

## **Living Resources Committee**

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Chair: Dave Reid (UK)

Rapporteur: Henk Heessen (Netherlands)

The Living Resources Committee had two sessions to discuss business: on Tuesday, 20 September from 11:30 to 18.00 and Saturday, 24 September from 09:00 to 12:30.

### **Opening**

The Chair opened the meeting, welcomed the participants and it was agreed that Henk Heessen (Netherlands) would be Rapporteur. The agenda was presented and adopted. The Chair mentioned that in the afternoon of 23 September a joint meeting would be held, together with the Resource Management Committee, on surveys.

### **Reports of Working Groups**

All Expert Group Chairs were asked to provide reports on their work giving highlights and problem areas, rather than simple repetition of the full activities.

#### **Working Group on Crangon Fisheries and Life History (WGCRAN)**

Axel Temming (Germany), Chair of WGCRAN, presented Doc. G:01.

In the data from the fishery a shift towards deeper water was observed in recent years, which may be related to higher water temperatures. A similar movement has been observed in juvenile plaice. There are many problems with the interpretation of effort data from different countries, each applying their own system. One important shrimp-fishing country (Netherlands) only provides information on effort and catch, but no spatial information. ToRs were fulfilled.

#### **Study Group on the Biology and Life History of Crabs (SGCRAB)**

Julian Addison (UK), incoming Chair of SGCRAB, presented Doc. G:10.

This group has some doubts whether to continue as a SG or to suggest change to a formal WG. They are gradually preparing for assessments of brown crab (*Cancer pagurus*), but suffer from poor data on effort and size distributions. In addition there are problems with stock ID, and the interpretation of fisheries that target different species. As in WGCRAN there is a problem with the lack of spatial information. Should ICES send a message to national governments and EU that such information is essential?

Through the SG ICES can provide a forum for crustacean biologists from inside and outside the ICES community to meet in the interests of ICES. As long as they are interested this should be encouraged. The SG provides relevant information in an ecosystem context, but mainly through national research projects. There is less international integration.

#### **Working Group on Cephalopod Fisheries and Life History (WGCEPH)**

João Pereira (Portugal), incoming Chair of WGCEPH, presented Doc. G:12.

It was noted that the work of WGCEPH is carried out predominantly by scientists from a university background. As such, this should be encouraged by ICES; however, there are problems obtaining funding to attend meetings. Recent work has been strongly linked with the EU-funded project CEPHSTOCK, which has helped ameliorate this problem.

As with the first two groups WGCEPH has a problem with availability and interpretation of effort data. The WG aims to more clearly identify what the data needs and limitations are.

Classical ICES assessments are not possible for cephalopods and the WG is looking for other approaches to the problem: what can we learn from the basic data such as distributions and age-structures. The problem is very much the same for WGCAN, SGCAN, WGCEPH, WGEF, and WGENW.

It was suggested to organise a theme session in collaboration with ACFM in 2007 to bring this problem to a wider audience.

The group will use the material gathered under CEPHSTOCK to prepare a CRR for publication detailing the state of the art.

### **Working Group on Fish Ecology (WGFE)**

Jim Ellis (UK), Chair of WGFE, presented Doc. G:05.

This group provides a comprehensive and wide-ranging service to a number of Expert Groups, particularly REGNS and also to ACE. The report noted a number of difficulties in fully carrying out its remit. For instance, it was noted that while a very well designed and constructed acoustic survey was carried in the North Sea, it was targeted on herring, and possibly sprat, and provided little information on other pelagic species, e.g. mackerel. The known problems with the GOV (and indeed beam trawl) selectivity confound attempts to use this long-term survey series for issues such as biodiversity. Problems with useable and meaningful effort data were also highlighted.

The LRC Chair stressed the importance of publishing the work done by the group, either as peer-reviewed publications, or as a *Cooperative Research Report*. The WGFE Chair agreed and said that this was already underway.

### **Study Group on Regional Scale Ecology of Small Pelagics (SGRESP)**

Pierre Petitgas (France), Chair of SGRESP, presented Doc. G:06.

The work of the group has been extended to a wider range of pelagics including herring in the North Sea and around Ireland. The ID cards prepared for the different stocks were applauded and may be valuable input in the stock annexes of the ACFM report. The reports detail the important aspects of the life history, biology and ecosystem interactions for each stock, including distribution maps, life history movement maps, and schematics detailing the different ways these fish move and breed within the pelagic ecosystem. It was regretted that horse-mackerel is not included in the species dealt with by this group. There was no horse-mackerel specialist attending, and moreover there are many gaps in the knowledge of this species. It was suggested that the group should identify the knowledge gaps. The group proposes to be dissolved in 2006; however, the opportunity should be taken to consider operationalising the advice potential in this group, with some change in ToR. A closer relationship with WGRED may be one approach, or alternatively to extend the collaboration with GLOBEC.

The group proposed two workshops on mesoscale oceanographic processes (with OCC) and on long-term variability in SW Europe. The group will also aim for a *Cooperative Research Report* in their final year, although production of a number of peer-reviewed papers may be more appropriate.

### **Working Group on Seabird Ecology (WGSE)**

Stefan Garthe (Germany), Chair of WGSE, presented Doc. G:07.

This group is new to LRC and was able to show an admirable proactivity in its work. The group has been able to target upcoming areas of interest in advance and produce studies in a timely fashion. The LRC Chair noted that numbers of these would be suitable for publication, and the WGSE Chair agreed to investigate. The opportunity of having WGSE in LRC was taken to explore the potential for using the IBTS survey as a vehicle for more targeted and standardised seabird surveys.

Seabirds in the northwestern North Sea have shown very poor recruitment in 2004 and 2005. The species concerned have very different prey species, and life histories. Up to 50% of the population may not breed at any one time. Is this linked to poor recruitment in some fish species (Norway pout, herring)?

Discussion also focused on the lack of observations on an ecosystem scale. Should ICES work towards developing a protocol? This may be included in the earlier proposed theme session?

### **Study Group on Stock Identity and Management Units of Whiting (SGSIMUW)**

Phil Kunzlik (UK), Chair of SGSIMUW, presented Doc. G:05.

The activity of the group in its first year concentrated on scoping of the study and of the gathering of relevant data. The group will continue to study the issues by correspondence in the following year. The group is attempting to avoid received wisdom assumptions about stock structuring in the North Sea, and looking for what is supported by the data. It was suggested that there are possibilities for following a multimarker approach to whiting stock ID, such as has been done for cod, herring and other species.

There was some discussion on the fact that WGNSSK had not done an assessment of whiting in recent years, whereas whiting is one of the most important species in the North Sea.

### **Stock Identification Methods Working Group (SIMWG)**

Steve Cadrin (USA), Chair of SIMWG, presented Doc. G:15.

The group has introduced a new Co-Chair, Stefano Mariani (Ireland) to enhance the European aspect of their work, and in recognition of his work on herring stock structuring.

This group is now set up somewhat differently to most other LRC groups. Previously it was focused on producing a book on the state of the art in this area. This book has been completed. The function of the WG is now seen as providing oversight in this important area of research. Relations with several ongoing European projects should be formalized. The WG should critically review these and other projects and provide advice when asked, but at the same time be pro-active and critical about new developments.

The WG should provide advice to assessment working groups on how the results of relevant projects should be used.

It will continue to monitor and update the state of the art while meeting by correspondence.

## **General comment from LRC Chair**

The current meeting is the second where the Chair asked for reports from Expert Groups in a new format. Rather than concentrating on the routine business of the group and detailing of ToRs and response, the Chairs were asked to present a “warts and all” approach, concentrating on highlights and problem areas. This proved both stimulating and successful. It was possible to identify common problem areas running through the work of many Expert Groups, as well as a number of useful synergies. It also engendered lively and productive discussion, resulting in new ToRs for some groups, and in two theme session proposals on alternative management and on effort metrics. This process was enhanced by the very strong attendance by Expert

Group Chairs. All but one Expert Group was represented by the current or incoming Chair. This is a GOOD thing. The presence of the incoming Chair is probably a very useful development and should be encouraged. The LRC Chair would like to thank the Expert Group Chairs for this strong support of the process.

## **ConC and LRC business**

The group had an extensive and wide-ranging discussion spread over the two sessions about the discussion document from ConC on the ICES structure. A presentation prepared by a number of scientists from Ireland was given on the subject. An email communication was also received from Germany.

It was impossible to arrive at a complete consensus on what changes (if any) should be made in the ICES structure. Broadly, it was felt that the committee structure could usefully be modified, although there was no clear agreement on how this should be done. Equally, it was felt that the Expert Groups were generally doing their job well, and that no radical changes were required. The information below is collated from the discussion held at the meeting.

## **Committees and their role**

- Committees should be constructed as coherent scientific entities, with a make up and name that is easily understood and consistent.
- For example, LRC should be called Fisheries Biology Committee. It could then continue to contain the biology, ecology, and survey groups it currently includes. RMC might be designated as Assessment and Management Science.
- The contradiction between discipline committees like OCC or LRC, and the Baltic Committee was noted. LRC contains Baltic survey groups that would also be appropriate for the Baltic Committee, but which clearly benefit from the synergy of meeting with other survey groups.
- The assignment of Expert Groups to committees is not clear – why are North Sea GOV surveys in RMC and North Sea beam trawl surveys in LRC?
- It was suggested that groups delivering material to the assessment and advisory process should all be under the advisory committees, but many felt that this would diminish the science element.
- The role of the committee as an auditor of the system, particularly to identify overlaps, synergies, gaps, and future needs was recognized and agreed.
- The REAL committee was felt to actually be the Expert Group Chairs and a small number of active committee members. Most of the committee members do not turn up and do not contribute. It was suggested that the committees should explicitly include the Expert Group Chairs, and that attendance at the ASC should be a requirement for an Expert Group Chair. The Expert Group members should also be explicitly invited to come to the committee meetings.
- It was suggested that as members were nationally nominated, this nomination should include a requirement to attend meetings in their job descriptions, along with associated resources.
- The review role of committees was discussed. The idea received a mixed reception. Many felt that the new structure of presentations requested by the LRC Chair and the subsequent discussions represented a good quality of review. It was agreed that if possible, the committee members should have a role in review, and that the LRC Chair should compile a catalogue of skills of members. Requests for reviews should be considered part of the mandated role of a member and supported by their home institutes.
- Committees should be promoters of science in their field. But it was felt that for LRC at least this is already the case. The strong listing of theme sessions, new groups, and symposia are evidence of this. New science and research initiatives are regularly

raised in the committee, e.g. CoML and ERANET at this meeting. The venue is also used to initiate EU and other projects by members and active participants.

- The problem of when and how to hold committee meetings was discussed. The solution of committee meetings parallel to theme sessions was universally condemned. The idea of having meetings within the ASC was approved, but it was suggested that a dedicated committee day in mid-ASC would be better, although there were worries this would be seen as a “shopping/sightseeing day” by ASC attendees.
- The position of committees in developing policy in ICES was unclear to some institutes. What is the advantage to a national organisation in participating in a committee?

## Expert Groups

- As stated above it was felt by the group that the Expert Group system was working quite well.
- There was strong support for the idea that the system should contain a significant bottom-up drive. Creation and running of an Expert Group requires commitment and time plus resources. Proposals from the floor usually reflect a combination of both personal and institutional commitment and are likely to be successful.
- It was agreed that top-down driven groups could also have a role, either based on emerging issues or on an audit of the Action Plan. But in this case, the membership and institutional commitment should be explicitly clarified in advance. When a national delegate signs up to a new group, particularly a top-down driven one, they should also commit to support it. There are examples of failure in both kinds of groups, and lessons should be learned.
- Lack of awareness of one Expert Group by another was highlighted. It should probably be the committees pointing out these overlaps, and the idea of back-to-back or joint meetings to improve this was applauded.
- The idea of Expert Group-based publications received general agreement. Expert Groups are generally happy to try and produce joint publications as a *Cooperative Research Report* or as peer-reviewed publications. Many new lines for this were identified at this ASC.
- The term of Expert Groups was discussed. It was agreed that in some cases a fixed term was useful. The use of workshops and short-term Study Groups was agreed as a good route. But the life of a Study Group, particularly when aiming for a *Cooperative Research Report* should by default be four calendar years, not three. Many Expert Groups will be able to determine their own life history. PGAAM for example felt that it had run its course. The group attempted to build a wider collaboration on mackerel surveys. This was unsuccessful, so they proposed winding up the group and returning to bilateral coordination. SGRESP, although playing a key role in ecosystem interactions felt that as a Study Group they would complete their work within 3 to 4 years, but that some follow-up with different ToRs may be appropriate. In essence, the members felt that the birth and death of Expert Groups can largely be trusted to the active scientists in the field.
- A mechanistic review of ToRs was not felt to be useful. Some ToRs could not be fulfilled, and this could be reported, but essentially represented the reality of what could be done with the level of resources committed. Priority listing of ToRs would be very useful.

## Theme sessions 2005

The committee noted that four theme sessions sponsored by LRC were held at the Aberdeen ASC. These were:

- Marine mammals: Monitoring techniques, abundance estimation and interactions with fisheries.
- Multidisciplinary approaches to the identification of stock structure of small pelagics: implications for assessment and sustainable management.

- Elasmobranch fisheries science.
- Advances in reproductive biology: methodology and applications for fisheries science.

All were well supported with papers and posters and well attended. This speaks well for the commitment and productivity of the LRC community and particularly the conveners.

## Theme sessions 2006

Theme sessions proposed by LRC and currently agreed for 2006 are as follows:

- Large-scale changes in the migration of small pelagic fish and the factors modulating such changes. Conveners: Jürgen Alheit (Germany) and Dave Reid (UK).
- Selected results from CoML. Convener: M. Sinclair. The text has been altered; however, the title needs changing.
- Evolutionary effects of exploitation on marine resources. Conveners: Mikko Heino (Norway), Ulf Dieckmann (Austria), and Jeffrey A. Hutchings (Canada). With RMC.
- Spatio-temporal characteristics of fish populations in relation to environmental forcing functions as a component of ecosystem-based assessment: effects on catchability. Conveners: Francois Gerlotto (France) and Dave Reid (UK). With FTC.
- Use of data storage tags to reveal aspects of behaviour important for fisheries management. Conveners: David Somerton (USA) and Julian Metcalfe (UK). With FTF and RMC.

It was agreed that the theme session entitled “The ecosystem approach: what’s the impact on marine science, science-based advice, and management of marine ecosystems”, with Conveners Dave Reid (UK), Simon Jennings (UK), and Einar Svendsen (Norway), should be held back until 2007.

LRC also agreed to propose a new theme session for 2006 entitled “Discarding: quantities, causes, and consequences”. Conveners: Marie Joëlle Rochet (France) and Lisa Borges (The Netherlands).

## Theme sessions 2007

Theme sessions proposed by LRC for 2007 are as follows:

- 1) Alternate approaches to management advice and assessment in fisheries; flying outside the ICES Assessment WG paradigm. With ACFM. Conveners: Julian Addison (UK) and João Pereira (Portugal), and one from ACFM ????
- 2) Capacity and effort metrics: methods and madness? With RMC and FTC. Conveners: Axel Temming (Germany), plus one each from RMC and FTC.
- 3) Monkfish across the world; common problems and common solutions. Conveners: Jean-Jacques Maguire (Canada), Pilar Pereda (Spain), Rafael Duarte (Portugal), and Helen Dobby (Scotland).
- 4) Marine biodiversity: A fish and fisheries perspective. Conveners: Jim Ellis (UK), Remment ter Hofstede (The Netherlands), and Henn Ojaveer (The Netherlands).
- 5) The role of sea ice in polar ecosystems. Conveners: Garry Stenson (Canada), Ken Drinkwater (Norway), Kai Wieland (Greenland), and Bob Dickson (UK).
- 6) The impact of anthropogenic noise on marine organisms. With FTC. Conveners: Kjell Olsen (Norway), Edward Trippel (Canada), Tony Hawkins (UK), Peter Tyack (USA), and Peter Liss (UK).

## Proposals for symposia

LRC supported the proposal by Luis Valdez (Spain) for a symposium on climate change impacts in 2008.

## Draft resolutions

Draft resolutions were adopted for all Working/Study and Planning Groups residing under the Living Resources Committee.

## Any other business

### Proposals for new groups

Three new proposals for new groups were presented to LRC. Full details and justifications are attached. The three groups were as follows:

- 1) **Study Group on Recruitment Variability in North Sea Planktivorous Fish** [SG RECVAP]. IJmuiden, The Netherlands. 16–20 January 2006.

Chair: Mark Dickey-Collas (The Netherlands)

Autumn-spawned herring, spring-spawned sand eel, and Norway pout in the North Sea have all exhibited poor recruitment from 2002 to 2004 inclusive. In light of this serial poor recruitment, the SGRECVAP will meet to:

- a) Report and assess what mechanisms, both far field and *in situ*, could lead to severely reduced recruitment in all three species and estimate the probability that these recent recruitment events are purely coincidental;
- b) Determine what data are available on the seasonal trends in hydrography, planktonic production, ichthyoplankton-predator abundance, anthropogenic influence, and adult fish behaviour in the North Sea to test hypotheses for serial poor recruitment reported in TOR a and to carry out preliminary testing;
- c) If plausible causative links can be established, report on any candidate early warning signals that could be used to assist in determination of recruitment scenarios for short term projections of stock numbers?

- 2) **ICES/GLOBEC Workshop on long-term variability in SW Europe** [WKLTVSWE]. Lisbon, Portugal, or Santander, Spain. 20–24 November 2006.

Co-Chairs: Jürgen Alheit (Germany), Alicia Lavín (Spain), Andres Uriarte (Spain), and Maria de Fatima Borges (Portugal)

Long-term studies are essential in understanding decadal-scale changes in the environment and in the associated fisheries. This task has been done in some areas e.g. the North Sea, but neglected in others, e.g., Iberian waters. This group aims to rectify this situation through the following ToRs:

- a) rescue, collate, and jointly analyze decadal-scale, long-term time-series of physical, chemical, and biological data from ecosystems surrounding the Iberian peninsula, with focus on the long-term changes in small pelagic fish;
- b) to identify possible links to climate variability;
- c) to look for possible telecommunication patterns with European and other marine ecosystems.

- 3) **A Workshop on Age Determination of Redfish** [WKADR] will be held in Vigo, Spain, from 28 August to 1 September 2006.

Co-Chairs: F. Saborido-Rey (Spain) and C. Stransky (Germany)

Reliable age determination data are the basis of age-based analytical assessment of the species and stocks under investigation. For redfish, recent studies have revealed considerable discrepancies in ageing criteria. Thus, different interpretations of the otolith structures of the various redfish species are made by the different countries, resulting in large differences in age per length class in, at least, *S. mentella* and *S. marinus* around Iceland and in the Irminger Sea. This is a critical deficiency in our ability to assess this commercially important stock. The workshop will meet to:

- a ) review information on age determinations, otolith exchanges and validation work since the most recent redfish age-reading workshop in 1995;
- b ) identify sources of age determination error in terms of bias and precision, describe the corresponding interpretational differences between readers and laboratories, and agree on the ageing criteria;
- c ) compare different otolith-based age determination methods for redfish and their effect on growth estimates;
- d ) analyse species- and stock-specific growth rates and growth increment patterns and provide corresponding specific guidelines for the interpretation of growth structures in otoliths;
- e ) propose a methodology to combine time-series of age readings based on scales and otoliths;
- f ) set up a strategic plan for routine age determinations during the next 5 years and for the inclusion of age data in the analytical assessment of the most important stocks.

## **Close**

The Chair thanked the Rapporteur for his help with the report of the LRC session and thanked all members for their participation in the discussions.