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

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Contents

1	Opening	1
2	Adoption of agenda and timetable	1
3	Minutes of Consultative Committee May meeting.....	1
3.1	Response from the Bureau.....	1
3.2	Follow-up on actions agreed at the Consultative Committee May meeting	1
4	General arrangements for Annual Science Conference 2007	2
4.1	Draft resolutions	2
4.2	ICES-Helsinki Outreach evening	2
4.3	Elections of new Committee Chairs	2
4.4	Requests to Science and Advisory Committees:	3
4.4.1	Theme Sessions in 2008	3
4.5	Preparation of Committee Reports	3
4.6	Award Selection Committee.....	3
5	Election of ConC Chair	4
6	ICES Strategic Plan.....	4
7	Reform of Science and Advisory Systems.....	6
8	Training in ICES	9
9	Lessons learned from 2007 ASC.....	9
10	Development of programme for the 2008 ASC (Halifax, Canada).....	10
10.1	Meeting arrangements	10
10.2	Review of proposed Theme Sessions	11
10.3	Invited lectures and other special events	12
11	Development of programme for the 2009 ASC (Berlin, Germany).....	12
11.1	Meeting arrangements	12
11.2	Review of proposed Theme Sessions	12
11.3	Invited lectures and other special events	12
12	2007 Draft Resolutions	13
13	Review of WGDIM report and draft resolution	17
14	Review the status of ICES Symposia.....	17
15	Progress reports from Publications, Science, and Advisory Committees.....	19
	Advisory Committee on Ecosystems (ACE).....	30

Advisory Committee on the Marine Environment (ACME)	30
16 Future of the ICES Oceanographic Database	31
17 ICES position paper on climate change	33
18 Review of ICES activities	33
18.1 ICES GLOBEC Office	33
18.2 ICES Baltic Sea Regional Project.....	34
18.3 ICES and FP7	34
18.4 Update on ICES/CoML cooperation.....	35
18.5 Cooperation with other organisations: ISO/OSI, OiE.....	35
19 ConC ToRs 2008 and date for mid-term meeting 2008.....	36
20 Any other business.....	36
21 Closing	37
Annex 1: List of participants	38
Annex 2: Draft Agenda and timetable	40
Annex 3: ICES Scientific Strategic Plan, draft October 2007	43
Annex 4: Outline for new Science Structure	48
Annex 5: Recommendation for an ICES Strategy on Teaching	59
Annex 6: Theme Sessions 2008	65
Annex 7: List of ICES Expert Groups dissolved, established, changed committee or renamed by virtue of the 95th Statutory Meeting	65
Annex 8: Recommendation on data products and especially on the matter of oceanographic data in ICES	72
Annex 9: ConC Terms of Reference	74
Annex 10: Recommendations from the Oceanography Committee.....	75

1 Opening

The ConC Chair welcomed all meeting participants (see **Annex 1**).

Due to sudden illness the Chair of DFC had been advised to cancel his participation in the ASC. The former Chair of DFC, N. Ó'Maoiléidigh kindly accepted to stand in on a short notice.

H. Sagen, Co-Chair of WGDIM had been invited to present the WGDIM report to ConC (item 13) and D. Wilson, Chair of the Working Group on Fishery Systems, attended the meeting as an observer for the SAFMAMS project. (D. Wilson had asked permission to observe the meetings around the ASC to see how scientific advice is being formulated at different levels and to follow new approaches to the advice process).

The meeting was attended by Secretariat staff for relevant agenda items, i.e. the General Secretary, Head of the Science and Advisory Programmes, the Departmental Secretary of the Science Programme (all items), the Conference Coordinator (items 4, 10 and 11), and the Data Centre Manager (items 13 and 16). The meeting was attended by the ICES President on the first session of the meeting on Saturday 15 September.

2 Adoption of agenda and timetable

The starting time for the two last days was changed to 9:00 and with this amendment to the timetable, the agenda was approved (see **Annex 2**).

The ConC Chair thanked the Secretariat for its assistance in preparing the meeting documents.

3 Minutes of Consultative Committee May meeting

3.1 Response from the Bureau

Several guidelines prepared by ConC in response to Council meeting 2006 had been approved by the Bureau and thus should be implemented this year:

- Guidelines for inter-sessional handling of ConC resolutions.
- Guidelines for electing EG chairs from non-ICES countries.
- Prioritisation of Expert Group Terms of Reference.

Regarding the future of the oceanographic database in the ICES Data Centre, the Bureau had noted the conclusions of ConC and had decided to wait for the recommendations of the Working Group on Data Integration and Management [WGDIM] before recommendations for action are made.

The Bureau decided not to extend the contract for the GLOBEC Coordinator and ConC noted that this was not fully in line with the ConC recommendations of the May midterm meeting. The GLOBEC Office was dealt with in more detail under Agenda Item 18.1.

3.2 Follow-up on actions agreed at the Consultative Committee May meeting

All action points, except for one, had been followed up. The Secretariat had not set up a web solution for publicising highlights. The Head of Science Programme explained that the request from the ConC Chair to Expert Groups asking for two-three bullet point highlights to be listed

in the Executive Summaries of reports has seen limited feedback from EG Chairs, in spite of Secretariat efforts to follow up the decision.

4 General arrangements for Annual Science Conference 2007

The Meeting & Conference Coordinator, G. Kjeldsen, presented the meeting arrangements and practicalities related to this year's ASC meeting. The opening session would be attended by the President of Finland and this would involve increased security. At the last count, there had been 650 registered participants, which was lower than last year. For the first time, 11 young fishermen had been invited to attend the conference this year. The fishermen had been nominated by the RACs and national Delegates.

4.1 Draft resolutions

The ConC Chair emphasized the need for all chairs to go through draft resolutions in detail. ToRs should be phrased actively to show progress and this should be checked in cooperation with the Head of Science (HoS). Only major highlights pertaining to crosslinkages, joint activities or suggestions for workshops or other new activities establishment of EGs, as well as dissolved groups should be brought forward during the final review of 2007 Draft Resolutions by ConC.

4.2 ICES-Helsinki Outreach evening

The Chair of MCAP reminded the Committee of the background for the Evening Theme Session on 'Outreach – Informing the Public about ICES'. The main objective of the event is to reach a targeted, local audience (such as key decision makers) and teach them about ICES. This year in Helsinki it will cover three main topics: ICES Advice, Climate Change and 'ICES and its Shareholders'. The question of whether this event should be repeated in Halifax, Canada, or even be a recurrent event was raised. In Halifax 2008 perhaps the focus could be on NAFO.

Action: Paul Keizer was asked to contact the local organizing committee in Halifax, Nova Scotia, to determine if they will have an Outreach Evening, and if so what the objective of that event would be. He will report to ConC at the midterm meeting. Costs of the event may be part of the ASC budget.

The General Secretary informed ConC that the number of registered participants for this event was lower than expected. 140 invitations had been issued and only nine positive responses had been received. However, it had been agreed that the meeting should go on as planned. The young fishermen participating in the ASC and the Heads of Delegations of HELCOM, having their meeting this week, were invited and took part in the event.

4.3 Elections of new Committee Chairs

The Chairs of the Fisheries Technology (FTC), the Resource Management (RMC) and the Baltic (BCC) Committees had been informed of the option of extending their chairmanship for one more year, however the Secretariat had been informed that they did not plan to extend their term of office. Dependant on the outcome of the implementation of the Science Reform and establishment of new Science Committees/Programmes, it was noted that the elections of new Chairs might be for only one year. The message should be communicated to the Science

Committees that the new, incoming committee chairs should be encouraged to stand for re-election in connection with the establishment of new programmes/committees.

The outcome of these elections is as follows:

- William Karp, US, was elected as Chair of the Fisheries Technology Committee.
- Mark Dickey-Collas, the Netherlands, was elected as Chair of the Resource Management Committee.
- Yvonne Walther, Sweden, was elected as Chair of the Baltic Committee.

4.4 Requests to Science and Advisory Committees:

4.4.1 Theme Sessions in 2008

The ConC Chair recalled that at the ConC midterm meeting in May five theme sessions had been approved and four preliminarily approved. An additional number of 10–12 theme sessions should be approved for ASC 2008. A small subgroup, led by the Chair of the Advisory Committee on Ecosystems (ACE) and also including the Chair of the Oceanography and Fisheries Technology Committees, was asked to make a proposal for the final theme session package. Both Advisory and Science Committees were encouraged to suggest additional theme sessions and additional candidates for keynote lectures bearing in mind that the venue for next year's ASC will be Canada and theme sessions should also be directed at this audience.

4.5 Preparation of Committee Reports

The ConC Chair asked for emphasis on highlights reflecting the committee discussions and different views of the committee and, bearing in mind that these reports will be posted on the ICES website and included in the ICES Annual Report. He also encouraged that story-telling graphs and figures be added to the reports to make them more appealing. The length of the report should be restricted to approx 3–4 pages.

4.6 Award Selection Committee

Each of the eight Science Committees appointed a representative for the Award Selection Committee which is tasked with selecting the ICES Merit Awards, i.e., the Best Poster, Best Paper, and Best New Scientist. The ConC Chair asked the ConC Vice-Chair to kick off the process and the daily responsibility for coordination to be carried out by the Chair of the Mariculture Committee (MCC). The Secretariat informed theme session conveners to look out for good papers, posters and presentations, and communicate their nominations to the Secretariat. The ConC Vice-Chair pointed out that the evaluation should be grounded on both content and presentation. ConC was pleased with the work carried out by the Award Selection Committee. During the Closing Session of the ASC, the ConC Chair introduced the Merit Award winners:

Best new scientist:	Meri Härmä Mapping fish reproduction areas along environmental gradients on the SW coast of Finland.
Best paper:	M. Sascha, M. Fässler, Natalia Gorska, and Egil Ona. Comparison of the swimbladder between Baltic and Norwegian fjord herring: possible consequences for mean target strength.
Best poster:	Veronika Hellwig, Antonia Wargel, Annika Behr, and Ursula Siebert.

Isolation of primary liver cell cultures of harbour seals (*Phoca vitulina*) for identification of novel biomarkers of pollutant influence.

ConC was informed of the Awards Committee meeting scheduled during the ASC. The Awards Committee decided to defer the Outstanding Achievement and Prix d'Excellence Awards by one year due to the low number of nominations received. The decision is based on the perception that the nature of the awards was not sufficiently known, and that the tight deadline had prevented appropriate solicitation.

5 Election of ConC Chair

The General Secretary announced that according to the Rules of Procedure, 30 (i), the ConC Chair's three-year term would be ending this year, however if the Chair was prepared to extend his term of office by one year, this would be in agreement with the rules. The ConC Chair confirmed that he was willing to take on an additional year as Chair of ConC and there was consensus in the Committee that the acting ConC Chair should extend his term of office by one year in order to finish the work under the restructuring of Science.

6 ICES Strategic Plan

A subgroup consisting of the Chairs of the Marine Habitat (MHC) and Fisheries Technology (FTC) Committees and the HoS had been established to further develop the ICES Scientific Strategic Plan. The HoS presented the revised ICES Scientific Strategic Plan (**Annex 3**).

National priorities and ConC's role in drafting the ICES Science Strategic Plan

The plan needs an introduction in order to present the reflections on which the document is based. A first draft of a Science Strategy for ICES was one of the results of the meeting in January 2007 of the ConC Restructuring Group. The Bureau was asked to comment in June and as a follow-up activity, national delegates were asked to report to the Secretariat their national science priorities to be addressed in future versions of the Strategic Science Plan. Only very few (seven national plans or equivalents) were received, the very last one the week before the ASC. The national priorities received so far are well in line with the tabled plan.

Concern was raised that ICES science might be controlled by national science agendas. The ICES strategy should be more than just the sum of national plans. There is added value from the knowledge of what is known and foreseen by the science committee chairs and national science plans should be invited to take advantage of that. ConC should have a strong voice here saying that ICES cannot be driven by individual national science agendas. This view is in line with the ICES Convention.

The comment was made that national priorities are mostly available in the native languages and are not always translated into English which may well be one reason for the lack of feedback. Delegates need to be made aware that ConC has received limited input and because delegates are the administrative leaders, comments from Council in the Fall is one way of moving the science plan forward.

<p>Action: The ConC Chair will inform the Council about the challenges with national science plans.</p>
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The document has to guide in planning, and the level of detail should be a trade-off between being too specific for being of use for member states and too general to offer any guidance at all. A document like this should be overarching and give the scope for science groups within ICES to identify what scientists believe are the key priorities for the future.

Performance indicators. The current ICES strategic plan was complemented by an action plan. The plan lists action items that can be linked with strategic goals and that can be cross-checked with the ToRs of expert groups. The main goal of the action plan was to measure progress towards achieving the strategic goals; however it was used rather as a post-hoc technical justification. A burden was the large number of action plan items which has created a significant “administrative” workload to expert group Chairs and the secretariat, equalling the workload required for justifying the ToRs.

For the new strategy, ConC was instructed by Bureau to include performance indicators in the science plan. A fundamental problem is the lack of measurable activities to document progress on strategic goals. Many national labs use the practice of judging the performance of their scientists by the numbers, such as the number of conferences they took part in, publications or indices of citations. For the ICES science programme establishing a similar system is not feasible. A more holistic approach was envisaged. The listed activities needed to reach the strategic goal can be used as cornerstones to estimate to what extent a goal has been approached. The time scale of the new strategic science plan is three to five years which means that an update will be required by that time. A review group needs to be installed that makes an assessment of the performance of expert groups, programmes and committees based on the output and achievements. Several models are possible, ranging from a review procedure within the committees to a review performance across committees.

The question was raised how often to update the science goals? A three-year time scale is probably not operational, but how long a lifetime should the strategic plan have? It was suggested to review the activities as performance indicators, instead of the strategic plan as a whole.

ConC should promote the strategic plan to Council, and should not ask for directions but for comments to take input from Delegates on board. There is no plan B. ConC Chair is confident to find suitable phrasing to present this message to the Council to challenge them.

<p>ConC recommends that a subgroup should be established to further develop the Science Strategy for ICES, building on the comments from the national delegates. The subgroup will meet twice before the midterm meeting of ConC in order to finalise the ICES Strategic Science Plan. Representatives from both science and advice will be part of the group.</p>

7 Reform of Science and Advisory Systems

Update on Reform of Advisory Services (Saturday 15 September)

On the first (Saturday) Session of ConC, the Head of Advice gave a brief update from MCAP. The main focus of the MCAP meeting was a PowerPoint presentation on the new Advisory Services which would be presented to all ACOMS, Bureau and Council, to be complemented by case studies targeted for the different audiences. The main drivers for the changes are the change in the timing of the advice, the more long-term considerations, a demand for more flexibility and the implementation of the ecosystem approach to management.

The involvement of the science programme in the new advisory structure should be better reflected. Especially recruitment to the review groups needs specification. In the existing system the science committee chairs are ex officio members of the advisory committees and to give up this practice is not a good signal to the science programme. Moreover, it would be irrational not to use this expertise.

There was misunderstanding about the shift of tasks to the Expert Group level and their preparations. Much of the advice will be formulated in the Expert Groups and will then be reviewed by the review groups. The assessment work in the national labs is not expected to be reproduced in the Expert Groups which would reduce the need for long meetings. External recruitment of review expertise may be considered. The question about the involvement of clients in designing the advisory reform was raised. Clients had generally responded that they considered the way of developing the reform to be an internal ICES matter and that they would be satisfied as long as the product was based on science. In this context, the point was made that it was important to communicate that the science is still acknowledged as the foundation for providing advice. Not doing so would mean losing many of the science groups. More top-down driven, tedious ToRs have potential to overload and frustrate expert group members.

It was pointed out that much good science is hidden in the Expert Group reports, but it can also be found in the ICES symposia. The ways and means of how this science is fed into the advice is not always clear to the outside; one example was the Galway Symposium.

Update on Reform of Advisory Services (continued Monday 24 September)

During the ASC week, the advisory committee Chairs had been listening to the concerns raised in response to the presentation of the new Advisory Services to the advisory committees and there had also been two critical meetings with Delegates. Out of these meetings came a document entitled "33 concerns". There had been discussion on transparency but no agreement was reached. They were also concerned about the details of how the ACOM would work. The Delegates did not feel they "owned" the reform. The Delegates present agreed to establish a Council subgroup tasked to look at the concerns and see where these are catered for in the implementation plan. There is a common understanding that next year we cannot get everything right, but we will evolve the structure and we will have a better and more efficient system in place.

Update on Science Reform (Saturday 15 September)

Comments had been received on the section on commitment. It was suggested to replace the section on commitment by a section with potential for more enthusiasm. The ConC Chair pointed out that the section is not specifically linked to the work of the chairs, but also to Delegates and their commitment to allocate the necessary resources to ICES work. The President pointed out that from a Delegate's point of view, the attitude is not to oppose the work of groups that seem to be out of focus but they would not support participation. The argument was repeated that the science side needs more empowerment. Non-advisory issues need a strong voice on science, but it can also do that through Council. Society is asking the marine science community on issues but they might also address themselves to other bodies.

There was criticism that the science side reform proposal is missing speed and flexibility, and this provoked a discussion on to what degree the science reform should be focused towards providing advice. The proactive science often refers to what is termed 'unrequested advice'. This process is bottom-up and ongoing and it is still foreseen in the plan for the future science in ICES. A different approach is working towards identifying future science issues in anticipation for the advice that will be needed driven by societal concerns. Gearing the science too far towards top-down inserted ToRs will reduce the attractiveness of expert groups and consequently attendance.

Providing advice on science questions and priorities was felt to be an area for further specification. Where and at which level should these products be generated? A science committee given appropriate ToRs or a study group are possible bodies to produce a specific science product/position paper. A lot of good work is also hidden in EG reports, which is certainly worthwhile searching and collating topics. Hiring expertise to take this on is one option, but we also need to set up a mechanism dealing with this.

The role that programme chairs will play in turning this into a process providing integration may also be considered. It will always be the primary responsibility of ConC to look at the science and identify the process necessary to move forward in an effective manner.

The science programmes, together with ConC, may form a task force which takes charge of this. Identifying emerging science issues where ICES should establish a position and provide an overview is the first step. The outcome would be a document for the public or agencies that we deal with. Subsequently, the advice side could become involved in selling the document.

Update on Science Reform (continued Monday 24 September)

Based on input from committees and comments made during the first (Saturday) meeting of ConC, a subgroup consisting of the ConC Chair, the ConC Vice-Chair, and the Baltic Committee (BCC) Chair was tasked to update the document with a view for a final discussion during the final ConC meeting. The ConC Vice-Chair presented the updated meeting document on the ICES Science Reform. The Outline for a new Science Structure (see **Annex 4**) describes concrete suggestions for the structure of the future science programme, including responsibility for the different levels and a comparison of the new and existing organisation.

The scope and Expert Group inventories of committees have not been included at this stage. Later on, we need to ensure that we do not lose members of our community, we will have to consult with the present committees and ask them if we have met their needs, and if they feel accommodated in the new system.

The major change compared to the previous version is the composition of the Consultative Committee, which may now have some form of national representation; ultimately in response to a clear request from Delegates. Part of the background was the perceived imbalance in national representation in ConC.

Some committee Chairs expressed concern in relation to Option 1 in the document for ConC, by which Member Countries not represented by a Committee, Programme or Advisory Chair may appoint a member to ConC. This may result in a mix of scientific qualification and national representation, which they felt should be kept separate. Scientists should be ConC members based on scientific merit – and not be representing national interests. Nevertheless, the science needs a strong, empowered voice in the ICES community. If ConC is given a strong mandate, the question arises as to what role Council will have in a new system. There was agreement that the core of ConC should always be based on scientific merit.

An alternative solution to seek more empowerment of ConC may be through a communication mechanism linking ConC with the Council, perhaps a scientific board working in connection with the meeting. Another suggestion was to break up ConC in subgroups according to the tasks that need to be solved and staff them accordingly.

The Chair of the Oceanography Committee, being both Committee Chair and Delegate, emphasised that he is not representing Council or Spain; he is representing the Oceanography Committee. He also agreed that ConC should represent science and not the nations; however ConC is the only ICES body without national representation - all discussions in the Bureau are immediately communicated to the Council. ConC should have the same level of governance. ConC was criticized for making micro-management instead of engaging in strategic thinking. The intention of the Council was to empower ConC to speak on behalf of ICES and make decisions, thus avoiding the slow process of making requests.

It may also be useful to start the process by linking each of the jobs that should be placed in ConC and analyse if this is best dealt with through national representation or scientific representation. ICES is built from the top by nations, however, at which level you can shift from national to science governance is not clear. Conversely, ConC is the place where the bottom-up science driven process meets the top-down one. Symposia and Theme Sessions for the ASC reflect this bottom-up process, therefore ConC should remain in charge of this.

Assuming national representation in ConC, to what extent would ConC be empowered to speak on behalf of the Council? Also, assuming that ConC was purely national, one option might be to move tasks which are better dealt with by Science to another body.

The ConC Chair pointed out that the response from the Council was not unequivocal – different opinions were expressed by Council. The current proposal has outlined specifically what we were asked to do and we are essentially asking Delegates to approve the structure for science (committees, programmes).

Recommendation for forming a subgroup

There was agreement in ConC to modify the document to reflect this latest discussion in ConC, and to present the document to the Council with a recommendation for establishing a subgroup to meet two times before the 2008 mid-term meeting of ConC. The tasks for the Subgroup will be to define the scope and function of each level in more detail; define key programmes and ToRs for new Committees/Programmes/EGs, and ensure that ConC stays operational. The Subgroup should consist of the ConC Chair, ConC Vice-Chair, and the Chairs of the Marine Habitat (MHC), Living Resources (LRC), Oceanography (OCC) Committees and HoS, plus one to be nominated from the Advisory side. One National Delegate should be invited to take part in the group with the goal to invite Council as passengers to give them a sense of possession and involvement. The group should report to ConC and Council.

8 Training in ICES

The ConC Chair asked for comments on the draft recommendations in the document that had been prepared by the Chairs of RMC and ACFM for the midterm meeting. The General Secretary commented that creating teaching and education programmes will involve investment and budgetary implications which should be included. He reminded the meeting of a parallel activity for setting up post-doctoral exchange programmes and stipends which stemmed from the Bureau earlier in 2007. From a practical point of view, the two proposals should be merged and a budget be set up.

In conclusion, ConC approved this recommendation in principle and asked the Chair of RMC and ACFM to finalise the proposal together with HoS.

This proposal is mainly directed towards the advisory side. It should be made clear in the justification that this should be a first step in developing a broader, longer-term strategy on teaching.

Action: The final recommendation (see **Annex 5**) will be brought to the attention of the Council.

9 Lessons learned from 2007 ASC

ASC Statistics

Görel Kjeldsen provided some statistics on the ASC participation from the 2007 Annual Science Conference. The figures are based on 648 registered participants plus 14 spouses = 662: 63 students (Euro 65); 18 one day fees (Euro 60); 14 late registrations (Euro 180); 167 free; 283 normal fee (Euro 130); 103 committee fee (Euro 65); 14 accompanying persons (Euro 30).

Technical arrangements and facilities

The ConC Chair invited comments on the technical arrangements and facilities. Overall, ConC was very pleased with the facilities and the new setup for the ASC. There were only a few minor comments:

- The room for the Chairs could have been bigger.
- A separate monitor for the conveners of what is shown on the screen during presentations would be nice.
- Joint session LRC/RMC – would be good to have one hour more.

There were diverging opinions in ConC regarding the scientific quality. All papers were well presented and some were outstanding. Some had the impression that the quality of science during the first two days was very high, but decreased during the last days and others saw it the opposite way. ConC was equivocal though that the ASC is not attracting the top-quality science. Quality to some extent depends on the conveners and the point was made that one way of dealing with this issue could be to encourage conveners to invite selected speakers to give extended talks at ASC theme sessions.

Action: The question of inviting selected speakers to theme sessions will be readdressed by ConC at the midterm meeting.

The quality of the invited plenary lecturers was very good.

Young fishermen

It was a successful event. This was on Council expense and it will be up to the Council to decide whether this should be repeated. It was suggested to have an equivalent sponsored programme of ‘young environmentalists’ or other stakeholder groups.

Other comments

ConC had received positive feedback from people who welcomed the new setup of the ASC. It had been very well received, the only concern was that all committees meeting at the same time makes it difficult for people attending more than one committee, but this will always be difficult to avoid. A Wednesday afternoon allocated for committee meetings was well received. The Monday/Wednesday session arrangement was excellent and Chairs would very much like to see this year’s model repeated.

Even the closing ceremony had been well attended. ConC was pleased that the closing had been shortened. The Chair of MHC suggested that it would have been nice to have a short reflection on the highlights of the theme sessions/the scientific contents to conclude the meeting.

10 Development of programme for the 2008 ASC (Halifax, Canada)

10.1 Meeting arrangements

G. Kjeldsen informed ConC that the ASC is scheduled for 22–26 September 2008, with the business meeting running from 20–29 September. The venue is the World Trade and Convention Centre in Halifax. The former Chair of MCC, Tom Sephton, had set up an information desk, displaying material regarding the ASC to be held next year in Halifax and there had been a meeting with T. Sephton, M. Sinclair, and Eero Aro (local organiser of 2007 ASC). Preparations are well in line, the Secretariat had promised to send a list of participants for the organisers to send a preannouncement and block booking have been made for three hotels. It had been suggested to seek sponsorship from an airline, and a concrete suggestion was to approach Iceland Air. The local organisers in Helsinki had given a lot of useful

information to the local organisers in Halifax. The Secretariat will go there in late October to check the facilities.

Regarding the calendar setup for the ASC and committee meetings, ConC agreed to have the same setup for next year's meeting. With the new role for Science Committees, more time should be made available for these to meet. The Secretariat mentioned the possibility of allocating time for committee wrap-up session and/or joined sessions, to sort out loose ends that have come up during the meeting; this should be announced to the committees on Friday afternoon after the Closing Session.

10.2 Review of proposed Theme Sessions

The Chair of ACE reported from the subgroup tasked with preparing a proposal for a Theme Session package for review and approval by ConC. The group found that two-thirds of the theme sessions in the proposed package had Canadian relevance, and the four ICES strategic goals were reasonably well balanced although goal 1 seemed to have priority. The final list of approved theme sessions can be found as **Annex 6**.

When combining sessions ConC we run the risk of widening the scope too much for appropriate attendance. However, as a special case for this, it was suggested to combine the theme sessions on Risk Assessment and Management Advice with the one on Fishery Research and Governmental Quality.

Action: RMC Chair was asked to follow up on this with the theme session conveners.

For the theme session on New Methodology for Tracking Fish Migration, it was suggested to expand the scope to include marine mammals and seabirds as well as the behavioral aspects.

Action: The Secretariat will ask the conveners to broaden the scope to include behavior of fish (schools) and include mammals and seabirds.

In the light of discussions during WGDIM, it was suggested to ask the conveners of the session on environmental and fisheries data management to include user's aspects.

Action: the Secretariat will approach the conveners of Environmental and Fisheries Data Management to include a paragraph on users' involvement in their Theme Session.

Action: Secretariat should contact conveners when the number of conveners is higher than three, three conveners is a suitable number.

Action: Theme sessions with a list of titles should go on the web as soon as the final details are in place.

The ConC Chair thanked the subgroup for doing a very nice job and ConC noted that handling theme session proposals by a subgroup would be an efficient approach in the future.

10.3 Invited lectures and other special events

Jake Rice, Canada, will be the speaker of the opening session. He will be asked to give a talk related to the “Size is Almost Everything” session.

Manuel Barange, UK (GLOBEC Office), will be invited to give a plenary talk which could be linked to evidence of the global warming effect in the context of GLOBEC.

Victor Smetacek, Germany, will be invited to give a plenary talk which could be linked to the theme session on “The Role of Sea-ice in Ecosystems”.

11 Development of programme for the 2009 ASC (Berlin, Germany)

11.1 Meeting arrangements

The Secretariat has received an official invitation from Germany and the Secretariat had hoped that the local organizers would be represented at this year’s ASC. The dates for the ASC 2009 are 21–25 September and business meetings will run from 19–28 September 2009.

The Chair of Baltic Committee asked to be informed of the correspondence between ICES and the German Ministry and offered to assist as appropriate.

11.2 Review of proposed Theme Sessions

There had been a few additions to the list of theme sessions for 2009 and a number of these theme sessions looked promising; however the list still is not very long.

The Chair of Baltic Committee informed that BCC would likely withdraw the theme session on Stock Recovery.

Action: the Secretariat to send a letter to all EG Chairs encouraging them to come up with new theme session proposals. The current list should be attached.

11.3 Invited lectures and other special events

ConC agreed to keep the following names on the list of proposed plenary speakers:

Ken Drinkwater, Norway; Ray Hilborn, USA; John Church, Australia; Bob Correll, USA; Bob Watson, UK; Jorge Sarmiento, USA.

The point was made that we are focusing on names; perhaps we better focus topics instead. However, we need to have more theme sessions first until we can do so and re-consider nominations.

ASC 2010

The ConC Chair informed the committee of the possibility of a Joint ICES/PICES Science Conference in 2010 in connection with the PICES meeting hosted in the US in 2010. The US will make investigations and report back to Council.

12 2007 Draft Resolutions

The Committee reviewed the proposed package of resolutions and introduced amendments where appropriate. ConC agreed to have the final package ready for Council by the end of week 40. A table of Expert Groups that were dissolved, established, changed committee or were renamed is attached as **Annex 7**.

Some of the highlights under the agenda item were:

Under the Marine Habitat Committee (MHC), many discussions evolved around the OSPAR requests and a follow-up meeting was needed and attended by the ACME Chair and the OSPAR liaison in the Secretariat. MCWG and WGMS wanted a meeting back to back, however Expert Groups have to meet in different venues but at the same time. Joint ventures will be accomplished either by video conference or by email correspondence. For WGBEC, the ToR on endocrine disruptors was withdrawn. BEWG noted that it is the standard operating procedures for mapping which are really lacking in certain approaches. Next year they will try to develop standards for recommendations. The group had focused a lot on work done in Europe. WGICZM came up with a long list of recommendations again. There are many activities for WGMHM along with a general need for mapping. The group has withdrawn the recommendation for ICES to develop advice with respect to the water framework directive.

Under the Mariculture Committee (MCC), WGPDMO met in the Balears while there had been a rockfall in the hosting lab. Work focused on hyper pigmentation in North Sea dab, and ToR b was to recommend a framework for integrated evaluation. WGAGFM stressed that there is an urgent need for ICES member states to secure and provide proper storage conditions for historical tissue collections such as scales and otoliths, since they contain invaluable DNA evidence of natural historical demographic processes in fish and shellfish populations. Due to the late meeting date, ConC be given the authority to adopt the WGMAFW resolutions during their mid-term meeting in 2008.

Under the Diadromous Fish Committee (DFC), new groups are SGBALANST to allow a more thorough consideration of data requirements for the provision of advice on Baltic sea trout and WKSHINI a follow up to WKDUHSTI in 2007 which had been very successful in collating, examining and analysing historic oceanic tagging data on salmon. WKSHINI would now use these data for analyses and oceanic migration mapping of Atlantic Salmon for many countries in the North Atlantic.

Under the Oceanography Committee (OCC), WKCPH has drawn very interesting conclusions and there is likelihood of some follow-up work. ConC agreed to disband PGNSP and transfer the ToRs, including the activities under NORSEPP into WKOOP which was originally scheduled to meet back to back with PGNSP in 2008. Further to that, a request was made to expand tasks descriptions and put the focus on products, not to establish a group without clear functions. WGPE had been dissolved in 2006, and an attempt was made to create PGPYME as the new home for phytoplankton matters in ICES. OCC decided to start the process with a theme session during the ASC 2008. For the OSPAR request on guideline updates, alternative solutions need to be found (see ACME). The zooplankton status report was not published this year, and it has turned out that the best option was to produce the report every second year. WKCFCC has suggested dissolving in 2009 and becoming a more general expert group dealing with climate issues. SGGOOS still needs to have commitment from IOC which needs to be sorted out during its 2008 meeting to be held at IOC premises.

Under the Resource Management Committee (RMC), SGHERWAY is a new group to look into the evaluation of assessment and management strategies of the western herring stocks and will meet for two consecutive years and feed into PGHERS and HAWG. Another new group is WKHIST to look into historical data on marine fisheries and fish stocks. SGFIAC had its first meeting this year and plans to have one or two more, given the success of the work. A proposal for WKTOWELS on how to perform trawl surveys needs to be passed back to RMC and elaborated further for next year. ACFM Chair expressed his concern that there may now be two groups dealing with Management Strategies (SGMAS and WGMS), leading to some possible overlap. It was suggested to reject the change of name since it might create confusion. PGNAPES identified a problem with the redfish fishery appearing in the northern Norwegian Sea which expanded rapidly for *Sebastes mentella*, and for which there is a no-take recommendation. Norway has started to survey the fishery in the area this year but it is beneficial in having an ICES home for such monitoring activities. Therefore, a new ToR was added: Tor e) plan, and as relevant coordinate, surveys in the Northern Norwegian Sea to observe abundance and distribution of pelagic redfish to SGRS.

ACE proposed the establishment of a Study Group on Bycatch of Protected Species (SGBYS). ConC found that the ToRs for SGBYS are quite similar to those for WGDEC (g) and (h) and suggested that the two groups coordinate their activities to avoid double work. The SG on effects of Sound in the Marine Environment (SGESME) has been terminated, the work has focused on the Nyborg “underwater noise” symposium (August 2007) and there are no ToRs which are of high priority. Work on effects of sound is concentrated in US based groups.

Under the Fisheries Technology Committee (FTC), there was concern under which umbrella WGUFM and the successor WGQAF should come. The group has done excellent work. However, as soon as the scope goes beyond the technical gear aspect, FTC is not the right home for the group. The ACFM Chair thought that results should be presented at AMAWCG where they were likely to provide a more useful input. A clearer outline of the work to be covered by this WG and whether it should be transferred to RMC is needed. Widening the scope is one way forward. The RMC and FTC Chairs were tasked with sorting this out. The FTC Chair pointed to a deficit in communication between committees, mostly done via individuals. He invited requests for FTC to discuss with a view to preparing ToR for the next session.

Under the Living Resources Committee (LRC), WGFE is a good example of a group that is responding to advisory requests and at the same time generates its own issues that matter. This balance is very important to maintain. The SIMWG was highlighted and ToR e) on the need to define generic protocols and advise on fishery independent sampling programmes that could be carried out as measurements was pointed out. A CRR will be one of the outcomes of this group. New groups are: a Planning Group on the Northeast Atlantic Continental Slope survey (PGECCS) which was proposed although it was noted there were obvious cross-committee issues inherent in this proposal. Support was also given to the proposal for a workshop and training course on *Nephrops* burrow identification (WKNEPHBID) in 2008. WKSPCLIM is an ICES/PICES/GLOBEC workshop, which will follow up on the work of WKLTVSWE on long-term climate variability and global change in south-western Europe. New groups: WKNEPHBID on training of *Nephrops* burrow identification, PGNEACS on coordination of deep sea surveys, WKSEQUIN on sea bird ecology indicators have been set up in relation to advisory requests. WKCLIM on changes in clupeid populations with climate has been set up in connection with GLOBEC and PICES. Groups dissolved: SGRECVAP on the analysis of the control in recruitment pattern of planktivorous fish has finalised its study. WGCRAb: the group suggests to improve assessment methodology, connectivity between regions and stock identification as well as monitor diseases that affect flesh taste and commercial value.

WGCRAN: Resolving variation in catchability is a first problem and the group suggests work on that issue. WGCEPH: Catches of cephalopods increase. Cephalopods are becoming an important subject related to trophodynamics, ecosystem structure and climate change. But research is completely dependent on external financing. The completion of a CRR on past activity is underway. There is a request from ACFM for CRAB, CRAN and CEPH to also report to ACFM.

Under the Baltic Committee (BCC), SGEH is a bit critical because its work is mostly based on the BSRP funding of quite a few participants. Next year it will be reviewed thoroughly and the question of whether it should be dissolved will be discussed in connection with the outphasing of BSRP. After some years of navel gazing, it turns out to be a good bridge between ICES and HELCOM. The Baltic Committee recommended giving this group another year to justify its existence. Similar reasoning applies to SGPROD which produces real work to the WGIAB. WGIAB would wish to receive more formal and personal support from the ICES secretariat, as well as from HELCOM, if the work is considered to be a useful component of the Baltic ICES work. WGHABD has requested that WGGIB should be dissolved. BCC thinks there are all good reasons for its existence. The example shows that BCC is always running the risk of having a reputation for duplicating work done in the rest of ICES. Would participation by WGGIB members in WGHABD solve the problem? BCC found that this was not the case, and WGGIB is very Baltic-specific, with particular reference to herring and sprat recruitment processes. A future merger might be possible, keeping this field as a ToR.

Under the Advisory Committee on Ecosystems (ACE), WGDEEP will become a joint ICES/NAFO group. The NAFO Scientific Council will consider this soon after ConC, but it may be turned down, in which case it will continue as an ICES group. There will be workshops dealing with maturity-related requests, boundaries for protected areas and management of fisheries. SGBYC is to be established to deal with by-catch of protected species. Since ToRs are similar to some extent under WGDEC, ConC requested a reference between the two groups, to be reviewed again next year. SGESME was dissolved.

Under ACME, there are a number of requests from OSPAR for advice. Consultations have been held with various EG chairs, the Chair of MHC, and OSPAR to determine the priority and timing for the delivery of the advice since there is more work than can be completed in 2008. There is a delay in finalising the ToRs for a workshop on prediction of eutrophication status and transboundary nutrient fluxes (WKPEST) proposed by OSPAR because the details of the request will not be known until after the OSPAR Eutrophication Committee meeting in October. There are two steering groups reporting to ACME on quality assurance of chemical and biological measurements; these are joint groups with HELCOM and OSPAR/HELCOM, respectively. In 2006 OSPAR and HELCOM were approached with a request to merge these groups into existing expert groups within ICES; however HELCOM denied the request. Therefore in 2008 STGQAC will meet at the same time as MCWG. STGQAB has an outstanding OSPAR request for reviewing and updating the benthic and phytoplankton monitoring guidelines. BEWG has been asked to review the benthic guidelines and provide a draft response to STGQAB; meeting dates have been adjusted accordingly. It is apparent that the new phytoplankton ecology group will not be able to respond to this type of request so an effort will be made to get the necessary expertise to review the phytoplankton guidelines to attend the meeting of the STGQAB. If this approach is not successful it may be necessary to create an ad hoc group to undertake the review.

Action: Suggestion for Chair of ACME and Chairs of OCC and MHC to find a solution.

Under the Advisory Committee on Fishery Management (ACFM), the process during the ASC had been very intense, a request to change the timing of advice, combined with the proposed change in the advisory process, resulted in an accepted approach, however details had not finalised. This means a collated package of ToRs for EGs will have to be finalized at a later stage. ConC agreed that the package will be finally accepted by ACFM in October. PGCCDBS ToRs were considered by ConC. The group acts like a committee and ConC noted that many workshops lack supporting information, chairs are not identified or not confirmed in several cases, dates and places are either only partially indicated or are not confirmed etc. Clearly, this is not a satisfactory basis for evaluating whether these groups are required, and whether the quality of the work within the groups is assured.

This work was earlier organised directly under the EC and some initial problems are inevitable when changing the organisational arrangements. These groups/workshops generate data feeding directly into the assessment process and for this reason coordination between the planning group/workshops and the ICES advisory work is urgently required. Data collections are in vain if the users find the data useless - and it was for this very reason that the workshops were moved to ICES. ConC recommended PGCCDBS for its initiative to establish a network of contacts within the assessment working groups. ConC would appreciate if such a package is presented as part of a long-term plan with indication of how well this plan is being followed. ConC accepts that there may be examples of workshops that need to be established at short notice but found nothing that suggests urgency. Finally, ConC noted that the workshop related to Baltic fish stocks are better documented than the rest of the recommendations.

ICES, by adopting workshops/groups, becomes a guarantor that this work is well planned and coordinated and that it can reasonably be expected that the groups will deliver on the ToRs. It is therefore unacceptable to ConC who advise the ICES Council on science issues to get such rudimentary arguments as to why these groups are proposed and what the groups will be doing.

Action: ConC instructed the Secretariat, together with the chair of PGCCDBS, to complete the recommendations and identify chairs, and confirm places and dates. This completion is a precondition for the recommendations to go forward to Council.

Two groups have been dissolved and combined into one: WGNPBW and WGHMSA since there was more interaction required between these two groups, they should be able to profit from each other.

There will be a number of benchmark workshops developing methodology for specific assessments, but it has not been finalised what they will focus on in 2008. Finally there is a WG on new MoU species to have a meeting by correspondence. The final package will be ready by 4 October.

13 Review of WGDIM report and draft resolution

Helge Sagen, Co-Chair of WGDIM, presented the report of the WGDIM report. ConC noted that it will be important for WGDIM to attract more users in the future as they were not well represented in the group this year. It was suggested to identify the relevant questions from the users' perspective and then plan a number of workshops designed to attract users to provide input on their requirements for types and integration of data.

The ConC Chair drew the attention to the draft ToRs of WGDIM. It was suggested to add a ToR to design a workshop in fields where it is appropriate to disseminate information/establish communication with users. With this comment from ConC, the WGDIM ToRs were approved. It was decided that the WGDIM draft resolutions should remain under ConC until the restructuring has been finalised.

Action: WGDIM was asked to produce a five-year work plan, including how to attract more users at their meetings.

14 Review the status of ICES Symposia

The Head of Science Programme presented the package of new Symposia proposals and the revolving list of symposia providing an overview. To assist the decision, an overview of request for ICES to cosponsor symposia was prepared including the criteria for approving cosponsorship. Only those symposia not previously listed in the revolving list were included in the new package.

The General Secretary requested that the revolving table should be expanded to include a column indicating the financial implications for the ICES budget.

Co-sponsorship of the following symposia was approved by ConC:

Symposium on Eastern boundary upwelling ecosystems: integrative and comparative approaches, to be held 2–6 June 2008, at Las Palmas de Gran Canaria, Spain with conveners Pierre Freon (IRD), Manuel Barange (GLOBEC), Javier Aristegui (ULPGC). *Comments:* Although this is a late proposal, this was found to be an important symposium for ICES. There is a broad range of ICES-relevant topics, integrative from physics to top-predators. The symposium meets well with the ICES criteria. ConC recommends cosponsorship in terms of JMS, but no additional funds. [Editorial note: request for JMS publication was withdrawn by conveners after the ConC meeting]

Symposium on Coping with global change in marine socio-ecological systems will be held 8–10 July 2008, at Rome, Italy with conveners Ian Perry (Canada), Rosemary Ommer (Canada), Philippe Cury (France). *Comments:* Well advanced in planning with not much scope left for ICES. Much science is developing in this area and if ICES wants to be in the forefront, we should not stay away but participate. Co-sponsorship was agreed but funding will only involve allocation of travel and subsistence for two ICES keynote scientists (4 K€). The outgoing and incoming RMC Chairs were tasked to inquire where conveners would like to see ICES to put focus on.

Symposium on the Role of Marine Mammals in the Ecosystem in the 21st Century will be held on 29 September–1 October 2008, at Dartmouth, Nova Scotia, Canada, with co-conveners Garry Stenson (NAFO) and Tore Haug (ICES). *Comments:* The request was welcomed and ConC agreed to fund one keynote speaker (2 K€).

Symposium on the Ocean in a High-CO₂ World will be held 6-8 October 2008, at Monaco. *Comments:* ConC considered this a high-priority topic since judging from the report from WKCPH there will be an important perspective for ICES. ICES and PICES were asked to sponsor a theme session on “Fisheries, food web and ecosystem impacts”. The Chairs of OCC and MHC were tasked to develop the theme session in cooperation with the Head of Science Programme and PICES. ConC agreed to sponsor travel and subsistence costs for ICES keynote speakers and/or conveners of up to 5 K€

World Conference on Marine Biodiversity will be held 11–15 November 2008, at Valencia, Spain with Carlo Heip (The Netherlands) and Carlos Duarte (Spain) as conference Chairs. *Comments:* There was some confusion before the ASC since it was not entirely clear what the conveners expected from ICES. At least, ICES is invited to sponsor a theme session but the scope remains open and to be defined by ICES. The original plan to develop a symposium on the topic came from ICES so we should go along with this. MHC nominated Heye Rumohr and Jake Rice as ICES conveners. Cosponsorship of up to 10 K€ was approved. Jake Rice should also be a member of the SSC, the ICES conveners will develop the contents of the theme session sponsored by ICES.

Symposium on issues confronting the deep oceans will be held in the Azores in April 2009. The prime focus will be on the North Atlantic (ICES + NAFO Areas) but relevant contributions from elsewhere will be included. Conveners will be Robert Brock (USA) and Gui Menezes (Portugal). *Comments:* The full coverage of up to 10K € to be allocated for travel and subsistence for keynote speakers, publication of abstracts as appropriate was approved.

Symposium on Rebuilding Depleted Fish Stocks - Biology, Ecology, Social Science and Management Strategies will be held during the autumn 2009 at Hamburg (Germany) with Cornelius Hammer (Germany), Olav Kjesbu (Norway) and Peter Shelton (Canada) as Conveners. *Comments:* Given the topic, it will be very important for ICES to join forces with UNCOVER here. The full coverage of up to 10K € to be allocated for travel and subsistence for keynote speakers, publication of abstracts as appropriate was approved.

Symposium on the Collection and Interpretation of Fishery Dependent Data will be held during the summer 2010, in Galway, Ireland with N. Graham (Ireland), K. Nedreaas (Norway), and W. Karp (USA) as Conveners. *Comments:* Very topical symposium, will be beneficial for ICES to be involved. The full coverage of up to 10K € to be allocated for travel and subsistence for keynote speakers, publication of abstracts as appropriate was approved.

ICES/NASCO/PICES/NPAFC Symposium on Marine Mortality of Salmon will be held in October 2010 in Europe with Niall Ó Maoiléidigh (ICES), Malcolm Windsor (NASCO), [requested] (PICES) and Jim Irvine (NPAFC) as Conveners. *Comments:* PICES has withdrawn. NASCO will carry out local organisation, steering group in place, ICES has made a commitment of up to 10K € covering ICES keynote speakers, abstracts, etc. plus publication of the proceedings in the JMS.

Co-sponsorship of the following symposia was **not** approved by ConC:

International Polar Year Symposium. This symposium has been on the list for quite a while without seeing initiatives or commitment from any of the science or advisory committees. There is another IPY symposium in Norway scheduled for 2010, where 3-4000 participants will be expected. ConC Chair suggests to cancel the ICES activity, there is no reason to compete with the Norwegian endeavour. ICES should look for other relevant symposia on climate and ocean change in the future.

ConC noted that in recent years, there had not been as many ICES initiated symposia to be sponsored compared to symposia co-sponsorship requested from external resources. However, looking at the full suite now available for 2008 and 2009, both are about equal. The ConC Chair pointed out that more ICES initiated symposia should be encouraged in the future. ICES symposia are an important outreach to other science communities, for leading the way and

bringing in ICES priorities, and for making ICES known to young scientists early in their career.

The PUB Chair pointed out that there is little flexibility for taking new requests on board for publication until the end of 2011. The second symposium on decadal changes will be proposed next year for 2011.

ConC felt that the ICES criteria for selecting symposia for sponsorship should be updated to give some more flexibility based on this year's experience. It was also noted that the ICES template for symposia needs an update. A subgroup was formed of Chairs of PUB and OCC and the Head of Science Programme to take care of this. The subgroup will also revise the letter to conveners to standardize the procedure.

There are now eight ICES sponsored symposia for 2008 which will be quite a burden.

Action: HoS and the Chair of Publications Committee: 1) When JMS is involved a paragraph should be added to the resolution stating that the Symposium conveners agree to the publications schedule recommended by ICES. 2) The table of Supporting Information should be changed radically, listing ICES' requirements to the symposium.

15 Progress reports from Publications, Science, and Advisory Committees

Marine Habitat Committee (MHC)

Participation in the committee meeting was quite good with 30 on day one and 40 on the second day. There were discussions about publications, particularly about the new "ICES insight" newsletter. It looks quite fisheries oriented but the committee decided that it is up to the committee itself to provide relevant articles with different focus. The Draft Outline for the new Science Structure was discussed in MHC. The following points were made (they can be found in more detail in the committee report):

- stronger links between the Science Programme and Advisory Programme, perhaps through the Review Group or by establishing a formal mechanism between the Review Group and the SciComms.
- emphasis on programs will be their interdisciplinary nature rather than their duration.
- need for ICES to be a channel for proactive advice from the EGs to the Science Committee to the AMG to the Client. Mechanisms for this need to be developed. ICES should consider investing (e.g. contracting experts in Science Committees) in the production of proactive advice documents to alert science and advisory agencies to emerging needs.
- SciComms should be made up of Chairs of EGs and up to one additional person from each country if requested. Alternatively, if national representation were required, the numbers of members could be reduced if the EG chairs also acted as national representatives.
- Not all agreed with an extra meeting due to time constraints. Some felt that there should instead be a stronger focus on the ASC as the point of information.
- In the discussion of the SciComm tasks it was stressed again that the operational framework should be dynamic and developed as necessary. The SciComms may need to form new EGs (not just consolidate them as currently in the proposed Science structure).
- The MHC considers that it is not realistic to expect Delegates to raise the necessary travel funds to send EG and Committee Chairs to the respective Committee and ConC meetings. It is suggested that this be built into ICES operations and budget in coordination with ICES support by member countries.

- Concerns expressed in relation to Marine Technology and Surveys, which sounds to some folks like it is focused on seabed engineering activities. To make clear that the ‘technology’ committee’s mandate covers a wide range of technologies, perhaps the term “Advanced Sampling Technology” can be considered as an alternative.
- It might be considered that coordination of international monitoring programmes, particularly if focused on stock assessment, go to Resource Biology and that monitoring strategies and methods should go to Habitat Characterization, Biodiversity and Anthropogenic Impacts.
- The name Habitat Characterization, Biodiversity and Anthropogenic Impacts was not considered appropriate and it was proposed that this should be changed to Ecosystem Status and that this should include all anthropogenic impacts including fishing and fishing gear, contamination as well as ‘natural stresses’
- The text describing the candidate Committee Analysis and Data Management should include support and facilitation of networking, tool development, using and sharing data. Particular emphasis should be given to the interoperability of large data bases needed for an ecosystem approach. Links with similar work in the ICES area should be encouraged and developed.
- Care should be taken not to assign mostly long-term ‘boring’ tasks to WGs. For example, the discipline-oriented groups such as the MCWG are spending most of their efforts preparing guidelines and annexes, while issue-oriented focal (perhaps ‘study’ or ‘planning’) groups may be dealing with more intellectually interesting and scientifically current topics. Might Task Groups be formed to deal with ‘more routine’ work?
- There was a suggestion to encourage co-chairing of WGs to help reduce the bias towards native English speakers.
- The issue of parenthood of EGs was discussed and there is a need to have clarity on this issue for both the EGs and the parent committee. An EG can really only have one parent but it can supply its report to a number of committees.
- The use of new web based communication could be considered but there are IT security problems with this.

Mariculture Committee (MCC)

14 participants attended the first meeting, 13 on the second day. Apart from the highlights, the primary focus was on the reform process, that is where should MCC go. MCC has well functioning Working Groups that report to MCC via WG Chairs. ICES is called upon to provide synthesis and advice, from WGs to Science Committees to Advisory Committees, and currently the Science Committees just serve as a filter. The MCC role should change to become a gentle guide to the WGs (e.g., the recent identification of the Fish Welfare WG to replace the old WGMAFC, which had finished its work). Consideration should be given to the fusion of the Science Committees into a framework that makes sense. MCC should change by serving primarily to provide broad strategy and therefore having a lighter touch on the WG work. WGEIM, WGMASC and WGPDMO are to varying degree ecological in nature and could provide advice in a context beyond just mariculture. Since both, fisheries and aquaculture practices will have to become more ecologically oriented, integration of MCC work with other WGs needs to be done.

Finally, the MCC decided that a) MCC should continue to exist, b) MCC structure should be revised to emphasize the role of WG chairs and any additional country representatives, and c) the role should be to provide long-term strategy for the WGs and to oversee the science needed, and also to integrate information with other ICES Committees. The WGs then continue to develop ToRs. MCC (via the WGs) should develop science products, such as publishing comprehensive reviews of mariculture science. Much advice is generated by WGs, but may not go anywhere. Unrequested advice is usually quite good and members of the WGs are enthusiastic about producing it; if the advice is not wanted, WG members may be less willing to participate in WGs. There was concern about the review process and how much extra work that would mean for WG Chairs. Given the workload, fewer people may volunteer

to be WG chairs. WGs would have to integrate more with other WGs; perhaps a WG vice-chair could help to handle the various responsibilities.

Resource Management Committee (RMC)

RMC pointed out that the distinction between committees and programmes was not clear. Strategic thinking might be better served by the cross-cutting nature of programmes, as they may be a better vehicle for enabling ICES to aim for goals. If this is the case, then the choice of the programmes becomes critical. The comment was made that the proposal is drastic although worthwhile – the committee structure was fine when ICES was at liberty to set its own, but may be less appropriate now that there are more external pressures. There is a danger that programmes may just add another layer of bureaucracy, however, and it is not yet clear who is to control them. It is an important issue, because ICES is a big organisation and there does need to be some structure.

It may be appropriate for external funders and managers to be involved in this planning process, as they will be the principal recipients of the results. ICES need to guard against setting up a structure that does not address the wider need, particularly since other organisations are likely to be aiming towards a similar strategy-setting role. A good overview of the current scientific and management situation would help in this regard. One example of a field that ICES currently does not cover, but should in most peoples view, is bio-economics. In this structure it is difficult to look very far ahead – short-term policy needs are often paramount. Hence some committee structure is beneficial to protect long-term planning.

There is a clear distinction between operational and long-term research work; the latter does need to be rather more separate from funders and managers than the former. More specifically, RMC (and the other Science committees) has two roles – strategic planning, and feeding into the advisory process – and a balance between the two needs to be maintained. The value of the Committees as homes for EGs was questioned – this doesn't seem to be necessary. At a higher level, the proposed Advisory Committee (ACOM) needs to concentrate on strategic thinking, rather than micro-management, formulating specific advice, and developing ToRs.

The principal strength of ICES in this process is the breadth and depth of experience of participating scientists. Its principal weakness is the lack of a funding structure to pay for these scientists. There are a large number of organisations now (ICES, STECF, RACs, EU projects, national governments) that dip into the same “expert pool”, which is too small and too overstretched. Given this, the discussion on the details of the ICES reform is perhaps premature in advance of efforts to identify resources to do the work. The problem for ICES is to compete in this market without the ability to offer funding. The proposal by ConC relies greatly on inter-sessional work, which may not be possible in this climate. ICES also tends to take on tasks without thinking very clearly about who will carry out the work, and are then accused of failing to meet targets. However, a role in prioritising scientific work is one that ICES is well-placed to fulfil. In this sense the structure is perhaps less important than the objectives – once objectives are set, a suitable structure should follow.

The RMC Chair asked a thought-provoking question: why do we all come to ICES? ConC's starting point is that we need ICES, but the lack of funding and efficiency, and a narrow biological focus, makes it a valid question. The main advantage of ICES is (in theory) objectivity and independence – these arise from its main weakness (lack of money) – and (also in theory) the ability to think in the longer term.

The discussion highlighted some dilemmas: ICES is well positioned to think strategically, but does not have funds to put these thoughts into practise. There is a trade-off between immediate needs that get funding, and long term needs that most often do not. External funders have to be involved in planning of future scientific activities, ICES is not as previously at liberty to set its own agenda, and it is not alone in this market. The structural reform must adapt to these needs, and not become another bureaucratic layer. In that respect, there were some doubts about a program structure as the ideal form, although most participants would prefer that over the current committee structure.

Fisheries Technology Committee (FTC)

The two working groups and their joint workshop met in Dublin, April 2007 to address their respective ToRs (see FTC resolutions). The audience was around 70 participants for each WG and 90 for the joint workshop. A meeting of all the EG chairs (termed FTC midterm meeting) was held after the joint workshop, and it was decided that it would be held on an annual basis, either during the joint workshop to engage a wide audience when the two WG meet in the same place, or through an EG chair meeting during the meeting of one of the two WGs.

The links between FTFB and FAO have been reinforced by the participation for the third time of scientists from countries outside the North Atlantic, and from the Mediterranean in particular. A representative from GFCM attended the WGFTFB meeting and a topic group carried out a review of technical measures in different Mediterranean countries in collaboration with GFCM. The importance for the Mediterranean countries to get linked with the ICES community has been demonstrated and it is likely that stronger involvement of FTFB will be required. Another highlight among the different activities of FTFB is the newly-established SGPOT. This is an important SG in an EAF perspective because it explores possibilities for replacing gears that impact the environment with others (pots) that are environmentally friendly.

Under the auspices of the WGFASST working group, two ICES Cooperative Research Reports were completed and submitted for publication in 2007. The first, entitled "Collection of Acoustic Data from Fishing Vessels" represents the input of experts from 12 countries over a three year study group term. It provides a detailed synthesis of the topic and concludes with thirty-nine principal findings and recommendations. The second, entitled, "Acoustic seabed classification of marine physical and biological landscapes" provides an overview of the major issues and applications in this field and a comprehensive review of the technologies and techniques used to investigate them.

The first major goal of FTC is to develop, report, and advise on research on science and technology relevant to sustainable exploitation of the ecosystem. This includes most aspects of the exploitation of living marine resources but primarily concerns fishing techniques, gear selectivity, measurements of gear characteristic, analysis of the effects of fishing gears on the ecosystem, and associated topics. The second is to develop, report, and advise on research on science and technology for ecosystem monitoring. Historically, this activity has focused almost exclusively on acoustic approaches; this perspective is now expanding to include optics and other technologies, and to consider requirements for integration of data derived from multiple technological sources.

In order to define which ICES issues and concerns should be directed to FTC, it is important to define an "FTC activity". Since FTC is directed to develop and reporting on research on technology and methodology, the role of the committee should be restricted to these objectives. The output of a FTC EG is limited to the provision of information or advice on the

use of techniques and methods to be deployed in the fields of sustainable exploitation and ecosystem monitoring. Tasks which involve analysis of ecosystem or fishing data (even if they are obtained with these methods) are beyond the scope of this SC.

ConC noted that FTC was not very happy with the decisions taken by the Awards Committee, since they had submitted two candidates.

Baltic Committee (BCC)

The Committee felt that there is a need for reconstruction and that generally the idea of merging the three Advisory committees makes sense in the proposed system. With regards to the need for more focused science the structure of the reform reveals however little change in itself, but is highly dependent on the communication from the merged ACOM. There are still a number of weaknesses and shortcomings in the proposal.

The structure of AMG was discussed and there was some caution expressed towards the crucial role that this group plays in the structure. The perception of AMG as a body that takes some of the workload of the Advisory Committee is recognized and welcomed. It is of vital importance how this group is formed and that the qualified expertise is available for the task. In the light of former problems to recruit appropriate nominees on other key positions in the ICES structure, inclines that this could be jeopardized. In particular BCC was of the opinion that a need is apparent for more focused research related to finding methods and tools for holistic management of the Baltic Sea and the application of these in the practical stock assessment work in ICES expert groups. BCC should prioritize this work and catalyze the process of finding ways to implement ecosystem based fisheries management. It was clear to BCC that the sole link via the chairs of the Science and the Advisory side was not enough to establish an effective pollination of the Science Programme with the research needs from and for the Advisory Services of ICES. The distinction between Committees and Programmes in the draft is considered weak. According to the drafts the Baltic Committee is supposed to become a Programme in the future, as well as Climate Change. The rationale behind the establishment of Programmes is that these shall have a shorter lifespan as the Committees, be thus more topic-oriented and more focussed. However, BCC was of the opinion that both the Baltic with its very particular hydrography, biology and ecology will last and will remain to be an extraordinary field of research, deserving special attention well beyond a 3–5-year horizon. For this reason BCC cannot follow the rational to change BCC into a Programme.

Moreover, BCC has, with the unique opportunity created by the BSRP project, become a distinguished forum for Baltic Sea as a test area for the integration approach. The end of the integration process is not seen yet and ICES may lose a proper forum to discuss Baltic issues if the BCC as such dissolves. The suggested reform of BCC into a Programme is not considered improving the shortcomings in the integration process. Ecosystem-based management should be validation enough for keeping a regional Committee for the Baltic and in fact also for other regions. There is a unified opinion from the members that BCC should not end as a Committee and be reformed into a programme. The same holds for Climate Change. It can be foreseen that climate change will increasingly dominate the research and discussions in ICES in all facets. Since climate change is a process that will with all likelihood occupy the scientific attention of ICES throughout the next decades, there is no logic in turning it into a programme.

- 1) In contrast to this it is proposed to create a Committee on Resource Biology with the aim to coordinate activities dealing with biology of different taxa and to assess trends in abundance and species composition. Although certainly important it seems somehow disproportional to stand as one of six Committees.
- 2) In addition, BCC is of the opinion that there should be a mixture of area-oriented Committees and cross-cutting theme-oriented ones, coupled with very focused programmes. The rationale for this is seen in the fact that ICES is under pressure to move further towards an integrated advice, and integrated advice is given in a regional context. It is however not clear in all details what this implies and how it is achieved. The experience of BCC is that the regional structure supports greatly the development of an integrated assessment and therefore an integrated advice. BCC considers this a success and proposes more such regional.
- 3) That there is a need of reviewing the internal and inter-sessional work of the Committee. Some ideas of how to strengthen the work of the group is proposed here by BCC:
 - The Committees should have its own TORs
 - Establish active contact in e.g. Universities and other organisations performing related research in the Baltic Sea.
 - There should be more active inter-sessional work for the Committees. The Committees should play an active role throughout the year and be responsive to requests from the Secretariat being put forward to the Committees.
 - As a result the Committees will work on more and well focused objectives.

Living Resources Committee (LRC)

The LRC meetings were well attended by over 30 participants. The room on the Monday meeting was too small. The joint meeting with RMC dedicated to the Survey Expert Groups will require more time in the future. The activity of the groups were presented and discussed and the reform of the science structure was discussed.

SIMWG: The group finalised a book on methods of stock identification. Since it has responded to requests from advisory assessment groups but will not be able to face all requests. The groups will develop protocols for large scale experiments and sampling programs. WGFE: the groups is rich and diverse with experts in fish population biology, ecology, surveys, assessment, statistics and modelling. The group manages a fragile balance between answering advisory requests and developing its disciplinary science. It is currently working on EcoQOs, essential habitats and spatial distributions. WGSE: the group is predominantly responding to advisory requests. It has developed approaches to delineate MPAs for birds. It suggests including Mediterranean institutes to develop a monitoring program. WGLESP: the group works mainly by workshops (this year: WKLTSE and WKTEST) and makes the connection with GLOBEC-SPACC for the ICES area. It should participate for the ICES area to the GLOBEC synthesis. It has responded to the OSPAR request this year in a joint meeting with WGFE and has experienced attendance problem.

Expert Groups on surveys: LRC hosts the majority of survey groups (6 groups). Groups deal with similar questions: plan coordination, standardise protocols, control catchability, set up data bases. There is a growing demand on additional measurements during the surveys as well as legitimating national surveys as part of a coordinated plan. Groups are responding by defining protocols for giving legitimacy, which deal with gear and sampling design. Acoustic survey groups are developing data bases. Egg surveys in the North Sea are not routinely performed and how to implement dedicated specific egg surveys is still debated.

WKLTSWE: the groups compiled and analysed of a large data set (73 series combined). A theory was proposed on the linkage between plankton production and abundance variation in clupeid fish. The group suggests another WK for 2008 which is to be an ICES/GLOBEC/PICES event on small pelagic fish and climate change. SGRECVAP: the group compiled and screened many data series to build hypotheses for explaining the repetitive recruitment failures in planktivorous North Sea fish. The larvae have poor survival. There have been major changes in the plankton in the late 90s. The group was set up top-down and has had difficulties in attracting the relevant multi-disciplinary expertise. WKTEST: The group has documented the importance of life-cycle diversity within populations in modulating population dynamics and its relation with climate. It made propositions for recovery plans. The group is programming the completion of a CRR.

LRC discussed the draft outline for new science structure. There was a general agreement to maintain long-lasting disciplinary committees with associated EGs. Also, there was agreement on the fact that these committees should have defined ToRs. Increased communication between EGs could be made possible by mid-term meetings of the parent committee, including the EG chairs. Transversal questions/programs of particular relevance to the LRC included issues such as “climate change” and “ecosystem approach” – there was agreement to work on them.

Management of transversal programmes: Concern was raised that with the suggested procedure by ConC they would run as long-lasting self-sustaining committees. A proposition was made to mitigate this.

To give similar generic ToRs, originating from a programme, to different associated EGs, was agreed as a good way to pilote the scientific developments as well as leave the opportunity to the EG to generate specific ToRs within the remit of its expertise related to the generic ToR. The answers given by the EGs could be integrated by the committee that would subsequently pass them over to the transversal programme.

The previous mechanism was thought to allow connection between top-down driving topics and bottom-up scientific production. There was concern that a simple prioritisation of ToRs might alienate some members of EGs as those EGs where ToRs are agreed on a bottom-up basis were often the most successful in attracting participants from various disciplines.

Regarding the contribution from LRC to the transversal questions/programmes, it was agreed that the core activity of LRC included: population biology and ecology, spatial distribution, stock identity and within stock structure, life cycle patterns and how these are affected by fishing an environment. Also, how the resource biology modulates the evolution of populations under the external factors of fishing and environment.

Stronger multidisciplinary links of LRC were felt necessary to effectively fit the fish within the ecosystem and in particular with the following expertise: ecosystem and hydrodynamic models developed in the Oceanography Committee, Marine Protected Areas, Bio-energetics, Trophodynamics, and Assessment methods. There was a strong interest for setting up and working in multidisciplinary Study Groups. Interdisciplinary collaborations among disciplinary groups could be requested by CONC and Science Committees to address issues that require communications among groups.

Diadromous Fish Committee (DFC)

14 people attended the meeting, five of which were Expert Group Chairs.

The DFC noted the poor status of salmon stocks in general as reported by WGNAS and the particular threats posed by mixed stock fisheries. The continued advice that there should be no harvest of salmon at Greenland or Faroes and further efforts to reduce exploitation in homewater countries were also considered. WGBAST reported that the stock assessment is now provided for six separate groups (categorised according to genetic, geographic, migration, fisheries exploitation and fisheries management criteria) of wild salmon. The main outcome of the assessment was that post-smolt survival has shown a decreasing trend, to extremely low values, over the last 20 years. In relation to sea trout WGBAST reported that due to difficulties with lack of data or uncertain data, no advice was provided for sea trout stocks this year.

WGEEL reported that the long-term downward trend in recruitment was continued in 2006. The swim bladder parasite *Anguillicola* has now been found widely throughout the EU but whether this is a direct or significant cause of recent declines in eel recruitment is not certain. Restoration of eel populations is now required under a recent EU Eel Action Plan which will require strategies to overcome anthropogenic mortalities with the target to restore eel stocks to the point equivalent to the value of silver eel spawning escapement last observed in the 1970s. It was noted that with the reduction in fisheries that the development of fishery independent assessment methods was now required and eel was now covered specifically in the EU Data Collection Regulation.

SGSAD was held in late 2006 and successfully achieved the agreed Tors. DFC noted that, at some future date, the work of this group should be expanded to include countries outside the Baltic area and even other fish species such as eel where imaging techniques were also being developed. SGEFISSA developed a framework of indicators to support the provision of multi annual catch advice for each NASCO Commission Area. NASCO indicated at the meeting that they were satisfied that this framework met the needs of the organisation. WKDUHSTI began the standardised collation of the significant amount of data on oceanic tag recoveries to provide insights into the distribution of salmon at sea. The Workshop successfully developed a standardised spreadsheet for the collation of tag recapture information and illustrated the power and advantages of using GIS techniques to handle and analyse the data.

Plans for a joint ICES/NASCO/NPAFC/PICES Symposium on “Factors Affecting Mortality of Salmon at Sea” and update from NASCO on marine research initiatives had been developed further. The symposium will provide a forum for presentation of the findings of the BASIS2 and SALSEA programmes. It was planned to schedule the symposium for 2010 and that co-convening organisations should provide £60,000 (i.e. £15,000 each if PICES, ICES, NASCO and NPAFC all co-convene) towards the cost. ICES have indicated that they would be able to allocate €10,000 and in addition, it could offer the ICES Journal of Marine Science for the publication of the proceedings. PICES has indicated that it was unlikely that his organisation could be included as a convenor or sponsor of the symposium as the subject matter was more relevant to the NPAFC. ICES had been requested to increase its funding but made it clear that there is no flexibility to increase its financial contribution.

With regard to the new advisory and science programmes, there was a concern that objectivity may be compromised if, as under the new proposals, stakeholders would be allowed on review groups. NASCO have already raised this issue with ICES. Under the new proposals advice

would in future be delivered by the advisory committee as opposed to the expert group chair. NASCO was of the opinion that the expert group chair was in an ideal position, having been directly involved in formulating the advice, for this role and did not see any advantage in changing this procedure. Modification of the current science committees was noted. The possible merging of DFC with RMC, LRC and MCC to form a new Resource Biology committee was discussed. DFC members felt that the best way to deal with diadromous species was through the current committee and wished to report this to the Consultative Committee. The DFC is the only committee currently whose remit also deals specifically with inland fisheries and freshwater habitats which are encompassed within the life-cycles of diadromous fish and it is difficult to envisage how this role would merge easily with the proposed Resource Biology committee. DFC also discussed the proposal for science committees to meet twice a year and queried whether this meant that ICES would be increasing the responsibilities or workload of the science committees.

Oceanography Committee (OCC)

A review of the history of the OCC was made. Starting with the “Plankton” and “Hydrography” Committees which persisted over more than half a century, the present OCC emerged 1997. Since 1997 the OCC has maintained an average of 13 expert groups with the main core build by Working Groups, which were quite stable along these 11 years. An exercise of evaluation, based in performance indicators, to see how well the OCC and its expert groups had implemented the ICES action plan, demonstrated that the OCC is a Committee with a balanced number of EGs, which are working successfully with a long list of products that are well recognised by the scientific colleagues and useful for advice. The OCC expressed its concern that in the new envisaged structure the ToRs seems to be generated top-down (from ConC or Advisory Com). The plan that the chairs of the experts groups will be formal members of the Committees was very welcomed. The discussion on how to combine cross-disciplinary science programs with vertical science committees in the new structure considered that OCC needs both multi and monodisciplinary groups within the committee (as it is actually). Committees are needed to ensure the maintenance of experts and expertise in ICES. This is not well resolved in the programmes where experts would enter and exit as required by particular tasks but they may be not available in time.

OCC reviewed the new structure of the ICES Science Programme and expressed surprise by the splitting of Oceanography from Ecosystem Processes and Ecological modelling. There was unanimity in the OCC that Oceanography and Ecosystem Processes (and the modelling in both fields) are the sides of the same coin and that both should be part of the same committee. The OCC agreed that there will also be a large role for the new OCC in the envisaged Programme of Climate Change. Re. membership of ConC there was agreement that the main core must be made by the Committees chairs, but the participation of national representatives to balance the governance of ICES via ConC was considered necessary. OCC suggests that a few seats in the ConC could be opened to balance the national representations, and that these seats should be covered by chairs of the experts groups, in such a way that the scientific spirit of the ConC will be safeguarded. In summary the OCC was favourable to initiate the changes but with the considerations done during the discussions.

Regarding ICES activities in climate change science, many players are producing good information on climate change. ICES efforts in climate change are disperse and represent a small fraction of ICES expert groups work. Comparing with other topics, not many Theme Sessions or Workshops aimed to discuss on the effects of climate change were produced in the past. However, ICES is more and more frequently being asked to contribute to the evaluation of the effects of climate change on the marine environment and fisheries. Too often ICES is

not given sufficient credit for the information provided to the outside sources when doing so. In order to more efficiently assemble and provide the information and to enhance ICES public image, a group needs to be created to assist ICES in preparing responses to outside queries.

While the Oceanography Committee has many initiatives that are directly related to climate change and its effects on the marine physical and biological constituents, other committees in ICES have climate concerns as well. The OCC therefore recommends that ICES create a cross-cutting multi-disciplinary steering group under CONC made up of members from a number of the existing committees to address issues of climate change that are brought to ICES from outside sources and to formulate appropriate responses to the issues. Both the queries and responses should be handled by some person in the Secretariat responsible for climate issues as a liaison to the steering group. As a first task for the Steering Group on Climate Change (SGCC), the SGCC should prepare a white paper detailing current knowledge about the effects of climate change on the physical oceanographic properties of the ICES ocean areas and lower and higher level trophic responses to change, and directions that research and education should proceed in order to better understand and anticipate climate change effects on the marine environment. OCC rated it to be a good initiative that the ICES Bureau in its June meeting tasked the Secretariat to take up the item of a popular document on climate related research in ICES with the help of the chairs of CONC and Oceanography Committee.

The WGOH considered that ICES must maintain and develop a world-class oceanographic Data Centre with a regional focus and with specific expertise in physical data. The Data Centre should prioritise the accumulation and quality control of historical and modern data in the ICES region. The Data Centre should have the capacity internally to generate products (gridded fields, time series etc) for use by its own Expert Groups and Advisory Committees. This was supported by the OCC.

Publications Committee (PUB)

The ICES JMS is healthy and doing well. Articles have scientific impact, and the relationship with the new publisher is good. However, ICES has to guard against editor burn-out. New editors need to be introduced into the system. This has to be negotiated with the publisher.

With regard to the requests for publication of symposia proceedings in the JMS for 2008 and 2009, ConC must be aware that if all requests are approved by Council as recommended by ConC, there will be three volumes per year until 2011, that is we are fully booked. If further proposals are made and accepted, additional funding must be sought.

The scientific oversight for the ICES CRR and TIMES Series needs to be solved. In the past the General Secretary was the editor but he has recommended that the editor should be actively participating in the scientific oversight of any series. The scientific review is carried out or supervised by the Chair of the relevant science committee. However, an Editor for each series is required to provide a long term oversight of the processes involved in the review and assessment of the scientific standards of these publications. Production responsibilities and standards will continue to rest with the Executive Editor, within input from PUB and the series Editor.

A request has come in on a short notice to publish guidelines for a rapid response to a non-native species alert. PUB saw no major problems with this but recommended that in addition to the Chair of WGITMO, the Chair of ACME should review the guidelines before publicising it in a CRR. The Chair of ACME was asked to clarify this with the Chair of WGITMO.

During the meeting in 2006, the ICES website was identified as an important element of communications for the organization. The Chair had asked three members of PUB to explore the website and provide some suggestions that might assist the webmaster in making the site more accessible to users. Their conclusion was that the structure needs overhauling, possibly organized according to user requirements. It was made clear by the Secretariat, however, that access through website will probably receive priority.

PUB believes that ensuring scientific standards also involves ensuring production standards of the best possible quality. PUB has defined the standards which should be adhered to for various publications. To ensure adherence to these standards will require development of a publication service that would provide services and tools required to ensure the highest standards of production and efficiency within the Secretariat and that the ICES Executive Editor should provide an oversight of the production quality and standards of ICES publications, including all Science and Advisory documents.

With the changing Structure of ICES, PUB considers that communications strategies and principles of ICES could be an issue that would fit within the mandate of PUB, under a modified remit. The role of the Committee, its membership needs, and the expertise needed within the Secretariat would have to be discussed inter-sessionally and would likely require that a subcommittee of PUB, along with participation from the Secretariat, Advisory Services and Bureau (or Delegates) meet at ICES expense. PUB is willing to undertake this task if the Consultative Committee and/or Bureau consider the task is appropriate and necessary.

ConC noted the report from the Publications Committee and supported the following **recommendations**:

ICES should appoint a scientific editor for the CRR and TIMES series. A modest honorarium in line with other ICES, e.g. the leaflet series, of approx. 1K Euro would be required annually. PUB recommends that Emory Anderson (US) and Paul Keizer (Canada) be appointed the editors of the ICES CRR and TIMES, respectively.

Following the resignation of Alistair Lindley (UK), PUB recommends that Steve Hay (UK) be appointed new Editor of the Plankton Leaflets.

PUB recommends that the title of the ICES Technical Editor be changed to Executive Editor.

Regarding the midterm request from ConC, PUB recommended that Expert Group reports should not be peer reviewed.

Finally, PUB recommends that the secretariat develop and define the responsibilities of a publication service that would provide services and tools required to ensure the highest standards of production and efficiency. Furthermore, the ICES Executive Editor should provide an oversight of the production quality and standards of ICES publications, including all Science and Advisory documents.

Advisory Committee on Ecosystems (ACE)

The ACE Chair Mark Tasker reported that the OSPAR request for an overview of changes in the distribution of biological communities and whether these changes can be related to environmental changes will be a major task for ACE in 2008. The task is to compile the information in a systematic fashion – elements scattered in the science literature. WGECO will be the focal point for this compilation. The data on marine fish is less scattered however, there is a very real fear that assessment groups are overloaded next year due to the reform of the advisory programme and not least because of the changed in timing of the advice. The Working Group on deep water ecology (WGDEC) will change status to a joint ICES-NAFO group; this is in line with the general approach to establish links with other organisations for access to a broader range of expertise and for efficient exchange of information and use of limited personnel expertise. Furthermore, ACE plans a workshop dealing maturity related request and boundaries for protected areas. ACE proposed the establishment of a Study Group on Bycatch of Protected Species (SGBYS). ConC found that the ToRs for SGBYS are quite similar to those for WGDEC (g) and (h) and suggested that the two groups coordinates their activities to avoid double work. The SG on effects of Sound in the Marine Environment (SGESME) – has been terminated, the work has focused on the Nyborg, Denmark symposium (August 2007) and there are no ToR which are of high priority. Work on effects of sound is concentrated in a US based group.

LRC Chair expressed his concern that the two Study Groups, The Study Group on Statistical Methods for Analyzing Climate Change Consequences [SGSMACCC] (will work by correspondence) and The Study Group on Working Hypotheses Regarding Effects of Climate Change [SGWRECC] (will work by correspondence) can be the basis for further development. Although he finds this an interesting exercise that at least will provide a good review of all the methods he cannot see how groups working by correspondence can attract the required expertise. ConC asked the Chairs of LRC and ACE to work together adding a ToR point for SGSMACC to explore how ICES should deal with the analysis of effects of climate change and on identifying climate effects. The LRC and ACE Chairs should consider if the tasks might better be addressed by other groups, if so ConC mandated its chair to change the resolution by transferring the ToRs to other appropriate groups. This would need to be done before the end of 2007.

Advisory Committee on the Marine Environment (ACME)

The Chair of ACME, Paul Keizer, reported that the work of ACME in 2008 will focus on several OSPAR requests that represent an increase in OSPAR's reliance on ICES for environmental advice. However at the same time communications with HELCOM appear to have suffered and there are no requests from HELCOM this year other than the standard items covered under the MOU. Similarly there has been no progress in communication with DG Environment and no requests for advice. There is an opportunity for ICES to play an important role in the normalisation of the guidelines for various chemical and biological measurements that will be required under the Water Framework Directive and those likely to be included in some sort of Marine Framework Directive. At present within the ICES area, OSPAR and HELCOM maintain separate guidelines and technical annexes that ICES reviews separately. Similar guidelines are maintained for the rest of the EU under MEDPOL. ICES should be proactive in consultations with DG Environment to bring these disparate sources of information together. Internally ICES will have to find a solution to attracting the necessary technical expertise to do this work since this is a problem in some speciality areas (see Section 12).

Advisory Committee on Fishery Management (ACFM)

The Chair of ACFM, Martin Pastoors, reported that the process for developing a 2008 time table for the necessary expert and review groups was quite difficult. The difficulties stem from a request (EC/Norway) to change the timing of the fisheries advice, most advice shall be presented in June. This requests ignited a number of proposals for changes in the advisory process that were felt necessary to achieve the goal of an early advice. The discussions that took place during the ASC have been very intense, but have resulted in accepted approach, although details are not finalised. The Chair asked for ConC to allow him to have a further discussion of the package at ACFM's meeting 4–11 October.

Two groups have been dissolved and combined two groups into one – northern pelagic and blue whiting and Mackerel and horse mackerel - the new group is called WG on widely distributed stocks (WGWIDE).

The WG on Anchovy is to take over work in SGSF, advice has been produced before, now it is to set up a process to coordinate with the clients that ICES will provide advice to in June.

The Chair summarised the main changes:

- It will be the review groups that develop the final draft advice – they are no advisory committee subgroups
- No physical meetings scheduled dealing with advice – this will be by video conference.
- Benchmark workshops developing methodology for specific assessments, perhaps three workshops, ACFM will consider the priority stocks for 2008 at its October 2007 meeting.
- Management Plans: there will be a Workshop on herring Management Plans,
- Continue Study Groups on mixed fisheries, and on Management Strategies
- WG on new MoU species – will work by correspondence because they are depending on research funding to go any further.

The final package will be ready by 4 October – final dates and venues will be filled in by then also.

16 Future of the ICES Oceanographic Database

At the request of the Secretariat and in consultation with the Chair of ConC and the Oceanography Committee, a report had been written by L. Rickards and presented to the ICES Secretariat. It examined the oceanographic data held by the ICES Secretariat and recommended the possible future direction to be taken. This takes into account the ICES ambition to remain a focal point for marine data in the North Atlantic and to create a portal serving as a hub for distributed data, and also the newly published data policy.

ConC had requested that WGDIM, in collaboration with the ICES Data Centre Manager, discuss the strategic plan to move ICES towards a distributed system, identify strategies to deal with issues of possible differences in data QC/QA procedures among data centres, and discuss the implications for the development and production of data products by the Data Centre for use by the ICES community. The WGDIM discussed the conclusion of the report for ICES to act as a focal point for expertise, coordination, and product generation for the ICES region and community and a gradual move to distributed systems. Option v) with elements of iv).

Some important remarks that were raised:

- It is important to avoid redundancy of data;
- Data availability gaps must be identified;
- ICES serve as a data centre for several programs, HELCOM, OSPAR and AMAP;
- ICES Data Centre can not only be a repository for data, must be more proactive;
- Identify what kind of products other WGs plan to produce;
- Important to have the human resources needed at the Data Centre;
- ICES Data Centre must provide data format translators;
- ICES Data Centre must become a more active partner in existing partnerships, like SeaDataNet;
- Identify products need by integrated assessments, grids;
- If ICES abolished the oceanographic database, where should member countries send their oceanographic data, to the world data centres? If so, does WDCs have the resources needed to manage the data? Will more data get lost?
- What about member countries that do not have a NODC?
- It is of great importance to register metadata together with the managed data.

This discussion concluded that most members of WGDIM disagree with the report on the conclusion that in fact could result in the oceanographic database being abolished at ICES within five years. WGDIM members would rather recommend that ICES kept on managing oceanographic data since they are needed by other datasets that ICES will continue to manage like fisheries data. While ICES should not aim at completeness of oceanographic data for the ICES area, it should increasingly focus at data collected at the same time (e.g. on the same cruises) as environmental and fisheries data. This is seen as a chance to strengthen the integration of different disciplines' data, which forms the basis for an integrated advice.

WGDIM recommended to ConC to continue the management of oceanographic data at ICES, but with a changed focus. The Data Centre needs to be cross-disciplinary. It should maintain its role as major regional player. More work is needed of the kind the data centre does for Seadatanet and DOME.

The question was raised if results from modelling should be included in the inventory of data and also results from operational programmes to consider. The Chair of WGDIM and the ICES Data Centre Manager were tasked to develop a recommendation on data products and especially on the matter of oceanographic data in ICES, see **Annex 8**.

17 ICES position paper on climate change

In June, the Bureau commissioned the Secretariat to produce a popular document on climate-related research in ICES with the help of the Chairs of ConC and the Oceanography Committee.

The proposal originated from Spain and was based on the fact that there has been extensive use of ICES data in third party climate publications, but ICES has not been given any credit or recognition for its role in the work on climate change. In the short term the aim is to produce a popular (glossy) brochure (to be published in January or February 2008), to be followed up by a much more elaborate position paper (see below) focusing on the longer term. The former Communication Officer in ICES has agreed to take on the former product since he is working as a freelancer.

The latter product “Climate change research in ICES” was outlined by the Chair of OCC. He recommends that ICES create a cross-cutting multi-disciplinary steering group under CONC. It will consist of members from a number of existing committees to address issues of climate change that are brought to ICES from outside requests and to formulate appropriate responses to the issues. Both the queries and responses should be handled by some person in the Secretariat responsible for climate issues as a liaison to the steering group. As a first task for the Steering Group on Climate Change (SGCC), the SGCC should prepare a white paper summarizing

- current knowledge about the effects of climate change on the physical oceanographic properties of the ICES ocean areas;
- current knowledge on lower and higher level trophic responses to change;
- directions that research and education should proceed in order to better understand and anticipate climate change effects on the marine environment.

ACE would like to be included in the group, since ACE has taken the lead on the OSPAR request. It should be made clear to the Bureau what ICES is doing in relation to the OSPAR request on climate change.

The HoS and the Chair of the Oceanography committee were tasked to work by correspondence/SharePoint to prepare an outline/description of the products, including the purpose of this paper and clarification of points brought up in discussion. OCC and ConC should quality control the final products.

18 Review of ICES activities

18.1 ICES GLOBEC Office

The ConC Chair presented this item and meeting documents, which included a letter from Francisco Werner, the GLOBEC Chair and response from the ICES General Secretary. The letter from GLOBEC expresses their worries in connection with the Bureau decision not to renew the contract of the ICES GLOBEC Coordinator. The instructions from the President and the Bureau are for ConC to continue the GLOBEC activities. There are presently three Expert Groups related to GLOBEC work plus one proposed for 2008 by LRC:

- The ICES/GLOBEC Working Group on Life Cycle and Ecology of Small Pelagic Fish [WGLESP] under the Living Resources Committee
- ICES/GLOBEC Working Group on Cod and Climate Change [WGCCC] under the Oceanography Committee
- Workshop on Cod and Future Climate Change [WKCFC], proposed for 2008 under the Oceanography Committee.
- ICES/PICES/GLOBEC-SPACC Workshop on Changes in distribution and abundance of clupeiform small fish in relation to climate variability and global change [WKSPCLIM], proposed for 2008 under the Living Resources Committee.

ConC discussed whether there would be any significant change in the work related to cod and climate, and whether coordination of activities should be dealt with inside or outside ICES. The ConC Vice-Chair proposed to maintain the link with wider GLOBEC activities. It was suggested to ask GLOBEC to send a representative to the meetings of the Oceanography Committee. More responsibility for coordination would have to be given to the Expert Group Chairs; they have received a good deal of support from the Secretariat and the GLOBEC Coordinator in previous years. Also, the CRR publication “Report on the Impact of Zooplankton on Cod Abundance and Production will have to be coordinated by Chair of WGCCC.

18.2 ICES Baltic Sea Regional Project

ConC was informed that the Baltic Sea Regional Project (BSRP) ended 30 June this year and that there have been attempts to continue the project, however under the GEF funding model, not all countries will qualify for GEF funding. The idea is to establish a model, where only Russia will receive funding, and it is therefore not likely that there will be a new BSRP. Some of the Baltic WGs will suffer from less attendance from the relevant member countries as there are predictions that there will be problems with less funding. The BONUS programme is not a substitute; the first call will focus on social sciences, but will not have an immediate effect in relation to our Baltic EGs. ConC noted the development of the programme.

No updates on whether phase two of BSRP is going to happen, negotiations are still ongoing. The Bonus activities will be continuing independently.

Action: ConC requested a report from the Baltic Committee Chair to address the development. ACFM and ACE and ACME should report on what impact this might have on their activities.

18.3 ICES and FP7

The Head of Science Programme reviewed the fate of a number of initiatives out of several expert groups and committees. TIMEA, dealing with generic integrated assessment tools in order to assist the Regional Conventions did not make it, apparently integrated assessments are not a hot topic in marine science, since other, similar proposals shared this fate. FTC Chair has been leading a second initiative M3F3, which at least survived the first round. A proposal that came out of WGAGFM was “FishPopTrace: Fish Populations and traceability” with the aim of developing validated methods (genetic, microchemistry and others) for tracing fish and fish product to the population of origin. A consortium of ICES WGAGFM members and others received an excellent rating in the first round of evaluations.

The bureau feedback on the ConC discussion was positive towards ICES taking on projects, as long as they are informed. ConC had recurrent discussions about ICES' involvement in EU funded projects or programme developments and actually encouraged such activities, and some had asked for more involvement. BWGUPDATE as reflected in the presentation at the "Strategic Lunch" had mentioned it as an opportunity for ICES to exploit framework programmes. The topic should be revisited under advice for science and ICES should actively seek communication and guidance from the European Commission or NSF and other bodies on how we could provide advice for science.

18.4 Update on ICES/CoML cooperation

As a follow-up of ConC decisions of the mid-term meeting, a proposal was drafted by DFO who had taken the lead in consultation with Chairs of OCC, WGZE and SAHFOS. The result was presented in the meeting docs 15 a and b. The new proposal is a follow up where the pilot project ended, however, further to that, analysis and interpretation of the historical zooplankton data on the background of the concomitant hydrography will be included. The budget is presented in the proposal

A complementary project BAZOOKA will follow a similar approach for the Baltic Sea and will be funded by Euroceans.

ConC recommended that the Sir Alister Hardy Foundation for Ocean Science SAHFOS continue the project. Funding has been ring fenced for the proposal out of the Strategic Investment Fund of ICES (SIF). ConC tasked the secretariat to develop background information for Council to approve. The ACFM Chair expressed his concern that perhaps there may be more strategically relevant items for funding.

Recommendation: ConC supported the proposal. A clear workplan from SAHFOS for next three years was found to be useful to be presented to Council in October.

18.5 Cooperation with other organisations: ISO/OSI, OIE

HoS informed the committee about the cooperation with the International Organization for Standards (ISO/OSI). ISO/OSI is about to establish a committee for fisheries and aquaculture with a secretariat in Bergen, Norway. ICES has been invited to participate and it was decided that the ICES Secretariat will be represented for the kick-off meeting in October.

Funded on national contributions, the Organisation Internationale d'Epizootie (Organization for Animal Health, OIE) was founded in 1924 in Paris. They have 170 member states, scientific and technical committees, and expert groups on special request of committees. WGPDMO, WGITMO, WGBOSV Chairs have been informed to join OIE committee meetings this fall. There is a draft Letter of Understanding which will be submitted to the ICES Council for approval and to the OIE governing body.

19 ConC ToRs 2008 and date for mid-term meeting 2008

ConC approved the proposed ToRs for next year (see **Annex 9**). The midterm meeting of ConC was scheduled to take place from 6 to 8 May at ICES Headquarters in Copenhagen.

Action: The Secretariat was tasked to find a solution to the situation on meeting rooms.

20 Any other business

The ConC Chair presented three **recommendations from the Oceanography Committee** (see **Annex 10**) addressed to the Consultative Committee, as well as a request to have a representative from the ICES Data Centre to take part in ICES WGDIM meetings.

1) ICES data centre involvement in Expert Groups and products

Direct cooperation in order to develop and operationalise data products is a very interesting consideration. It needs to be specified by the EG Chairs in cooperation with the ICES DC manager first, what products and what timelines are involved. Participation of the data centre in EG meetings will depend on the location. The preferred option is that EG meetings will be held in the ICES Headquarters. Re. WGDIM, it was suggested that meetings outside Copenhagen would add value by being held in one of the NODC which would make it easier to grant travel funds to DC representative(s). It is not possible to introduce a general rule.

2) View of OCC on future climate change activities in ICES

The recommendation is well in line with the new strategic science plan and reform process. The proposed paper will be part of that process. OCC should have prepared though a draft resolution for a steering group. The initiative was nonetheless well received by ConC, OCC was encouraged to establish a group at the earliest convenience, perhaps to start working as an ad-hoc group to carry out intersessional work.

3) Response to need for better documentation of figures and maps presented in working group reports

The proposal was agreed by ConC. OCC will contact the ICES Data Centre and agree on the further procedure, including the necessary resources.

Science Cooperation

There was a suggestion from the General Secretary to set up a new mechanism for cooperation. The Secretariat co-operates at different levels with partner organisations. At present this cannot be delegated to other bodies in ICES. ConC has to be aware of the shortage of attention and capacity given to this within the Secretariat. The General Secretary recommended to have this considered in the new proposal for the Science Reform.

Procedures for ICES theme session conveners at PICES annual meetings

In the same context of cooperation, an example was mentioned from the ICES/PICES practice of sending scientists as conveners to each others annual science meetings. Recently a problem has arisen and an ICES convener is now in need of third-party funding. Do we need to set up a procedure involving endorsement by ConC? There were views to leave such a decision to the secretariat. However, it would be useful if ConC would be involved. The ConC Chair gave his personal view that who is inviting should be paying. It was agreed that at ConC midterm meetings, joint theme sessions at the PICES annual meetings should be available and reviewed in conjunction with the joint sessions at the ASC. Recommendations can then be made to the secretariat for funding.

21 Closing

The ConC Chair thanked the outgoing Chairs of RMC, FTC, BCC and the Chair of MCAP, and for doing a good job in their committees and in ConC. Thanks were also extended to the Secretariat for organising meeting documents and the SharePoint site. The ConC Chair wished all members a safe trip home and all were invited for something French and something Scottish.

Annex 1: List of participants

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Annex 2: Draft Agenda and timetable

Helsinki, Finland, Saturday, 15 September: 14:00–18:00

Sunday 23 and Monday 24 September: 08:30–1800

- 1) Opening
- 2) Adoption of agenda and timetable (**Doc 1**)
- 3) Minutes of Consultative Committee May meeting (**Doc 2**)
 - 3.1) Response from the Bureau
 - 3.2) Follow-up on actions agreed at the Consultative Committee May meeting
- 4) General arrangements for Annual Science Conference 2007
 - 4.1) Draft resolutions
 - 4.2) ICES-Helsinki Outreach evening
 - 4.3) Elections of new Committee Chairs
 - 4.4) Requests to Science and Advisory Committees:
 - 4.4.1) Theme Sessions in 2008
 - 4.5) Preparation of Committee Reports
 - 4.6) Award Selection Committee
- 5) Election of ConC Chair
- 6) ICES Strategic Plan (**Doc 3**)
- 7) Reform of Science and Advisory Committees (**Doc 4a–d, 5 and 6**)
- 8) Training in ICES (**Doc 7**)
- 9) Lessons learned from 2007 ASC
- 10) Development of programme for the 2008 ASC (Halifax, Canada) (**Doc 8**)
 - 10.1) Meeting arrangements
 - 10.2) Review of proposed Theme Sessions (**Doc 9a and b**)
 - 10.3) Invited lectures and other special events
- 11) Development of programme for the 2009 ASC (Berlin, Germany) (**Doc 8**)
 - 11.1) Meeting arrangements
 - 11.2) Review of proposed Theme Sessions (**Doc 9c**)
 - 11.3) Invited lectures and other special events
- 12) 2007 Draft Resolutions (see ConC Sharepoint)
- 13) Review of WGDIM report and draft resolutions (**Doc 10**)
- 14) Review the status of ICES Symposia (**Doc 11a and b**)
- 15) Progress reports from Publications, Science, and Advisory Committees
- 16) Future of the ICES Oceanographic Database
- 17) ICES position paper on climate change (**Doc 12**)
- 18) Review of ICES activities
 - 18.1) ICES GLOBEC Office (**Doc 14a and b**)
 - 18.2) ICES Baltic Sea Regional Project

- 18.3) ICES and FP7
- 18.4) Update on ICES/CoML cooperation (**Doc 15a/b**)
- 18.5) Cooperation with other organisations: ISO/OSI, OiE
- 19) ConC ToRs and date for mid-term meeting 2008 (**Doc 13**)
- 20) Any other business
- 21) Closing

Draft timetable

	SATURDAY, 15 SEPTEMBER	SUNDAY, 23 SEPTEMBER	MONDAY 24 SEPTEMBER
08:30–10:30		Agenda Items 9, 10 and 11	Agenda Item 5 and 6
10:30–11:00	<i>H e a l t h b r e a k</i>		
11:00–13:00		Agenda Item 14 and 12/15 (combined)	Agenda Items 6 and 7
13:00–14:00	<i>L u n c h</i>		
14:00–15:30	Agenda Items 1, 2, 3, 4	Agenda Item 12/15 (combined)	Agenda Item 7
15:30–16:00	<i>H e a l t h b r e a k</i>		
16:00–18:00	Agenda Items 6, 7, 8, 10.2, 13 and 16	Agenda Item 12/15 (combined)	Agenda Items 17 18, 19, 20, and 21

Meeting Documents

DOC No.	TITLE	RESPONSIBLE	STATUS	AGENDA ITEM
1	Draft agenda, annotations and timetable	Secretariat	✓	2
2	Minutes of 2007 ConC midterm meeting	Secretariat	✓	3
3	ICES Science Strategy Strawman	Head of Science	✓	6
4a	Reform of the ICES Advisory Programme	ACME Chair	✓	7
4b	Advisory Services – A Risk Analysis	ACME Chair	✓	7
4c	Case Studies for Environment, Ecosystems, and Fisheries – Details of the new Advisory Services	ACME Chair	✓	7
4d	Revised Rules of procedure	Head of Advice	✓	7
5	Reform of the ICES Science Programme	ConC Chair	✓	7
6	Reform of ICES – the advice/science interaction	Head of Advisory	✓	7
7	ICES Training Programme	ACFM/RMC Chairs	✓	8
8	Arrangements for ASC 2008–2010	ICES Conference Coordinator		10 and 11
9a	Theme Sessions Approved and Preliminarily Approved by ConC for 2008	Secretariat	✓	10.2
9b	Theme Session proposals 2008 for review by ConC	Secretariat	✓	10.2
9c	Theme Sessions proposed for ASC 2009	Secretariat		
10	WGDIM report	Secretariat	✓	13

11a	Revolving list of symposia, incl. new proposals	Secretariat	✓	14
11b	Overview of requests for ICES to co-sponsor a symposium	Head of Science	✓	
12	ICES role in climate related research and management applications		✓	17
13	ConC ToRs	Secretariat/ ConC Chair	✓	19
14a	Letter from GLOBEC	Secretariat	✓	18.1
14b	ICES response to letter from GLOBEC	Secretariat	✓	18.1
15a	CoML proposal for digitisation of pre-1914 plankton data	Secretariat	✓	18.4
15b	Review of CoML proposal by WGZE Chair	Secretariat	✓	18.4

Annex 3: ICES Scientific Strategic Plan, draft October 2007

The ICES Vision

“An international community of scientists that is leading the provision of sound and credible science to improve understanding of marine ecosystems and their relation to humanity”

Introduction

ICES science must take on a role as a leader in strategic planning for marine science in the North Atlantic community. The prime function of the ICES science programme is to build a foundation that acts as a platform for networking within marine science and provides the data and analysis that underpin the advisory process.

ICES leading the way: ICES finds itself in a rapidly developing world. A changing environment, technological advancements, exponentially expanding human activities and changing societal priorities call for a strategy which allows not only for a responsive science agenda but also for one which is adaptive and anticipatory. Further, global problems require global approaches. Therefore ICES will expand its geographical scope and seek to establish new alliances with non-member countries, international and intergovernmental organizations and conventions.

ICES sound and credible science: With an ever growing awareness of societal concerns about growing environmental problems, scientists unavoidably become involved in politically motivated discussions and sometimes walk a tightrope between advocacy and objective science. Therefore, it is more important than ever to ensure that scientific credibility continues to stand behind every piece of ICES advice. Further, science priorities, as set by ICES, should be coordinated with Member Countries' science agendas, in order to support integrated ecosystem-based ocean management. Clearly ICES is more than just the sum of national priorities.

ICES science goals

ICES science goals support the ICES vision for North Atlantic marine science, as laid out in the first ICES Strategic Plan. **The overarching goal for ICES science is to produce best informed science in order to: i) understand the functioning of marine ecosystems, ii) understand human impacts on marine ecosystems, and iii) to develop and evaluate options for the sustainable use of ecosystems.**

The classical pillars of ICES science still need to be maintained to reinforce ICES position in today's world as a widely acknowledged player in marine research. Understanding of ecosystem structure and functioning is crucial to provide the science and advice in the context of a changing ocean climate. Ecosystem indicators, integrated assessments, ocean and ecosystem forecasting and spatial planning are further issues where good science will be needed.

The following activities are illustrative of the strategy for this goal:

- Describe, understand, and quantify the state and variability of the marine environment in terms of its physical, chemical, and biological processes;

- Increase knowledge of the life history, stock structure, dynamics, and trophic relationships of living marine resources;
- Modernise, adapt and integrate technologies and sampling designs for monitoring marine organisms, habitats and ecosystems, and improve the precision and accuracy of resource surveys;
- Evaluate the effects of habitat change, as caused by fishing, mariculture, contaminants, eutrophication and other human activities, on marine ecosystems;
- Evaluate the impacts of intentional and accidental introductions of non-native species, including genetically modified organisms, on marine ecosystems;
- Design robust exploitation strategies for living marine resources, taking into account ecosystem complexity and uncertainty;
- Design and test harvesting technology that is more selective and least environmentally invasive;
- Demonstrate ways of working with, and using the knowledge of, stakeholders (such as the fishing industry) as part of a programme of research on living marine resources and marine ecosystems;
- Develop environmentally sound mariculture methods and indicators of sustainability for fisheries;
- Assess the social and economic aspects of human interactions with marine ecosystems.

In addition, a number of further strategic goals have been identified during the science reform process.

Strategic Science Goal 1. The ICES science programme should function as the leading network for marine science in the North Atlantic and develop links globally, to provide the science in support of policy decisions and management actions now and in the future.

Clearly, the network of scientists organized in the Expert Groups is the strongest capital of ICES. It adds value to the national science agenda and priorities. An unparalleled feature is the advisory function of ICES and the role of science underpinning it in a sound and credible way. The ICES Expert Groups add value by providing access to information well beyond the reach of national resources.

Strategic Science Goal 2. The ICES science programme should become the vanguard collecting the science to enable strategic planning for emerging and anticipated science issues, in order to provide strategic advice to governments and funding agencies.

Environmental changes driven by climate change and technological advancements set the stage for new challenges in marine science. The ICES science network has the ability to foresee emerging fields of marine in response to these changes. ICES will advise on what are the most important new and emerging scientific and which will likely become the foundation for future advice on scientific issues and strategic developments.

Strategic Science Goal 3. ICES should lead the development of methods and tools needed in support of operational ecosystem observation services, in order to improve the understanding of climate change and impacts to our oceans and marine ecosystems.

Existing operational global ocean observation systems are chiefly confined to physical and chemical parameters. Technologies to integrate biological observations into today's global

observation programmes are still in early stages of development. ICES has a long tradition in planning, coordinating and evaluating ocean surveys and is poised to complement these systems with analysis to identify ecosystem descriptors in support of management strategies..

Strategic Science Goal 4. ICES should develop methods and tools needed to support the implementation of marine strategic initiatives in the North Atlantic with the aim of achieving sustainable use and conservation of biodiversity.

Human impacts along with climate change are a threat to the composition, structure and function of biodiversity. In light of expanding human activities in coastal and offshore areas over the past years, there is an increasing need for spatial planning and governance regulations. Sustainable resource exploitation, renewable energy, conservation efforts and marine transportation are fields, for which sound scientific foundations are required in support of governmental planning and regulatory activities. One such activity is the European Marine Strategy.

The science strategy

ICES science goals delimit the area, in which ICES is engaged, and determine the specific science objectives. The science goals are the basis and guiding principles for the development of the Ecosystem Approach to Management of human activities.

A strategy in this context is understood to be a series of science based steps necessary to achieve the ICES science goals and objectives. The strategy will result in the creation of new scientific committees and/or cross-disciplinary programmes.

The strategy forms the basis for establishing a reformed ICES science programme. Listed below for each Strategic Science Goal are Science Programme Objectives anticipated to be key activities to support the goal. The activities are to be complemented with performance indicators which allow for a later evaluation and review of the goals under supervision of the Consultative Committee.

Strategic Science Goal 1. The ICES science programme should function as the leading network for marine science in the North Atlantic and develop links globally, to provide the science in support of policy decisions and management actions now and in the future.

Ocean resources and their exploitation, climate change and the resulting ocean and ecosystem changes are the fields, for which advice is needed and a sound science base must be provided. Food, energy and “blue technology” encompass both traditional and new fields for ICES.

The following activities are illustrative of the strategy for this goal:

- Maintain the corporate memory of the ICES science community by ensuring continuity in the main structural features;
- Ensure direct involvement of the ICES science programme in key advisory service bodies;
- Facilitate better understanding and anticipation of the clients’ and stakeholders’ needs;
- Develop the advisory function of science towards the provision of advice on emerging societal issues and on the nature of potential future advisory needs;

- Consider and develop approaches to link life sciences with social and economical sciences.

Strategic Science Goal 2. The ICES science programme should become the vanguard collecting the science to enable strategic planning for emerging and anticipated science issues, in order to provide strategic advice to governments and funding agencies.

ICES has good working relationships with a number of international, intergovernmental organizations. Global issues, such as climate change, require innovation in science and technology and appropriate strategies for developing science-based action plans and programmes. This requires cooperation with other regional and global networks in order to cope with global and regional challenges on all scales. The corporate knowledge of the ICES science community is reflected in the reports of the Expert Groups. Further, the Annual Science Conference is the forum where new science is presented and where future mainstream science is identified and the implications discussed.

The following activities are illustrative of the strategy for this goal:

- Identify current and future global issues, the mainstream science and the scientific disciplines requiring ICES' attention. Climate and ocean change, non-native species, migrating species and habitat protection are only some examples of future issues;
- Consider societal needs and the inclusion of socio-economical research into life sciences studies;
- Identify the partners for global, transatlantic and regional European cooperation for which new alliances are needed. Other intergovernmental bodies and also the Regional Conventions are excellent partners;
- Develop joint action plans and work programmes with these partner organizations;
- Establish a forum or task an existing structure with identifying the "new" science, which is emerging from societal needs, technological advancements and scientific questions;
- Establish working relationships with those organisations that accommodate and facilitate the implementation of international science agenda;
- Ensure the added value of ICES science is inclusive of the national priorities while maintaining an oversight of the long term objectives that are essential to successfully guide marine science at the international level.

Strategic Science Goal 3. ICES should lead the development of methods and tools needed in support of operational ecosystem observation services, in order to improve the understanding of climate change and impacts to our oceans and marine ecosystems.

ICES coordinates a variety of scientific surveys and monitoring programmes and uses these data to formulate integrated advice. These activities are becoming increasingly operationalized with the aim of providing near-real-time data and assessments in the context of long-term variability. Providing the technological means for operational recording of ecosystem parameters as well as exploiting new matrices of historical data sources are prestigious milestones.

The following activities are illustrative of the strategy for this goal:

- Set up a programme or committee to explore and develop technologies in marine disciplines, including optical, acoustic and other continuous observation, recording and sampling;
- Ensure that such a programme or committee addresses all disciplines and includes physical, chemical and biological oceanography;
- Develop integrated assessments tools, operational systems and regional models with a view on generating forecasting capacities;
- Collate long time-series of environmental and ecosystem parameters, based on existing historical or recent data, to support backward analysis and developing ecosystem forecasting;
- Establish a special programme as ICES' contribution to climate change research, and corresponding programmes to carry out environmental and ecosystem research.

Strategic Science Goal 4. ICES should develop methods and tools needed to support the implementation of marine strategic initiatives in the North Atlantic with the aim of achieving sustainable use and conservation of biodiversity.

Conservation and sustainable use of the Exclusive Economical Zones of the ICES Member Countries and of the waters under international regime call for spatial planning. Mapping of species distribution and habitats as well as human use require data, classification criteria and applications for data retrieval and presentation. ICES has made a strong commitment to the EAM of human activities. The efforts are to be continued and re-inforced. The European Commission has anchored the EAM in its marine strategy. The Lisbon Declaration, in line with the Johannesburg Declaration has underlined the concept of a sustainable ocean for North Atlantic waters. There is a clear target to put the biodiversity loss to a halt by 2015. Integrating biodiversity into the EAM requires a sound science basis.

The following activities are illustrative of the strategy for this goal:

- Develop the knowledge base for the assessment of human activities in the EEZs and open ocean areas, including the deep sea;
- Coordinate the development of instrumentation, standards and classification techniques for species distribution and habitat mapping;
- Establish relationships and support the structures to be set up in the context of, for instance the marine strategy directive;
- Develop integrated assessment tools with a view to support regional management bodies in their efforts for protecting biodiversity;
- Provide the science foundation for linking biodiversity to ecosystem services;
- Continue to facilitate the implementation of the EAM in the ICES advisory services;
- Establish new and continue existing relationships with research networks on these topics with a view on integration.

Annex 4: Outline for new Science Structure

1 Introduction

The ICES vision is for a scientific community that is relevant, responsive, sound and credible concerning marine ecosystems and their relation to humanity. ICES is built on the two pillars of science and advice. It is important to identify an efficient and effective structure and processes that will deliver the science and advice ICES needs to fulfil its mission. Providing highest quality information, knowledge and products in support of an Ecosystem Approach to Management is currently the top priority for both ICES advice and science. During the last three years a process on how to improve quality and efficiency in the ICES system has taken place.

A prime function of the science programme is to 'build a foundation of science' that acts as a platform for networking within the marine science community. In addition, ICES advice and science activities are inexorably linked and the science programme is the pillar that will provide guidance, advice and information to the advisory program. As such, ConC should serve as the coordinating body for the study, development and implementation of the Ecosystem-based Approach to Ocean Management throughout the ICES arena. Its primary goal should be the identification of Science and Advisory needs that are essential for the coordinated input of information across a broad range of scientific disciplines of marine science. A second but equally important aspect of the science programme is the identification and synthesis of key scientific issues and trends that are likely to influence our understanding of ecosystem structure, function and variability, which will inevitably influence the nature of the advice which ICES should provide to clients.

Furthermore, the ICES science programme should assume a leading role in strategic planning and coordination of marine science activities in the North Atlantic and adjacent areas, while working to integrate the Member Countries' science agendas. The ICES Science Programme should be the leader in collecting the science necessary to enable strategic planning for emerging and anticipated science issues in order to provide strategic advice and opinion to governments and funding agencies.

The Delegates' Recommendation on Reforming the Science Structure states that structural elements in the proposal should include:

- A strong link between Science and Advice assuring
 - Efficient development of strategic plans for and implementation of research based on advisory needs
 - Effective communication of research results for inclusion in the advisory work at the strategic as well as the operational level
- For the science structure
 - ConC with a changed mandate
 - Coordinates cross disciplinary activities within the science network
 - The scientific steering group for the ASC
 - To speak on behalf of ICES on science strategic matters
 - Taking initiatives to develop science in response to both science and advisory needs
 - The science arm in the strategic link between science and the advisory service
 - Science Programmes (formerly SciCom)
 - Lead programmes by overseeing a system of expert groups within the remit of the programme

- Quality assurance of the products produced through its expert groups
 - Expert Groups
 - Flexible, operational groups which can take many forms from brainstorming for a, pooling data and making joint analyses, to being the coordinating body for joint projects. This is where scientists meet, pool information and data, and review and discuss results.

The present document describes concrete suggestions for the structure of the future science programme, including responsibility for the different levels and what is new compared with the existing organisation.

2 Overall organisation

The present scientific structure of ICES has been thoroughly analysed. The main conclusion from the process is that Expert Groups are functioning relatively well, while a problem area has been identified at the intermediate level of the Science Committees in terms of insufficient integration. Also, there has been criticism that ConC has been practicing micromanagement and has not had sufficient time for strategic thinking, cross-fertilization and foresight. It is therefore recommended that structural, procedural and managerial changes are required.

It is recommended to continue to have three levels in the science programme (Figure 1):

- The Upper level (Consultative Committee – ConC) should be the primary body that provides science integration between the Science and Advisory bodies within ICES. ConC should provide the overall synthesis of emerging and anticipated science needs that serve to advise governments and agencies on necessary science objectives and activities. ConC should develop a strategic vision of what science is needed to move the member countries forward, what should be national science priorities, and how can existing elements be integrated. ConC should determine how to make ICES more attractive to scientists than it is now to ensure basis for future advice. ConC should address the science the advisory committee believes is needed and the science which the committees and programmes believe should be integrated into the advisory process. In addition, ConC should consider directions provided by Council. ConC should develop the ICES Science Strategy and identify key areas that require further development, review and plan the ICES Science Programme, review ToRs for Science Committees and Programmes, promote ICES as a leading marine science organization and be the Scientific Steering Group for the ASC. ConC should report to the Council and Bureau.
- The intermediate level of ICES Science should consist of two elements; Science Committees which are responsible for the core activities of ICES science that require long term or regional objectives/strategies and outcomes (e.g. planning and survey groups, ecology and oceanography, standards) and Science Programmes which deal with cross-cutting and interdisciplinary issues that require prompt synthesis, advice and/or solutions. Committees and Programmes represent networks for the development and integration of science within and across disciplines. They can and should involve both institutional and academic participants. The ToRs of Science Committees should include overseeing activities of EGs with a focus on developing a synthesis of disciplinary-based or regional science that should form the basis for development of Science Strategies and Position, as well as approaches that should be incorporated to improve the current advisory process. Science Committees provide a mechanism for coordinating national work requiring international oversight as well as in the development of strategies for emerging or anticipated issues. Science Committees, through ConC, should provide the impetus to identify emerging and anticipated science issues that could form the basis for the development of Science Programmes. Science Programmes deal with issues that require the resources of more

than one member state and more than one Committee. Their structure should be flexible and they should serve to coordinate existing the activities of existing EGs to address key science issues. Their ToRs are linked to ongoing activities in national institutions but may also embark into existing third-party funded projects. Their timelines will be limited (3–6 years). Their output should serve ConC and the Science Committees in the review and development of the Science Strategy to better coordinate long term activities required by ICES and in the development of national management plans in critical issues. Science Programmes will report to ConC.

- The Expert Groups should be the operational level within the ICES science structure. The Expert Group level conducts the scientific evaluation and analysis necessary to achieve the Science Strategy. It should respond and report on their ToRs and will be the level where most of the good ideas for new science will take place, and a key task will be to identify knowledge gaps and report them to the to the rest of the organization.

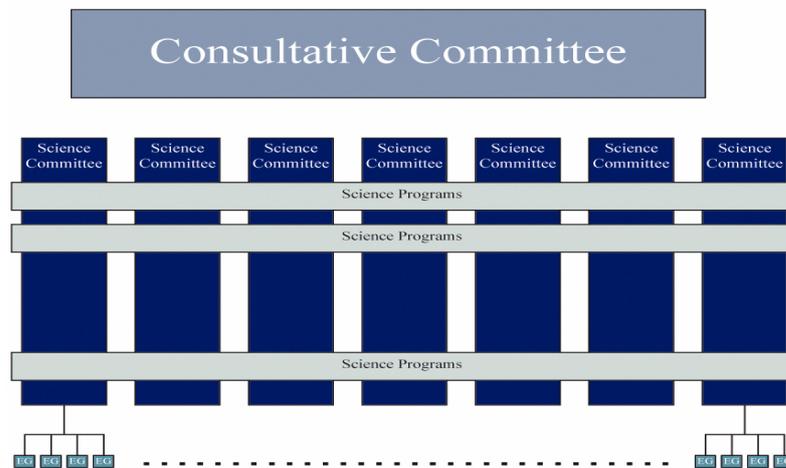


Figure 1. ICES future Science Programme.

3 Consultative Committee (ConC)

Article 12 of the Convention for The International Council for the Exploration of the Sea (12 September 1964) states: “There shall be a Consultative Committee, a Finance Committee and such other committees as the Council may deem necessary for the discharge of its functions with the duties respectively assigned to them in the Rules of Procedure.”

Rules of Procedure, adopted by Council on 3 October 2001 outline the role of the ConC in Rule 25. That rule also defines that the members of the ConC should be the Chairs of established Committees.

The Consultative Committee (ConC) is:

- The home for cross disciplinary coordination within the science network;
- The scientific steering group for the ASC;
- The group that on behalf of ICES speaks on science matters at the supranational level in providing initiatives for the development of and input to science strategic plans.
- The group that takes initiatives to develop science in response to both science and advisory needs and be the strategic link between science and the advisory service

ConC's primary role is to set the scientific agenda and priorities for ICES science and advisory processes. For that, ConC matches the top-down pilotage with bottom-up scientific outcomes. ConC must identify cross-cutting issues between science committees based partly on the dissemination of results and emergent issues from Expert Groups and partly on the requirements of advisory committees. ConC will provide the Strategic Planning of ICES activities through a broadly based perspective of marine science.

3.1 The new role of ConC

- ConC should provide integration of the science needs and outcomes from both the advisory and science committees and programmes. ConC should be doing strategic planning objectives in ICES. The time frame of the plan should involve a long term (decadal) vision for the priorities and activities of ICES but should also recognize the realities of shorter term changes in our understanding of marine environments as well as the needs of client Commissions that will require regular (3-5 years) review of the Strategic Plan.
- ConC should formulate the vision to establish ICES as the leading marine science organization for the North Atlantic and adjacent areas, with influence on regions outside the ICES area. The role that ICES should play in the future on a global level should be addressed by the ICES Council with strategic guidance from ConC. ICES will have to engage more with other international organizations and provide a view of emerging and anticipated science requirements.
- Important scientific fields are outlined in the ICES position paper, which should contribute to the basis for the Science Strategic priorities. ConC should provide regular updates in accordance with strategic reviews and ensure that ICES science priorities have sufficient breadth to allow the inclusion of shifts in national priorities without losing sight of the long term vision of the organization. This will ensure the added value of ICES science is inclusive of the national priorities while maintaining an oversight of the long term objectives that are essential to successfully guide marine science at the international level.
- ConC should establish the priority science activities according to the Science Strategy and set the ToRs for Science Committees and Programmes. These will be regularly reviewed. ConC along with parent Committees should coordinate the EG work to ensure that the science required in the advisory system is available.
- ConC should continue to act as the Scientific Steering Committee of the ICES ASC and review resolutions on the very general level brought forward by the Science Committees. Through the Science Committees, ConC ensures that ToRs are fit to address the Science Strategy.
- ConC will set up a mechanism by which good ideas from EGs are brought forward to ConC.
- ConC has to coordinate the top down process such as the requests passed down from and through advisory committees. There should be division of tasks between ConC and the Science Committees. The Committees should make the decisions of ConC operational but should also provide feedback to ConC to help shape the strategic thinking in ConC and the Advisory Committees.
- ConC should be responsible to link science and advice. ConC should take the necessary initiatives to develop science in response to both science and advisory needs based on the scientific and advisory strategies.

3.2 Membership of ConC

Option 1:

ConC represents the body within ICES which provides a critical and objective overview of the Science Strategy, the link between the Science and Advisory processes, and of the quality and adequacy of guidance and information coming from the Science Committees and Programmes, and Expert Groups. The composition of ConC should therefore reflect input from ICES, as the Parent Organization, and scientific leadership, as identified by the scientific community that contributes to the operational side of ICES.

As such, ConC shall consist of the Chairs of the established Science Committees and Programmes as well as the leader of the Advisory Committee and the Chair of the Publications Committee. To ensure that national science agendas and objectives are considered in the planning of ICES activities, Member Countries not represented by a Committee, Programme or Advisory Chair should appoint a member to ConC.

Advantage: Membership is limited to at no time more than 20 participants and manageable in terms of numbers. Chairs are elected based on their scientific skill, and expertise. The membership will cover the scientific disciplines deemed to be most important to ICES while ensuring national representation. The General Secretary and Head of Science and the Head of Advisory Programmes as well as the Chair of the Advisory Management Group (AMG) are *ex officio* members. This will promote efficient and knowledgeable operations. ConC can speak on behalf of ICES in scientific questions. As such ConC will represent a body that can provide oversight of the Science Strategy and Advisory processes.

Option 2:

ConC shall consist of the Chairs of Committees and Programmes, and additionally each member country should have one representative. The General Secretary and Head of Science and Advisory Programmes as well as the Chair of the Advisory Management Group are *ex officio* members.

Advantage:

- ConC can speak behalf of ICES in scientific questions.
- ConC will approve ToRs on behalf of Council.
- ConC takes a new strategic role.

Disadvantage: The operation of ConC will have to be changed drastically in order to allow effective development and review of Science activities within ICES. A large Committee (30 + members) will not be efficient and is very unlikely to allow objective integration and overview of key Science and Advisory activities. As such the activities of ConC will have to be separated into two primary bodies. The first would have to consist of a Board, made up of the Chairs of Committees and Programmes and the Heads of Science and AMG and responsible for the coordination of Science activities, integration and planning within ICES. The national representatives would meet less frequently but deal with review of the Science governance, strategy and ICES position that emerge from the recommendations of the ConC Board Also ConC loses its pivotal role of matching top-down and bottom-up processes within ICES by taking onboard other, e.g. political roles.

Option 3:

The composition of ConC designed to reflect input from ICES, as the Parent Organization, and scientific leadership, as identified by the scientific community that contributes to the

operational side of ICES. As such, ConC shall consist of the Chairs of the established Committees and Programmes as well as the Heads of the Science and Advisory Programmes and Management Group. Council is represented by the President (and possibly two to three members elected by Council). Any Delegate is free to attend the meetings of ConC, *ex officio*. This will also provide for the possibility of national representation.

Advantage: Membership is manageable in terms of numbers. Members are elected based on their scientific skill, and expertise. The membership will cover the scientific disciplines deemed to be most important to ICES. National representation is assured by participation on Council and on the Science Committees and Programmes.

Disadvantage: A disproportional national representation may mean that ConC cannot talk on behalf of ICES.

3.3 Working procedure

ConC should meet twice a year; once during spring and secondly in connection with ASC. The interim meeting could consist exclusively of the group of Chairs which could act as a scientific board and meet twice a year as described, while the entire committee meets once a year in relation to ASC.

The focus of the work should be on coordinating and integrating the work of the Science Committees and Programmes and the Advisory Committee. Subgroups of ConC would be assigned the management of tasks (e.g. coordinating ASC, review of resolutions) and report to ConC with a summary of recommendations.

4 Science Committees/Programmes

Science Committees are hardly mentioned in the Rules of Procedure, adopted by Council on 3 October 2001. However, it is stated that all meetings of the Science Committee should be open. The ICES Action Plan 2003–2007 as adopted by Council on 28 October 2002 states that “they are responsible, on behalf of the Council, for the scientific activities of ICES. A core task of all the Science Committees is to plan, guide, and review studies of the biotic and abiotic environment, the natural resources, and the interactions among the biological organisms in the sea. A second core task is to unravel the impacts of human uses of the seas, including exploitation of its living resources, and impacts of climate variability and climate change on marine ecosystems and their components. A third core task is to improve our ability to sample and measure the ocean, what lives in it, and what we put in it. The Science Committees also ensure that appropriate opportunities for internal and external collaboration are identified and that scientific information receives peer review.”

The Science Committees, however, have never been in a good position to attend to and complete the tasks defined in the Action Plan. A meeting of 6-8 hours a year spread over the week of the ASC and competing with science sessions for attendance is clearly not enough.

The science committees and programmes must be the platform for networking among scientists within the remit of the committee and should act as the communication focal point for its Expert Groups. The committees and programmes are the focal point for communication between EGs and ConC, and therefore between science and advice. They should lead expert groups within the remit of the Committee.

4.1 Science Committees

The science committees should be discipline focused and long-term. They should strengthen and coordinate ICES activities within its discipline and initiate new research activities relevant for ICES and the coordination of international activities through national institutions. The science committees should have a function in reviewing the science done within its remit.

The performance of the science committee should be reviewed every 5–6 years by ConC. For that, Science Committees should have ToRs for their work. The result of the review process will conclude if the work should continue under the same remit or new ones. The committee may also be dissolved and replaced by another topic area that will be more relevant to ICES ongoing and expected activities.

Tasks:

- SciComms will take on an increased operational role. SciComms are essential elements to provide the long term stability required to manage the science programme in ICES.
- SciComms shall be the layer where the input from scientists with a broad range of interests and disciplines should be channelled. Therefore SciComms should promote communications and provide an opportunity for like minded scientists in related disciplines to develop specific ideas or showcase new material in their respective fields (symposia or theme sessions). This function is fundamental and important but not yet reflected explicitly in the existing structure.
- The structure of SciComms shall be based on key disciplines within ICES (advice and science). However, SciComms should be designed to ensure flexibility in addressing cross-cutting issues by allowing the formation of ConC EGs (essentially short-lived committees) intended to scope approaches on emerging issues or new international agreements.
- SciComms shall be responsible for the tracking, review and prioritization of ToRs based on the strategic planning of ConC.

SciComms shall review EG reports and contribute, if necessary, in the review process on ICES Advice at the expense of ICES. In particular, reviewing EGs encompasses:

- SciComms shall be responsible for identifying and, where feasible, filling gaps in the science required by ICES. The SciComms should identify areas of overlap among EG activities to avoid duplication and encourage integration. EG ToRs may originate from client Commissions, national governments, advisory committees and their EG, other science EG, and the EG itself. Priorities in these ToRs should be provided by ConC in discussion with the originators and with the advisory side.
- SciComm and EG Chairs shall work to ensure that the activities of EG should reflect a broadly based scientific community to ensure that the advice and conclusions developed around each ToR reflects a consensus view rather than the opinion of the members in attendance. SciComms are therefore responsible to consolidate related EGs if review of activities and conclusions reveals that participation does not provide a sufficient basis for consultation across the area of concern.
- SciComms and Programmes should meet in the inter-session, in close collaboration with the 'science week' organised through the activity of the programs.
- SciComms shall develop their own ToRs and report to the ConC. Ideally ToRs should detail whether intersessional work is required or whether a response should be provided at a meeting. A key role of SciComms shall be the synthesis of key findings from the ToRs and communication to ConC to ensure necessary review and redevelopment of activities within the science programme.
- SciComms develop a list of expected results, products and a calendar of achievement.

- The performance of the science committee shall be reviewed every 5–6 years by ConC.

Membership:

SciComms have to explicitly and formally include the chairs of the component EGs. In addition there can be one national delegate for Member Countries not represented in the EG Chairs in order to maintain national representation also on the science side. This position should be assigned to a scientist who is knowledgeable and interested in the committee's work. This will substantially improve the quality of the committee work and discussions. In well designated committees, the EG chairs will be able to review each other's work and ToR much more effectively and objectively than in the past.

4.2 Science Programmes

Science Programmes consist of strategic focus groups that deal with crosscutting scientific issues that require synthesis, advice and/or solutions. Their structure should be flexible and they should serve to coordinate the activities of existing EGs to address key science issues. As such, Programmes will act primarily as steering and coordination bodies of part of the activities and ToRs of existing science EG, or when needed plan and carry out key multi-disciplinary workshops to address key issues that require greater concentration of effort and expertise, needed to address emerging science issues. Programmes will have a restricted mandate to address specific and critical issues that require specialized expertise. Their timelines will be limited (3–6 years). Their output should serve ConC and the SciComms in the review and development of the Science Strategy to better coordinate long term activities required by ICES. Science Programmes will report to ConC.

Tasks

The programmes should identify methods to solve the scientific challenges ahead. They could initiate Workshops or Study Groups that focus on specific issues primarily to enhance multi-disciplinary collaborations, suggest Symposia and convene relevant Theme Sessions at the ASC. The Programmes would develop ToRs for EGs in close collaboration with the Science Committees. They should every year report to ConC and summarize the results and preview the way forward.

- Programmes shall prepare a list of expected results, products and a calendar of achievement.
- The performance of the programmes shall be reviewed every 2 years by ConC.

Membership

Science programmes shall consist of a Chair, members nominated by ConC, and one member nominated by each of the Science Committees. The SciCom Chairs involved are *ex officio* members. The Council will need to appoint expert members that are identified by the Programme Chair and by ConC, in addition to any additional National expertise required. Input from academic and international (non-ICES) researchers could be requested, and resources could be sought from the ICES Strategic Investment Fund (SIF). The composition of Science Programmes will be inclusive of the Science Committees but their membership will be distinct with greater independence to allow recruitment of the most appropriate expertise needed to address emerging issues facing ICES.

Working Procedure

One to two meetings a year are necessary. The primary meeting of all science committees and programmes is the ASC. The meeting should not overlap or impinge on theme sessions and should therefore be held one or two days prior to the ASC, much in the same manner as the current strategy of the Committees. The meeting of Programs should not also impinge on Committee meetings as SciComs and Acom shall take part to the Programmes meeting. A goal of these meetings shall be the integration of the results of EG meetings, the synthesis of material that can be used for development of advice about the need for emerging areas of research, and the development of ToRs and attending to other ICES business. In addition, this meeting has to define scientific challenges. EG chairs would report on key highlights and SciComm and Programmes chairs should coordinate discussion of cross-cutting issues. One function of this meeting must focus on the scientific needs of ICES advice. The meeting would provide the opportunity for the advisory side to discuss their current and future science needs at the operational level. ConC must ensure that these needs are provided for in the current and future work programmes of the science committees and Expert Groups.

An additional meeting could be held at ICES HQ just before the ConC midterm meeting based on the recommendations from the ASC meetings of Science Committees and Programmes, and ConC. This meeting could consist of a subset of the Committees and Programmes. The meeting would focus on strategic planning of research activities both within and among Committees and Programmes. The focus could include the development of an ICES position on research requirements and priorities, with knowledge of national research science plans, that could be presented to governments and funding agencies. This may also be a focussed meeting where only the EG chairs meet to discuss scientific challenges related to science and advice and to exchange information among committees. Several committees could meet in parallel, and create a “science week” designed to foster the enhancement of networks and communication among researchers both within and outside of ICES.

What's new

The EG chairs become official members of committees, and national membership is reduced from two to one member. The committees will have their own ToRs, and will report to ConC. The committees will review the EG reports and decide on their ToRs. There is increased activity in defining science requirements that can be used for strategic advice to government and funding agencies. There is also increased opportunity to involve the academic community through participation in Science Programmes, however this will likely involve funding.

5 Expert Groups

The Expert Groups are the operational level within the ICES science structure. This is where scientists meet, pool information and data and review and discuss results. It should be a flexible level which can take many forms from brainstorming fora, to being the coordinating body for joint projects.

This multidimensional role of the science program within the ICES community requires a structure that both identifies and leads the strategic objectives of the organization, and responds to advisory needs and emerging issues identified by Expert Groups.

Expert Groups are the primary advisory bodies within ICES. It is generally recognized that most science EGs work well and also that most of their ToRs are determined by each EG

itself. However, with increasing demands from the advisory side, EGs are increasingly being asked to prioritize their activities relative to other scientific activities. Given that the work of most science EGs is based on goodwill participation, it is essential that EGs should be able to set some of their own ToR and be involved in the prioritisation of the full set of ToRs. The Expert Groups should be the primary linkage between ICES science and Advice. A procedure with generic ToRs (longer term) and specific ToRs should be set up, in which generic ToRs would allow to work with a longer-term perspective while specific ToRs would address short-term issues. A balance between the two will allow pilotage of the science expert groups without crushing their scientific activity.

Tasks: Respond to their ToRs and Report to their Parent Committee or to the Advisory Programme and propose some of their ToRs.

Expert Group Chair: Chair the work of the group and serve as a member of the Science Committee and attend their meeting twice a year.

Parentship: The EGs shall have one parent, but refer to several committees.

What's new: EG Chair shall be members of the parent Committee and are committed to take part in their meetings twice a year

6 Implementation

On approval of the structure and procedures outlined in this proposal, a Science Structure Working Group (SSWG), consisting of 4 members from ConC along with 1 or 2 Delegates, would develop an implementation proposal to be presented to ConC and Council in the fall of 2008, during which the WG would meet two or three times at Council expense. The timeline is:

- November 2007–January 2008
 - Define core long term ToRs;
 - Identify key strategic topics that require interdisciplinary action;
 - Consult with Advisory Committee and Committees on future science requirement and expectations;
 - Develop recommend Committee/Programme structure;
 - Report to Bureau Feb 2008.
- March to May 2008
 - Revise recommendations as needed;
 - Develop agenda and ToRs for first test cross-disciplinary meeting (ASC 2008) of existing Science Committees;
 - Develop implementation strategy;
 - Report to ConC May 2008 and revise proposal prior to Bureau meeting;
 - Report to Bureau June 2008.
- July to September 2008 (if required)
 - Revise proposal as required;
 - Delegate subgroup would develop the resolution;

- Finalize implementation plan;
- Present to Existing Science Committees and Delegates for input;
- Finalize and plan implementation intersessionally until ASC 2009.

7 Summary

In response to the Delegates' Recommendation on Reforming the Science Structure, the proposal includes:

- A strong link between Science and Advice assuring
 - Efficient development of strategic plans for and implementation of research based on advisory needs *through the primary responsibilities of ConC*
 - Effective communication of research results for inclusion in the advisory work at the strategic as well as the operational level *through recommendations from Science Committees and Programmes*
- For the science structure
 - ConC with a changed mandate
 - Takes initiatives to develop science in response to both science and advisory needs
 - The science arm in the strategic link between science and the advisory service
 - Provides integration of the science needs and outcomes from both the advisory and Science Committees and Programmes within the science network
 - Formulates the vision to establish ICES as the leading marine science organization for the North Atlantic and adjacent areas with influence on regions outside the ICES area
 - Establishes the priority science activities according to the Science Strategy and set the ToRs for Science Committees and Programmes
 - Coordinates the top down process such as the requests passed down from and through advisory committees
 - The scientific steering group for the ASC
 - Includes national representation
 - Speaks on behalf of ICES on science strategic matters
 - Science Committees and Programmes (formerly SciCom)
 - Lead ICES Science activities by overseeing a system of expert groups within the remit of the programme
 - Committees are essential elements to provide the long term stability required to manage the science programme in ICES
 - Science Programmes consist of strategic focus groups that deal with crosscutting scientific issues that require prompt synthesis, advice and/or solutions
 - Committees and Programmes will be the layer where the input from scientists with a broad range of interests and disciplines should be channelled
 - Committees and Programmes will be responsible for identifying and, where feasible, filling gaps in the science required by ICES
 - Provide quality assurance of the products produced through its expert groups
 - Expert Groups
 - Flexible, operational groups which can take many forms from brainstorming for a, pooling data and making joint analyses, to being the coordinating body for joint projects. This is where scientists meet, pool information and data, and review and discuss results.

Annex 5: Recommendation for an ICES Strategy on Teaching

Teaching activities to underpin the advisory process

ICES recognises its responsibility to provide teaching to ensure an adequate level of knowledge and insight for scientists who serve an advisory role in ICES.

The Consultative Committee recognizes that the Secretariat will submit a proposal to the Council meeting in October 2007 on the development of an “ICES school of marine science”. ConC recognizes that the Secretariat proposal has a much wider remit than the current proposal to develop courses that serve the advisory function.

ICES seeks cooperation with institutions that are willing to organize teaching for members of the ICES community and - if needed - ICES will arrange the teaching activities.

ICES recognizes that a reasonable compensation will be required for teachers that operate in the ICES courses.

ICES will:

- appoint a person at the Secretariat who will be responsible for coordinating teaching activities within ICES. The person will communicate with institutions who arrange teaching and with participants in teaching arrangements. The expected work commitment for this person would be 0.1-0.3 FTE depending on the amount of courses.
- establishes a “teaching group” consisting of 3-5 members from the science and advisory programs, to work together with the Secretariat to:
 - Develop and maintain an inventory of teaching activities of interest to ICES, covering both needs recognised by ICES and relevant initiatives from others.
 - Oversee and – as appropriate approve-teaching activities by other institutions, to be recognised as ‘ICES-approved teaching’.
 - Decide on priorities and rules with respect to participation.
 - Take initiatives towards potential teachers and arranging institutions to promote teaching in fields of interest.
- develop Wiki-based teaching material that can be used as a basis for courses

The expenses for the Secretariat tasks and for the teaching committee will be covered by the ICES Council.

Participants in teaching activities will pay a fee that shall cover the expenses for preparing and teaching that activity and for the travel and subsistence of the teachers. Teachers are paid according to [rules for that have to be decided by the Council].

Teaching activities approved by ICES shall be open to participation from all members of ICES that are appointed by the relevant Delegate. The number of participants may have to be restricted for practical and pedagogic reasons. If so, priority shall be given according to the following criteria:

- Sufficient skills to ensure the full benefit of the teaching
- Willingness to take part in advisory work where the teaching is relevant
- Fair share of participation between ICES member states, taking into account the relevance of the subject to each member state's involvement in ICES activities.

For 2008, ICES will endeavour to organize the following teaching courses:

- Establish a 'package' of **elementary courses** and organize a basic course in age-based assessment methods (4 days).
- Develop and organize a course on **survey-based assessment methods** (4 days)
- Technical course on the **use of FLR for assessment working groups** (4 days)
- Technical course on the **use of Intercatch** (3 days)

The program for 2009 will be established by the Teaching Committee.

Supporting information¹

At its October 2006 meeting, ConC discussed the subject of teaching of scientists who do work in support of the ICES advisory system. The basis for the discussion was a paper presented by the chair of RMC. This paper reflected the view by RMC, having discussed the report of the WKAFAT that ICES needs to ensure that scientists who do work related to the advisory process, have the necessary skills. ICES has an obligation to ensure that teaching and education is available as needed. The conclusion by ConC in October 2006 was:

ConC **recommends** that ICES should maintain its presence in this area, but a feedback from Delegates would be useful before ConC pursues this further.

Action: a ConC subgroup consisting of the chairs of RMC and ACFM and the Head of Advisory Programme will develop a broader portfolio of courses/workshops to be presented at the ConC mid-term meeting in May. The list should identify teachers to match the selected topics and the group was also asked to consider any financial implications for ICES.

The current document reflects the work carried out by the ConC subgroup and contains the recommendations that follow from that work.

The Consultative Committee recognizes that the secretariat will submit a proposal to the Council meeting in October 2007 on the development of an “ICES school of marine science”. ConC recognizes that the secretariat proposal has a much wider remit than the current proposal to develop courses that serve the advisory function. The current proposal could serve as a short term solution to maintain the required teaching activities for the advisory function of ICES and could be embedded in the wider school of marine science in the longer term.

Objectives for teaching in ICES

ConC considers that the following objectives should apply to the teaching activities that underpin the advisory process

- 1) Ensure that participants in working groups and other parts of the advisory process have the skill needed to deliver high quality advice.
- 2) Ensure a common understanding of ICES advisory practise
- 3) Disseminate insight throughout and outside the ICES community

Recommended level of involvement of ICES in teaching activities

There could be different levels of involvement from ICES in teaching activities that underpin the advisory process, ranging from a “school”-type of activity with high involvement to a “advertising board” of locally organized courses.

ConC recommends that ICES develops long-term plans for fields that should be covered. ICES takes on specific teaching assignments in-house but leaves it to other institutions to provide parts of the teaching. ICES takes care of coordination and of quality control. Parts of the ICES assignment could be development and maintenance of web-based courses (e.g. through WiKi webpages like for FLR <http://www.flr-project.org/doku.php?id=courses:tyflr>). These can be the basis for local courses organized by individual institutions.

Professionalizing teaching activities in ICES

Several teaching courses have been organized under the remit of RMC in the past. In those courses, the teachers were basically “volunteers” with some compensation for travel and subsistence and participants paid a very modest fee. Teaching activities constitute a service to the ICES community and in most cases there will not be national projects that will cover the time spent by the teachers. Developing courses is an intensive job. As a rule of thumb, each hour taught will require 5–7 hours of preparation.

ConC recommends that future courses would need a different financial arrangement whereby the teachers are compensated for the time they need for preparing and teaching the courses. This professionalized approach will bring the teaching activities in line with the teaching facilities that many institutes use when hiring trainers for e.g. statistical courses, management courses etc. This will mean that participants will need to pay a more “realistic” fee that will be enough to pay the major part of the labour cost of the teachers. ICES could thereby also attract people from outside the traditional ICES circles who are seen as the high profile experts. This would raise the reputation the teaching activities.

Secretariat support

If ICES develops a long term plan for teaching, instruments to provide communication and quality assurance need to be put in place and maintained. This would be the responsibility for the secretariat.

Teaching Committee

ConC recommends that a 'Teaching committee' be established with a role similar to the Publications Committee. The Teaching committee should oversee the teaching activities both within and outside of ICES and to take initiatives for developing and organizing courses. The Teaching Committee should consist of 3-5 members who would be recruited from the Science and Advisory Committees.

Types of courses

Different types of courses can be envisioned:

- 4) Introductory teaching for people who are about to enter the expert group system.
- 5) Advanced courses, primarily to update people with experience in the system.
- 6) Specialised courses/seminars, to disseminate new insight, methods and tools in the ICES community.
- 7) Technical courses on the application of specific tools.

Suggestions for specific topics in the different types of courses are supplied in annex 1. The role of web-based teaching courses should be explored. Within FLR there is now good experience in developing courses on a Wiki system that contains the theory, the practical "problems" and the way to solve them.

Financial implications

ConC recommends that ICES implements a system of teaching courses with cost recovery from the participants. A rough calculation indicates that participants would need to pay around 2000 Euro for a 5-day course (see annex 2).

For ICES the costs for maintaining an infrastructure for tools and methods of communication would take about 0.1-0.3 FTE depending on the number of courses.

The maintaining of Wiki pages could be made as part of the preparation of the courses and should not require additional resources.

Annex 1: Inventory of potential teaching activities

Elementary level

- Basic course in age-based assessment methods. ICES may consider to produce the core of the teaching material.
- Basic course in simulation of management strategies. Should be based on 1.
- Design and conducting of surveys for assessment purposes and statistical properties of survey results. Should be considered as part of a ‘basic education programme’ for incoming assessment/advice scientists, and also for people responsible for surveys that are used in assessments.
- Design and conducting of sampling of fisheries data for assessment purposes and statistical properties of fisheries data. Should also be considered as part of a ‘basic education programme’ for incoming assessment/advice scientists.

Advanced level

- Advanced course in assessment and simulation methods. May be a continuation of the the WKAFAT.
- Alternative assessment methods. This should cover methods for data-poor situations, difference-delay and production models, length based methods etc, i.e. methods that are not routinely used in ICES, but that are or should be considered for some stocks.

Specialist courses

Such courses will be more *ad hoc*, often to disseminate the outcome of methodological WGs, and sometimes in the borderline between teaching and seminars. Some examples:

- Bayesian approaches to assessment and management
- Diagnostics in assessment tools
- Length based and age-length based methods
- Integrating environmental information in fish stock management
- Mixed fisheries management
- Optimal regimes with conflicting objectives
- Indicator based management
- Design of strategies for fisheries management

Technical courses

These are intended as courses to ensure consistent practices, and to introduce new tools. Examples could be:

- FLR
- Intercatch
- Standard procedures for ageing or maturity staging.

Annex 2 Indicative calculation of the price per participant for a 5-day course.

<u>Teaching event</u>			
Number of days	5		
Number of participants	25		
<u>Teachers</u>			
Number of teachers	2		
Teaching days	10		
Preparation days	50	(Preparation factor	5)
Total	60		
<u>Costs for teachers</u>			
work	48000	(Cost per day	800)
travel and subs.	2500	(Subsistence per day	250)
Total	50500		
Required fee per participant	2020		

Annex 6: Theme Sessions 2008

- a) Incorporating microbial dynamics in studies of shelf ecosystems. *Conveners:* J. Steele, F. Colijn, C. Heip/L.Legendre
- b) Role of sea ice in polar ecosystems. *Conveners:* Garry Stenson, Canada; Ken Drinkwater, Norway; and Kai Wieland, Greenland
- c) Mid-ocean ridges and seamounts: oceanography, ecology and exploitation. *Conveners:* Tone Falkenhaus, Norway; Gui Menezes, Portugal; Uwe Piatkowski, Germany; Andrey Gebruk, Russia, or Astthor Gislason, Iceland
- d) New trends in diseases of marine organisms: causes and effects. *Conveners:* Sharon MacLean, USA, Thomas Lang, Germany, and Sharon McGladdery, Canada
- e) Marine spatial planning in support of integrated management – tools, methods, and approaches. *Conveners:* Stuart Rogers, UK; Robert O’Boyle, Canada
- f) Size is almost everything! Size and trait based processes and models in ecosystems and management. *Conveners:* Ken Haste Andersen, Denmark; Jorn Bruggeman, Netherlands; John Pope, Norway; Simon Jennings, UK; and Jake Rice, Canada
- g) Sediment - Biota Interactions and Mapping Marine Habitats. *Conveners:* Stephen Smith, Canada; Heye Rumohr, Germany; Thomas Noji, US
- h) Ecological Carrying Capacity in Shellfish Culture. *Conveners:* Francis O’Beirn, Ireland; Peter Cranford, Canada
- i) Fishing Capacity, effort and fishing mortality; The understanding of fishery dynamics and their links to management. *Conveners:* Dave Reid, UK, Jos Smit, Netherlands; Rögnvaldur Hannesson, Norway; Paul Marchal, France; Axel Temming, Germany
- j) Comparative dynamics of populations in the Baltic Sea and Gulf of St. Lawrence ecosystems. *Conveners:* Michele Casini, Sweden; Dan Duplisea, Canada
- k) Small-scale & recreational fisheries surveys, assessment, and management. *Conveners:* Jon Helge Vølstad, Norway; Dave Van Vorhees, USA; Patrick Berthou, France
- l) Coupled Physical and Biological Models: Parameterization, Validation, and Applications. *Conveners:* Guoqi Han (Canada), Andreas Moll (Germany), and Andrée Visser (Denmark)
- m) How Much Habitat is Enough? Evaluating Habitats in terms of their Ecosystem Function, Goods and Services. *Conveners:* Stephen K. Brown, USA; David Connor, UK; Jake Rice, Canada
- n) Problems and solutions for the assessment, conservation and restoration of rare, threatened and endangered fish species. *Conveners:* N. Ó Maoiléidigh, Ireland, and NN, Canada.
- o) Governmental quality and risk management. *Conveners:* Tammo Bult (The Netherlands), Laurence Kell (UK), Sakari Kuikka (Finland), Bonnie McCay (US)
- p) New methodology for tracking fish migrations. *Conveners:* David Somerton, Seattle, USA; and Francis Neat, Scotland, UK
- q) Evidence of global warming effects on zooplankton populations and communities, including larvae of benthic invertebrates and fish. *Conveners:* Wulf Greve, Germany; Steve Hay, UK; Peter Wiebe, USA
- r) Environmental and Fisheries Data Management, Access, and Integration *Conveners:* Christopher Zimmermann, Germany; Helge Sagen, Norway; Peter H. Wiebe, USA

Annex 7: List of ICES Expert Groups dissolved, established, changed committee or renamed by virtue of the 95th Statutory Meeting

TYPE OF ACTION	NAME	CHAIR – OUTGOING	CHAIR – INCOMING
<i>Change of Chairs</i>			
Committees			
BCC	Baltic Committee	Cornelius Hammer, Germany	Yvonne Walther, Sweden
FTC	Fisheries Technology Committee	François Gerlotto, France	Bill Karp, USA
MCAP	Management Committee on the Advisory Process	Paul Connolly, Ireland	
RMC	Resource Management Committee	Dankert Skagen, Norway	Mark Dickey-Collas, The Netherlands
<i>Change of Chairs</i>			
Expert Groups			
ACE	Working Group on Ecosystem Effects of Fishing Activities [WGECO]	Stuart I. Rogers, UK	Ellen Kenchington, Canada
ACFM	Herring Assessment Working Group [HAWG]	Mark Dickey-Collas, NL	Tomas Gröhsler, Germany and Emma Hatfield, UK
ACFM	North-Western Working Group	Einar Hjörleifsson, Iceland	Guðmundur Þórðarson, Iceland
ACFM	Working Group on the Assessment of Southern Shelf Demersal Stocks [WGSSDS]	Wim Demaré, Belgium	Colm Lordan, Ireland
ACFM	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources [WGDEEP]	Paul Marchal, France	Tom Blasdale, UK
ACFM	The Study Group on Mixed Fisheries Management [SGMIXMAN]	Sarah Kraak, NL ²	
ACFM	Study Group on Management Strategies [SGMAS]		John Simmonds, UK ³
CONC	Working Group on Data and Information Management [WGDIM]	C. Zimmermann, Germany and P. Wiebe, US	R. Ayers, UK ⁴
BCC	Study Group on Baltic Sea Productivity [SGPROD]	Bärbel Müller-Karulis, Latvia	M. Olesen, Denmark

2 Stuart Reeves, UK continues as Chair.

3 Co-chaired together with D. Skagen, Norway.

4 Co-chaired together with H. Sagen, Norway.

TYPE OF ACTION	NAME	CHAIR – OUTGOING	CHAIR – INCOMING
LRC	Baltic International Fish Survey Working Group [WGBIFS]	Rainer Oeberst, Germany	Henrik Degel, Denmark
LRC	Working Group on Beam Trawl Surveys [WGBEAM]	Richard Millner, UK	Ingeborg de Boois, The Netherlands
LRC	Working Group on Cephalopod Fisheries and Life History [WGCEPH]	João Pereira, Portugal	Graham Pierce, UK
LRC	Stock Identification Methods Working Group [SIMWG]	John Waldman, USA & Steve Cadrin, USA ⁵	
LRC	Working Group on Seabird Ecology [WGSE]	Stefan Garthe, Germany	Jim Reid, UK
MHC	Study Group on Biodiversity Science [SGBIODIV]	Hubert Rees, UK	Michaela Schratzberger, UK
MHC	Working Group on Marine Sediments in Relation to Pollution [WGMS]		Patrick Roose, Belgium ⁶
MHC	Working Group on Integrated Coastal Zone Management [WGICZM]	Josianne Støttrup, Denmark	B. Morales-Nin, Spain
OCC	ICES-IOC Steering Group on GOOS [SGGOOS]	David Mountain, USA ⁷	
RMC	Study Group on Redfish Stocks [SGRS]	Christoph Stransky, Germany	A. Pedchenko, Russia
MHC	Working Group on Marine Chemistry [MCWG]	Jacek Tronczynski, France	

*Established/
Re-established*

ACOM	ICES-NAFO Joint Working Group on Deep Water Ecology [WGDEC]	Mark Tasker, UK	Robert Brock, USA
ACOM	Study Group for Bycatch of Protected Species [SGBYC]		Simon Northridge, UK
ACOM	Study Group on Statistical Methods for Analyzing Climate Change Consequences [SGSMACCC]		NN
ACOM	Study Group on Working Hypotheses Regarding Effects of Climate Change [SGWRECC]		Adriaan Rijnsdorp, The Netherlands
ACOM	Working Group on Anchovy [WGANC]		Dankert Skagen, Norway
ACOM	Working Group on Widely distributed Stocks [WGWIDE]		Beatriz Roel, UK
DFC	Study Group on data requirements and assessment needs for Baltic Sea trout [SGBALANST]		Stig Pedersen, Denmark

⁵ Stefano Mariani, Ireland, continues as Chair.

⁶ Co-chaired together with Foppe Smedes, The Netherlands.

⁷ A. Bode will continue as Chair of SGGOOS.

TYPE OF ACTION	NAME	CHAIR – OUTGOING	CHAIR – INCOMING
FTC	Study Group on Unaccounted Fishing Mortality [SGUFM] will be re-established as the Working Group on Quantifying All Fishing mortality [WGQAF]	Mike Breen, UK	Phil MacMullen, UK
FTC	Study Group on combining gear parameters into effort and capacity metrics [SGEM]		Dave Reid, UK and Norman Graham, Ireland
LRC	Planning Group on the North-east Atlantic continental slope survey [PGNEACS]		Leonie Dransfeld, Ireland
RMC	Study Group on the evaluation of assessment and management strategies of the western herring stocks [SGHERWAY]		Emma Hatfield, UK

New Workshops

ACE	Workshop on dealing with Natura 2000 and Related Requests [WKN2K]		Stuart Rogers, UK
ACME	Fourth ICES/OSPAR Workshop on Integrated Monitoring of Contaminants and their Effects in Coastal and Open-sea Areas [WKIMON IV]		Co-chairs: one designated by OSPAR and John Thain designated by ICES
ACME	Workshop on modelling of predictive eutrophication status and transboundary nutrient fluxes [WKPEST]		NN
ACFM	Workshop on Herring Management Plans [WKHMP]		Mark Dickey-Collas, The Netherlands
ACFM	Workshop on Reference Points in the Baltic Sea [WKREFBAS]		Carl O'Brien, UK
ACFM	Workshop on Benchmark assessments 2008 [WKBENCH1]		NN
ACFM	Workshop on Benchmark assessments 2008 [WKBENCH2]		NN
ACFM	Workshop on Benchmark assessments 2008 [WKBENCH3]		NN
ACFM	Workshop on Fishers Sampling of Catches [WKSC]		Kjell Nedreaas, Norway and Michael Pennington, Norway
ACFM	Joint STECF/ICES Workshop on Implementation Studies on Concurrent Length Sampling [WKISCON]		Sieto Verver, The Netherlands and Frank Redant, Belgium
ACFM	Workshop on Methods to evaluate and estimate the accuracy of fisheries data used for assessment [WKACCU]		Michael Pennington and Sondre Aanes, Norway

TYPE OF ACTION	NAME	CHAIR – OUTGOING	CHAIR – INCOMING
ACFM	Workshop on Maturity Ogive Estimation for Stock Assessment [WKMOG]		David Maxwell, UK
ACFM	Workshop on Age Determination of Redfish [WKADR]		F. Saborido-Rey, Spain, and C. Stransky, Germany
ACFM	Workshop on Age Reading of Red Mullet [WKARRM]		Chryssi Mytillineou, Greece
ACFM	Workshop on Age Reading of Turbot [WKART]		Bart Maertens, Belgium
ACFM	Workshop on Age Reading of Baltic Herring [WKARBH]		Georgs Kornilovs, Latvia
ACFM	Workshop on Age Reading of Baltic Sprat [WKARBS]		Georgs Kornilovs, Latvia
ACFM	2nd Workshop on Age Reading of Flounder [WKARFLO]		Johan Modin, Sweden and Ann-Britt Florin, Sweden
ACFM	Workshop on Age Reading of North Sea Cod [WKARNSC]		Lotte Worsøe Clausen, Denmark and Hans Høie, Norway
ACFM	Workshop on Maturity Staging of sardine and anchovy [WKMSSP]		Nando Cingolan, Italy
ACFM	Workshop on Maturity Staging of Crustaceans [WKMSC]		Matteo Murenu, Italy
BCC	ICES/BSRP Workshop on Developing and Testing Environmentally-Sensitive Stock-recruitment Relationships of Baltic Herring and Sprat stocks [WKSSRB]		Max Cardinale, Sweden and Piotr Margonski, Poland
DFC	Workshop on Salmon historical information – new investigations from old tagging data [WKSHINI]		Lars Petter Hansen, Norway
LRC	Workshop and training course on <i>Nephtrops</i> burrow identification [WKNEPHBID]		Ewen Bell, UK
LRC	Workshop on Seabird Ecological Quality Indicator [WKSEQUIN]		Ian Mitchell, UK
LRC	ICES/PICES/GLOBEC-SPACC Workshop on Changes in distribution and abundance of clupeiform small fish in relation to climate variability and global change [WKSPCLIM]		J. Alheit, Germany, R. Voss, Germany and G. Kruse, USA, PICES
MHC	Workshop on Benthos Related Environmental Metrics [WKBEMET]		I. Moulaert, Belgium
MHC	Workshop on the role of phytobenthic communities in ICES waters [WKPHYT]		Hans Kautsky, Sweden

TYPE OF ACTION	NAME	CHAIR – OUTGOING	CHAIR – INCOMING
OCC	The Workshop on Operational Oceanographic Products [WKOOP]		Co-Chairs: Hein Rune Skjoldal (Norway), John Siddorn (UK), Morten Skogen (Norway), Mark Dickey-Collas (Netherlands)
OCC	Workshop on Cod and Future Climate Change [WKCFC]		Co-Chairs: K. Drinkwater, Norway, J. Dippner, Germany, and, C. Schrum, Norway
RMC	Workshop on historical data on fisheries and fish [WKHIST]		Co-Chairs: Martin Pastoors, The Netherlands and Brian MacKenzie, Denmark

Dissolved

ACE	SGESME Study Group on Effects of Sound in the Marine Environment [SGESME]	Magnus Wahlberg, DK
ACFM	Northern Pelagic and Blue Whiting Fisheries Working Group	Morten Vinther, DK and Frans van Beek
ACFM	Working Group on the Assessment of Mackerel, Horse Mackerel, Sardine and Anchovy	Beatriz Roel, UK
ACME	ICES/HELLCOM Steering Group on Quality Assurance of Chemical Measurements in the Baltic Sea	Elisabeth Sahlsten, Sweden
BCC	Study Group on Baltic Fish and Fisheries Dynamics [SGBFFD]	Eero Aro, Finland
BCC	ICES/BSRP Workshop on Recruitment Processes of Baltic Sea herring stocks [WKHRPB]	Christian Möllmann, Germany, and Max Cardinale, Sweden
DFC	Study Group on Establishing a Frame-work of Indicators of Salmon Stock Abundance [SGEFISSA]	Tim Sheehan, USA
FTC	Study Group on Catch Comparison Methods and Analysis [SGCOMP]	René Holst, DK and Andy Revill, UK
LRC	Study Group on recruitment variability in North Sea planktivorous fish [SGRECVAP]	Mark Dickey-Collas, The Netherlands
MHC	Study Group on the North Sea Benthos Project 2000 [SGNSBP]	H. Rees, UK
OCC	A Planning Group on Phytoplankton and Microbial Ecology [PGPYME]	J. Steele, USA, Franciscus Colijn, Germany, and Ted Smayda, USA

TYPE OF ACTION	NAME	CHAIR – OUTGOING	CHAIR – INCOMING
OCC	Planning Group on Operational Oceanographic Products [PGOOP]	E. Svendsen, Norway	
OCC	Planning Group for the North Sea Pilot Project NORSEPP [PGNSP]	Martin Holt, UK, and Hein Rune Skjoldal, Norway	
OCC	Workshop on the Significance of Changes in Surface CO ₂ and Ocean pH in ICES Shelf Sea Ecosystems [WKCpH]	Peter Brewer, USA, and Liam Fernand, UK	
RMC	Study Group on Age-length Structured Assessment Models [SGASAM]	Helen Dobby, UK	

Annex 8: Recommendation on data products and especially on the matter of oceanographic data in ICES

The ConC chair requested that the WGDIM chairs in collaboration with the ICES Data Centre manager make a draft recommendation on the future of the ICES Oceanographic database building on the recommendation from the ConC Midterm Report.

In line with the ICES Data strategy (2006) and the ConC Midterm report (2007) which states that ICES will continue to act as a focal point for the collation and aggregation of international marine data for the North Atlantic and serve as a regional data hub to the ICES community,

Conc noted that:

- a) WGDIM agrees that ICES continue the collection of oceanographic data provided by member states as some nations and regional programmes use ICES instead of a national oceanographic data centre and ICES should continue to provide this service.
- b) ICES Databases should concentrate on integrated data, that is oceanographic data collected at the same time (e.g. on the same cruises) as environmental and fisheries data. This is an opportunity to strengthen the integration of different disciplines' data, which forms the basis for integrated advice.
- c) WGDIM recommends that the ICES Oceanographic data be moved to a relational data system, as this would provide the platform for a regional hub in an international network of databases and facilitate the use of web services and links to other systems.

ConC **recommends** that the Working Group on Data Integration and Management [WGDIM], in collaboration with the ICES Data Centre Manager, discuss the Strategic Plan to move ICES toward (1) a distributed system and (2) identify strategies to deal with issues of possible differences in data QC/QA procedures among data centres and (3) the implications for the development and production of data products by the Data Centre for use by the ICES community.

In line with the above recommendation (1) and with reference to the ICES Data strategy (2006-10), practical steps that will form the basis for a platform of distributed data will include:

- Greater utilization of web services (2008 onwards);
- Continuing the development and adoption of the ICES data policy (ongoing);
- A simplified web access point that will be the gateway to all ICES databases (2009) ;
- Closer links with national data centres and inter-regional projects to ensure the ICES Data centre is involved in developments around guidelines and data standards, for instance ISO (ongoing) ;
- Migrating the ICES Oceanographic data to a relational system (2008 onwards) (*see item c, above*).

In line with the above recommendation (2), further discussion is needed on the ICES Oceanographic data Quality Control (QC) procedures:

- The strategic aim would be to have QC checks that examine the internal consistency of data performed at the data origination point (by submitters). ICES Data Centre would then focus QC procedures on consistency between national data submissions.
- Implement the use of a quality flagging system on data inside ICES databases to indicate the level of quality control performed on data.
- Create an inventory of QC checks currently performed at ICES Data Centre, with reference to other internationally formulated QC standards.
- Identify strategies to deal with issues of possible differences in data QC/QA procedures.

In line with the above recommendation (3), the end-users and potential uses of ICES Data Products are numerous, while many products are technically possible, it is important to focus on services that serve the greatest need and provide the most value to the ICES community.

- ICES Data Centre should develop a dual approach to data products:
 1. Standard products that ICES provide as part of programme agreements and standard interfaces to data, which are strictly defined. For example, time-series and trend-plots, such as included in the NORSEPP quarterly reports.
 2. Building block products that will provide datasets in readily available services or downloads that can support other products and models that serve the wider scientific community.
- The ICES Data Centre should use graphical products where applicable and work further to provide integrated products based on readily available GIS technologies.
- WGDIM in cooperation with the ICES Data centre should identify implications for the development and production of ICES Data Products of the future QC procedure.

Annex 9: ConC Terms of Reference

2007/2/CONC01 The **Consultative Committee** [ConC] (Chair: Harald Loeng, Norway) will meet at ICES Headquarters, Copenhagen, from 6–8 May 2008, and in connection with the ASC, to:

- a) oversee the scientific interests of the Council and its scientific work;
- b) review progress of 2008 activities of Committees and Expert Groups with a view to identify key scientific issues;
- c) be updated and comment on progress of relevant ICES activities;
- d) develop and agree on ICES Science Strategic Plan based on comments from the Council;
- e) Implement the new science structure and develop guidelines for interaction between science and advice
- f) review status of preparations for ICES Symposia and prepare resolutions;
- g) review and update the arrangements for the 2008 Annual Science Conference;
- h) further develop the plans for the 2009 and 2010 Annual Science Conferences;

ConC will make its report available for consideration at the October 2008 95th Statutory Meeting.

Supporting Information

PRIORITY:	High
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	The demands on Consultative in a number of areas (i.a., revise the advisory and science structure, integrated ecosystem-based advice, ASC planning) dictate the need for this meeting.
RESOURCE REQUIREMENTS:	None.
PARTICIPANTS:	Chairs of Committees
SECRETARIAT FACILITIES:	Meeting room. Secretarial support
FINANCIAL:	Cost of a meeting of 15 persons at Council expense
LINKAGES TO ADVISORY COMMITTEES:	Part of Committee
LINKAGES TO OTHER COMMITTEES OR GROUPS:	All Committees
LINKAGES TO OTHER ORGANIZATIONS:	No

Annex 10: Recommendations from the Oceanography Committee

- 1) ICES Data Center involvement in Expert Groups and products. The Data Centre currently has the data resources to generate suitable products, either within its own holdings (which it continues to expand), or through free access to numerous data resources online. WGOH has the scientific expertise to locate the appropriate online resources and to define optimum parameters and products. Other EGs of the Oceanography Committee (especially WGCCC, WGZE, WGRP) will also liaise with the WGOH and the Data Centre to develop the products that they require to complete their own ToRs. Therefore, the OCC recommends that the ICES Data Centre will develop the expertise necessary to generate environmental indicator time histories and other data products for Expert Groups. It will do this in collaboration with the Expert Groups of the Oceanography Committee who will provide advice in defining parameters and product development. The OCC also recommends that members of the ICES Data Center attend the expert groups meetings when requested in order to contribute with their expertise.
- 2) Climate change research in ICES. The OCC recommends that ICES create a cross-cutting multi-disciplinary steering group under ConC made up of members from a number of the existing committees to address issues of climate change that are brought to ICES from outside sources and to formulate appropriate responses to the issues. Both the queries and responses should be handled by some person in the Secretariate responsible for climate issues as a liaison to the steering group. As a first task for the Steering Group on Climate Change (SGCC), the SGCC should prepare a white paper detailing current knowledge about the effects of climate change on the physical oceanographic properties of the ICES ocean areas and lower and higher level trophic responses to change, and directions that research and education should proceed in order to better understand and anticipate climate change effects on the marine environment.
- 3) Response to need for better documentation of figures and maps presented in working group reports. Several working groups in the OCC are now preparing environmental status reports as part of their working group tasks. It was noted this year, for example, that the WGHABD had a number of interesting and useful maps of regions where HABs were impacting the marine environment. In the discussion of the report, a need was recognized to have the data that gave rise to the maps provided along with the maps and to have them served by the ICES data center via the ICES website. The OCC therefore recommends that when working groups assemble data sets and prepare figures and maps that summarize the data sets in their reports, the data as well as the figures be made available by the ICES Data Center.