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ICES

International Council for
the Exploration of the Sea

CIEM

Conseil International pour
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1 Introduction

The General Secretary, Gerd Hubold, welcomed the new Science Committee (SCICOM) to ICES and expressed his best wishes for a fruitful meeting. He mentioned that there are great expectations from the ICES community for this new committee, and many interested parties will be looking forward to seeing the results of this group.

The SCICOM Chair, Serge Labonté, welcomed participants (see Annex 1) and noted how the diversified background of members should contribute to an interesting group dynamics. He said that the implementation of the Science Plan will be a challenging, but very exciting task. We are facing a changing environment for coastal and ocean management. The issues to be addressed are increasingly complex and our scientific capacity in ICES is limited. Many issues require a science that is integrated and multidisciplinary. There is also a growing need for science in support of an Ecosystem Approach to Management (EAM) and also in policy development. The ICES scientific community could play an influential role by providing authoritative advice on major issues such as the impact of climate change on marine ecosystem. As we move forward, we need to better integrate various disciplines to address complex issues and we also need to reach out to external partners, particularly academia, to expand our capacity and expertise. Finally, we will need to move from communication to outreach to showcase ICES and influence decision- and policy-making.

The SCICOM Chair invited members to introduce themselves and share with the committee a few words on their expectations for this the first meeting of the Science Committee. Key expectations could be summarized as:

- History – It is important not to lose the good practices within ICES as we design new structures and processes. We need to keep the momentum while implementing the new Science Plan.
- Excellence – We need to maintain scientific excellence, ensure innovation and facilitate greater use of science in the advisory process.
- Nurturing – It is key to maintain the attractiveness of ICES to scientists and find ways to bring young scientists in the organization.
- Engagement - The challenge in implementing the new Science Plan is to strike a balance between Top-Down and Bottom-Up approaches. The plan could not be delivered without the active involvement of our scientists.
- Networking – We need to foster better interaction and exchanges between Expert Groups and with academia. ICES also needs to make an effort to assist in Pan-Atlantic cooperation.
- Integration – We want to see the integration of different skills and disciplines within the ICES community. This is essential to realize the Ecosystem Approach
- Cooperation – Expectations are high. SCICOM needs to develop a spirit of trust and cooperation to be effective.

The Chair thanked the members for their valuable input and asked for comments and proposals to the agenda (see Annex 2). The agenda was adopted without modification.

2 Linking the work of the EGs to the Science Plan

The Chair presented the ICES Science Plan, highlighting the perspective towards a new structure, the guiding principles for the Science Committee, its mandate and functions, and the envisioned science–advice linkages. He pointed out that at its first meeting SCICOM would go through a mapping exercise with a view to linking the expertise of EGs to the 16 High Priority Research Topics of the Science Plan, and subsequently have strategic discussions on how to tackle the priorities; how to deal with gaps in knowledge and challenges; how to define the ICES niche; the integration of disciplines; and the development of options for the new science structure. At the second meeting of SCICOM in May 2009, the committee will need to agree on the intermediate level structure between the SCICOM and the Expert Groups; prepare the transition for ASC in September 2009; and agree on strategic research initiatives.

A key issue for discussion is how SCICOM will provide leadership to the Expert Groups and to whom they will report. The outgoing Science Committee Chairs could help ensuring the transition. For 2009, the EGs have a work plan (as spelled out by the resolutions), ToRs and deliverables. Furthermore some of the former Science Committees had established Transition Groups to help oversee and coordinate the activities of the EGs. However, the EGs are aware of the reform process led by SCICOM and they are anxiously awaiting decisions and guidance.

It was noted that the work of EGs has been successful (e.g. because they are meetings of like-minded scientists for their mutual benefit and for the benefit of the whole community). The biggest challenge will be to maintain those communities, while at the same time engaging and integrating them in the broader perspective

For developing a new structure, we need a common understanding of where to go in the future in order to deal with the transition process. Currently, the only permanent structure in place is SCICOM. The focus should be placed on the best way to organise the delivery of the Science Programme, and we should not worry about the terminology that will be used for the structure (programmes, committees, steering groups).

The Head of Science (HoS) presented the Science Matrix, which had spurred some misunderstanding in an email exchange with former science committee members who had interpreted the priority score as ranking the importance of EGs. In contrast, the matrix was produced to help visualizing which priorities of the new Science Plan are well covered and to facilitate the discussion on identifying the gaps in expertise. It was pointed out again that early during the Science Reform, the conclusion had been that the EG level was functioning well. Then, the former Science Committee Chairs summarized the activities of the EGs under their (former) Committees.

In the following discussion, it was noted that most Expert Groups are addressing a number of priorities identified in the Science Plan and that the boundaries between the science and advisory groups are getting more blurred (e.g. it is hard to distinguish when a group is advisory and/or science), particularly when the work is driven by client requests.

It was mentioned that many groups are ready to review their work according to the Science Plan and some have already started in anticipation of new developments. Some group clusters already work towards the EAM, integrate disciplines and are linking with universities. On the other hand, some groups are not sure what their role is and they are asking for leadership from SCICOM.

A number of groups have heavy workloads and they have emphasised the importance to have time for bottom-up activities. New demands or adding topics to the ToRs of groups should be carefully planned. It was also mentioned that publishing findings was important and this was one reason for some groups' attractiveness. Future ToRs could also include publication in peer reviewed literature as a deliverable.

An analysis of strengths, weaknesses, opportunities and threats (SWOT) was carried out in breakout groups to assess ICES' strengths and weaknesses in delivering the Science Plan. Threats (internal and from outside) and opportunities (for instance of getting into new fields) were also identified (Annex 3 provides details of the analysis). Several members felt that it was a useful exercise that would help narrow and focus an ambitious plan.

- In general, ICES is seen as a strong organization that has broad and excellent science capacities; provides advice and develop knowledge at the ecosystem level; and has strong interaction with managers. The voluntary system in ICES means we can draw on a large pool of expertise but it precludes a strictly top-down approach to the topics. We are weak on communicating these strengths.
- ICES is well positioned for research into climate change and ecosystems and is leading the science for understanding population and community processes that could be affected by climate change. Huge datasets are available and well organized to tackle key issues. In order to develop capacities on the more global scale, there will be opportunities for joining forces with others, such as PICES.
- ICES is the authority for providing scientific information on living marine resources including life history (exploited and non-exploited species), supported by a coordinated survey programme. There is potential for improvement of survey performance and there are opportunities for transatlantic coordination. Enhanced efforts to develop the EAM will require better integration of surveys.
- ICES holds good data on biodiversity and ecosystem health although we need a better understanding of biodiversity in all facets especially in terms of its functional role and particularly in terms of the genetics of populations and individuals. In fact we do not understand biodiversity in some of the basic questions (e.g. diversity-stability).
- We have quite good imaging and acoustic technology at present to model coastal habitats and we also have coastal population surveying techniques. However, expertise on coastal issues is spread (e.g. mapping, essential fish habitats) and needs more integration.
- Research on top predators (fish, sea birds) is well established in ICES Expert Groups which are attractive for the experts in these fields. There are deficits in the field of large pelagics, calling for possible cooperation with ICCAT.
- Mariculture has a big potential for future activities but is poorly covered by ICES and is isolated. There is a need to join with other disciplines to work towards more integration.
- Little attention is paid in ICES Expert Groups to sensitive ecosystems and rare and data-poor species. There are opportunities by developing dedicated surveys in the context of high sea governance plus there is potential for extending cooperation into the Arctic.

- Although general skills and knowledge are available for addressing the renewable energy issues, ICES skills on specific “renewables” technologies are limited and would need input from outside ICES. There are opportunities in the habitat group cluster and ICES is working on elements (habitats, fish behaviour, fishing, currents etc.) related to “renewables” but not bringing it together.
- ICES is holding huge data sets on effects of “contaminants” on individuals in freshwater, estuaries and coastal waters, however ICES has limited links with coastal and estuarine environments, for instance no involvement in the respective work on the Water Framework Directive.
- Work on non-native species, the introduction of which is enhanced by increased shipping, will gain in importance and will have to respond to major management problems and requirements for advice. In addition climate change is likely to increase opportunities for non-native species.
- Probably the strongest area for ICES expertise in both SCICOM and ACOM is in living resources management and in impacts on ecosystems by fishing activity. There are major opportunities for clearly defining what EAM means with options for implementation.
- Modelling of physical and biological linkages has developed into a strong field in ICES. Multispecies models provide insight into higher trophic levels and interactions with predators. It will matter in the future to integrate knowledge from different sources into providing advice and to move to a broader range of environmental and trophic interactions.
- There is some limited expertise in spatial planning, however it was felt that this is an area in which ICES should recruit additional expertise, since this would greatly support the EC Marine Strategy Directive and various national objectives. It was noted that ICES expertise exists for integrated coastal zone management, habitat mapping, MPAs and fisheries management concepts.
- ICES activities within social and economical sciences have been limited. Risk analysis is probably the area of greatest activity or expertise. ICES has strength in promoting science across disciplines. We can achieve a better outcome if we develop research tools that integrate across biology, economics and social sciences. Caveat is that increasing activity in this area may lead to the perception that involvement with social science may politicize the advisory process.

3 ACOM Strategic Plan

The ACOM Chair presented the draft Advice Strategy (2009–2011), noting that this is still a document in progress.

The setting of advisory services is an evolving one taking into account the need for integrated advice, rapid transition of research to application, quality assurance and transparency, two way communications with advice users and with stakeholders (better understanding and mutual respect), responsiveness on a continuous basis, more long-term advice and involvement of science groups. The overall goal is to “plan and implement a programme to deliver the advice decision makers need in partnership with member countries and client commissions” in a three-year strategic Action Plan structured to address 6 themes with objectives stated under each of them.

The 6 themes are:

- Data: Access to more and better data to fulfil advisory needs
- Human Resources: A scientific community with enhanced capability to contribute to
- Integration: Integrated advice based on advances in scientific knowledge and ecosystem considerations
- User needs: Responsiveness to the evolving needs of users
- Credibility: Advice that has earned and enjoys a high degree of credibility
- Planning: Expectations for advice harmonized with human and fiscal resource constraints.

The Chair thanked the ACOM Chair for his presentation and the following discussion focused on:

Linkages between SCICOM/ACOM

The most important linkage is an intangible one: the Culture (i.e. scientists in ICES are part of both science and advice). Furthermore, the border between science and advice is becoming blurry; with a number of Science EGs (particularly in the field of Environment) being directly involved in the drafting of advice. The linkage between SCICOM and ACOM could be strengthened by producing the science needed to support the development of advice. SCICOM has also an important role in developing 'unsolicited' proactive advice on subject areas of broad societal importance. ACOM and SCICOM can contribute to priority setting of each other and the interaction between the two Chairs is important. In that context, the ACOM Chair mentioned that he would welcome any feedback from SCICOM on the draft Advice Strategy before February.

Advice is mostly confined to fisheries issues

Work on fisheries advice is progressing towards ecosystem considerations. Advice is primarily driven by the need to manage fisheries, with indirect impacts on habitat, top predators. But there are new areas, going beyond fisheries that require a new category of advice such as environmental indicators. This will provide opportunities for ACOM and SCICOM to work together on better integration. Environmental institutes should take into account this work in their annual work plans. It could increase the willingness to send scientists to attend the meetings.

Mutual understanding of ToRs

When ToRs are given to a Science EG, there are probably examples that the EGs have made incorrect assumptions in the interpretation of the ToR. As appropriate, there should be more interactive communication between ACOM and Science EGs during the drafting of the ToRs as well as the actual advice. In particular, this needs improvement for the environmental requests for advice.

Experience from the first year of work of the new ACOM

There has been a complete change in the structure. The first year was difficult with many unexpected challenges emerging. On the other hand, ACOM delivered the advice and the system did not break down or fail. Growing success came with web conferences and the transition has been successful. ACOM did not do particularly well on fostering the EAM in 2008, but is poised to do better in the future. When looking at the list of advice given, special requests are increasing year after year and are becoming increasingly ecosystem-oriented.

4 Role of SCICOM

Members engaged in a discussion on the role and responsibilities of SCICOM. It was proposed that the committee should perform strategic and tactical functions.

From a strategic perspective, SCICOM has to position the Expert Groups to deliver on the 16 priority areas of the Science Plan; identify opportunities to translate research into advice; develop authoritative scientific advice on major issues such as climate change; develop partnerships and alliances to build scientific capacity and outreach to the global marine science community.

From a tactical point of view, SCICOM must first oversee the Expert Groups, which includes encouraging them to address priorities; organizing their activities efficiently, creating-merging-dissolving groups and ensuring adequate terms of reference. Tactical functions also include planning the ASC and symposia; overseeing publications, training and awards programs.

The discussion then focused mainly on the 'management' of the Expert Groups. Key points that were raised include:

- Very important that SCICOM oversees the Expert Groups, but there is a need for some structure.
- Important to maintain productivity of Expert Groups as changes are implemented.
- Better not to rush the permanent structure of science. Need to consider short-term and long-term (e.g. transition).
- Communication between SCICOM and Expert Group is essential.
- Important to nurture scientific disciplines.
- Need to have mechanisms to take into accounts change of priorities.
- Cooperation between SCICOM and ACOM is important.

5 Structure of SCICOM

Two breakout sessions were held to develop and evaluate options to 'manage' the Expert Groups. The first session of breakouts focused on how to manage the short-term (e.g. transitional structure and 2009 ASC) and the long-term (development of 'permanent' structures).

For the short-term, it was generally agreed that there was an immediate need to set up a process that would allow communication between SCICOM and the Expert Groups. Although the Expert Groups have their ToRs approved and work and meetings are planned for 2009, they do not have a 'home' to report to. SCICOM needs to set up a mechanism (at least transitional) that will allow for reporting and guidance. It was also stressed that SCICOM could not oversee directly the work of 80 Expert Groups and that some kind of sub-structure would be needed. SCICOM discussed how Expert Groups could be clustered and views ranged from a 'loose' approach (EGs decide) to a 'structured' approach where SCICOM would allocate the existing EGs to the Science Plan themes. The committee also discussed the need to review the ToRs of the Expert Group in order to identify potential synergies and to facilitate both clustering and efforts to address the Science Plan. SCICOM discussed how to synthesize Expert Group outputs for 2009 and concluded that the two blocks of time still open at the 2009 ASC (Monday morning and Wednesday afternoon) could be used to organize reporting of Expert Groups. It was generally agreed that a number

of issues (Plan for 2009 ASC and Symposia; Publications; Training; and Awards) were under control and did not need immediate attention.

For the long-term, SCICOM members raised a number of issues that will need to be addressed soon:

- For instance, what should be the process for the creation of an Expert Group? Could it be based on project proposals linked to the Science Plan that would be limited in time (e.g. 3 years)?
- What mechanisms should be put in place to evaluate the work of EGs? Who should be involved in the review and how frequent should it be done?
- How to ensure that the work of the EGs is relevant to advisory needs?
- How to measure progress with the implementations of the Science Plan?

Action: These questions will be addressed at the SCICOM meeting in May 2009.

The second session specifically focused on the development of options to 'manage' the work of the Expert Groups. Coming out of the breakouts, two scenarios were proposed. One was based on a less structured model involving strong involvement of all SCICOM members; while the other promoted a more structured approach with a committee structure managed by SCICOM.

Under Scenario 1, the responsibility of the EGs would be shared among the SCICOM members. Blocks of 3 SCICOM members (3SC) would be responsible for about 12 EGs and they would act as a contact point for these EG chairs. The 3SC would coordinate the science activities of their EGs; facilitate planning and review of their work at ASC; ensure that their work is consistent with and coordinated across the Science program and monitor progress; and provide them with mentoring and leadership.

Under Scenario 2, a number of steering committees would oversee a number of EGs. The basis for the steering committees could be the 3 science themes or other features (such as geography or program) that would ensure the integration and encourage cross-disciplinary research. Other steering groups could be set up to deal with ASC, publication, training and data. The steering committees would coordinate the activities of the EGs as under Scenario 1. They would also ensure the delivery of relevant sections of the Science Plan, ensure interaction with advice and stimulate cooperation and coordination between disciplines.

SCICOM discussed at length the two proposed approaches. A number of important points were considered such as the flexibility of the structure; leadership and accountability; time and commitment of SCICOM members; size and composition of EG clusters; linkage of the structure to the Science Plan; attractiveness of EG for scientists; integration and multi-disciplinary research; involvement of EG chairs in the governance. SCICOM agreed that it has to be accountable for the work of the EGs and that SCICOM member themselves have to be directly involved in the 'management' of EGs.

Decision: SCICOM agreed to develop a steering committee structure to provide scientific leadership and coordinate the work of the Science Expert Groups. A SCICOM Working Group on Science Leadership (SWGSL) was established. The ToRs are attached in Annex 4.

Membership:

- Niall O Maoldéidigh - Chair (Ireland)
- Yvonne Walther (Sweden)

- Mark Dickey-Collas (The Netherlands)
- Einar Eeg Nielsen (Denmark)
- Pierre Petitgas (France)
- Oleg Lapshin (Russia)
- Van Holliday (USA)
- Adi Kellermann (Secretariat)

SCICOM then discussed the impact of the restructuring between the new SCICOM and the expert groups. This will result in substantial additional workload on the Science Programme in the ICES Secretariat:

- Expert Group Chairs will have no immediate contact on the (former) science committee level because these have ceased to exist. This will likely result in more communication with the secretariat.
- New structures are being established pulling together Expert Groups and developing ToRs, etc. Meeting schedules, reporting schemes, etc., have to be developed and communicated which means substantial secretarial work, new Sharepoint sites, DLs etc.
- There will be additional meetings of the new SCICOM devoted to the implementation of the reform, adding on the workload.
- The 83 Science Expert Groups of ICES rely heavily on the administrative support provided by the ICES Science Programme. Expert Groups need support before, during and after the meetings, including report formatting, maintenance of membership lists and SharePoint sites. The Science Programme has lost an Assisting Secretary, who was promoted to become the Personal Assistant of the General Secretary in 2008. The implementation of the new Science structure will increase the workload and it is critical that this Science Programme Assisting Secretary be replaced.

Decision: Given the increased workload resulting from the implementation of the new Science Plan and structure, SCICOM recommends to the Bureau to approve a post for an assisting secretary (C4) in the Science Programme at the ICES Secretariat for a three-year period and to fund that post with the SIF. (See Annex 5).

6 Scientific Priorities

SCICOM initiated a discussion on how priorities should be set in relation to delivering the Science Plan. Although the 16 priority areas identified in the Science Plan clearly reflect the priority of ICES member countries, the Science Plan is silent on where to put the emphasis. On one hand, some members of SCICOM felt that prioritization of the 16 priority areas would send the signal that all priorities are not equally important. On the other hand, some felt that the old system was criticized for the lack of strategic planning and SCICOM should provide leadership in identifying areas where special emphasis should be given. It was noted that putting emphasis on certain areas does not mean that ICES will neglect the other ones. Furthermore, emphasis could change with time.

Another important point to consider: the Science Plan was built with the input of the member countries, which have different views – some look at the Sea as a resource while others look at it as an ecosystem. SCICOM needs to do a horizontal analysis to identify areas of common interest and individual needs.

During a round table, it was mentioned that emphasis could be put on the impact of climate change; biodiversity and the health of ecosystem; vulnerable ecosystems; invasive species; survey integration; and marine special planning. The Chair stressed the importance of identifying specific areas of emphasis and reminded SCICOM that the scientific community could play an influential role by providing authoritative advice on major issues. We need to decide on which one to focus.

Action: This will be a key agenda item at the SCICOM meeting in May 2009.

7 Scientific Cooperation

ICES has well established partnerships with other intergovernmental organizations (IGOs) and science networks and cooperates with others on marine research objectives. Some partnerships are specified by MoUs or LoAs, while in many cases cooperation is based on a more practical basis. In order to deliver the priorities in the Science Plan, these partnerships and collaboration arrangements can be exploited according to the expertise needed. Where can synergies be expected and which areas require input from third parties? Collaboration could be with other IGOs, research projects and with academic communities, which are classically underrepresented in ICES.

Three breakout groups were formed to tackle these three areas.

Breakout groups 1 and 2 reviewed the list of cooperating intergovernmental organisations (IGOs) and research projects and explored the potential of cooperation in light of the Science Plan vs. the results of the SWOT weaknesses (where do we need outside expertise?), threats and opportunities (where is the potential for synergies, what topics are global/more than regional North Atlantic?).

SCICOM could do a more structured mapping of the IGOs. Special attention should be on funding organisations and where ICES can play a leading role in the coordination of funding, e.g. to synchronize for transatlantic activities.

Several research networks received attention during the discussion. Some of the EU funded Networks of Excellence have come to an end already or will soon. The European Network of Excellence for Ocean Ecosystems Analysis (EUR-OCEANS) has initiated a process of seeking closer scientific cooperation before the ASC in 2008. Cooperation should be based on mutual benefits for the science sides. ICES would gain from the involvement of the academics, of the "blue water" oceanography and could join forces with the training and education programme of EUR-OCEANS. They in turn would have access to the ICES structure and network, including the ASC and the linkages to the advisory services of ICES. SCICOM felt that the science in EUR-OCEANS is very close to the core science of ICES and that it could be adopted. The General Secretary pointed out that this is a valuable view in light of an upcoming decision of where to accommodate a EUR-OCEANS secretariat on the long term.

Baltic Organisations Network for Funding Science (BONUS) was mentioned as an obvious example where both sides could benefit and where there is great potential for synergies. BONUS+ has launched several projects which are of direct relevance for ICES and where ICES may embark and give them a platform for creating synergies with ICES Expert Groups. Cooperation with the Baltic Marine Environment Protection Commission (HELCOM) would add opportunities to several issues in the Science Plan.

Breakout group 3 dealt with the academic community and explored ways and means how to enhance their participation in ICES. First, it was stated that all priorities in the Science Plan will need networking and also involvement of the academic community. Specifically, there are some research activities outside ICES with strong involvement of universities which could welcome ICES initiatives for continuation, such as GLOBEC where ICES had taken a role from the beginning. Climate change is a continuing issue and in addition to seeking cooperation with the Intergovernmental Oceanographic Commission (IOC) we need to involve the academic expertise in modelling which is indispensable for developing forecasting capabilities.

Other topics mentioned were eco-toxicology and social and economical sciences.

Suggestions how to better attract the academics included:

- In general, demonstrate that ICES is more than just governments and fisheries;
- Set up theme sessions selecting topics with potential for academics, and seek appropriate co-sponsorship for those, invite university teachers for keynotes
- Organize workshop in a similar fashion;
- Some EGs benefit from a strong academic participation (e.g. the Working Group on Seabird Ecology (WGSE)), which energises the process and stimulates the science questions. It was suggested to strengthen these groups and transfer the model to other topics, e.g. climate change and biodiversity;
- The Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM) was mentioned as a good example of an EG with good academic participation, which has even spawned the formation of a consortium to submit an FP7 proposal. The ICES network had been beneficial for the work of the consortium, however, more top-down guidance was needed;
- Highlight more the availability of long term data sets available in ICES for such groups involved in, e.g. biodiversity;
- The Intergovernmental Panel on Climate Change (IPCC) community may benefit from ICES by its ownership of the holistic approach to the ocean, from waves to food;
- Disseminate the Science Plan to the academic community;
- Suggestion to cooperate with the Society of Environmental Toxicology and Chemistry (SETAC) to attract scientist to the ASC. This organization is operating worldwide attracting tens of thousands of academics.

Decision: SCICOM established a SCICOM Study Group on Science Cooperation (SSGSC) (Chair B. Santos) that will set priorities for strategic cooperation with other IGOs, marine research networks and research projects. Membership Markku Viitasalo (Finland), Ólafur S. Astthórsson (Iceland), Carlos Vale (Portugal), Report date: by the end of 2009. (See Annex 6).

European Marine and Maritime Partnership

The HoS presented an ICES activity that had started in April 2008 but which goes back to the EUR-OCEANS Conferences in 2004, bringing marine and maritime research networks in Europe together. In its strategic objectives (2005-2009) the European Commission recognised that there is a need for an all-embracing maritime policy aimed at developing a thriving maritime economy, in an environmentally sustainable manner. Such a policy should be supported by excellence in marine scientific research, technology and innovation. Human activities are exerting environmental

pressures threatening safety of coastal settlements, ecosystems and biodiversity and preventing sustainable maritime activities. Science and technology provide one of the keys for reconciling promotion of sustainable economic growth in maritime activities with environmental conservation. Consequently, the large number of ongoing research activities needed coordination and cross-sectoral integration in order to address system complexity and interactions, and to introduce new forms of governance in research through consensus and continuous dialogue.

Following a first meeting in April 2008, the European research networks dealing with the marine and maritime research sectors transport and maritime industries, tourism, coastal development, security, living resources, fisheries and aquaculture (Aberdeen Plus Partnership, later renamed "European Marine and Maritime Partnership") have decided to join forces and commission a subset ("Task Force") with a mandate to respond to a call released by the EC. ICES was appointed Chair of the Task Force which formed a consortium in order to draft a proposal for developing a forum to provide the means to support the future EU Maritime Policy. The Consortium proposes a two-year work programme comprising six work packages and five cross-cutting panels in order to develop a Forum which will be open to all interested research networks. The proposal was submitted in early January and details will be presented to the wider European Marine and Maritime Partnership later this year.

SCICOM felt that this will have big payoffs to the ICES marine community. It potentially opens up a new way of doing business and offers a strategic approach to setting research priorities. SCICOM is also expected to play a role in the project if it gets funded because the proposal includes a number of workshops which need to be populated and science input provided.

The Chair conveyed congratulations for all the hard work in the Secretariat.

8 Communication and Publications

The Chair of the Transition Group on ICES Publications (TGIP) gave an introduction to the development of the former Publications Committee from a small and exclusive group to a full committee with national, senior membership with strong background on publications, publishing and editorial matters.

Recommendation on the Development of a Communications Strategy

During the 2008 ASC, PUB presented a proposal for the expansion of the current publications facilities in the ICES Secretariat to encompass the broader issue of communications. In response, TGIP was asked to investigate the development of a Communications Strategy, which could involve the development of both a Communications Committee and a Communications Branch in the ICES Secretariat. Although there is a draft document, it has not been vetted by the members of TGIP. The Chair briefed SCICOM on the current status of the proposal and its contents.

The goal of a coherent communications programme would be to:

- Increase the profile and awareness of issues dealing with marine science;
- Build a positive and professional picture of ICES;
- Increase the impact of ICES advice and science.

SCICOM agreed with the need to move forward with the development of the Strategy, including financial requirements. Permanent increase in funding, such as an ad-

ditional position in the Secretariat, would have to be submitted to Council for approval.

Decision: SCICOM asked the Chair of TGIP to complete the development of the Communication Strategy by October 2009.

Recommendation from OCC to produce status reports free of cost

All publications are available on the ICES website as pdf files. The ICES publications are also distributed free of charge to a large number of libraries, so there is a fairly wide distribution. Currently ICES spends resources on publishing CRRs and TIMESs. Selling those generate some income that contribute refinancing this activity.

The TGIP Chair recommended to SCICOM that the CRR and TIMES hardcopies are not be given away free of charge.

Decision: SCICOM agreed not to offer ICES publications (hardcopies) free of charge.

Series editor honoraria

The current Series honoraria are as follows:

- • CRR Emory D. Anderson €1345 (ca. £1000)
- • TIMES Paul D. Keizer €1345 (ca. £1000)
- • Diseases Leaflets Stephen W. Feist €675 (ca. £500)
- • Plankton Leaflets Steve Hay €675 (ca. £500)

The normal workload for the CRR and TIMES editors to date had involved the publication and 4 to 6 documents a year, normally 20-50 pages in length. Recently, there has been a considerable increase in the length and numbers of CRRs, with many documents exceeding 50 printed pages in length and the expected number of CRRs for 2009 is expected to increase substantially (15 new CRRs were approved for publication between autumn 2008 and 2009, with a number to be fast tracked in 2008). This workload far exceeds that of the other series editors (in contrast 5 TIMES were approved for publication in 2008–2009). The editors, especially the CRR editor add significant value to the series.

Because it is impossible to predict the amount of time required in a given year, TGIP proposed that the current honorarium covers the first 100 hours of work of the CRR editor, and that he be paid £10 for each additional hour, with a recommendation that this be made retroactive for 2008. Alternatives such as bringing in additional assistance from member institutes were discussed and discarded. It was also mentioned that a ceiling could be included in the revised payment structure.

Decision: SCICOM asked the TGIP Chair to work with the General Secretary and HoS to elaborate a model as an extension of the current honorarium of the CRR Editor, Emory Anderson.

ICES Website

SCICOM discussed the need to improve the website and recognized that it is a high priority. The Chair of TGIP welcomed comments and input from the members of SCICOM with a view to improving the website.

Decision: SCICOM asked the Chair of TGIP to include recommendations to improve the website (including costing) in the Communication Strategy.

9 Training

The Training Committee was established by ConC in 2008. SCICOM agreed to ask the current members to continue as members in 2009 to maintain corporate memory. A new SCICOM member was added to the group to bring in new blood:

- Ted Potter
- Mark Dickey-Collas
- Gerd Kraus (new member)
- Martin Pastoors

Action: The Secretariat, on behalf of the Training Committee, will write a letter to SCICOM members soliciting their proposals, based on strong fields of expertise in their member countries.

HoS presented Søren Anker Pedersen, who will act as the Secretary/Coordinator for the ICES Training Committee.

10 ASC, Symposia and Awards

10.1 ASC

Decision on format of ASC, Berlin and review of two theme sessions on the reserve list for the ASC 2009

ConC, at its September 2008 meeting had made a selection for a programme consisting of 18 themes, but had left two timeslots open, i.e. the Monday morning and Wednesday afternoon. SCICOM was asked to consider inclusion of two additional theme sessions, which had been placed on the reserve list for the ASC 2009, bearing in mind that this would be at the expense of the time allocated to EG reporting/SCICOM business meetings:

Death in the sea - Mortality in the zooplankton and early-life stages of marine fish (estimates, processes and outcomes).	A. Gallego, E. D. Houde, E. W. North
Monitoring biological effects and contaminants in the marine environment: where do we go from here?	John Thain (United Kingdom), Catherine Couillard (Canada), Dick Vethaak (The Netherlands).

It was also brought to the attention of the committee that "Death in the Sea" was timely in 2009.

Decision: SCICOM agreed to include the theme session "Death in the sea - Mortality in the zooplankton and early-life stages of marine fish (estimates, processes and outcomes)" in the programme for the 2009 ASC. The theme session would link to the keynote talk to be given by Elizabeth North, and furthermore the results of the theme session would feed into important milestones for the next two years set by WGBPI and related workshops the following year.

Decision: SCICOM decided to postpone the theme session "Monitoring biological effects and contaminants in the marine environment: where do we go from here?" for new consideration by SCICOM for the ASC 2010. WGBEC had not expressed a strong need to have this theme session in 2009.

Registration fees for the ASC

HoS presented a proposal prepared by the Secretariat for a simplified system of registration with effect as per the ASC 2009. This year the local hosts have foreseen an increase of 15 Euros (total then 145 Euro) which would buy participants a public transport ticket for Berlin during the week of the ASC.

TYPE OF FEE	AMOUNT
Normal early registration fee	Euro 130
Reduced fee for members of the Science Committee and Advisory Committee, Expert Group Chairs under SCICOM and ACOM, Delegates to ICES, and students.	Euro 65
Late fee after 31 August	Euro 180
Accompanying persons	Euro 30
The President, Chair of the Science Committee and Chair of the Advisory Committee, Journal Editors, Invited Speakers, Theme Session Conveners and Outgoing Committee Chairs	Free

Decision: SCICOM agreed to simplify the registration fee system for the ASC with immediate effect.

Support for early career scientists, young fishermen, and young media professionals

Support for young scientists has the objective to bring them into an international conference to gain experience, network and expose their work to the scientific community and to provide guidance by experienced colleagues. This does not apply to the support for young fishermen. Funding for them is to introduce them to the science world and to provide background for what they sometimes perceive as management decisions. SCICOM discussed whether support to fishermen should be limited only to the young ones. It was agreed that age should not be a factor. Similarly, age limitation should not be a criterion for media persons. The goal with media is to increase their awareness of science issues and the societal relevance of what ICES is doing. An alternative to funding media attendance could be to give a prize for the best news article or broadcast as an incentive for good media people to attend and report.

Decision: The majority of the allocated funds of 100K DKK will be used to support attendance of young scientists to the ASC. The rest will be used to support attendance of fishermen (no age limitation) and to further positive PR about the ASC, perhaps through a media award. The Secretariat, in cooperation with TGIP, will finalize the details.

Development of programme for the 2010 ASC (Nantes, France)

A more final arrangement of the programme will be reviewed and approved at the ASC in Berlin. A strong linkage with the Science Plan will be an important selection criterion for theme session proposals.

Coordination of resolutions under Science and Advisory Programmes

It was suggested to establish a subgroup with joint ACOM/SCICOM membership (e.g. three members from each committee), tasked to select theme sessions, sponsorship for symposia, to have more exchange between the two sides of ICES. The planning of meetings would be virtual net meetings.

There was consensus in SCICOM to move forward with this approach and establish a subgroup with joint ACOM/SCICOM membership

Action: The Chair of SCICOM will discuss this further with the Chair of ACOM.

10.2 Symposia

Request for International Otolith Symposium

The HoS introduced a request for co-sponsorship 4th International Otolith Symposium, to be held 24–28 August 2009 in Monterey, California. There is an issue with the Symposium Organizing Committee, which is purely staffed with US scientists while ICES prefers to see a real international coverage. The reason for the Symposium Organizing Committee composition had been explained by the organizer. SCICOM noted that this leaves no opportunities for ICES to make adequate input to the science, especially on that short notice.

Decision: SCICOM rejected the request for ICES co-sponsorship of the International Otolith Symposium and asked the HoS to follow up with the organizer.

Cooperation with PICES

As part of our regular cooperation, PICES has made invitations for co-conveners of “science symposia” (held by their Science Board corresponding to SCICOM) and theme sessions, bringing in more participation from Europe and the North American East coast.

Mark Dickey-Collas volunteered to be a co-convener on S3.

Action (all members): Please get back to the secretariat with your input within the next few weeks. The Secretariat has received more nominations after the meeting.

10.3 Awards

SCICOM discussed the membership of the Awards Committee and the need to appoint new members.

Decision: SCICOM decided that the current membership on the Awards Committee should remain unchanged for 2009 and to nominate new SCICOM representatives by 2010. It was also agreed that the Chair of SCICOM be an ex officio member.

11 Approval of ToR for EGs

SCICOM reviewed eleven ToRs for EGs that were not submitted in time for approval by ConC at the 2008 ASC meeting. A number of groups met too late last year, while other groups had formed only late in the year due to some discussion processes needed.

The Joint PICES/ICES Working Group on Forecasting Climate Change Impacts on Fish and Shellfish [WGFCCIFS] was approved in October, but major changes are suggested here.

A draft recommendation for a central group for ichthyoplankton surveys was tabled. The final product of this group will be the cross fertilisation of ideas and standards for ichthyoplankton surveys in the ICES area aiming for more integration and better coordination to generate more synergies. ACOM commented that they would welcome this as a basis of preparing better advice. It was agreed that such a group

would be useful and they would be asked to write a formal proposal to be presented at the ASC 2009.

Decision: SCICOM approved the following resolutions (See Annex 7):

- Study Group on Salmon Age Determination [SGSAD]
- Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES areas VIII and IX [WGACEGG]
- Joint PICES/ICES Working Group on Forecasting Climate Change Impacts on Fish and Shellfish [WGFCCIFS]
- Study Group on Risk Assessment and Management Advice [SGRAMA]
- Working Group on Operational oceanographic products for fisheries and environment [WGOOFE]
- Working Group on Methods on Fish Stock Assessments [WGMG]
- Working Group on Multispecies Assessment Methods [WGSAM]
- Working Group on Fishery Systems [WGFS]
- Working Group on Holistic Assessments of Regional Marine Ecosystems [WGHAME]
- Study Group on the evaluation of assessment and management strategies of the western herring stocks [SGHERWAY]
- Planning Group on Redfish Surveys [PGRS]

12 Other Business

Action: The Chair of SCICOM will send a letter the Chairs of the Expert Groups to inform them of the outcomes of the first meeting of SCICOM.

Key agenda items to be discussed at the next meeting in May:

- Agreement on the new committees structure
- Implementing the new structure – next steps
- Identifying specific areas of emphasis
- Strategic Research Initiatives under ICES
- ASC 2009 – meetings of SCICOM, Expert Groups and Committees

13 Next Meeting

The next meeting of SCICOM will be held at the premises of the European Environment Agency (EEA) in Copenhagen from 18–20 May 2009.

Annex 1: SCICOM list of participants

NAME	ADDRESS	PHONE/FAX/EMAIL
Chair:		
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Ex officio:

Mike Sissenwine, Chair of the Advisory Committee (ACOM)	Woods Hole Oceanographic Institution - PO Box 2228 Teaticket MA 07536 United States	Phone +1 508 566 3144 Email m.sissenwine@ices.dk
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National members and alternates

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Annex 2: SCICOM Draft Agenda

Chair: Serge Labonté, Canada
 ICES Headquarters, Copenhagen, Atlantic Room
 6 January, 10:00 till 8 January 2009, 18:00

Tuesday, 6 January 2009

- 1) Opening
- 2) Adoption of agenda and timetable (Doc 1 and 2)
- 3) Tour de table with introduction of all members (Doc 3)
- 4) Review of the Science Plan (Docs 4 and 5)
- 5) Mapping the Science Plan to the expertise of ICES Expert Groups (Doc 6)
 - 5.1) Presentation of Science Matrix (Doc 7)
 - 5.2) Chairs of former SCICOMs explaining the rating of individual groups
 - 5.3) SWOT analysis (breakout groups) (Doc 7 and 8)

Wednesday, 7 January 2009

- 6) Summary of Day One
- 7) ACOM Strategic Plan and key priorities (Doc 9 and 10)
- 8) Priorities for the ICES Science Programme (break-out groups)
 - 8.1) Gaps in knowledge, challenges and ICES niche
 - 8.2) Integration of disciplines
- 9) Collaboration and partnerships
 - 9.1) Strategic alliances
 - 9.2) How to engage new science communities with ICES: academics and research networks
- 10) Strategic discussion on where to focus in Science Plan

Thursday, 8 January 2009

- 11) Options for new structures and required timelines (breakout groups)
- 12) Housekeeping and follow-up actions agreed at the Consultative Committee ASC 2008 meeting
 - 12.1) General arrangements for Annual Science Conference (*information and decision*) (Doc 11 and 12)
 - 12.1.1) Registration fees for the ASC (*decision*) (Doc 13)
 - 12.1.2) Support for early career scientists, young fishermen, young media professionals (*decision*) (Doc 14)
 - 12.1.3) Development of programme for the 2010 ASC (Nantes, France) (Doc 15)
 - 12.2) Coordination of resolutions under Science and Advisory Programmes
 - 12.3) ICES Recognition Programme: representation of SCICOM in the Awards Committee (*appointment of SCICOM representatives*) (Doc 16)
 - 12.4) Publication matters: approval of CRR and TIMES publications, sales policy and website for SCICOM Expert Groups and subordinate bodies (*for information*) (Doc 17)
 - 12.5) Training in ICES
 - 12.6) Review the status of ICES Symposia and new requests for co-sponsorship (Docs 18, 19, 20 and 21 a–c)
 - 12.7) Review of ICES activities: Aberdeen Plus Partnership

- 13) SCICOM dates (mid-term meeting and ASC 2009) and draft resolutions for approval by SCICOM (Docs 22 and Doc 23)
 - 13.1) Review and approval of ToRs for 2009:
 - Study Group on Salmon Age Determination [SGSAD]
 - Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES areas VIII and IX [WGACEGG]
 - Joint PICES/ICES Working Group on Forecasting Climate Change Impacts on Fish and Shellfish [WGFCCIFS]
 - Study Group on Risk Assessment and Management Advice [SGRAMA]
 - Working Group on Operational oceanographic products for fisheries and environment [WGOOFE]
 - Working Group on Methods on Fish Stock Assessments [WGMG]
 - Working Group on Multispecies Assessment Methods [WGSAM]
 - Working Group on Fishery Systems [WGFS]
 - Working Group on Holistic Assessments of Regional Marine Ecosystems [WGHAME]
 - Study Group on the evaluation of assessment and management strategies of the western herring stocks [SGHERWAY]
 - Planning Group on Redfish Surveys [PGRS]
- 14) Any other business
- 15) Closing

Annex 3: SWOT Table

THEMATIC AREA/ RESEARCH TOPIC	Strengths	Weaknesses	OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ICES OVERALL 	<ul style="list-style-type: none"> Provision of advice or knowledge at ecosystem level (sustainability) – strong academic background / interaction with managers. SCICOM can act as a facilitator to provide opportunities for research activities in topic areas. Breadth of science capacity – from physics to whales 	<ul style="list-style-type: none"> Overall, we are not good at communicating We have a mixture of group reporting to ACOM and SCICOM, though it is not clear why. ICES cannot tell scientists to work in a specific area. 	<ul style="list-style-type: none"> New science to be brought into advisory process, but how? 	
<p><i>UNDERSTANDING ECOSYSTEM FUNCTIONING (Group 1)</i></p>				
Climate change and impacts	<ul style="list-style-type: none"> Very broad range of excellent scientists. (appropriate, e.g. temporal and spatial extent) Databases are available and well organised either within ices itself or participating EG scientists from member countries. We are leaders in understanding some of the population and community processes that could be affected by climate change (ie. we know how to bring climate change into our work and play it out (model projection and scenario testing). We have already drafted TORs related to climate change impacts. 	<ul style="list-style-type: none"> Questions are often poorly defined in terms of the scientific products that should come out of the eggs. We are not good on the climate side, we do not necessarily have the expertise on determining the climate changes and forecasts (sea ice, sea level rise, freshwater input). 	<ul style="list-style-type: none"> Networking with other organisations (e.g. PICES) to tap into their expertise. 	

THEMATIC AREA/ RESEARCH TOPIC	Strengts	Weaknesses	OPPORTUNITIES	THREATS
Fish life and EAM	<ul style="list-style-type: none"> • Good information on exploited species and also some less exploited species with surveys but there are some sampling issues for some species. • We have excellent people on fish life history and assessment of vulnerability to human activities 	<ul style="list-style-type: none"> • There are not necessarily good models or techniques that can be used for predictions 	<ul style="list-style-type: none"> • We have the data and people that can allow us to bring in non-traditional species into the assessment of ecosystem impacts 	<ul style="list-style-type: none"> • Potential reductions in ship time could reduce the usefulness of surveys especially for rarer species which are not well caught by the surveys
Biodiversity and ecosystem health	<ul style="list-style-type: none"> • Again good data though sometimes difficult to interpret in biodiversity sense. 	<ul style="list-style-type: none"> • There is a temporal trend in biodiversity resolution in almost all databases. • ICES does not necessarily have the participation of key scientists in the field many of whom are in the universities. • We do not understand biodiversity in all facets especially in terms of its functional role and particularly in terms of the genetics of populations and individuals, in fact we do not understand biodiversity in some of the basic questions (e.g. diversity-stability). 	<ul style="list-style-type: none"> • COML people are looking for a home and ICES may be able to bring these people into the fold. We are going to need to understand exactly what turns the crank of the COML people in order to do this and will have to actively seek their participation. We also may not be sufficiently attractive to these people (we are seen as fish stock assessors) to bring them in. • We have a great opportunity to get into biodiversity issues and seem quite relevant to society and member countries. 	<ul style="list-style-type: none"> • We need to define quite well how we are going to get into it and brand it as such or else we are going to get so spread out that we will be to diverse to make any contribution.
Coastal zone habitat and exploited species	<ul style="list-style-type: none"> • We have quite good imaging and acoustic technology at present to model many of these habitats and also coastal population surveying techniques. 	<ul style="list-style-type: none"> • We are not good at linking the importance of particular habitats to particular species in how coastal zone perturbations will affect the population dynamics. 		

THEMATIC AREA/ RESEARCH TOPIC	Strengths	Weaknesses	OPPORTUNITIES	THREATS
	<ul style="list-style-type: none"> We have most of the expertise in ICES already. 	<ul style="list-style-type: none"> Expertise is quite widely spread out between groups (mapping, essential fish habitat). 		
Top predators in marine ecosystems	<ul style="list-style-type: none"> We are quite good on attracting many of the experts on the mammals and birds. 	<ul style="list-style-type: none"> We do not know the impacts of including some of these species in the dynamics of the systems. They are most notable by their absence. We are not very good on large pelagics and it is probably difficult to get these people to come to ICES (perhaps a session on large pelagics at the ASC) 		
Sensitive ecosystems (deep-sea coral, seamounts, Arctic), rare and data-poor species		<ul style="list-style-type: none"> They are data poor so we do not know what is out there. 	<ul style="list-style-type: none"> We could try to develop dedicated surveys on these species There is a lot of work going on by national countries exploring and sampling in the Arctic there is not really a common place for this work 	
Integration of surveys in support of EAM	<ul style="list-style-type: none"> We have many surveys already, we have done a lot of thought on database structure Available quickly and easily. 	<ul style="list-style-type: none"> There are sometimes differences in the methods that can hinder comparison. Good data descriptions are needed, metadata. It needs to be made 		

THEMATIC AREA/ RESEARCH TOPIC	Strengths	Weaknesses	OPPORTUNITIES	THREATS
<i>UNDERSTANDING INTERACTIONS OF HUMAN ACTIVITIES WITH ECOSYSTEMS (Group 2)</i>	<ul style="list-style-type: none"> ICES has huge breadth of skills and knowledge (but this is not currently structured in line with the Sci Plan) 	<ul style="list-style-type: none"> All areas in Topic 2 except “fishing impacts” poorly covered (Low ‘scores’ on EG evaluation matrix) – possibly reflecting limited previous work on integrating ecosystem and fishery work 	<ul style="list-style-type: none"> Major opportunity to clearly defining what EAM means and provide options for implementation Potential for developing strong work on “impacts of fishing” because of major interest on EAM 	<ul style="list-style-type: none"> May be too many themes to be addressed in detail; may need to decide where greatest priorities exist; ICES is failing to educate its customers to ask the ‘right’ questions (need to ensure customer requirements are aligned with our science objectives – or v-v); ICES advice is still too complex for managers; need to ensure we communicate our science appropriately Is there a ‘theme’ which disentangles climate and fishing effects?? Failure to develop skills in major areas in Topic 2 (e.g. “renewables”) could result in major customers going elsewhere
Impacts of fishing on marine ecosystems	<ul style="list-style-type: none"> Impacts of fishing” is best covered in Topic 2 – but good potential for development (NB previous committee was very active) 	<ul style="list-style-type: none"> Work on “fishing technology” is too isolated – needs more integration 	<ul style="list-style-type: none"> This area could provide a focus for developing work on EAM 	
Carrying capacity, ecosystem interactions and mariculture	<ul style="list-style-type: none"> ICES Members have skills/knowledge to support work on “mariculture” 	<ul style="list-style-type: none"> “Mariculture” has big potential but poorly covered by ICES and is isolated – need to consider models for potential (and impacts) 	<ul style="list-style-type: none"> “Mariculture” is major growing area – with potential shift of skills from fishing plus socio economics issues; needs sound basis 	<ul style="list-style-type: none"> Risk of mariculture and wild fisheries interests in ICES providing conflicting advice;

THEMATIC AREA/ RESEARCH TOPIC	Strengths	Weaknesses	OPPORTUNITIES	THREATS
Renewable energy resources, marine habitat and biota	ICES Members have skills/knowledge to support work on “renewables”.	<p>Limited ICES skill on specific “renewables” technologies – this would need input from outside ICES</p> <ul style="list-style-type: none"> ICES is working on elements (habitats, fish behaviour, fishing, currents etc) related to “renewables” but not bringing it together. 	“Renewables” is a great opportunity for coordination of current activities and skills.	‘Renewables’ in freshwater presents particular threats (e.g. hydropower); position in theme unclear.
Contaminants, eutrophication, and habitat changes in the coastal zone	<ul style="list-style-type: none"> ICES members have huge data sets on effects of “contaminants” on individuals in fw/estuaries and coastal waters 	<ul style="list-style-type: none"> ICES has limited links with coastal/estuarine/fw environment – no links to Water Framework Directive (EU Marine Strategy also has more integrated philosophy) “Contaminant” work has concentrated on impacts on individuals – the problem is what effect do they have at population and community level (including sub-lethal effects) Current advisory process has a lack of links with knowledge of ecosystem/biodiversity; not applying a clear EAFM Little current work on coastal habitats to support work on human impacts 	<ul style="list-style-type: none"> Need to ensure continuity of work from marine through coastal/estuary into freshwater (and river basins as in WFD); obvious links to impacts in coastal waters; opportunities to link with universities 	<ul style="list-style-type: none"> Differences in national legislation makes integration of different concepts for multiple uses of coastal zones difficult
Invasive species, their impacts and climate chang	<ul style="list-style-type: none"> ICES Members have skills/knowledge to support work on “introductions and invasives” (NB much work in freshwater) 	<ul style="list-style-type: none"> Work on introductions and invasive species very poorly covered within ICES (subset of MCC) Need to include Baltic in work on “invasives” 	<ul style="list-style-type: none"> “Introductions and invasives” will present major management problems (e.g. whether to prevent or encourage new species) and requirements for advice 	<ul style="list-style-type: none"> Climate change is likely to greatly increase threats from introductions/invasions and ICES should be able to advise.

THEMATIC AREA/ RESEARCH TOPIC	Strengths	Weaknesses	OPPORTUNITIES	THREATS
DEVELOPMENT OF OPTIONS FOR SUSTAINABLE USE OF ECOSYSTEMS (Group 3)				
Marine living resource management tools	<ul style="list-style-type: none"> • Probably the strongest area for ICES • Considerable expertise in both SCICOM and ACOM 		<ul style="list-style-type: none"> • Dealing with data poor stocks • Moving away from single species assessments • Ecosystem indicators and their application • Moving toward understand of ecosystem processes rather than only describing their state • Currently little spatial resolution • Developing predictive capacity (e.g. recruitment, variation in growth, life history impacts) 	<ul style="list-style-type: none"> •
Operational modelling combining oceanographic, ecosystem, and population processes	<p>(This is primarily an area that involves the application of models)</p> <ul style="list-style-type: none"> • Huge investment for development of physical models with some biological linkages. • Multispecies models provide some insight into higher trophic levels 		<ul style="list-style-type: none"> • How do we integrate knowledge from different sources into providing advice? • How do we move to broader range of environmental and trophic interactions? • Developments in model-data interplay. 	<ul style="list-style-type: none"> •

THEMATIC AREA/ RESEARCH TOPIC	Strengths	Weaknesses	OPPORTUNITIES	THREATS
Marine spatial planning and its role in the conservation of biodiversity	Hot topic – all nations have effort because of request for advice	Is the science good enough to deal with requests for advice on MPAs? – ICES is only organizing a process (proponent asked to provide evidence) at this stage	MPAs <ul style="list-style-type: none"> • Coastal zone management • Cold water reefs • Application of indicators in marine spatial planning • Modeling impact of effort redistribution • Hard natural science issues – migration, habitat use, transport, scales of connectivity 	
Socio-economic understanding and forecasting of the impact of human activities		<ul style="list-style-type: none"> • Probably an area where ICES activities has been most limited. Risk analysis is probably the area of greatest activity or expertise 	<ul style="list-style-type: none"> • ICES has strength in promoting science across disciplines. We can achieve a better outcome if we develop research tools that integrate across biology, economics and social sciences. • (Important to note that this involves research and not in the provision of advice.) • How to move forward from results should be an issue for Delegates 	<ul style="list-style-type: none"> • Increasing activity in this area may lead to the perception that involvement with social science may politicize the advisory process

Annex 4: Approved Terms of Reference for SCICOM Working Group on Science Leadership (SWGSL)

At its 6–8 January 2009 meeting, SCICOM agreed to develop a ‘steering committee’ structure to provide scientific leadership and coordinated the work of the Science Expert Groups (EG). It was agreed that this leadership would be provided by members of SCICOM and that the role and responsibilities of the steering committees (SC) would be developed by a SCICOM working group.

Mandate:

- Define the field of responsibilities of each SC (e.g. Science Plan themes and / or other strategic themes such as technology, climate). The number of proposed SC should be limited to 5-6.
- Develop generic TOR for the SCs. The role and responsibilities of these SCs need to specifically describe how:
 - leadership will be provided to the Expert Groups;
 - the work of the EGs will be coordinated (from planning to performance evaluation);
 - the 16 priorities of the Science Plan will be addressed; and,
 - key values of the Science Plan (such as integration of disciplines, nurturing science) will be addressed.
- Review the TOR of each EG and recommend options for allocating EGs to Steering Committees.

Membership:

- SWGSL will be chaired by a member of SCICOM. The working group will include 3 members of SCICOM and 2 former chairs of Scientific Committees.

Reporting:

- Work by correspondence (and if necessary one meeting)
- SWGLS will report directly to SCICOM
- A draft report will be completed by 28 February 2009 and circulated to SCICOM for review and comments
- The final report will be completed by 15 March 2009.

Annex 5: Draft Resolution requiring Secretariat action (Category 4)

The General Secretary will establish the post of a C4 Secretary in the ICES Science Programme at ICES Headquarters, Copenhagen, Denmark.

Supporting Information

PRIORITY:	High priority for supporting and implementing the reformed Science Programme.
JUSTIFICATION	<p>2009 will see a major restructuring of the roles and functions, and of the structures of the intermediate level between the new SCICOM and the Expert Groups. This means substantial additional workload on the secretariat/Science Programme secretaries in the ICES Headquarters.</p> <ol style="list-style-type: none"> 1) Expert Group Chairs will have no immediate contact on the (former) science committee level because these have ceased to exist. This will likely result in more communication with the secretariat. 2) New structures are being established pulling together Expert Groups and developing ToRs, etc. Meeting schedules, reporting schemes, etc., have to be developed and communicated which means substantial secretarial work, new Sharepoint sites, DLs etc. 3) There will be additional meetings of the new SCICOM devoted to the implementation of the reform, adding on the workload. 4) The 83 Science Expert Groups of ICES rely heavily on the administrative support provided by the ICES Science Programme. Expert Groups need support before, during and after the meetings, including report formatting, maintenance of membership lists and SharePoint sites. The Science Programme has lost an Assisting Secretary, who was promoted to become the Personal Assistant of the General Secretary in 2008. The implementation of the new Science structure will increase the workload and it is critical that this Science Programme Assisting Secretary be replaced
RESOURCE REQUIREMENTS:	Funding from the SIF is required in the order of 850K DKK over a period of three years.
PARTICIPANTS:	N/A.
SECRETARIAT FACILITIES:	ICES Secretariat will solicit applications, hold interviews and employ the successful incumbent.
FINANCIAL:	No financial implications other than personnel.
LINKAGES TO ADVISORY COMMITTEES:	As required by SCICOM
LINKAGES TO OTHER COMMITTEES OR GROUPS:	All Science Programme and structural bodies.
LINKAGES TO OTHER ORGANIZATIONS:	As appropriate
COST:	ICES 100%.

Annex 6: Approved Terms of Reference for SCICOM Study Group on Science Cooperation [SSGSC]

Mandate:

- a) Review the present cooperation with various organisations and networks; evaluate the functionality of the cooperation
- b) Explore the potential for new cooperation and strategic alliances in the light of the Science Plan 2009–2013 and the Advice Strategy 2009–2011, e.g.:
 - 5) Identify new and emerging synergies across science disciplines, regions and different types of organizations and networks
 - 6) Identify cooperation supporting the ability to give advice (especially on horizontal matters, such as Ecosystem Approach to Management)
- c) Prepare a draft of an ICES Cooperation Strategy in support of the Science Plan, including, e.g.:
 - 1) Requirements for cooperation posed by the Science Plan and the Advice Strategy
 - 2) ICES procedure for contacting organisations and networks

Membership:

- SSGSC will be chaired by a member or alternate of SCICOM. This working group will include 2 members or alternates of SCICOM

Reporting:

- SSGSC will report directly to SCICOM
- SSGSC will work by correspondence
- A draft report will be completed by the end of 2009.

Annex 7: Draft resolutions approved by SCICOM

2008/2/DFC07 The **Study Group on Salmon Age Determination [SGSAD]** (Chair to be decided) will meet in (venue to be decided) the winter period of 2010 to:

- a) evaluate the status of examination of thin slice from salmon pelvic fin ray;
- b) evaluate the possibility to differentiate real spawning marks from other erosion marks;
- c) evaluate the status of the preparation of a description of salmon life cycle (blue book of IBSFC);
- d) evaluate the status of the investigations on possibilities to assess post smolt survival rate on the basis of scale growth pattern;
- e) evaluate the possibilities to use the number and width of striae as an aid in the interpretation of difficult scales;
- f) evaluate the experiences from the use of strontium-calcium relationship in the research on e.g. early emigration behaviour of fry.

SGSAD will report by 1 June 2010 or 2011 (depending on the date of SGSAD meeting) for the attention of Transition Group on the Science Requirements to Support Conservation, Restoration and Management of Diadromous Species (TGRECORDS) and SCICOM.

Supporting Information

Priority:	The highest priority of SGSAD is to increase and maintain a high level of reliability of age determination of salmon as a basis for the stock assessment and other research concerning salmon.
Scientific justification and relation to action plan:	<p>In the age determination of fish, quality assurance is a vital part to ensure the reliability of age determinations. Co-operation of age readers from different countries and laboratories can be used as a tool to improve and validate the age determinations and to maintain high quality.</p> <p>In addition to age determination, SGSAD contributes the use of scientific methods that utilize calcified structures, especially scales and otoliths.</p> <p>Stock assessment of salmon and other research on salmon are benefitted from the work of SGSAD.</p>
Resource requirements:	
Participants:	The Group is normally attended by some 20–25 members and guests.
Secretariat facilities:	None.
Financial:	BSRP has supported the work of SGSAD by means of traveling expences of the participants from countries that get funding from BSRP.
Linkages to advisory committees:	There are linkages with Transition Group on the Science Requirements to Support Conservation, Restoration and Management of Diadromous Species; Baltic Committee; and Baltic Salmon and Trout Working Group.
Linkages to other committees or groups:	There is a very close working relationship with all the groups of under WGFASST/WGFTFB. It also is of close relevance to the Working Group on Ecosystem Effects of Fisheries.
Linkages to other organizations:	By contributing the efforts to increase the validity of salmon age determination, SGSAD supports the objectives of the EU Data Collection Programme.

2008/2/LRC20 The Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES Areas VIII and IX [WGACEGG]. (Chair: A. Uriarte, Spain) will meet in Lisbon, Portugal, 16-20 November 2009 to:

Long-term Terms of Reference:

- 1) plan, coordinate and review acoustic and egg surveys in ICES Areas VIII and IX and standardize analysis procedures;
- 2) update on innovations on sampling and estimation methods for DEPM and acoustics;
- 3) develop a framework to cross-validate and integrate egg production and acoustic methods for the estimation of Spawning stock biomass and its distribution;
- 4) produce an annual synoptic overview of distribution, abundance and population structure of sardine and anchovy in relation to the pelagic ecosystem for ICES areas VIII and IXa;
- 5) integrate biological/environmental information from surveys and additional sources to improve the understanding of the spatial distribution and dynamics of sardine and anchovy in relation to the pelagic ecosystem in ICES Areas VIII and IXa.

2009 Short Terms of Reference:

- a) To report on the results of the 2009 surveys: Either for adults with Acoustics (Sardine and anchovy all areas) and DEPM (Anchovy in the Bay of Biscay Spring), or for juveniles (with acoustics for anchovy in BoB);
- b) To finish the estimation of Adult Fecundity and final Spawning Biomass for some applications of the DEPM in 2008 (Sardine all areas and anchovy in Cadiz);
- c) to finish the revision of the series of DEPM for the anchovy in the Bay of Biscay;
- d) To perform a new intercalibration between RV Thalassa and RV Noruega in spring acoustic surveys;
- e) To continue cross validation of the autumn acoustic surveys on anchovy juveniles in the Bay of Biscay and the revision of the 2006 JUVENA's point estimate;
- f) To produce precise acoustic survey protocols for each institution (acoustic acquisition, survey design, fishing gears, fishing strategy, etc.) as a background reference of the procedures applied to be annexed to the next WGACEGG report;
- g) To keep on producing the common database on a general grid in order to obtain a synoptic presentation of results of DEPM and acoustic surveys and analysis. Consolidate 2008 and 2009 data base, and if possible expanding it backward in time;
- h) Produce technical specifications for the development of a common database for acoustic data (delayed from 2008);

WGACEGG will report by 20 December 2009 for the attention of SCICOM.

Supporting Information

Priority: The Group has high priority as it will be responsible for providing direct monitoring for two major small pelagic stocks (sardine and anchovy) in this area. These stocks are distributed across national boundaries. The most important part of its work will be to standardize, plan and analyse all the relevant surveys and to integrate these together to give the best possible advice to the WGANSA for integrated assessment purposes.

Scientific Justification and relation to Science Plan 2009-2013 Concerning the recently adopted ICES Science Plan 2009-2013 WGACEGG is expected to contribute particularly in the first thematic area entitled Understanding Ecosystem Functioning. The Acoustic and DEPM surveys being coordinated in this group and the synoptic overview of the pelagic community of Mid Southern European waters will provide useful insights not only for the direct monitoring and assessment of anchovy and sardine, but also about the spatial distribution patterns of adults and juveniles of these and connected pelagic species and their habitats. Monitoring the status of this population (with the best standard methods and practices – Long TORs 1 to 3, and Short TORs a to f) and their occupation of the potential habitats (Long TORs 4 & 5 and Short TORs g) are very relevant to the topic about Fish life history information in support of Ecosystem Approach to Management. Habitat mapping should also contribute to the topic of the role of coastal zone habitat in population dynamics of commercially exploited Species. The aims of Long Term 5 to integrate biological/environmental information from surveys and additional sources to improve the understanding of the spatial distribution and dynamics of sardine and anchovy in relation to the pelagic ecosystem in ICES Areas VIII and IXa should also contribute to the topic of Integration of surveys and observational technologies into operational ecosystem surveys.

Scientific Justification and relation to past Action Plan of ICES: In relation to the past action Plan of ICES: Long ToR 1) plan, coordinate and review acoustic and egg surveys in ICES Areas VIII and IX and standardize analysis procedures. Egg surveys for sardine and anchovy have been carried out since 1988 in Spain and Portugal, and since 1997 surveys were coordinated within different projects and the SGSBSA. A continuation of this planning and coordination, as well as analysis methodology standardization, will be carried out within WGACEGG (including CUFES sampling). Also the acoustic surveys in ICES Areas VIII and IX planned and coordinated with best standard methods within the group. This concerns to the Spanish (IEO, AZTI), Portuguese (IPIMAR) and France (IFREMER) acoustic surveys [Action Numbers 1.11; 1.13]. 2009 TORs a & b relate to this Long TOR.

Long ToR 2) update on innovations on sampling and estimation methods for DEPM and acoustics. Both newly developed DEPM and traditional egg production methods and associated robust and user-friendly software to perform egg production estimates are being developed and applied within the group. Improvement on acoustic estimation methods are also routinely presented in WGACEGG, from the interim work carried out in each institute. WGACEGG will continue to support the work on methodological improvements, by validation and testing of each of the methods. [Action Number 1.10]. 2009 TORs c, d & e relate to this Long TOR by checking quality of the implementation of the acoustic surveys and providing the basic reference of practice to the group.

Scientific Justification and relation to past Action Plan of ICES (continued)	<p>Long ToR 3) Develop a framework to cross-validate and integrate egg production and acoustic methods for the estimation of Spawning stock biomass and its distribution. Both egg production and acoustic methods allow estimation of Spawning stock biomass and stock distribution by using different assumptions and techniques. Cross-validation of these methods should be performed in a broad framework, allowing the comparison and validation of each method basic assumptions and identification of possible sources of discrepancy and its impact on the estimates. WGACEGG will explore the possibility of using both methods to obtain an integrated estimate of SSB [Action Numbers 1.2; 1.11; 1.13]. Progress on this approach have presented this year and are expected to grow in next year and are relevant to the topic of Integration of surveys and observational technologies into operational ecosystem</p> <p>ToR 4) produce an annual synoptic overview of distribution, abundance and population structure of sardine and anchovy in relation to the pelagic ecosystem for ICES areas VIII and IXa; WGACEGG will combine the results of each national survey to produce data at a regional scale, covering the area from the Strait of Gibraltar up to the English Channel. Within this framework, WGACEGG will provide an integrated synoptic view of the annual distribution and abundance of the sardine and anchovy population, which will be useful both for assessment purposes and for ecological studies.</p> <p>ToR 5) integrate biological/environmental information from surveys and additional sources to improve the understanding of the spatial distribution and dynamics of sardine and anchovy in relation to the pelagic ecosystem in ICES Areas VIII and IXa.. Information obtained from the spatial structure of the sardine and anchovy communities, together with associated environmental information would be integrated, with the scope of improving the understanding of the pelagic community, using both sardine and anchovy as key species of this community. [Action Numbers 1.2; 4.11].</p>
Resource Requirements:	None
Participants:	20–25
Secretariat Facilities:	None
Financial:	None
Linkages to Advisory Committees:	ACOM
Linkages to other Committees Groups:	WGANSA, WGLESP, WGFE, PGECCS, WGECCS, WGFAST/WGFTFB, TGISUR
Linkages to other Organizations:	Other countries/institutions applying the DEPM, or carrying out integrated acoustic-egg surveys worldwide. Linkages with mediterranean small pelagic committees are also seek. Linkages with Northern Africa countries will be established based on EU cooperative projects. Participation in FRESH COST actions are also seek

2008/2/OCC09 A Joint PICES/ICES Working Group on Forecasting Climate Change Impacts on Fish and Shellfish [WGFCCIFS] will be established (Co-Chairs: A. Hollowed, USA, Manuel Barange, UK, Suam Kim, Korea, and Harald Loeng, Norway) and will meet on 21 June 2009 one day prior to the GLOBEC Synthesis meeting in Victoria B.C, Canada to:

- a) Promote research on climate change impacts on marine ecosystems by scientists in ICES and PICES member nations through coordinated communication, exchange of methodology, and organization of meetings to discuss and publish results;
- b) In collaboration with relevant expert groups in PICES and ICES, develop frameworks and methodologies for forecasting the impacts of climate change on marine ecosystems, with particular emphasis on the distribution, abundance and production of commercial fish and shellfish;
- c) Review the results of designated case studies to test methods;
- d) Explore techniques for estimating and communicating uncertainty in forecasts;
- e) Explore strategies for research and management under climate change scenarios, given the limitations of our forecasts;
- f) Plan for a science symposium in early 2010 to present, discuss and publish forecasts of climate change impacts on the world's marine ecosystems, with particular emphasis on commercial fish and shellfish resources;
- g) Produce publications that are relevant to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change;
- h) Publish report(s) summarizing work.

WGFCCIFS will report by 1 September 2009 for the attention of the ICES Climate Change Steering Group, SCICOM, **and by 1 October 2009** to the PICES FIS and POC Committees.

Supporting Information

Priority:	The work of the WGFCCIFS is essential to ensure that ICES and PICES will be able to provide guidance on the potential impacts of climate change on marine ecosystems and the response of commercial fish and shellfish resources to these changes.
Scientific justification and relation to action plan:	The work done within ICES and PICES on Climate Change and fisheries has been diverse and has included: a) guidance on methods for selection of IPCC scenarios for use in projections; b) techniques for downscaling IPCC scenarios to local regions, c) development of coupled ecosystem models for use in evaluating climate induced shifts in environmental conditions, d) literature documenting relationships between climate forcing and marine fish and shellfish distribution and production, and e) stock assessment techniques for evaluating management strategies to mitigate the impacts of change. A challenge facing ICES and PICES is the need to integrate all of this research to provide stakeholders with quantitative estimates of the potential impact of climate change on marine life throughout the world. This challenge calls for the establishment of an interdisciplinary research team composed of experts from around the world who will focus attention on the development of common and standardized frameworks for forecasting climate change impacts on marine life with particular emphasis on commercially important fish and shellfish. ICES and PICES should act now to ensure

	<p>that our research communities develop the capabilities to provide quantitative contributions to the next IPCC reports and to provide guidance for management under climate change scenarios.</p> <p>Several case studies will be identified by the Steering Group based on their potential for contributing to methodological development and the opportunity for comparison of marine species and community responses to climate forcing in different ecosystems. Members of the working group will be responsible for encouraging the development of regional interdisciplinary teams responsible for the production of forecasts. Members of the working group will provide guidance to the regional teams by providing a framework for the development of the forecasts and communication of new advances in analytical tools. A major contribution of the working group's effort will be presentation and discussion of results at a science symposium in 2010 and publication of results in a peer reviewed journal by 2011. The timing for the publication is critical because the future IPCC AR5 report is slated for release in 2013.</p>
Resource requirements:	No specific resource requirements beyond the need for members to prepare for and participate in the meeting.
Participants:	These would include climatologists, oceanographers, ecologists, stock assessment scientists, ecosystem modellers, fisheries managers and economists. Participation is sought from members of PICES and ICES as well as scientists from the southern hemisphere. Potential working group members: James Overland, USA (ESSAS, PICES POC), Shin-ichi Ito, Japan (ESSAS, PICES POC), Michael Foreman, Canada (PICES POC), Sang-Wook Yeh, Korea (PICES WG 20) , Thomas Okey, Canada (PEW trust), Richard Beamish, Canada (NPAFC, PICES FIS), Daniel Duplisea, Canada (ICES), Jason Holt, United Kingdom (QUESTFISH, ICES), Keith Brander, Denmark (ICES, IPCC ecosystem writing team), Jürgen Alheit, Germany (ICES, GLOBEC SPACC), Ken Drinkwater, Norway (ESSAS; ICES)].
Secretariat facilities:	This group is likely to have high demand on the computing resources of the Secretariat, but no additional software/hardware is anticipated beyond that which is currently available.
Financial:	ICES invitational travel for 4 invited scientists, PICES invitational travel for 4 scientists.
Linkages to advisory committees:	An obvious very close link with the ICES Climate Change steering committee and the PICES FUTURE Scientific Steering Committee.
Linkages to other committees or groups:	Methodological issues are within the mandate of this Group but for the purpose of this meeting this issue is not on the agenda. Fish stock assessment methods for forecasting and conducting management strategy evaluations will be discussed, as will various ecosystem modelling approaches. Techniques for selecting and downscaling climate change scenarios for use in forecasts will also be discussed. Knowledge of the mechanisms underlying commercial and other species and community responses to shifts in oceanography will be critical to the formation of forecasts.
Linkages to other organizations:	ICES and PICES will seek widened participation for this group including contact with relevant academic and intergovernmental organisations including fisheries managers and FAO for this meeting.
Secretariat marginal cost share:	ICES 50%, PICES 50%.

2008/2/OCC11 The Working Group on Operational oceanographic products for fisheries and environment [WGOOFE] (Co-Chairs: Morten Skogen, Norway, Mark Dickey-Collas, the Netherlands), will meet for a demonstration workshop at FRS Aberdeen, 15-17 June 2009, and for a WG meeting at IMARES, IJmuiden 16-18 November 2009 to:

- a) prior to the meeting and workshops publicise the activities of the working group to attract potential members, with an emphasis on users;
- b) interessionally develop the first versions of web based products (either from institutes, projects or individuals) for testing in the workshops;
- c) arrange a demonstration workshop with users to get feedback on interim product list and operational services (Aberdeen June 2009);
- d) hold other workshops, including an evening at the ICES ASC to demonstrate and operate the first versions of products;
- e) refine and evaluate the operational products to the needs of the users, including format and timing (IJmuiden November 2009);
- f) identify gaps in the products available, and define new products from this.

WGOOFE will report by 10 December 2009 for the attention of the SCICOM.

Supporting Information

Priority:	There is an urgent need to incorporate the field of operational oceanographic products into ICES to be able to support fisheries research, assessment and management advice and other ecosystem approach related activities.
Scientific justification and relation to action plan:	<p>WGOOFE justification:</p> <p>a) To make the products of WGOOFE relevant and encourage them to be used within ICES, it is essential to engage users in the work of the WG, and not make the group a fora only for operational oceanographers.</p> <p>b) Available operational oceanographic products are to be used as initial products to initiate a dialogue with the users of their needs and possible use of the products.</p> <p>c) The dialogue will define improved products to better meet the user needs</p> <p>d) To ensure regularity of the products to be delivered WGOOFE will identify the producers</p> <p>e) Several large projects are running operational oceanographic services. To ensure the relevance of their works, WGOOFE will establish a close dialogue with these initiatives to stimulate for delivery of relevant (to ICES) products.</p>
Resource requirements:	No specific resource requirements beyond the need for members to prepare for and participate in the meeting, and preferably participation from ICES data centre
Participants:	The Group should have participants from organizations dealing with operational services and/or development of operational techniques, and participants that are identified of users of such products.
Secretariat facilities:	None.
Financial:	No financial implications.

Linkages to advisory committees:	An obvious very close link with ACOM activities.
Linkages to other committees or groups:	There would be a strong interaction with other experts groups within OCC such as WGZE, WGHABD, WGOH and WGRP, and modelling activities e.g. in WGPBI, PGNSP, NORSEPP, WGRED, REGNS. Later also with the ICES Advisory Programme.
Linkages to other organizations:	The WG must interact with IOC/JCOMM/GOOS/EuroGOOS/ArcticGOOS/ GMES/GEOSS. The group should also have a close relationship with MyOcean

2008/2/RMC08 The Working Group on Multispecies Assessment Methods [WGSAM] (Co-Chairs: John Pinnegar, UK and Bjarte Bogstad, Norway) will meet at ICES Headquarters, Copenhagen from 5–9 October 2009 to:

- a) review further progress in multispecies and ecosystem modelling throughout the ICES region;
- b) report on the development of key-runs (standardized model runs updated with recent data, and agreed upon by WGSAM participants) of multispecies fisheries models for different ICES regions;
- c) Determine a standardized format for reporting Ecopath key-runs;
- d) Review current process-knowledge, data requirements, and data available to model predation on pre-settlement life stages by pelagic predators;
- e) Work towards the inclusion of spatial overlap in existing multispecies models;
- f) Review methods for estimating consumption and diet composition in multispecies models;
- g) Work towards implementing new stomach sampling programs in the ICES area in 2011 by reviewing protocols and estimating costs.

Longer-term aspirations (possible ToRs for future years)

- Investigate alternative ways to present multispecies advice to decision makers;
- Explore the possibility of developing ‘virtual data sets’ which might be used in multiple models, for comparison and sensitivity testing.

WGSAM will report by 20 November 2009 for the attention of the SCICOM and ACOM.

Supporting information

Priority:	Multispecies assessment modelling is essential for the development of viable long-term management strategies.
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Scientific Justification and relation to action plan:

The increased emphasis on ecosystem management, and the move away from advising on single stocks in isolation, necessitate considering interactions between fish stocks and the ecosystems of which they are part.

Historically the ICES multispecies working and study groups have acted as a useful conduit within the ICES system, drawing together advice and quantitative outputs from many different assessment working groups and combining these into an integrated product of direct use to managers and researchers. The 2007 meeting of WGSAM showed that there is much ongoing work within this field of research, and that there is a need for a pan-European forum for reviewing progress within this important field (ToR a).

Stomach content data serve as the basis for a plethora of multi-species, extended single-species, and ecosystem models. Having a solid foundation of adequate stomach content data is a pre-requisite for implementing the ecosystem approaches to fisheries. Stomach sampling has been annual in some areas, while in other areas (e.g. the North Sea) a large effort ('Year of the Stomach') has been made sporadically. At the 2009 WGSAM meeting the group will work towards implementing new stomach sampling programs throughout the ICES area in 2011 by reviewing protocols and estimating costs.

Multispecies models have often been used to provide updates of natural mortality M for inclusion in conventional single-species stock assessments. Consequently it is considered useful to have occasional 'key runs' for each region, whereby time-series are updated and mode configurations are agreed by a number of regional experts. WGSAM will continue to work towards key runs in the Barents Sea, Bay of Biscay and Iceland as well as devising the reporting formats necessary for key runs using Ecopath with Ecosim (ToR's b) and c).

At the WGSAM 2008 meeting it became apparent that little is known with respect to the role that herring and sprat (and other pelagic fish) play as predators of demersal fish eggs and larvae. Research in several sea areas (e.g. the North Sea, Iceland, NW Atlantic) suggest that herring may constrain the recovery of commercial species when they are at high abundance, and conversely when herring are removed other species seem to experience enhanced recruitment success. In 2009 WGSAM will review the evidence-base on this topic (ToR d) and this may influence future stomach sampling exercises, and species included as predators in multispecies models.

Resource Requirements:	–
Participants:	Approx 20. Expertise in ecosystem, modelling and fish stock assessment from across the whole ICES region.
Secretariat Facilities:	None
Financial:	No financial implications
Linkage to Advisory Committees:	ACOM
Linkage to other Comities or groups:	AMAWGC, WGRED, WGEKO, SGMAS, WKEFA, SGMIXMAN, most assessment Expert Groups.
Linkages to other organisations:	–

2008/2/RMC009 The **Working Group on Fishery Systems [WGFS]** (Chair: Kjellrun Hiis Hauge*, Norway) will meet at ICES Headquarters, Copenhagen from 12–16 October 2009 to:

- a) review and generate recommendations about the future structure of risk evaluation and management strategy research within ICES toward greater inclusiveness across the fisheries system and greater usefulness in policy advice. This includes re-evaluating the role of WGFS in light of several other ICES groups involved in risk evaluation and management strategy;
- b) catalogue successes, problems and approaches in participatory, bio-economic modelling of management scenarios as a stakeholder involvement tool in fisheries management? This includes an evaluation the links and synergies between participatory modelling and collaborative research;
- c) evaluate the past contribution of WGFS activities on ICES as a way to inform future directions.

WGFS will report by 1 December 2009 for the attention of the SCICOM.

Supporting Information

Priority:	The main focus of WGFS is the fishery system and the role of scientific advice within that system. The system-based approach relates directly to priorities such as developing an ecosystem-based approach to management and the effective implementation of the precautionary approach. Consequently, these activities have a very high priority. The work of the Group is also essential if ICES is to advance the development of realistic projections of fisheries development that take into account the reaction of other parts of the overall fisheries system.
Scientific Justification and Relation to Action Plan:	The Group met in 2000, 2001, 2003, and 2004 to develop a framework for case study analysis and has identified European (North Sea cod) and North American (Georges Bank mixed fisheries) case studies. Funding for the European case study had been granted from 2003 under the EU Framework V Programme; funding for the North American study was granted from 2004. This effort resulted in 7 papers that were published in the special issue of the ICES JMS based on the Symposium on Management Strategies held in Galway in 2006. The key role for the WGFS is to integrate across disciplines to develop analytical and investigative methods/approaches for studying fishery management systems. The main but not exclusive focus of these investigations of the overall fisheries system is to improve the effectiveness of scientific advice. The Group met in 2005 in conjunction with the PKFM, FEMS and EASE projects all of which dealt with organizational and institutional aspects of the production of scientific advice. The 2006 meeting placed a strong emphasis on the ecosystem-based approach and particularly the issue of spatial planning. The 2007 meeting also considered and provided specific recommendations in relation to ICES current reorganization of the advice system, especially in respect to the European Marine Strategy and the role of the Regional Advisory Council. The 2008 meeting invited experts from policy arenas outside of fisheries to discuss the ways they handle uncertainty in making scientific advice.
Resource Requirements:	Secretariat support for meeting.
Participants:	These include scientists working with fisheries management, both from an economic, social and biological perspective. Participation is from ICES countries and scientists both from disciplines and scientific circles not traditionally represented at ICES.

Secretariat Facilities:	No additional software/hardware is anticipated beyond that which is currently available.
Financial:	None
Linkages to Advisory Committees:	The goal for this Working Group is to better understand fishery management systems which is a central element of the work of ACOM.
Linkages to other Committees or Groups:	Close links to SGMAS and SGRAMA who address the technical aspects of management strategies.
Linkages to other Organisations	ICES will continue to seek to widen participation for this group, including contact with relevant academic and inter-governmental organisations

2008/2/RMC10 The Working Group on Methods of Fish Stock Assessment [WGMG] (Chair: C. L. Needle, UK) will meet in Nantes, France from 13–22 October 2009 to:

- a) work according to specific ToRs developed intersessionally by the end of June 2009 in consultation with ACOM, relevant benchmark and assessment WG chairs, and relevant stock assessors. These ToRs are to be considered and finalised by SCICOM at the ASC meeting in September 2009.

WGMG will report by 20 November 2009 for the attention of the SCICOM and ACOM.

Supporting Information

Priority:	The work of this group is essential for ICES to progress in the development of methods for fish stock assessment and advice.
Scientific justification and relation to action plan:	<p>Term of Reference a)</p> <p>Much of the recent output of WGMG has not had a strong influence beyond the confines of the meeting. The challenge is to try and continue strong threads of research within the group while avoiding marginali-sation.</p> <p>Better communication between WGMG and the wider assessment community is clearly required. One way to achieve this could be for WGMG to act (at least in part) as a method exploration and development service for the series of benchmark as-sessment meetings that are planned to be held each year by ICES. In this context, a possible schedule would be as follows:</p> <p>1) Well in advance [six months] of the WGMG meeting in October, the WGMG chair would approach the chairs of the forthcoming benchmark and assessment meetings (and, ideally, the relevant stock assessment scientists) to discuss and determine the key methodological issues for those benchmarks. The WGMG chair would have to be careful to ensure a focus on a limited number each year.</p> <p>2) These discussions would provide the basis for the WGMG ToRs for the October meeting. The WGMG chair would circulate these ToRs as widely as possible, to try and bring together a group with the skills and interests necessary to address the relevant issues.</p>

	<p>3) WGMG would then meet in October (or around then) to consider ways in which to improve the methods available for the key issues. The intention would be to feed these into the subsequent benchmark meetings in the early spring of the following year - but only in a general sense. Rather than do the work of the benchmark groups for them, WGMG would provide general advice on how to deal with generic issues (such as modelling discards etc.)</p> <p>This scheme should ensure that WGMG remains relevant and focussed to the key stock assessment issues prevalent within ICES, while also allowing the flexibility for some regular themes to be continued (in as much as they are relevant to a forthcoming benchmark).</p>
Resource requirements:	None.
Participants:	The Group is well-manned by regular members. However, it may benefit from some wider participation to deal with specific issues arising relevant to subsequent benchmark meetings.
Secretariat facilities:	None required.
Financial:	No financial implications.
Linkages to advisory committees:	ACOM has strongly supported the work of this group and has worked actively in formulating the ToRs for recent meetings. WGMG will report to ACOM at its autumn meeting in 2009.
Linkages to other committees or groups:	WGMG will report to the SCICOM at the ICES ASC in 2009.
Linkages to other organisations:	There is similar work going on within ICCAT and NAFO. Coordination should be assured.

2008/2/RMC11 A Working Group on Holistic Assessments of Regional Marine Ecosystems [WGHAME] will be established (Co-Chairs: H R Skjoldal*, Norway, and A Kenny*, UK) to meet in ICES Headquarters, Copenhagen from 12-16 October 2009 to:

- a) Up-date the REGNS integrated assessment undertaken in 2006 by including a further 5 years data on ocean climate, plankton, seabirds, marine mammals, benthos, fish stocks, fisheries;
- b) Work in collaboration with the ICES data centre to ensure procedures are in place for the effective long-term management and storage of the data and analyses outputs;
- c) Include new data on human pressures such as dredging, shipping and offshore structures (e.g. windfarms);
- d) Begin work on investigating the spatial and temporal scaling laws which define the relative effect of widescale climate forcing in relation to more localized human activities by repeating the above assessment at a range of spatial and temporal scales;
- e) Begin a review available evidence of large Marine Ecosystem "Regime shifts" or possible oscillations across the North Atlantic region (Scotian shelf, North Sea, Baltic Sea, Bay of Biscay, Mediterranean and Black Seas) and report on the feasibility of establishing assessment methods to determine ecosystem regime shift risk;
- f) Further evaluate quantitative/objective methods for assess the cumulative affects of multiple human activities on the status of LMEs;
- g) Advise on how the outputs from the quantitative and objective assessment of multiple ecosystem components can support the implementation of the OSPAR Integrated Assessment framework;

- h) Contribute evidence in support of the scientific criteria for assessing Good Environmental Status under the MSFD.

WGHAME will report by 1 December 2009 for the attention of the SCICOM.

Supporting Information

Priority:	The work of the Group is essential if ICES is to progress the developments of integrated assessment in the context of the EAM.
Scientific justification and relation to action plan:	<p>In order to help develop stronger links between science and advice in ICES it will be necessary to have regional assessment groups which can objectively integrate datasets corresponding to a wide range of ecosystem components. A pilot study was undertaken in the North Sea in 2006 to undertake such an integration exercise (REGNS), an approach which has since been adopted in ICES by a Baltic Sea Working Group. These assessments show the value of creating assessment databases (including the development of methods) for the evaluation of spatial and temporal trends in the state of LMEs, and more importantly to provide evidence of what is driving such changes. The available evidence on comparative ecosystem dynamics through the application of consistent and comparable integrated assessment techniques applied at the scale of LMEs offers great potential in better understanding what controls the observed large-scale and significant changes in marine ecosystems. Whilst the focus for this group will be the North Sea it is inevitable that what controls the dynamics of the North will be driven by forces beyond its immediate boundaries, so working with other groups will be essential. In this respect ICES has established a new WG on operational oceanographic products for fisheries and environment (WGOOFE) that includes a continuation of NORSEPP (North Sea Pilot Project). The WG on holistic assessments will seek to cooperate with WGOOFE to include updated information on physical conditions and drivers in the integrated assessment.</p> <p>It is now clear that the outputs of REGNS can add considerable value in supporting the developing OSPAR Integrated Assessment framework by providing quantitative numerical outputs which can be used directly in the OSPAR assessment matrix. It would be an objective of the WGHAME to work in collaboration with OSPAR and EC MSFD (WG on GES criteria) to ensure the outputs of the group support their policy objectives.</p> <p>The group would plan on meeting in Autumn each year (probably in late October) so as to prepare its scientific assessment on integrated ecosystem state ahead of the preparation of ICES advice in the following year. The group would ensure datasets are updated ahead of the meeting in order to maximize the time at the meeting for analysing the data using the methods applied by REGNS.</p>
Resource requirements:	No specific resource requirements beyond the need for members to prepare for and participate in the meeting.
Participants:	Membership of the group will include those who were involved in the REGNS process plus additional members drawn from existing relevant WGs such as WGRES (Jake Rice). Support for such a group has so far been offered by the Chair of WGSE (Jim Reid), Hein Rune Skjoldal (IMR) and the ICES data centre (Neil Holdsworth).
Secretariat facilities:	This group is likely to have high demand on the computing resources of the Secretariat, but no additional software/hardware is anticipated beyond that which is currently available.
Financial:	None specific.

Linkages to advisory committees:	An obvious very close link with ACOM activities.
Linkages to other committees or groups:	Methodological issues are within the mandate of this Group but for the purpose of this meeting this issue is not on the agenda. Fish stock assessment methods are referred to the Methods WG that has been set up.
Linkages to other organizations:	ICES will seek widened participation for this group including contact with relevant academic and intergovernmental organizations (including FAO, OECD, and IIFET) for this meeting.

2008/2/RMC12 The **Study Group on Risk Assessment and Management Advice [SGRAMA]** (Chair: Knut Korsbrekke, Norway) will meet in (venue to be decided) from (Nov.-Dec 2009) to:

- a) on the basis of the previous SGRAMA meetings and reports, input from WGFS and experience gained elsewhere, continue to develop operational guidelines for risk assessment as a part of the fisheries management advice process by:
 - i) identifying potentials for measuring or estimating consequences and probabilities.
 - ii) relating indicators to negative consequences and developing management procedures based upon such indicators.
 - iii) considering different approaches to risk identification;
 - iv) considering risk communication as a part of traditional fisheries management advice;
 - v) and in further detail suggest what elements or phases of a risk assessment is best suited for expert groups only
- b) present previous reports and proposed guidelines and framework to scientists outside SGRAMA and incorporate comments and suggestions;

SGRAMA will report by 1 March 2010 for the attention of SCICOM and ACOM.

Supporting Information

Priority:	The work is essential for ICES to progress in the development of its capacity to provide advice on fisheries and marine management which includes considerations of risk. Such evaluations are necessary to fulfil the requirements stipulated in the MOUs between ICES and Commissions
Scientific justification and relation to Action Plan:	[Action numbers 3.2, 3.4, 3.5, 3.12, 4.2, 4.3, 4.5, 4.11.2, 4.13, 4.15, 7.2] The SGRAMA report is a first step in establishing guidelines for production of risk assessments and inclusion of considerations of risk management in the advice. Risk assessment and risk management is an important field in several branches of science. The SGRAMA aims at drawing on the experience from other branches of science, and to include that experience in the development of risk assessment and risk management in fisheries science.

Scientific justification and relation to Action Plan (continued):	<p>The field covered by the SGRAMA is close to the field of the WGFS. The ToR a) is coordinated with a ToR for the WGFS, to ensure a rational division of labour, where the SGRAMA concentrates on technical aspects supporting risk decision making</p> <p>ToR a) The guidelines shall outline the kind of information needed required for a risk assessment. They shall describe the process of identifying risk including how these relates to existing conservation and target limits, and with an overall focus on the ecosystem effect of fishing. The guidelines shall furthermore contain references to methods of quantifying risk including pseudo quantification methods and other qualitative approaches to risk analysis</p> <p>An important part of the guidelines will be a description of both risk identification processes and risk communication (how to communicate the findings in the assessment to managers in a way that facilitates decisions).</p>
Participants:	Experts with qualifications regarding assessment and institutional aspects of risk assessment and management. Effort should be made to attract participants with experience in risk assessment and management outside the fisheries sector.
Secretariat Facilities:	Secretariat support
Financial:	No extra costs for ICES
Linkages to advisory committees:	ACOM
Linkages to other committees or groups:	WGFS, AMAWGC and Assessment WGs ToR c) relates directly to the WKREF, and WGEIM under SCICOM
Linkages to other organisations:	This work serves as a mechanism in fulfilment of the MOU with EC and fisheries commissions. Co-ordination should be assured as a number of participants in EU-funded projects such as JAKFISH are expected to participate.

Further justification:

SGRAMA has met three times and the next meeting should finalize the results before the group is dissolved. The work overlaps in part with the Working Group on Fishery Systems [WGFS] and further work within this field could be coordinated by this group. Especially as the use of stakeholder participation evolves.

The group has never been able to attract much participation. The exception was the meeting in Cape Town with very valuable contributions and comments from people traditionally not a part of the "ICES environment". The group believes that presenting our work to scientists "outside Copenhagen" will give further feedback and comments from experts in this field.

One presentation made during the last SGRAMA meeting (December 2008 in the ICES Headquarters) was made using a Skype connection to a colleague in Vancouver, Canada. This presenter is willing to host our next meeting in November 2009 and we believe we can attract several experts in the Vancouver area to attend such a meeting.

The last meeting of the group attracted a total of six participants from four different laboratories. We consider ourselves as a highly effective group, but we recognize our shortcomings and the need for us to learn from external experts.

2008/2/RMC13 The Study Group on the evaluation of assessment and management strategies of the western herring stocks [SGHERWAY] (Chair: Emma Hatfield, UK) will meet in Belfast, UK from 7–11 December 2009 to:

- a) evaluate the utility of a synoptic acoustic survey in the summer for the Hebrides, Malin and Irish shelf areas, in conjunction with PGIPS surveys of VIaN and the North Sea;
- b) explore a combined assessment of the three stocks and investigate its utility for advisory purposes;
- c) evaluate, through simulation, alternative management strategies for the metapopulation of VIaN, VIaS and VIIaN and the best way to maintain each spawning component in a healthy state.

SGHERWAY will report by 1 March 2010 to the attention of the SCICOM Committee.

Supporting Information

Priority:	It is expected that this work will resolve issues surrounding the assessment and management of the herring stocks to the west of the British Isles. Its impact is expected to be high and consequently this work is considered to have a very high priority.
Scientific Justification and relation to Action Plan:	<p>The EU funded project WESTHER evaluated the uncertain stock identity of herring stocks to the west of the British Isles. Its results suggested a rearrangement of the stocks as they are currently assessed and these results now need to be taken forward into the assessment and management process.</p> <p>We recognize the need to provide sound management advice for the western herring areas, and in particular the importance of ensuring as far as possible that there is no depletion of local components. HAWG noted that WESTHER was not funded to evaluate the extent of mixing in the fisheries or to evaluate alternate management strategies for the area. Currently it is unclear what management regime would provide the most cost effective method for successful management and what data would be needed to support this management.</p> <p>We consider that it is necessary to move towards an integrated management plan for this area through a series of iterations involving the following steps.</p> <p>Investigation of combined assessment of the three currently assessed stocks, VIaN, VIaS and VIIaN (to be called the Malin Shelf stock), including an investigation of the utility of a combined acoustic survey.</p> <p>Examination of alternative management strategies based on their ability to deliver protection to local populations and provide cost effective information applicable for management of the two proposed stock units of herring to the west of the British Isles (Malin Shelf and Celtic Sea).</p> <p>Amendment of existing, or development of new, cost effective assessment and data collection schemes which will be required to support this management.</p> <p>SGHERWAY supports directly ICES Goals 1, 3 and 4 in the action plan, specifically 1.11, 3.4, 4.1, 4.2, 4.3 and 4.15.</p>
Resource Requirements:	It is proposed that this would be the second of two meetings of SGHERWAY. It is intended that there would be 8-10 –participants, meeting for a week each time, with intersessional work required.

Participants:	Herring biologists and scientists experienced in assessment and management strategy evaluation, from Ireland, Norway, The Netherlands, and the UK have agreed to attend the study group.
Secretariat Facilities:	None, other than formatting and publishing of the final report.
Financial:	There are virtually no financial implications
Linkages To Advisory Committees:	The study group will provide information to ACOM. This group feeds into the advisory process.
Linkages To other Committees or Groups:	This SG is essential to the work of HAWG and will have clear links to PGIPS.
Linkages to other Organisations:	None

2008/2/RMC04 The **Study Group on Redfish Stocks [SGRS]** will be renamed the **Planning Group on Redfish Surveys [PGRS]** (Co-Chairs: A. Pedchenko*, Russia and Benjamin Planque*, Norway) and will meet at ICES Headquarters, Copenhagen, from 26–29 January 2009, in Reykjavík, Iceland, from 28–30 July 2009, and in Bergen, Norway, from 1–3 September 2009 to:

- a) evaluate the ICES need for surveys on redfish, with particular emphasis on the assessment and advice of redfish in the North Atlantic;
- b) report on the most efficient and cost effective method of providing time series of redfish abundance for advice, and whether existing ICES International surveys can be used;
- c) at the 26-29 January 2009 meeting plan:
 - i. an international trawl/acoustic survey on redfish in the Irminger Sea and adjacent waters in June/July 2009 and
 - ii. an international trawl/acoustic survey on redfish in the Norwegian Sea and adjacent waters in August 2009
 - iii. planning joint international trawl/acoustic surveys (ITAS) on redfish stock in the Irminger Sea and adjacent waters in June/July 2009
- d) initiate an international database for redfish surveys;
- e) at the 28-30 July 2009 meeting report on the outcome of the 2009 Irminger Sea survey;
- f) at the 1-3 September meeting report on the outcome of the 2009 Norwegian Sea survey;
- g) provide a strategy for ICES and a framework for planning redfish surveys from 2010 onwards.

PGRS will report by 15 March 2009 (January meeting) and 15 August 2009 (July meeting); 15 October 2009 (September meeting) for the attention of the SCICOM and ACOM.

Supporting Information

Priority:	Essential
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Scientific justification and relation to action plan:	<p>This group was previously The Study Group on Redfish Stocks [SGRS] and the remit has slightly changed to The Planning Group on Redfish Surveys [PGRS]. PGRS will be responsible for the planning and reporting of the international hydroacoustic-trawl survey on pelagic redfish (<i>Sebastes mentella</i>) in the Irminger Sea and Norwegian Sea. Redfish in the Norwegian Sea has been fished in an Olympic fishery by an international fleet since 2005. Since 2007, ICES has advised a protection of juveniles, no directed trawl fishery and low bycatch limits for <i>S. mentella</i> in Sub-areas I and II. NEAFC has recently set a TAC for pelagic <i>S. mentella</i> in this area of 14,500 t. The unknown stock size and its relations to other <i>S. mentella</i> stocks on the shelves have evoked the immediate need for an international survey on redfish in the Norwegian Sea and adjacent waters.</p> <p>SGRS has been responsible for the planning of the international trawl/acoustic surveys of redfish in the Irminger Sea and adjacent waters since 1994 and corresponding reports on the survey results. This task will be transferred to PGRS. The observed drastic changes in abundance and biomass estimates since 1994 and considerable changes in environmental conditions in recent years confirm the need of precise monitoring of the redfish in the distribution area.</p> <p>SGRS, however, repeatedly faced the problem of a large spacing between hydroacoustic survey tracks and between trawl hauls due to the large survey area (about 400 000 square nautical miles) that has to be covered with only three vessels currently participating in the survey. In order to reach a sufficient density of survey tracks and trawls, SGRS recommended (ICES CM 2005/D:03) that "as many vessels as possible (at least four) should participate to improve the quality of the derived estimates. Thus, the efforts directed at involving other nations in the survey should be continued." Consequently, the potential countries were requested to consider a participation in the next redfish survey in June/July 2007, without success so far. SGRS repeated this recommendation in 2007 (ICES CM 2007/RMC:01). The first international survey on redfish in the Norwegian Sea, carried out in August 2008, was hampered by insufficient harmonisation of instrumentation (hydroacoustics, hydrography), trawl gear and biological sampling. The need for a planning group on redfish surveys in the Norwegian Sea, with close linkage to SGRS was clearly identified in the post-survey meeting of the 2008 survey. Moreover, the expansion of the survey area and participation of more than three vessels has been recommended.</p> <p>From the early stages of the survey, it is highly advisable to build up an international database for redfish surveys in the Norwegian Sea, including scrutinised hydroacoustic data, biological data and hydrographic data. The existing data from the redfish surveys in the Irminger Sea should be transferred into an international database as well.</p>
Resource requirements:	N/A
Participants:	<15 (incl. the cruise leaders of each vessel and the principle experts involved in abundance and biomass calculations). Participation of SGRS members is highly recommended due to the expected synergistic effects in the planning of the survey and analysis of hydroacoustic, biological and hydrographic data.
Secretariat facilities:	N/A
Financial:	Travel costs will be eligible for participants from Member States of the European Union through the EU Data Collection Regulation (Reg. 199/2008).

Linkages to advisory committees:	ACOM
Linkages to other Committees or Groups:	AFWG, NWWG, SGRS, PGNAPES
Linkages to other Organisations:	NEAFC
