

## Report of the Living Resources Committee (LRC) and Resource Management Committee (RMC) Joint Session on Surveys

Co-Chairs: Pierre Petitgas (France) for LRC, Dankert Skagen (Norway) for RMC

The Joint Session on Surveys met on Wednesday 19 September from 16: 00 to 19: 00 and lasted one hour more than scheduled. Expert Group reports were presented and discussed shortly. There was no time for general discussion and foresight.

### Opening

The Chairs opened the meeting and welcomed the participants. The agenda was presented and adopted.

### Report of working groups

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

#### **LRC:06 – Baltic International Fish Survey Working Group (WGBIFS)**

The WG Chair (Rainer Oeberst, Germany) presented the WG report. Work of the group covers the following topics: (i) coordination of the international acoustic and trawl surveys in the Baltic Sea; (ii) standardization of the survey methods; and (iii) uncertainty of the stock indices based on the survey data analyses. Major 2007 results were presented. The currently used stratification for post-processing the data was not optimal given the results of the analysis of spatial patterns. Cod was shown to migrate both vertically and horizontally depending on oxygen concentration and this affected survey catchability. Specific experiments on these issues were programmed for 2008 in conjunction with traditional survey work.

#### **LRC:11 – Working Group on Beam Trawl Surveys (WGBEAM)**

The incoming WG Chair (Ingeborg de Boois, The Netherlands) presented the WG report. The work of the group covers the following topics: (i) coordination of offshore surveys and also in-shore surveys; (ii) calculation of abundance indices; (iii) catchability issues for the fish and the benthos; and (iv) development of databases. Work progress in 2007 was presented. For offshore coordinated surveys, the review of survey procedures was completed and a standard format was achieved for reporting individual survey results. For in-shore coordinated surveys in the North Sea, a complete review of the procedures was also undertaken. The beam trawl gears are not standardized and the group is currently undertaking gear efficiency analyses. The group has been requested to also coordinate surveys targeting benthic species with otter trawls. In response, the group will consider constructing a list of criteria for beam trawl surveys to meet WGBEAM standards.

#### **ICES CM 2006/LRC:18 – Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES Areas VIII and IX (WGACEGG)**

The WG Chair (Miguel Bernal, Spain) presented the WG report. The group meets in autumn after the council meeting and therefore the 2007 report (produced in late 2006 as ICES CM 2006/LRC:18) contains work performed in late 2006. The group works with generic long-term ToRs. The work of the group covers the following topics: (i) coordination and standardization of procedures for egg and acoustic surveys; (ii) cross-validation of egg production and acoustic methods and combination of abundance indices from both methods; (iii) integration of environment information to fish survey data; and (iv) development of new procedures. In 2006 the group was faced with two external requests, one from the EU on the coordination of acoustic surveys for anchovy in Biscay and the other from Portugal on the implementation of

the Daily Egg Production Method (DEPM) for horse mackerel off the Iberian peninsula. Much effort was dedicated to the EU request and a plan for coordinated acoustic surveys for Biscay anchovy juveniles in autumn was achieved between IEO, AZTI, and IFREMER. Discrepancies of results between acoustic surveys on Biscay anchovy juveniles were analysed and understood during a dedicated workshop held in March 2007. In addition, a common database format for acoustic surveys was suggested. Datation of post-ovulatory follicles was revised which may have major implications on the DEPM survey indices of abundance. The DEPM was successfully applied for the estimation of anchovy in the Gulf of Cadiz. A list of requirements and guidelines were finalized for planning a DEPM survey for horse mackerel. Work on cross-validation of acoustic and egg data (CUFES) is ongoing. In recent years, DEPM and acoustic survey estimates for the anchovy in Area VIII have shown a systematic difference, which could be worthwhile analysing.

#### **LRC:13 – Planning Group on North Sea Cod and Plaice Egg Surveys in the North Sea (PGEGBS)**

Mark Dickey-Collas (The Netherlands) presented the WG report in place of the Chair. The last coordinated survey was undertaken in 2004. The *CRR No. 285* 'Results of the Spring 2004 North Sea Ichthyoplankton Surveys' was published in 2007. Plans are under way to coordinate another ichthyoplankton survey in 2009 in the North Sea. Plans have been made to approach the ICES data centre for archiving ichthyoplankton survey data. A debate followed on the regularity needed for dedicated ichthyoplankton surveys. The monitoring of the spatial distribution of spawning areas of commercial fish species in the North Sea could be achieved using the CUFES (Continuous Underway Fish Egg Sampler) on the Quarter 1 IBTS survey as the water column is well mixed vertically in winter. It was felt that the group should also investigate that possibility.

#### **LRC:14 – Working Group on Mackerel and Horse Mackerel Egg Surveys (WGMES)**

Dave Reid (UK) presented the WG report in place of the Chair. Surveys take place every three years and the group works with a three-year schedule: in the year of the surveys it works by correspondence and provides preliminary abundance estimates; in the year after the surveys it consolidates the estimates and deals with data analyses; in the year prior to the surveys it plans the surveys and holds a workshop on egg staging and identification (WKMHMES). 2007 was a year of surveys. Preliminary egg production ogives were presented which were within the range of the variability observed in previous years.

#### **ICES CM 2006/LRC:17 – Workshop on Mackerel and Horse Mackerel Egg Staging and Identification (WKMHMES)**

Dave Reid (UK) presented the WK report in place of the Chair. The WK was held in autumn 2006 after the council meeting. The work of the group covers the following topics: (i) inter-calibration of egg identification and staging across institutes, and (ii) inter-calibration and harmonization of fecundity estimation procedures. The outcomes of the 2006 workshop were presented. A mechanical method for removing eggs from the rest of the sample (spray technique) is now recommended. The experiments for egg species determination used eggs from artificial fertilization, thus ensuring truthing of the identification. This method was used for the first time. Eggs were correctly identified to species in more than 90% of the cases. A comprehensive egg staging and species recognition guide has been developed. A fecundity workshop, conducted at the same time, carried out an inter-calibration exercise, and updated the fecundity manual in advance of the 2007 surveys.

**LRC:01 – Planning Group for Herring Surveys (PGHERS)**

The WG Chair (Norbert Rohlf, Germany) presented the WG report. The work of the group covers the following topics: (i) coordination of the acoustic and larvae surveys in the North Sea, West of Scotland, Skagerrak and Kattegat; (ii) provision of abundance indices for herring and sprat; (iii) harmonization of maturity readings for herring; and (iv) catchability of ichthyoplankton gear for larvae. Work progress in 2007 was presented. The FishFrameAcoustic database was intensively tested and its functionalities debugged to combine the 2006 acoustic survey data. A plan was achieved for the coordination of the autumn 2007 larvae surveys for herring and sprat. First results show that the change in gear in the Dutch herring larvae survey may have resulted in a change in catchability. Analysis of the consequences of misclassification of maturity stages for the herring SSB estimate is undergoing. A discussion followed the presentation of the report. Though targeting the herring the coordinated acoustic surveys are in fact acoustic pelagic surveys that acquire multispecies data. PGHERS could be renamed the Planning Group of North Sea Pelagic Acoustic Surveys. Progress was noted on the FishFrame acoustic database. It was questioned why an accessible database similar to DATRAS does not exist for acoustic surveys. Unlike bottom-trawl surveys, acoustic surveys required to interpret the echogram and therefore the database of raw data cannot be used directly. Different expert groups coordinating acoustic surveys have repeatedly performed echogram scrutiny exercises to standardize the interpretation of echograms. Storing the data of acoustic surveys is to be distinguished from a database of acoustic survey results, which are obtained after echogram interpretation. There are thus different options for an acoustic database and harmonization of options taken by different acoustic survey expert groups was to be considered.

**RMC:05 – International Bottom Trawl Surveys Working Group (IBTSWG)**

This WG coordinates international bottom-trawl surveys in the ICES Area. In addition to the coordination *per se*, it develops standards for gears, survey design, data reporting, and data archiving. This year, a new standard reporting format has been developed, as well as protocols to ensure quality and consistency in data generated within the remits of the group.

A growing concern is requests to coordinate more surveys that emerge out of the data collection regulation in EU. RMC shares this concern. IBTS is providing a list of criteria to be met for surveys to meet IBTS-like standards. Requests should include sampling protocols so that IBTS can effectively consider the potential for implementing additional measurements. In more general terms, this problem is part of the wider question of how ICES shall relate to needs generated by EU regulations, in this case the data collection regulation.

**RMC:07 – Planning Group on Northeast Atlantic Pelagic Ecosystem Surveys (PGNAPES)**

This planning group coordinates international pelagic surveys in the Norwegian Sea and to the West of the British Isles, directed in particular towards Norwegian spring-spawning herring and blue whiting.

In addition, these surveys collect environmental information. The work in the group has progressed as planned.

An upcoming question was coverage of redfish in the Northern Norwegian Sea, where a fishery is rapidly expanding in the international zone. From a PGNAPES perspective, such coverage would require separate surveys; there were strong reservations against including redfish as another target species in existing surveys. Norway had a survey directed at redfish and Greenland halibut in the area this year, which is likely to be continued next year. The final proposal was to give PGNAPES the task to coordinate future surveys directed at redfish in that

area, and to leave it to the PG to consider if some of the existing surveys could be extended to cover redfish.

**RMC:01 – Study Group on Redfish Stocks (SGRS) and RMC:12**

This group coordinates acoustic and pelagic trawl surveys directed at redfish in the Irminger Sea. This survey is conducted every second year. The group meets before the survey to plan it, and after the survey to analyse the results. A survey was conducted in 2007, and the results indicate abundance in line with the level in recent years. This is somewhat different from the indication by other data sources, which suggest a declining stock. Low interest in participating in these surveys is a matter of concern, and may lead to too poor coverage of this large area. The next meeting is planned for 2008 to plan the survey in 2009, and another meeting is planned after the survey.