

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

**ICES Secretariat**

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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 General Secretary, D. Griffith, then welcomed the meeting and noted the growing need for integration in marine environmental scientific work. For the past several years, ICES has also been holding discussions with EC DG Environment to develop a clearer relationship with that body. This dialogue is developing along satisfactory lines, and ICES has been requested to assist in the preparation for a meeting to be held in Copenhagen in December 2002 on a European strategy for the marine environment. In addition, Germany has requested ICES to prepare a layman's document on the marine environment of the Northeast Atlantic, including the Baltic Sea, for the joint ministerial meeting between OSPAR and HELCOM.

The Chair especially welcomed the new members. All members then introduced themselves, indicating their institute and areas of responsibility.

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

The ACME reviewed the agenda. The Chair pointed out that the items relating to ecological quality objectives for eutrophication-related issues (items 7.5 and 11.3) will be handled preliminarily in ACME, but the results of this will be forwarded to ACE for final handling at its meeting immediately after the ACME meeting. The agenda was adopted as proposed.

The timetable for the meeting was reviewed and adopted without change.

The procedures for the meeting were described.

## **3 REQUESTS FROM REGULATORY COMMISSIONS AND MEMBER GOVERNMENTS**

### **3.1 OSPAR Commission**

The ACME reviewed the requests from OSPAR for 2002, as provided in Doc. ACME2002/3.1/1. Item 1.1 is the recurrent request regarding the development of QA procedures for biological measurements under SGQAE.

Item 2.1 requests "participation in the joint assessment of concentrations and input data to apply the trend assessment procedure." Unfortunately, the OSPAR Secretariat had not been in a position to clarify exactly what was required to meet this request, despite several queries from ICES. Several working groups had, nonetheless, provided some material concerning this issue.

Item 3.1, to provide assistance in the preparation of data products based on the relevant data series available in the ICES data banks, for inclusion in an assessment report on the eutrophication status of the maritime area, is being handled by the ICES Oceanographer, who will provide some material for ACME to review on this topic.

Items 4 and 6 on routine data handling and database development, respectively, will be covered based on contributions from the ICES Marine Data Centre.

Finally, for item 5, on the provision of advice on data products in relation to the preparation of indicators, several working groups had been requested to develop responses. However, they generally responded that more details must first be provided concerning the use of these data products. ACME will need to propose a way forward to be able to handle this request.

In addition to the formal requests from OSPAR, an informal request had recently (1 May 2002) been made for ICES to review and comment on the third draft revision of the Joint Assessment and Monitoring Programme.

### **3.2 Helsinki Commission**

The ACME reviewed the requests from HELCOM, contained in Doc. ACME2002/3.2/1.

Item 1 is the recurring request for the coordination of the development of QA procedures for biological and chemical measurements in the Baltic Sea, as coordinated by SGQAB and SGQAC, respectively.

Item 2, concerning the evaluation of marine mammal populations in the Baltic Sea, is handled every third year, with the next treatment in 2003.

Item 3, advice on the statistical requirements for calculations in relation to the determination of background concentrations, had been withdrawn by HELCOM for financial reasons, but this withdrawal occurred after the terms of reference for the working groups had been determined. Accordingly, WGS/AEM provided a response to this issue for information to ICES. The ACME will need to decide how to handle this.

Under item 4, the preparation of various data products based on HELCOM hydrographic and hydrochemical data, has been handled by the ICES Marine Data Centre. A demonstration will be conducted of this work during the ACME meeting.

Item 5, on biotope mapping in the Baltic Sea, will be covered by ACE. Item 6, the development of a monitoring programme for estimating the abundance of seal populations, was dropped from the work programme by HELCOM for financial reasons.

#### **4 INFORMATION REGARDING OTHER FORA**

At the beginning of the consideration of developments in other fora, the ACME decided that no material on these topics should be included in its report unless it could be considered of use for that other organization in its work.

##### **4.1 Fifth North Sea Conference**

The Environment Adviser provided information on the outcome of the Fifth North Sea Conference, summarizing the main issues in the Bergen Declaration with relevance to ACME. These included the adoption by the North Sea Ministers of an ecosystem approach to marine management, including the development and implementation of ecological quality objectives.

##### **4.2 Arctic Monitoring and Assessment Programme**

H. Loeng presented a draft section for the report providing information on recent activities of AMAP. The ACME appreciated receiving this information, but will not include this in the report.

##### **4.3 EEA and Inter-Regional Forum**

The Environment Adviser provided an update on activities in relation to the EEA during the past six months, particularly the request from EEA that the ICES Marine Data Centre provide the EEA Water Topic Centre with relevant monitoring data that have been submitted for the OSPAR and HELCOM monitoring programmes. This request created a great deal of activity to obtain permission from data originators to ensure that they accepted that their data would be transmitted to the EEA. There is an ongoing negotiation between the ICES Secretariat and the EEA concerning data handling/transmission arrangements on a regular basis.

Cooperation under the Inter-Regional Forum is continuing, but the status and role of the IRF remain unclear.

Finally, EC DG Environment is presently preparing a comprehensive European Marine Strategy, which will be the subject of a stakeholders meeting in Copenhagen on 4–6 December 2002, hosted by the EC and Denmark. ICES has been invited to participate in the planning for this meeting.

##### **4.4 Nordic Council of Ministers**

There was no new information on this topic.

##### **4.5 UNEP Convention on POPs**

R. Law provided information on this topic. An Advisory Group has been established to advise UNEP Chemicals on activities to ensure the collection of data on concentrations of POPs in the environment; ICES is represented on this group via the Environment Adviser.



#### **4.6 Global Ocean Ecosystem Dynamics (GLOBEC), including ICES/GLOBEC Working Group on Cod and Climate Change (WGCCC)**

K. Brander provided information on progress in GLOBEC-related work. He stated that the funding problems have now been resolved for the next few years. Also, the question of whether GLOBEC should be considered a core activity of ICES has now been resolved.

He reported on the outcome of the GLOBEC Workshop held in Hillerød, the workshop on research priorities in relation to the ecosystem approach, and the Arctic Climate Impact Assessment. Furthermore, he will develop an EU Expression of Interest for a pan-Atlantic approach for an ecosystem framework for managing the marine ecosystem.

In the discussion, it was pointed out that some of the GLOBEC-related activities are related to the work that ICES will need to conduct in the development of indicators and EcoQOs. In response, K. Brander stated that GLOBEC is planning to handle the applied aspects related to GLOBEC, and a workshop may be held to cover this in a year or two.

#### **4.7 Global Ocean Observing System (GOOS)**

H. Loeng presented material concerning recent activities in the framework of GOOS.

The ACME discussed whether this material should be included in its report, given that ICES supports GOOS and its activities.

It was pointed out that one of the problems with obtaining support for GOOS is the wide range of its scope and the lack of clear definition of the borderlines of GOOS, as ultimately all marine observation could be part of GOOS.

The Chair reminded ACME that GOOS has been established to support the sustainable use of the marine ecosystem, and as such is comprehensive. Most of the activities of countries in marine observations fit into the GOOS objective, so there is no need to start them from the beginning.

The ACME decided to accept this material for its report, possibly with some editorial amendments to bring it in line with the requirements of a report section. Noting that this is also relevant to ACE, the ACME decided to provide this section to ACE for its meeting at the end of the week.

#### **4.8 GEF Baltic Sea Regional Project**

There was no material on this topic.

#### **4.9 Global International Waters Assessment (GIWA)**

E. Andruliewicz provided a brief update on the recent activities of GIWA.

### **5 MONITORING TECHNIQUES AND GUIDELINES**

#### **5.1 Biological effects monitoring**

##### **5.1.1 Sea-Going Workshop on Pelagic Biological Effects Methods**

K. Cooreman presented a draft section for the report based on material from WGBEC. He noted that there had been a delay in the distribution of the samples, so many of the samples have not been analysed yet. There will be a final workshop held in Copenhagen in late August 2002 to review the overall findings.

In the discussion, it was proposed that more details be added to the table to show a more complete picture of the activities. With these comments and additions, the ACME accepted this text for its report.

##### **5.1.2 Tables for recommended and promising methods for biological effects monitoring**

M. Waldo presented a draft section for the report based on material from WGBEC.

The ACME agreed on a recommendation concerning the inclusion of nineteen of these methods into monitoring programmes, in order to gain more experience about their suitability as routine tools.

It was felt that a caveat should be given that these recommended methods may provide comparable results when applied by experienced laboratories, but not necessarily by new laboratories. Several other minor amendments were made, after which the ACME adopted this section for its report.

Note: Based on comments received after the end of the meeting by a member who had been unable to attend, but contributed comments via e-mail, this section was subsequently dropped from the ACME report as external fish diseases and benthic community studies were no longer included in the recommended methods. These methods should be reconsidered by WGBEC, together with WGPDMO and BEWG, in 2003 along with the criteria for choosing methods to be included on the list.

### **5.1.3 Applicability for marine monitoring of new biological effects techniques in molecular biology, endocrine disruption, and proteomics**

M. Waldock presented a section for the report based on material from WGBEC.

The ACME discussed the actual value of these methods and whether they will really be useful in the future. With a few amendments, this section was adopted for the report.

### **5.1.4 Other issues regarding biological effects**

M. Waldock presented a section for the report based on material from WGBEC. This covered the proposed methodology for the EU Water Framework Directive and also provided some information on the EU-funded BEEP project.

In the discussion of the material relating to the WFD, the ACME noted that further additions to the WFD would not be possible at this stage, so this material should be presented as proposals that would be to supplement work in relation to the WFD. This material should be considered to contribute to the future debate about monitoring for compliance with environmental regulations.

However, it was pointed out that the EU is funding the BEEP project to develop biological effects monitoring, so it could be hoped that such monitoring will figure in future EU activities.

With these comments, the ACME adopted this section for the report.

## **5.2 Techniques for sediment monitoring**

### **5.2.1 Technical annex on metal analyses in sediments**

K. Cooreman presented draft text on this topic based on material from WGMS. This concerns an annex on trace metal determinations in sediments that was originally prepared for OSPAR and has subsequently been adopted by the OSPAR Environmental Assessment and Monitoring Committee (ASMO), with the WGMS amendments. The method includes the use of partial digestion of sediments, which has not been accepted by ACME. In addition, this change may critically affect the effectiveness of monitoring programmes, which may discourage laboratories from measuring contaminants in sediments. There are apparently no certified reference materials available based on partial digestion of sediments.

The ACME decided not to include the Technical Annex on Metal Analyses in Sediments in the ACME report as an addition to the ICES Guidelines on the Determination of Contaminants in Sediments, but would include the text commenting on that annex in its report.

### **5.2.2 National sediment quality criteria values and how they are derived**

K. Cooreman presented a draft section for the report based on material from WGMS.

In the discussion, it was pointed out that the use of Semi-permeable Membrane Devices (SPMDs) only measures the dissolved fraction of contaminants, and does not take account of the particle-associated contaminants that are very important for filter-feeding organisms, such as mussels. Thus, using these devices to estimate bioavailability may be

adequate for fish but not for all other organisms. The ACME should keep this in mind for further work. It was agreed that some draft text for terms of reference for 2002 for working groups should be prepared this week.

With these comments, this section was adopted for the report.

### **5.2.3 Appendix on error calculation for the Technical Annex on Normalization**

There was no draft text on this topic for the report, but the text of the appendix was available for review. S. Uhlig stated that, from a statistical point of view, the equations used in this appendix are correct and are practical rules for the generation of error propagation but they are not general rules.

T. Nunes stated that this appendix consists of two parts: an error calculation and the proposal of using a standard sediment. M. Leivuori stated that WGMS accepted the error calculation portion of this appendix, but had not discussed the portion of the document concerned with the standard sediment, so this portion of the appendix had not been accepted by the WGMS as a whole.

The ACME noted that the material concerning the standard sediment was contained in Section 6 of this appendix, and that all the other material had been accepted by WGMS. Accordingly, it was proposed that this appendix should be annexed to the ACME report but with amendment to or removal of the section on standard sediment. Subsequently, it was noted that the deletion of the section on a standard sediment had broader implications than simply removing one section, as this concept was also included in an equation in another section. Thus, the ACME decided not to accept the Technical Appendix on Error Calculation for inclusion in the Annex on Normalization of Contaminant Concentrations in Sediments, but rather remand the issue back to WGMS to obtain agreement by the full working group before subsequent reconsideration by ACME.

### **5.2.4 National procedures for temporal trend monitoring of contaminants in sediments**

T. Nunes presented a document for discussion on this topic, containing both draft text for the report and extensive comments on the approach of WGMS on this issue. She pointed out that, although the information is not complete, it appears that there is a large variety of approaches to the monitoring of temporal trends of contaminants in sediments, both in terms of sampling strategy, the fractions analysed, etc.

It was felt that an inventory of temporal trend monitoring programmes in the ICES area would be useful to provide an overview of this work. As this work is being conducted by WGMS, it was felt that this is the most useful way forward on this topic.

The ACME accepted the text on the topic of temporal trend monitoring in sediments and the topic of the influence of sediment dynamics on temporal trend assessment.

### **5.2.5 Other sediment issues**

K. Cooreman reported that WGMS had reported that they did not have time to provide material for the OSPAR request on the joint assessment of data on inputs of contaminants and contaminant concentrations in sediments. They also did not take time to discuss the term of reference based on the OSPAR request for proposals for data products that could be developed for trace metals and organic contaminants in sediments in relation to environmental state indicators, based on OSPAR data.

The ACME expressed concern that WGMS did not give a high priority to the terms of reference relating to requests from the Commissions and requested the parent Marine Habitat Committee to consider how to handle this.

## **5.3 Statistical aspects of monitoring**

### **5.3.1 Further develop QA screening and weighting procedures with regard to temporal trend assessments**

S. Uhlig presented a draft section for the report based on material from WGS AEM. He pointed out that some of this material has also been duplicated in other draft sections of the report, and this will need to be resolved.

It was proposed that some of the examples provided in the oral presentation of this section, including definition of some of the statistical terms, be included in this section. The implications of this material for storage of the data should also be indicated in this section.

Concerning the QA screening of the monitoring data prior to assessment, the ACME agreed that it was necessary to find a means for bringing together policy-makers, chemists, and statisticians to discuss how to handle the QA. This is especially important given the major OSPAR assessment activities scheduled for 2004. The question was raised as to the relationship between this issue and the issue of indicators, where the question of data quality is very important. The ACME proposed that ICES approach OSPAR with a list of questions that should be considered and propose that a workshop or other activity be organized to discuss this issue.

This is also relevant to the issue of data products that can be developed from the monitoring data, that will also be relevant to the development of indicators; this has also been proposed as a topic for an ICES/OSPAR workshop. It was pointed out that in addition to the need to consider the quality of the data, there is a need to consider seriously the use of indicators as a management tool, so that one avoids a false use of indicators.

Noting the relationship of this item with the issue of indicators, it was agreed that this text would be reviewed in relation to the material on indicators and EcoQOs under agenda items 7.5, 7.6, and 11.3. A proposal will also be developed for an ICES/OSPAR workshop to cover as many of these related issues as appropriate.

With these proposed amendments, this section was adopted for the report. There are four annexes associated with this section; these can be reviewed over the summer for final adoption in September. However, noting the relationship of some of this material with that under agenda item 6.5, it was decided that the material on QA screening from this text would be moved to the text under agenda item 6.5.

### **5.3.2 Alternative fixed-cost sampling schemes using Norwegian data from the VIC database**

S. Uhlig presented a draft section for the report; however, no further work has been done on this topic as no new data sets appear to be available in the ICES Marine Data Centre to continue the investigation.

The ACME agreed to recommend that institutes in Member Countries search for new data that may be useful to continue this work to optimise sampling schemes.

### **5.3.3 Appropriate sampling schemes for the detection of hotspots of contamination in the marine environment**

A. Bignert presented a draft section for the report based on material from WGSAAEM.

In the comments, it was noted that this material was quite complicated and the diagrams were not easy to understand. Furthermore, the implications of this material should be clearly explained so that this information can be utilized by readers of the ACME report.

### **5.3.4 Smoothers for use in trend analysis of monthly and quarterly data on inputs of nutrients and contaminants in the marine environment**

A. Bignert had prepared a draft section for the report, but this material was very similar to that under agenda item 5.3.1.

The ACME decided that the material on smoothers from agenda item 5.3.1 should be merged with the material under this agenda item.

### **5.3.5 Other relevant statistical issues**

A. Bignert presented a draft section for the report based on material from WGSAAEM concerning: 1) the development of environmental indicators and classifications, including comments on the draft EEA indicator fact sheets, and 2) the outcome of an OSPAR pilot assessment integrating input data and data on contaminants in biota and sediments. It was noted that this latter material has already been incorporated into the text under agenda item 7.3.

For the text on indicators, it was noted that there is already text being drafted under other agenda items concerning indicators and the text here should be part of that larger package. It was pointed out that this text is being prepared at

present and will need to be considered by ACME as a whole, as the contributions from the various working groups were not completely compatible and ACME needs to determine its position on this issue.

### **5.3.6 Number of samples needed for calculation of 5th percentile and associated uncertainties**

A. Bignert presented a draft section for the report based on material from WGSAAEM. This had originally been a request from HELCOM, but it was withdrawn shortly before the WGSAAEM meeting for financial reasons. WGSAAEM decided to provide some information on this topic in any case, as the issue was undoubtedly of interest to ICES. The request also required some interpretation to handle it.

The ACME considered whether or not to include this response to the HELCOM request that was subsequently withdrawn owing to financial reasons, and decided that as a gesture of good will it should be included in the ACME report. It was proposed that a recommendation be prepared for using a hybrid method for calculating background concentrations. With this change, the ACME accepted this section for its report.

## **6 QUALITY ASSURANCE PROCEDURES AND INTERCOMPARISON EXERCISES**

### **6.1 Quality assurance of biological measurements in the Baltic Sea**

E. Ojaveer presented material for the report summarizing the outcome of the work by SGQAB.

The ACME discussed the SGQAB recommendation that phytoplankton be considered as a core parameter in the COMBINE programme. The ACME accepted this recommendation, given that EU member countries will need to monitor phytoplankton under the Water Framework Directive in any case. A recommendation should be formulated to this effect for inclusion in the recommendations portion of this report section.

It was also pointed out that SGQAB met in joint session with SGQAE for roughly half the time. The Steering Groups also work with a number of other working groups, such as BEWG, WGPE, and WGZE. It was felt that this should be reflected in the section for the ACME report.

With these comments and additions, this section was adopted for the report.

### **6.2 Quality assurance of biological measurements in the OSPAR area**

A. Bodoy presented a draft section for the report based on material from SGQAE.

In discussing this text, a question was raised concerning the schemes for accreditation in relation to biological measurements. These accreditation schemes should aim to be as wide as possible so that multiple accreditations will not be required.

The ACME accepted the Guidelines for the Quality Assurance of Biological Measurements for transmission to OSPAR. It was noted that the Council has already accepted that these guidelines should be published in the *ICES Techniques in Marine Environmental Sciences* series.

It was also decided that the recommendation that HELCOM be informed about the benefits in scientific and cost terms arising from synergistic interactions between SGQAB and SGQAE on matters of common interest should be included in the text for agenda item 6.1, which is directed towards HELCOM.

With these changes, and the addition of some cross-references, this text was accepted for the ACME report.

### **6.3 Quality assurance procedures for biological effects techniques, including fish diseases**

M. Waldock presented material on this topic from the WGBEC report, covering some requirements for QA based on the biological effects measurements contained in the OSPAR Coordinated Environmental Monitoring Programme. Many of these techniques were covered in the BEQUALM programme.

It was pointed out that some additional material relating to fish diseases is contained in the WGPDMO report. This material should be reviewed with a view to adding some additional text.

The ACME agreed to the recommendation, but asked that it be made broader than the OSPAR CEMP to the extent applicable.

#### **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.

It was noted that the technical notes on the determination of CBs in sediments and PAHs in sediments and biota needed additional work and should be reviewed intersessionally for completion next year. The technical note on measurement uncertainty had been reviewed and accepted, after amendment, by WGSAAEM but the SGQAC report noted that MCWG should also review this technical note. R. Law reviewed the annex on behalf of the MCWG and subsequently the ACME adopted this annex for submission to HELCOM.

#### **6.5 Guidelines and criteria for data screening and evaluation prior to assessment of chemical monitoring data, including potential for a data filter**

R. Law presented a draft section for the report, mainly based on the MCWG report.

It was noted that there is some relevant material in the SGQAC and WGSAAEM reports that should also be considered in further expanding this section.

It was pointed out that this is a very important topic in terms of providing transparency and a more standardized system to the quality control of marine monitoring data. This was the subject of a request from HELCOM last year and is very important to OSPAR for the screening OSPAR monitoring data prior to an assessment.

This section was revised by adding material from the other two reports. The revised draft was accepted by ACME for the report.

#### **6.6 Developments within QUASIMEME**

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

The QUASIMEME Scientific Assessment Group decision concerning the possibility for correcting incorrect Z-scores was discussed. The ACME decided that the laboratories should report their corrected Z-scores, rather than the incorrect score that will remain in the QUASIMEME database, but they should add a comment record to show that this is a corrected value. This should be part of the national reports which are required under the procedures for reporting OSPAR and HELCOM monitoring data. Thus, the ICES database will contain the correct values, even though they may be at variance from those registered in QUASIMEME.

#### **6.7 Standardized presentation of the long-term performance of a laboratory**

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

It was noted that this is relevant to a previous request from OSPAR, but it has a broader application. It was agreed that this section should be expanded somewhat.

#### **6.8 Other issues or activities**

There was no material for this agenda item.

### **7 ASSESSMENT METHODOLOGIES AND RESULTS**

#### **7.1 Outcome of the assessment of AMAP POPs and heavy metals data**

A. Bignert presented a draft section for the report based on material from SGPOP.

The ACME discussed the issue of the software for conducting temporal trend analyses of contaminant data. The ACME agreed that the ICES Secretariat should have this capability, but did not have a view as to whether this should be offered

as a service for other organizations who request a temporal trend assessment of contaminant data or should be a program for working group members to be able to use on their own.

Dating back to the mid-1980s, ICES has been heavily involved in the development of methods for the (statistical) analysis of time series data from marine monitoring programmes. Previously, ICES has also developed in-house software applications to conduct these analyses on data sets held in the ICES environmental data banks. However, with the loss of the UNIX OS systems from ICES, these computer applications are no longer available in the ICES Marine Data Centre. The group discussed this situation, and unanimously agreed that it was highly desirable that ICES re-establish the capability to perform the (standard) statistical time series analyses in-house. This recommendation should be addressed to the appropriate bodies within ICES:

- ICES should re-establish the capacity to perform (in-house) a standardised set of statistical time series analyses on data sets held in the ICES environmental data banks, i.e., develop and implement software solutions to conduct statistical analyses according to the methods recommended by the ICES WGSEAM.

## **7.2 Data products that could be developed for trace metals, organic contaminants and eutrophication in relation to environmental state indicators**

B. Pedersen presented a draft section for the report based on material from MCWG. She pointed out the criticism that has been levelled at the EEA indicator fact sheets; more details are contained in the report of MCWG. MCWG concluded its discussion of this issue with the recommendation that ICES and OSPAR work together to develop a common approach to the development of data products relevant to indicators, including the possible conduct of a workshop.

M. Waldoock supported the need for an interdisciplinary workshop; this has also been proposed by WGBEC. This is also being considered in the UK.

E. Andrulowicz stated that HELCOM has agreed to develop indicator-based assessments, so HELCOM should also be invited to participate in this workshop. He felt that the EEA has taken too broad of an approach to indicators, which can be confusing. He felt that state indicators should be developed first.

J. Rice stated that there will probably be more recommendations for workshops later in the agenda, and we will need to discuss the types and order of workshops. Several ICES working group reports have commented on the problems with devising an appropriate approach to the development of indicators from a scientific as well as a management perspective.

It was pointed out that there is a need to have a better understanding between the EEA and other organizations such as ICES and OSPAR.

## **7.3 Review and comment on the outcome of the OSPAR pilot assessment integrating input data and environmental contaminants**

J. Olafsson presented a draft section for the report based on material from MCWG and WGMS.

It was noted that material on this topic is also contained in the report of WGSAM, which was received quite late in the Secretariat. It was proposed that this material be considered and worked into this section.

Text from the previous agenda item should also be highlighted, namely that input data are not always comprehensive and that current environmental sampling is not targeted towards locations that would most directly reflect changes in inputs. This comment should also be kept in mind in the review of the JAMP under agenda item 15, as if it is the aim of the JAMP to be able to conduct such assessments, then the sampling strategy must be designed accordingly.

## **7.4 GESAMP/ICES Working Group on Hazard Assessment of Contaminants in the Marine Environment in Relation to the Quality of Seafood for Human Consumption and Risk to the Marine Ecosystem**

The Environment Adviser presented a draft section based on the work of the GESAMP/ICES working group and the reviews of its first report by MCWG and WGBEC.

The ACME agreed with the comments of MCWG that this group was not taking adequate account of all possible factors that influence contamination of seafood, and that post-harvest inspection would be the better approach as this integrates all sources of contamination. To achieve what this group hopes to do will take very detailed models, which we are quite far from having. It was doubted whether this approach would be usable to inspection agencies.

#### **7.5 Studies under way in OSPAR on ecological quality objectives for the North Sea with regard to nutrients and eutrophication effects**

J. Rice stated that he had been requested at the last minute to handle this item owing to the illness of the original presenter. He prepared the draft section on the basis of material from the reports of MCWG, WGPE, BEWG, and WGECO. There was a general agreement in the treatment of this topic by all these groups.

Over the next round of meetings, the appropriate ICES Working Groups should consolidate the available data relative to these EcoQs and EcoQOs, review the proposed Ecological Quality elements and Objectives, and, where necessary, suggest altered or alternative Ecological Quality elements and Objectives. The aim of this work is to understand the properties of the selected indicators, and propose modifications that may make them more operational and well linked to monitoring programmes. WGECO should consider the results of these reviews in the context of the evaluation criteria and screening processes that they have been developing, and the overall goal of supporting an ecosystem approach to the development of scientific advice and management.

#### **7.6 Strategy and framework for the use of indicators in environmental assessments and reporting**

J. Rice stated that he had been requested at the last minute to handle this item owing to the illness of the original presenter. He prepared the draft section on the basis of material from the reports of WGZE, WGPE, BEWG, SGEAM, and WGSAM. He stated that there were no incompatibilities in the outcome of the discussion of this topic in all these groups, and they generally agreed on the pitfalls associated with this work. He ended his draft section with the proposal that a joint workshop co-sponsored by ICES, OSPAR, and any other relevant organizations be held in late 2004 or early 2005 to consider indicators of ecosystem status.

#### **7.7 ICES Environmental Status Report**

##### **7.7.1 Oceanographic conditions**

H. Loeng presented a draft section for the report, which is the summary of the ICES Ocean Climate Status Summary, as prepared by WGOH. The full material is on the ICES website and also is published annually in the *ICES Cooperative Research Report* series. This section was accepted by ACME for its report.

##### **7.7.2 Zooplankton and phytoplankton monitoring results**

F. Colijn present a draft section for the report based on material from WGZE.

##### **7.7.3 Harmful algal blooms**

A. Bodoy presented a summary of the decadal maps of harmful algal events, which are displayed on the ICES website. He noted that these maps are prepared by WGHABD, which has proposed some improvements in these maps for next year. He pointed out that, although monitoring for these types of harmful algal blooms is conducted by most or all ICES Member Countries, not all the data are transmitted to the French institute that prepares the decadal maps.

Members from countries for which data are not included in the maps agreed to look into ensuring that these data will be submitted.

##### **7.7.4 Fish disease prevalence**

S. Mellergaard presented a draft section for the report based on material from WGPDMO. He stated that WGPDMO has decided to update the presentation of the maps, and further work on this update will be conducted intersessionally.

The ACME accepted this section for the report.



## **8 MARINE CONTAMINANTS**

### **8.1 Information on specific contaminants**

B. Pedersen presented a draft section for the report based on material from MCWG. The section was based on new information concerning dioxins and dioxin-like CBs in foodstuffs.

In discussion, it was pointed out that this is a very sensitive issue and one that is of interest to the press. Thus, this text should be worded very carefully to decrease the possibility of misinterpretation of the information provided. Several suggestions were made for this purpose.

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

J. Olafsson presented a draft section based on material from MCWG.

It was agreed that the table would be amended to include the names of the chemicals, in addition to their CAS numbers. The recommendation for cooperation with the working group under the Water Framework Directive should go into the minutes.

The Chair of MCWG agreed to cooperate with the EU Working Group AMPS; he will draft a letter for the ICES General Secretary in which ICES will seek this cooperation.

In view of concerns amongst members that inappropriate analytical methods may become mandatory for work in support of EU Directives (under CEN/ISO and in relation to the Water Framework Directive, for example), the Chair of MCWG should approach the Chair of the AMPS group for reassurance that all validated methods that meet the criteria and are fit for purpose will be accepted.

The Chair of MCWG, on behalf of ICES, should approach the Chair of the AMPS group via the ICES General Secretary with a view to establishing a liaison between the two groups in areas of common interest regarding contaminant monitoring in the marine environment, in which MCWG has considerable experience.

#### **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. This was accepted for the report without comment.

#### **8.1.3 Polybrominated diphenylethers (PBDEs)**

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

It was pointed out that there is some additional material from MCWG relevant to this item, which should be incorporated into this draft section for the report. MCWG also recommended that PBDEs be included in the OSPAR CEMP, as the methodology has now been adequately developed to be able to provide comparable data for these compounds. The ACME accepted this recommendation.

A revised version of this section, incorporating the additional information, was subsequently reviewed and adopted by ACME, with the addition of a new paragraph on the need to review the environmental significance of compounds that are now used to replace PBDEs.

#### **8.1.4 Toxaphene**

R. Law presented a draft section for the report based on material from MCWG. This was accepted for the report, with the inclusion of a table on toxaphene concentrations in various animals from Greenland.

## **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 draft section based on material from WGPDMO. This section was accepted after brief discussion.

### **9.2 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 draft section based on material from WGPDMO. The ACME accepted this section with an additional recommendation to increase research efforts on the causes of M74.

### **9.3 Report on the current status of studies on the relationship between environmental contaminants and shellfish pathology**

S. Mellergaard presented a draft section based on material from WGPDMO.

The ACME accepted this section for its report, with the addition of an example, and accepted that the material in Annex 7 of the WGPDMO report would be annexed in association with this section.

### **9.4 Advice on control measures in relation to nodavirus**

S. Mellergaard presented a draft section based on material from WGPDMO.

The ACME accepted this section for its report without major comment.

### **9.5 IPNV in salmonid fish farming**

S. Mellergaard presented a draft section based on material from WGPDMO.

The ACME accepted this section for its report, with the addition of some explanatory material.

## **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 was accepted by ACME, with the addition of a recommendation that Member Countries should submit this information annually.

### **10.2 Review and adopt an updated Code of Practice on Introductions and Transfers of Marine Organisms**

J. Doyle reported that she had conducted an extensive review of the new draft of the Code of Practice prepared by WGITMO. She noted that this new version of the Code was intended to cover aquarium and bait trade, transfers for immediate consumption, as well as GMOs, and new text on GMOs had been provided by WGAGFM. However, very little new text had been provided relevant to the aquarium and bait trade. Furthermore, the structure of the material presented in the new draft Code was confusing. Careful inspection of this material showed that it mainly comprised the material from the present Code but rearranged in a different order. There was very little new material in this new version. WGITMO additionally would like to add six new appendices that would be extremely bulky and would make this document very long.

She felt that it will not be possible to finalize the Code of Practice at this meeting and proposed that this work be transferred to a sub-group of ACME for further work and finalization at the ACME Consultations Meeting at the end of September.

The Chair recalled that ACME has emphasized the importance of finalizing this Code of Practice to WGITMO. To further emphasize this, he had attended one day of the WGITMO meeting in March 2002 and explained the procedures

to them. Very recently, the Chair of WGITMO submitted detailed appendices to accompany the draft revised Code of Practice; most of these appendices are intended only for inclusion on the web, as they are intended to be revised more frequently than the Code itself. However, there was conflicting information from WGITMO as to whether these annexes were to be considered as drafts or final versions.

The General Secretary stated that this Code of Practice is one of the most important pieces of work within ICES. The original Code was first developed in the early 1970s, and requests to receive copies of the Code are received on a regular basis. One important feature has been the clear language of the Code. He stated that it is very important that ICES provide the update of this document as soon as possible, but this should be done in a way that maintains the present clarity of thought and structure of the existing document. He suggested that ACME provide for rigorous editing and finalizing of the Code. As he felt that WGITMO was too close to this subject so that they become lost in the details, he suggested that a sub-group of ACME handle the detailed editing of this Code. The product of this work should then be provided back to WGITMO for a final check on the technical aspects of the wording. He felt that some further guidance on the application of the Code could be very useful, but it should not be very bulky. WGITMO should receive explicit instructions concerning what they should do and should not do in reviewing the ACME editing of this Code.

J. Doyle stated that no recent applications to ICES for review of new introductions and transfers have been received. So it is not clear as to the extent to which this Code is being applied in actual practice. Thus, there is an urgency to re-publicize this Code, and get it back into the public domain.

It was noted that some countries may follow the ICES Code of Practice, without actually seeking review of the proposed introduction by ICES.

The ACME agreed that the above proposal was good and should be implemented. The Chair was uncertain about sending the revisions back to WGITMO, as they may be offended by the extensive reworking. However, they may be even more offended by not being consulted concerning the changes made by ACME. It was proposed that Carl Sinderman be invited to review the revised Code, as he was involved in the development of the initial Code and is still somewhat active in this field.

Accordingly, the ACME agreed that a small sub-group should be identified to work together on revising this Code intersessionally. The product of their work should be reviewed at the ACME Consultations Meeting at the end of September, to follow the progress. This sub-group will comprise J. Doyle, A. Calabrese, and A. Bodoy. This discussion will be conducted via e-mail and the Chair of ACME will handle the communications with the Chair of WGITMO. It was felt that a useful compromise could be found with WGITMO between now and the next WGITMO meeting. A. Calabrese will contact Carl Sinderman to request him to conduct a review of the revised Code.

In planning the intersessional work, J. Doyle asked for an endorsement of the proposed approach that the Code of Practice itself should be short and clear and should be able to be valid for a number of years; this should be accompanied by a series of annexes that would be posted on the ICES website and that could be changed more easily as may be required. The material required by some of these annexes is very extensive, and may discourage persons from applying the Code.

The opinion was expressed that it would be useful to have the entire package, Code plus annexes, printed together. However, there is a very good case to be made for keeping the Code as a clear, succinct document that could be accompanied by the technical annexes as supplementary material. As a compromise, a brief summary or outline of each annex could be included in the Code, with the details provided on the web. It was noted that some editing may also need to be done on each of the annexes to ensure their compatibility with the revised Code of Practice.

The ACME agreed that the important issue is to have the Code completed and issued so that it is available on a wide basis.

### **10.3 Selected examples of current invasions, their consequences and significance**

A. Calabrese presented a draft section for the report based on material from WGITMO and SGBOSV.

The comment was made that maps should be produced showing the range expansion of accidentally introduced species over the ICES area. These maps would provide a valuable contribution to the web-based ICES Environmental Status Report. The ACME agreed to request WGITMO to consider the preparation of such maps.

This section was adopted by ACME with some additional text.

#### **10.4 Progress in ballast water research and management technologies**

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

A comment was made regarding the impact of the ban on TBT, noting that this can be a poor excuse.

It was noted that Annex 3 from the SGBOSV report contained a text that SGBOSV would like to contribute to the IMO Marine Environment Protection Committee. This text should be reviewed in relation to the text for the report section on this item. The ACME agreed to return to this section after this review.

The ACME subsequently approved the text in SGBOSV Annex 3 for transmission to IMO.

#### **10.5 Directory of dispersal vectors of exotic species**

There was no material on this item.

### **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**

P. Keizer presented a draft section for the report on this topic based on material from BEWG. Noting that this was just a brief update of progress on the preparation of these guidelines, the ACME decided not to include this in its report.

#### **11.2 Progress in the North Sea Benthos Survey**

P. Keizer presented a draft section for the report on this topic based on material from BEWG. There was some discussion about the workshops mentioned, as they were not formal ICES workshops. Thus, it was agreed that a recommendation concerning the future workshop should be dropped from the text.

#### **11.3 Studies under way on ecological quality objectives for benthos communities in the North Sea**

P. Keizer presented material on this item from BEWG.

There was discussion on the text relating to the EcoQO on changes/kills in relation to eutrophication, as some oxygen deficiencies that cause kills of zoobenthos have a natural cause. However, the BEWG report did not provide any quantitative information concerning this issue. It was noted that there must be some context for the information presented, but this has not been done.

It was noted that there is no current request for advice on this topic for this year, but it is anticipated that advice on these EcoQOs will probably be requested for 2003. The EcoQOs on eutrophication-related issues were developed under a process in relation to the Fifth North Sea Conference and were accepted by OSPAR before that Conference. ICES was not involved in the development of these EcoQOs, however, the Bergen Declaration indicates that ICES will be requested to review these eutrophication-related EcoQOs. Thus, it would be important to provide relevant working groups with clear guidance concerning how this review should ultimately be carried out so that they produce useful material for consideration next year.

It was noted that benthic die-off may be a useful EcoQO in cases of serious eutrophication, but will be of little use in areas with good conditions.

It was further noted that the Bergen Declaration states that the eutrophication-related EcoQOs are to be considered an integrated set and are not to be considered in isolation, however, no guidance was given on how this integration should actually be done.

It was felt that this discussion should be held in the context of a clear definition of the desirable properties of EcoQOs.

The ACME decided that P. Keizer, J. Rice, and M. Waldo should work together to provide a combined text on EcoQOs that would be reviewed by ACME for transmission to ACE.

A second part of this text concerned BEWG's response regarding their review of the benthic species on the OSPAR draft list of threatened and endangered species. It was pointed out that this issue will be handled by ACE, but ACME comments would be welcome. It was generally felt that BEWG had not provided a useful review of this list of species, and that more information should have been provided to BEWG in advance of the meeting to assist them in preparing a response to this question.

The comment was made that the status of threatened or endangered was not adequately related to the geographical distribution of the species.

It was pointed out that the consultant's report on threatened and declining species was very large, but the workshop at which the draft list was determined was attended by only six OSPAR Contracting Parties and two NGOs. Thus, there is a split in OSPAR concerning how to handle this issue. In addition, given that OSPAR has not yet agreed the criteria for determining threatened or declining species or habitats, it seems premature to prepare a list of such species or habitats.

It was acknowledged that these lists can have very large administrative and economic impacts when they have been agreed.

On Thursday morning, a document compiling material developed under this agenda item, as well as under items 7.5 and 7.6, was considered. It was noted that there is still confusion regarding the terminology in relation to EcoQOs. In addition, no management framework has been developed that can be used to determine the status of the ecosystem in relation to the reference point; without this framework, no progress can be expected on difficult issues.

It was felt that discussions must take place in ACE with regard to how ICES can exhibit leadership in the development of EcoQOs. The proposal by SGEAM that ICES establish Regional Ecosystem Groups to handle ecosystem issues on a regional basis was noted. This recommendation was discussed last year at the Statutory Meeting and it was felt that the resource requirements of such a system would be prohibitively large. Nonetheless, further consideration should be given to this recommendation.

The ACME discussed whether text should be provided for the report based on the draft material from agenda items 7.5 and 7.6. The question was raised as to whether there is a client for this material. It was noted that item 7.6 is relevant to item 7.2, as providing a framework for the development of indicators, under which ultimately data products based on OSPAR monitoring data can be determined.

The ACME agreed that the texts for items 7.6 and 11.3 should be transmitted to ACE. The text for item 7.5 should be either supplemented with additional material based on studies that have been conducted on eutrophication or the title should be revised to reflect the actual content of this section. The second option was agreed, as it was felt undesirable to leave this section open for the addition of an unknown amount of material after the meeting.

## **12 NUTRIENTS, EUTROPHICATION, PLANKTON ECOLOGY**

### **12.1 Phytoplankton ecology issues**

A. Bodoy presented a draft section for the report on this topic based on material from WGPE. Noting the paragraph regarding EcoQOs, it was proposed that this be removed from the text and included in the material being assembled on this topic that will be transmitted to ACE. It was noted that Section 3.9 of the WGPE report contains more material on this topic.

The ACME requested that the recommendations be moved under the heading "Need for further research or additional data", with relevant changes in wording. With the above changes, the ACME adopted this text for its report.

### **12.2 Progress in understanding the dynamics of harmful algal blooms, including implementation of GEOHAB**

A. Bodoy presented a draft section for the report based on material from WGHABD.

The ACME discussed potential support for the Canadian GEOHAB National Programme. It was noted that this initiative was still in the early planning stage, and ACME has no direct knowledge about this programme. The ACME decided that the text should not express support for any individual national GEOHAB programme, but should support national initiatives in relation to GEOHAB.

The ACME acknowledged with appreciation that Allan Cembella accepted chairing the meeting of WGHABD, owing to the absence of the Chair, Kaisa Kononen, who was unable to attend.

The ACME questioned whether ICES should provide active support to a workshop sponsored by GEOHAB in mid-2003.

### **12.3 Scientific and operational merits of including primary production measurements and zooplankton studies in eutrophication monitoring**

A. Boday presented a draft section for the report based on material from WGPE and WGZE.

In the discussion, there were grave reservations concerning adding new monitoring parameters to the full list of existing monitoring parameters that must be covered already, particularly given that the methodology for primary production is in transition and there is no standardization for zooplankton measurements.

It was felt that ACME could provide valuable guidance with regard to monitoring issues by developing standards against which decisions could be made on the inclusion of parameters into a monitoring programme. This would include whether the components are sufficient and whether they are necessary. This would be more useful than a case-by-case review of individual requests to add new parameters, for which different standards may be applied in different cases. This would amount to a quality assurance of the monitoring programme and a determination of whether it is fit for purpose. This would be useful, for example, in the review of the JAMP programme.

Several additions were proposed to expand the coverage to include why primary production measurements have received a lower status in the HELCOM programme, to emphasize that the new bio-optical methods are not yet ready for full implementation, and, most importantly, that new parameters should not be added to monitoring programmes without clear scientific and operational justification.

### **12.4 Outcome of the Workshop on Contrasting Approaches to Understanding Eutrophication Effects on Phytoplankton**

F. Colijn presented a draft section for the report based on material from WKNUPE. He stated that he will enhance this material to include the conclusions of the workshop.

### **12.5 Zooplankton ecology issues**

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

## **13 MARICULTURE ISSUES**

### **13.1 Environmental interactions of mariculture, including new research and monitoring programmes**

A. Calabrese presented a draft section for the report based on material from WGEIM.

It was suggested that some reference to GOOS be made here, as GOOS now has a coastal monitoring component that could be relevant to mariculture operations. H. Dooley, ICES Oceanographer, provided some information on the coastal GOOS monitoring module. He stated that T. Malone will present a lecture at the 2002 ASC on GOOS and proposed that Dr Malone include some information on the coastal module of GOOS in that lecture.

Noting that ACME considers mariculture issues every year, the ACME decided that it would consider the potential role of coastal GOOS in relation to mariculture at a future meeting when more information is available.

The ACME then accepted this section for its report.

### **13.2 Guidelines for the preparation of Environmental Impact Assessments and monitoring programmes for large-scale shellfish farm developments**

J. Doyle presented a draft section for the report based on material from WGEIM. She pointed out that most shellfish farming operations are small-scale and the preparation of a full EIA would be very costly and probably not warranted. Thus, this section proposes the preparation of an environmental report. WGEIM did not provide a design of a

monitoring programme for shellfish farms, but provided some general guidelines. The terms of reference for the 2003 meeting should include a task to continue the development of monitoring guidelines, based on experience in France.

After discussion, the ACME accepted this section for its report, with several amendments.

### **13.3 Issues regarding sustainability in mariculture, including interactions between mariculture and other users of resources in the coastal zone**

A. Calabrese presented a draft section for the report based on material from WGEIM.

The definition of sustainability used in this section is different from that usually used, and should be clearly defined in this context. It was pointed out that WGEIM will undoubtedly need to continue to work on the issue of sustainability in mariculture over the next few years.

This section was agreed for inclusion in the ACME report, after some amendment.

### **13.4 Quantities of chemotherapeutants used in finfish and shellfish farming and assessment of their environmental impacts**

A. Calabrese presented a draft section for the report based on material from WGEIM.

Noting that this material will be included in a prospective *ICES Cooperative Research Report*, that is intended to be ready later this year, he enquired whether this section should be included in the ACME report. It was stated that the new report will be very technical and would not really overlap with the ACME section

The question was raised as to whether WGEIM has developed a standardized reporting format for reporting data on the use of chemotherapeutants in mariculture.

There were several questions concerning the text that could not be resolved. Thus, it was agreed that a member of the WGEIM would be contacted to clarify the statements that were not clear.

The ACME then discussed the recommendations that should be made based on these four items on mariculture.

With regard to the suggestion that the GOOS component for coastal zone monitoring could be relevant to this context, see discussion under agenda item 13.1, above.

It was proposed that ACME recommend the adoption of guidance concerning when an EIA, EIS, or environmental report should be prepared in association with shellfish culture facilities.

## **14 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**

C. Lima presented a draft opening section for this topic for the report, based on material from WGEXT. This text was accepted for the report.

### **14.1 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. It was noted that not all ICES Member Countries report their extraction activities to WGEXT. The text was accepted with some small amendments.

### **14.2 Review and approve an updated Code of Practice for the Commercial Extraction of Marine Sediments and the Guidelines for the preparation of Environmental Impact Assessments**

C. Lima presented a draft section for the report based on material from WGEXT. The ACME generally accepted this section, but still needed to review the guidelines for commercial extraction of marine sediments, that were proposed to be annexed to the ACME report after adoption by ACME.

In detailed consideration of these guidelines, a number of small amendments were agreed on the guidelines for commercial extraction. The question was raised as to whether the requirement to report extraction activities to WGEXT should be included in the guidelines. The ACME decided that this requirement should be included in the guidelines. It was proposed that a definition of extraction be given in the introduction to these guidelines. With these amendments, the ACME adopted the revised guidelines for commercial extraction of marine sediments. The Chair agreed to contact the Chair of WGEXT to clarify the terminology concerning permits and licenses.

The ACME recommended that the final guidelines be issued as a leaflet, if possible in both official ICES languages.

### **14.3 Methods to assess localized impacts from aggregate extraction on fisheries**

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

It was agreed that the last five paragraphs should be restructured to reflect needs for future research. With this and some editorial amendments, the section was accepted for the report.

### **14.4 Application of risk assessment methods as a tool for management of marine extraction activities**

P. Keizer presented a draft section for the report based on material from WGEXT. In the discussion, it was pointed out that the use of terms in this section is different from the use of the same words in the management of living resources and habitat protection. This is particularly the case for the WGEXT definitions of “reducible uncertainty” and “irreducible uncertainty”. In the common usage of these terms, “irreducible uncertainty” means something that you know exists but cannot do anything about. It was questioned whether these terms are the accepted terms used for extraction work, given these differences with the more common usage of these terms.

Given these questions and the statement that WGEXT will continue work on this topic, the ACME decided not to accept this text for its report. It was decided that the term of reference for this work at the 2003 WGEXT meeting should be carefully reviewed to ensure that the relevant details, as expressed by ACME, will be handled. It was agreed that feedback on this will be provided to WGEXT by the Chair of the Marine Habitat Committee.

## **15 REVIEW OF THE REVISED DRAFT OF THE OSPAR JOINT ASSESSMENT AND MONITORING PROGRAMME**

The Environment Adviser provided the background for this very recent request from OSPAR, via a letter dated 1 May 2002. The third draft of the Joint Assessment and Monitoring Programme (JAMP) was only prepared at the end of April, after which the OSPAR Secretariat decided to request ICES to provide a scientific review of the document. OSPAR also requested ICES to consider where it can provide products for the JAMP. No specific deadline was given for the response to this request, but it will be needed by at least March 2003 for use by OSPAR in the finalization of the JAMP. Also, as this is a review of a document under preparation, OSPAR requested that the response be provided directly to the OSPAR Secretariat and not be published in the ACME report.

J. Piuze noted that OSPAR has also requested ICES to consider whether any adjustments need to be made to the JAMP to improve the synergy between the activities of OSPAR and ICES. ICES should also consider whether the products proposed in the draft JAMP could adequately contribute to an overall assessment of the quality of the marine environment, and identify any gaps where information would be required that could not be covered by activities in OSPAR.

He proposed that a subgroup be constituted with at least one member each to review each portion of the JAMP and that he would coordinate the work and handle the general section of the JAMP. It was agreed that the following persons would serve as the main reviewer for the themes indicated: P. Keizer (Ecosystems and Biodiversity) (J. Rice will also comment); A. Draxler (Eutrophication) (E. Andrulowicz will also comment); M. Waldock (Hazardous Substances) (R. Law and K. Cooreman will also comment); R. Law (Offshore Activities); J. Piuze (General) (J. Doyle will also comment). In addition, A. Draxler and E. Andrulowicz will comment on all sections. J. Piuze, A. Draxler, E. Andrulowicz, and J. Olafsson will prepare overall comments on the JAMP. H. Loeng will be requested to consider the climate change aspects of this document.

Noting that ACME does not have specific expertise on radioactive substances, the ACME decided not to comment on this part of the JAMP.



On Wednesday afternoon, J. Piuze reported on progress in the review of the JAMP. He stated that the subgroup working on the review felt that expert review by other Science and Advisory Committees in ICES would be preferable as ACME does not have the full range or detail of expertise at this meeting. A procedure will need to be put in place to finalize this review intersessionally.

The ACME later reviewed the draft review of the strategy for the JAMP. In the comments, it was pointed out that the relationship between OSPAR and fisheries issues should be explicitly addressed, as the biodiversity issues cannot be evaluated without some reference to fish stocks. It was acknowledged that this is a sensitive issue, but it must be addressed.

It was felt that the role of ICES is to identify inconsistencies and problems, but ACME do not need to solve all these problems.

In reviewing the comments on the JAMP, the lack of submission of nutrients data for OSPAR will be a limiting factor in implementing the JAMP in relation to eutrophication. This could be mentioned in another context in communication with OSPAR.

It was noted that Appendix 3 listing the "Human activities in the marine environment" does not contain items relating to contaminants from land-based sources. Although OSPAR may have an easy explanation for this omission, this is not apparent on the face of the document, and this could thus raise questions by persons not thoroughly familiar with the OSPAR work.

In terms of the issue of threatened or declining species and habitats, ICES was requested by OSPAR to review a list of species and habitats, but was not requested to review the criteria themselves.

H. Dooley should be requested to provide comments on the eutrophication section.

It was pointed out that one of the criteria used by OSPAR to identify potentially eutrophic waters is the presence of toxic algae. However, as toxic algae can occur in the absence of eutrophication, the use of this occurrence as a criterion of eutrophication has been questioned. It was agreed that the JAMP material should be checked for mention of this issue.

All the details of the draft response were reviewed and commented on. J. Piuze will edit this document on the basis of these comments and work to further improve the document. This next version of this document will be posted on the restricted access portion of the ACME website shortly after this meeting and will be open for review. Comments on this version should be sent to J. Piuze by 31 July. Based on these comments, he will further revise this document. This revised document will then be made available to ACFM and ACE for any comments that they may have. Final consideration and adoption of the document will take place at the ACME Consultations Meeting in late September.

## **16 DATA ISSUES**

### **16.1 Handling of data on contaminants in marine media**

J. Nørrevang Jensen presented a section for the report from the ICES Marine Data Centre covering the progress in data handling and the development of the new environmental database, which is jointly funded by OSPAR.

It was noted that ICES holds many different databases relating to the marine environment, and it was the goal for this development project to integrate these for the benefit of the users.

The ACME accepted this section for its report.

### **16.2 Handling of nutrient data for the OSPAR Commission**

H. Dooley presented a draft section for the report based on his own work. He pointed out that there have been no new regular submissions of nutrients data since last year, however, two very large sets of data have been submitted based on retirements. It was noted that the addition of these two very large data sets will substantially revise the data products for the North Sea and the Bristol Channel/Severn estuary area.

The ACME accepted this section for the report.

### **16.3 Advice and standard data products for developing the OSPAR Common Procedure for Identification of the Eutrophication Status of the Maritime Area**

H. Dooley presented a draft section for the report, stating that no further work has been done on this topic. However, he proposed that the LOICZ approach be adopted for further elaboration or use in the assistance to OSPAR.

This contribution was accepted for the report.

### **16.4 Handling of biological community data**

J. Nørrevang Jensen presented a section for the report from the ICES Marine Data Centre. He pointed out that the data centre is now open for the submission of biological community data, but so far only data from Sweden have been submitted.

The ACME accepted this section, with the addition of a recommendation that ICES Member Countries, especially those that are also Contracting Parties of OSPAR or HELCOM, should submit their biological community data to ICES or describe what difficulties, if any, they had in using the new format.

### **16.5 ICES phytoplankton checklist**

F. Colijn presented a draft section for the report based on material from WGPE. The ACME questioned whether this checklist will actually be prepared, as the progress in the Study Group has been very slow. There has been general concern at the very slow progress in the preparation of this list.

F. Colijn, as Chair of the Oceanography Committee, was requested to check into the problems with the production of this checklist and report back to ACME at the Consultations Meeting at the end of September.

### **16.6 Development of reporting format for biological effects measurement data**

J. Nørrevang Jensen presented a section for the report from the ICES Marine Data Centre and the WGBEC report. A draft data reporting format was presented to WGBEC for their review. The ACME accepted this section for the report.

### **16.7 Data products on nutrients in the Baltic Sea**

J. Nørrevang Jensen presented a section for the report and provided a demonstration of a web-based display for the preparation of data products on nutrients that was prepared for HELCOM based on a request from HELCOM.

The question was raised as to the checking of the quality of the data used for the web-based inventory and product display. It was pointed out that wrong conclusions can be drawn based on these data products by persons who do not have proper expertise.

It was noted that this problem can always arise from allowing more public access to data in an open society. One cannot guard against misuse of data, although we must be aware of this possibility.

The ACME agreed that this text should be amended to reflect the comments on data quality and the careful use of the data. With these amendments, this section was adopted for the report.

## **17 ORGANIZATIONAL AND PROCEDURAL ISSUES**

### **17.1 Role of the Management Committee on the Advisory Process**

The Chair reported that when ACE and MCAP were set up, the ground rules were that there would be no increase in costs. However, and not surprisingly, the total cost for the advisory functions did increase. Thus, at the January 2002 meeting of MCAP, it was proposed that ACME and ACE would meet jointly in 2002. This decision was reversed by the Bureau, but the ACME meeting was shortened by one day. ACME was requested, however, not to present scientific material in isolation, but rather to provide clear recommendations and management advice to the extent possible.

The ACME needs to review scientific material 1) to produce advice, 2) to keep abreast of the developments for the preparation of future advice, and 3) to interact with the Science Committees regarding scientific products to underpin prospective future requirements for advice.

The General Secretary stated that one of the concerns of the Bureau has been that if ACME allocates a significant part of its time to discussing the basic science, rather than the science that is relevant to answering the specific requests, this limits the Member Countries' possibility to contribute to the science. As each Member Country can have only one representative at ACME, given that ICES pays for the participation of the members of ACME, this limits the scope of participation with regard to the types of expertise that should be made available to the Committee from each Member Country.

The Environment Adviser stated that discussions with the OSPAR Secretariat have emphasized the need for the development of clear advice on how the scientific background information could be used in a practical manner.

The Chair responded that the ACME discussions on what to present in the ACME report are always based on the outcome of the work of Working and Study Groups. The ACME does not invent or produce science on its own.

J. Piuze stated that he felt that the ACME report was very useful because it gives a distillation of the important developments in the environmental area from the past year and has to date been the only vehicle for the publication of the finalized scientific material from the environmental working groups under one cover. This is also the only real interest of the North American Member Countries in ACME, as they have no specific interest in the requests from OSPAR and HELCOM.

J. Rice, Chair of the Consultative Committee, stated that he attends MCAP and the Bureau and would like to contribute positively on this topic. He encouraged members to come to him with their concerns and comments.

## **17.2 ICES Strategic Plan and Action Plans**

J. Rice provided information on the developments in relation to the adoption of Action Plans for the ICES Committees, both Science and Advisory, to achieve the goals identified in the ICES Strategic Plan. This document tries to show that the work that is done within ICES serves to provide extra benefit to the laboratories that contribute to ICES. It is relatively concise text for what ICES intends to do over the next five years. He encouraged ACME members to review the introductory material, which provides a vision of how the ICES Working Group, Science Committee, Advisory Committee mechanism is intended to work. Following this is a list of goals, including Goal 4 that specifies what ICES will be providing as advice over the next five years. He noted that the Advisory Committees should provide value added to the work of the working groups.

This draft Action Plan will be reviewed by the Bureau later in June and, if accepted by them, it will be presented to the Delegates at the ASC.

In the discussion, it was pointed out that the Advisory Committees need to provide clear guidance to the working groups to ensure that they are producing the best material in the way required.

It was further pointed out that Advisory Committees should not merely cut and paste material from working group reports without providing added value in interpreting this material and turning it into advice. This must be considered very seriously, as only cutting and pasting would not justify the money spent on convening an Advisory Committee meeting. It was noted, however, that this added value comes in many forms.

## **17.3 Proposed changes to ICES publications policy**

The Chair indicated that he was not aware of any changes in the ICES publications policy at the present time. It was noted that the remit of the Publications Committee has been changed, but there is also a new Chair who is just starting his term and needs an opportunity to begin his work.

## **18 WORK PROGRAMMES FOR 2003**

### **18.1 OSPAR Commission**

The Environment Adviser presented the draft requests from OSPAR for 2003. These requests will be finally agreed at the OSPAR Commission meeting later in June.

She also presented a draft list of additional requests on ecological quality objectives, that may be the subject of further requests. She requested the views of ACME on the possibility of taking on all or parts of these requests.

In the discussion of the additional requests on EcoQOs, the Chair of CONC stated that he felt that ICES should take on all the work requested as it is easier for ICES to carry out this work from the beginning, rather than having another organization do part of the work and ICES subsequently having to review and critique them.

The ACME agreed with this approach and noted that the work can be scheduled so that the EcoQOs that can be implemented in the near future will be handled first and the more difficult ones during subsequent years.

### **18.2 Helsinki Commission**

The Environment Adviser presented the draft requests from HELCOM for 2003. Most of them are recurrent requests, but the request for the development of a Baltic Sea bottom oxygen indicator will need to be handled in the context of the overall framework for the approach to indicators within ICES.

In reviewing this list of requests, the ACME felt that HELCOM should provide a clearer description of what is actually being required of ICES. This clarification should be requested from the HELCOM Secretariat.

## **19 ANY OTHER BUSINESS**

The Environment Adviser presented the background to the German request for ICES to prepare a quality status report in layman's language, to be prepared for use in association with the Joint OSPAR and Helsinki Commission Meeting at Ministerial Level, to be held in Bremen in June 2003.

It was noted that there is virtually nothing on coastal zone issues, such as bathing waters, tourism, litter, mariculture, and other issues that are relevant to the coastal zone. It was noted that there has been little quantitative assessment of the effects of tourism and litter on the coastal environment; these issues could be mentioned as pressures on the system. It could also be useful to mention something about monitoring and research on the marine environment.

## **20 ADOPTION OF THE 2002 ACME REPORT AND REVIEW OF DRAFT MINUTES**

In reviewing the draft report and noting that most of the material under agenda item 4 would no longer be included in the report but that information on the activities of other organizations is useful to ACME, it was decided that the draft sections that were prepared under this item that will not appear in the report should be annexed to the minutes.

In reviewing the sections covering the ICES Environmental Status Report, it was proposed that the material on oceanographic conditions and zooplankton be structured in the same way. The Chair of the Oceanography Committee was requested to prepare a new structure. In addition, a map would be useful to identify the areas mentioned in the text. The Chair of the Oceanography Committee agreed to find a relevant map for this section. This should be provided so that the revised material can be included in the compiled edited ACME report that will be available in early July.

In reviewing the report, the ACME noted that it had not considered the request of WGITMO to publish the material in its report on the rapa whelk. J. Doyle and A. Calabrese agreed to review this material intersessionally for final decision at the ACME Consultations Meeting at the end of September.

The ACME decided to put the issue of the policy of what should be included in the ACME report on the agenda for the ACME Consultations Meeting for decision; this will particularly include the issue of whether workshops and other activities should be mentioned in the ACME report, particularly when they are activities under other organizations.

The last one third of the report was not able to be reviewed in plenary, so it was agreed that comments on these sections should be submitted by e-mail by close of business on Wednesday, 13 June. Any major comments will be distributed by e-mail to all members.

The final compiled ACME report will be available no later than the first week of July. It will be posted on the restricted access portion of the ACME website and an e-mail will be sent to all participants when it is ready. The exact deadline for comments will be noted in that e-mail, but it will be at the end of the first week of August. The draft minutes should also be reviewed, and comments sent in by the same deadline.

As the time limit for the end of the meeting (12.00 noon on 7 June) had arrived, the Chair thanked the members for their work. He also thanked the Secretariat for their assistance during the meeting. He then closed the meeting at 12.10 hrs.

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## ANNEX 2: ARCTIC MONITORING AND ASSESSMENT PROGRAMME (AGENDA ITEM: 4.2)

### *Request*

This is ongoing work in cooperation with the Arctic Monitoring and Assessment Programme (AMAP).

### *Source of the information presented*

Progress report from AMAP Board to the SAO (Senior Arctic Officials) meeting, May 2002, and ACME deliberations.

### *Status/background information*

During the past two years, AMAP has placed increasing effort on identifying and quantifying sources of contamination to the Arctic. This is a complex issue and national reporting of emissions and discharges of priority contaminants is often inadequate, unreliable, or unavailable. Improved information has been received concerning a number of sources. On a project level, both the PTS (Persistent Toxic Substances) and the PCB projects include a source identification/quantification component, as does the ACAP project on obsolete chemicals in which AMAP is involved. Close cooperation has been further developed between AMAP and UN-ECE, OSPAR and GEIA on related issues. An AMAP Workshop on Source Information for POPs and Heavy Metals was held in Oslo in August 2001 and the report from this workshop is available. AMAP has also been involved in the preparation of an inventory of atmospheric emissions of mercury from anthropogenic sources, which was a pre-requisite for mercury transport modelling that has been employed in the AMAP assessments.

During the past two years, AMAP has prepared its four 2002 Assessments on Persistent Organic Pollutants (POPs), Heavy Metals, Radioactivity, and Human Health. Parts of the assessments concerned with Effects of Climate Change on Pathways of Contaminants will now be produced as a separate fifth assessment report. The 2002 SOAER (State of the Arctic Environmental Report) will be released and presented to Ministers in October 2002. The 2002 AARs (AMAP (scientific) Assessment Reports) will also be published during the latter part of 2002.

AMAP had planned to deliver an updated assessment on the effect of petroleum hydrocarbons in the Arctic Environment in 2004. Based on recent developments, AMAP has presented a proposal to the Senior Arctic Officials that this assessment now be delayed until 2006. AMAP also plans to present an updated assessment on acidification issues in 2006, and planning work for this assessment is under way.

AMAP continues to operate four thematic data centres (TDCs) to support its assessment activities and to ensure the long-term access to Arctic environmental data that is necessary for the conduct of, for example, temporal trend assessments. Much of the new environmental data that have been used in the 2002 AMAP Assessment Reports have been reported to the AMAP marine TDC at the International Council for the Exploration of the Sea (ICES, Denmark), the atmospheric TDC at Norwegian Institute for Air Research (NILU, Norway), the terrestrial/freshwater TDC at University of Alaska Fairbanks (UAF, USA) and the radioactivity TDC at the Norwegian Radiation Protection Authority (NRPA, Norway). The ICES TDC hosted a special workshop in November 2001 to analyse AMAP temporal trend data sets as part of the heavy metals assessment. The UAF TDC has developed systems to provide on-line access to its database (see [www.syncon.uaf.edu](http://www.syncon.uaf.edu)); these systems developments include necessary restrictions on public access to restricted AMAP data sets, according to the AMAP Data Policy. The TDC for human health has not been in operation owing to problems related to handling/storing of personal and confidential data. Hopefully these problems will be resolved in the near future.

AMAP has prepared three Fact Sheets concerning Persistent Organic Pollutants, Heavy Metals, and Radionuclides, providing an overview of the Ministerial decisions that have been made under the AEPS and Arctic Council in relation to these issues for use in international negotiations, etc. Initially 1000 copies of each sheet were produced and circulated to the eight Arctic countries, observers and permanent participants; subsequently an additional 1000 copies of each Fact Sheet were requested and produced. The Fact Sheets have been translated into Russian and Saami for production in these languages.

During the past year, Arctic Climate Impact Assessment (ACIA) has been further developed. More than 180 scientists have now agreed to take part in the scientific assessment. The extended outlines of the seventeen chapters have been further elaborated. The drafting teams are now actively engaged in the drafting work and several workshops have been arranged to develop different components of the programme. The first draft will be finished in third quarter of 2002 and the final report will be published in autumn 2004 after an extensive review process.

Several models have been tested in relation to the development of scenarios for the next 100 years. Agreement has been reached on the scenarios that will be considered by the other scientists when preparing their assessments. A synthesis document of approximately 100 pages will be prepared in layman's language. This document will summarize all chapters in the main report in the same way as was done for the first AMAP assessment report.

The strategic plan for the production of a policy document is under development.