductions.

The ACME decided that the dialogue with EIFAC should not be started until the updated Code of Practice has been completed, and for the European Commission, the report on the status of introductions of non-indigenous marine species in North Atlantic waters from 1992 to 2001 should be completed first.

- 2) ICES should urge Member Countries and other jurisdictions to inform it of any new record of non-indigenous species and changes in the distribution and abundance of previously introduced exotic species in their jurisdiction.

The ACME noted that this is the work of WGITMO and should be conducted using the new reporting format contained in the 2001 WGITMO report.

- 3) ICES should establish a dialogue with international agencies, such as the EU Commission, relative to the increasing movements through trade agreements of live aquatic organisms and their products, to ensure that potential ecological and genetic impacts of such movements are taken into consideration, not just the prevention of the spread of disease agents. In relation to the revision of the EU Shellfish Disease Directive, advance notice of shellfish movements between countries should be given so that monitoring of consignments or relaying can be undertaken.

The ACME agreed that the comment concerning the first recommendation applied equally to this recommendation.

23 ANY OTHER BUSINESS

The Environment Adviser reported that the ICES Secretariat has decided that all Working Group reports will be placed on the open website for downloading and that discussions will be held in the Committees during the Statutory Meeting in Oslo concerning stopping the practice of sending copies (on paper or CD-Rom) to Working Group members.

In the discussion, it was felt that the open availability of Working Group reports in the open website may create some problems because the peer review comments will not be associated with the Working Group report. Issues in Working Group reports that could cause problems include the dioxin material in the MCWG report and sea-lice treatment issues in the WGPDMO report. It was agreed that the Chair would bring this up at the Consultative Committee meeting the following week.

24 ADOPTION OF THE 2001 ACME REPORT AND REVIEW OF DRAFT MINUTES

The draft 2001 ACME report, together with annexes, was reviewed and adopted with a number of amendments, several of which required checking after the meeting.

The draft minutes were reviewed and generally accepted.

The Environment Adviser stated that the report will be placed on the ACME website on 29 June (or early the following week) and a hard copy will be sent by mail. Comments should be sent to J. Pawlak, with a copy to the Chair, by 1 August 2001. Comments can be made by writing legibly on a paper version of the report or in electronic files using the editorial revision facility of Word.

Comments on the minutes and changes to the terms of reference of the Working Groups should also be sent to J. Pawlak by 1 August.

The Chair then closed the meeting at 14.00 hrs on 9 June 2001.

ANNEX 1: LIST OF PARTICIPANTS

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**ANNEX 2: 2001/2002 SHADOW ASSIGNMENTS
FOR ACME AND ACME-RELATED WORKING GROUPS**

Study/Working Group	Parent Committee	ACME Shadow	ICES Shadow
WGMMPH	ACE	Law	-
SGBOSV	ACME	Calabrese/Doyle	Environment Adviser
SGQAE	ACME	Colijn	Environment Adviser
SGQAC	ACME	Andrulewicz	Environment Adviser
SGQAB	ACME	[Hällfors]	Environment Adviser
WGITMO	ACME	Doyle/Calabrese	Environment Adviser
WGEIM	MARC	Calabrese/Mellergaard	Environment Adviser
WGAGFM	MARC	Cooreman	Environment Adviser
WGPDMO	MARC	Lang	Environment Adviser
MCWG	MHC	Ólafsson/Nunes	Environment Adviser
WGBEC	MHC	Cooreman/Lang	Environment Adviser
SGEAM	MHC	Piuze/Andrulewicz/ Yurkowski	Environment Adviser
WGMS	MHC	Cooreman/Nunes	Environment Adviser
WGSAEM	MHC	Bignert/Gentien	Environment Adviser
WGEXT	MHC	Lima/Andrulewicz	Environment Adviser
BEWG	MHC	Noji/Lima	Environment Adviser
WGPE	OCC	Colijn	Oceanographer
WGZE	OCC	Noji/Gentien	Oceanographer
WGOH	OCC	Loeng	Oceanographer
WGMDM	OCC	Loeng	Oceanographer
SGMPBI	OCC	Colijn	Oceanographer
WGHABD	OCC	Doyle	Oceanographer
SGGOOS	OCC	Loeng	Oceanographer
WGSE	OCC	Piuze	Oceanographer
WGCCC	OCC	Loeng	GLOBEC Coordinator

2001/2002 ACME SHADOW ASSIGNMENTS FOR OTHER INTERNATIONAL FORA

Organization	Relevant Meeting(s)	ACME Shadow	ICES Shadow
Arctic Council		Loeng	Environment Adviser
CONSSO			Environment Adviser
EEA		Skjoldal	Environment Adviser
GESAMP (UN)			Environment Adviser
IOC/GOOS		Piuze	Oceanographer
HELCOM NATURE		Andrulewicz	Environment Adviser
HELCOM MONAS		Andrulewicz	Environment Adviser
IMO ↳ LDC ↳ MEPC			Environment Adviser
QUASIMEME		Nørrevang-Jensen	Environment Adviser
SCOR (ICSU)		Skjoldal	Oceanographer
UNEP GPA			Environment Adviser
UNEP GIWA		Andrulewicz	Environment Adviser
WHO			Environment Adviser
WMO			Oceanographer

ANNEX 3: COMMENTS FROM ACME ON PROPOSALS FOR CHANGES TO ICES PUBLICATION POLICY

ACME was asked to provide comments to the paper submitted for consideration at the Consultative Committee meeting, and also its own proposals for changes to ICES publications policy initially prepared within a small drafting group.

(1) Comments on the paper by Turrell *et al.*

ACME appreciated the contents of the paper to a large extent, since it identifies a number of shortcomings in the present ICES publications policy. However, it felt that some clarification is needed regarding the role of ACME and its annual report described in the paper.

Under point 3 "Missed Opportunities" it is stated that numerous examples exist, particularly in the ICES CRR series, where excellent consensus summaries..."

ACME emphasised that the reports of the ICES Advisory Committees cannot be regarded as internal documents, since their purpose is to provide scientific advice to ICES' customers, including the EU, OSPAR, HELCOM and ICES member countries. Furthermore, there can be no doubt that the reports of the ICES Advisory Committees also contain many examples of excellent consensus summaries of state-of-the-art science.

Also under point 3, "Missed Opportunities", the paper provides instances where ICES has missed key opportunities to establish its work at the forefront of fisheries and environmental science, where publications in the CRR series have provided excellent consensus summaries of state-of-the-art science, but the relatively low profile of the CRR reports (beyond the ICES community particularly) has prevented them from being recognised as such. ACME has often raised the profile of material produced within WGs by reproducing material in its reports, but again this applies primarily within the ICES community. The paper also suggests that the active participation of high calibre scientists in WGs has been discouraged because their endeavours do not result in internationally recognised scientific outputs. This certainly does not apply across the full range of ICES WGs, however, and in MCWG as an example, much of the material produced in the form of overviews, intercomparison reports, etc. has subsequently been published in the open scientific literature. These contributions have though never been published in the IJMS, though a wide range of other peer-reviewed journals have been used.

Under point 5, "No Overall Publication Policy", it is stated that the mixture of high quality scientific summaries and Advisory Committee reports in the ICES CRR series reduces the impact of the series. This again seems to imply that the work carried out by the ICES Advisory Committees reflected in their reports is of low scientific value, which, of course, is not the case.

(2) Proposals by ACME

ACME suggests the following changes and developments to the current ICES publications policy and practice intended to raise the profile of ICES science and to make it more accessible to those both within and beyond the current ICES community.

- 1) ICES should conduct a customer survey for publications such as CRRs which have an established distribution list, aimed at finding out how many people use the material and how useful they find it, if it should be available in electronic format, etc.
- 2) The importance of the ICES website as a means of raising the profile of ICES work and making it more accessible to potential users of the information must be recognised and acted upon. Currently reports are accessible, but described as, for instance, the report of ACME 2000, with no indication of the detailed contents within and the scope of the science described. ACME 2000 is a bulky document that is presented as an Acrobat file. The pagination in Acrobat does not coincide with the pagination in the list of contents which makes it awkward to locate selected sections. Such a document would need to have direct links from the list of contents to the corresponding sections. Access needs to be in a much more subject/keyword oriented manner, so that user can find information that they need but that they do not know the location of within ICES reports and publications. All ICES publications should be made available via the website except IJMS and books. Keyword search and download facilities are essential, and availability via searchable CD-ROM provided at cost is also a desirable addition. The website should also be used for presenting highlights of current ICES science in a more eye-catching format, so as to attract interest from the public as well as scientific domains. So as to make the website more accessible to all it should also present the general public with a popular description of the organisation, its work and responsibilities.

- 3) The IJMS currently has a very broad declared scope, encompassing all activities undertaken within ICES (as one should expect). The range of papers published seems to be rather narrower, however, largely restricted to items of interest to fishery biologists. This yields some disincentives to those considering publication of environmental science papers in IJMS, as currently readers do not expect to find environmental science in this journal and the abstracting of papers into the wider science community is limited - other than ASFA none of the listed abstracting journals would be routinely used for searches on environmental data. The membership and remit of the editorial board of IJMS needs to be broadened in order to encourage submission and publication of high-quality papers across the range of ICES activities. As environmental science becomes established within IJMS the other shortcomings can be addressed and the visibility of ICES environmental science within IJMS raised.
- 4) The ICES Environmental Status Report summarised in the ACME report and published on the ICES website should be improved. At present it is difficult to find as it is placed far down in the hierarchy at the Science Committees webpage. It should be accessible already at the top level (www.ices.dk) and given a dedicated headline (e.g. Marine Environment Report or Status of the Marine Environment) independent of the various committees. As the next step the reader should be presented a short introductory text describing that this is a new ICES service, it builds on material from scientific working groups producing environmental information and that the content of this service will gradually increase in volume and the number of subjects. The material should be updated annually (as now) or more often depending on the nature of the information. The information should be presented with summaries in a glossy and accessible style. The reports would have to be designed for web publication which means i.a. that they should have a high proportion of graphics (maps, graphs etc). This again would enhance the ICES profile in both scientific and public domains. The latest ocean climate report on the web is a good example to build on.

Lengthy reports could directly after the summary have a list of content and a short information about the size of the document to give the reader a hint of the extent of the material. It is a good idea always to make the report available as a pdf-file that can be downloaded by the reader directly from the screen once his interest has been raised. It would also be useful to add links to relevant (parts of) websites of institutes in ICES member countries where information is updated more frequently than is possible on the ICES web.

The HAB information on the web is today available only as pdf-files. It would be very useful if they also were to be displayed directly on the screen since downloading would not always be necessary.

These suggestions could all be implemented quite soon and easily. More material is also available to be added e.g. WGPDMO maps showing the distribution of the incidence of diseases in fish and shellfish in different areas.

A further suggestion for improvements in the future would be that the reader should be able to select an area from a map on the website and then, as the next screen, get an overview of the environmental information available for that area and from there select the desired information.
- 5) The ICES PUBCOM needs to be a flexible body, with a delegated responsibility to implement an publications policy established by the Consultative Committee. They need to follow an the agreed strategy, but also to understand what is developing within ICES science and to be responsive to new directions, operating in electronic communication and able to take decisions rapidly within the policy agreed. The chairman of PUBCOM should be an ex-officio member of the Consultative Committee. If this is not possible and as an alternative a representative of the Consultative Committee is included in the future PUBCOM, this should not be the chairman of the Consultative Committee, as he already has too many calls on his time, but another committee member with delegated responsibility. PUBCOM should report annually on its activities to the Consultative Committee, and the policy and strategy revised as necessary at that time.

Summary

In summary, ACME agree that ICES currently hides at least some of its achievements and findings from the view of scientists who could make good use of them and so bring the work of ICES to a wider scientific community. The function of the ICES website is a pivotal one in terms of improving access to ICES work and raising the profile of this work in both scientific and public domains. Other than IJMS and publications in book form, all ICES publications should be available via the website in both report and searchable forms. The contents of IJMS should encompass all areas of ICES endeavour on an equal basis, as this is the ICES flagship publication in many ways. In the modern world ICES needs to reach out to the huge audience available via the www, and to make its quality science available as widely as possible.