

Living Resources Committee (LRC) Resolutions 2006

2006/2/LRC01 The **Planning Group for Herring Surveys** [PGHERS] (Chair: Norbert Rohlf*, Germany) will meet at the Danish Institute for Fisheries Research, Charlottenlund, Denmark, from 22–26 January 2007 to:

- a) combine the 2006 survey data to provide indices of abundance for the population within the area, by means of the FishFrameAcoustics database;
- b) coordinate the timing, area and effort allocation and methodologies for acoustic and larvae surveys for herring and sprat in the North Sea, around Ireland, Division VIa and IIIa and the Western Baltic in 2007;
- c) intensively test the in-year developments of the FishFrameAcoustics database, specifically verify the ability of the new system to calculate global survey estimates from raw acoustic and trawl data using 2005 and – if possible – 2006 survey data;
- d) further harmonise the maturity readings of North Sea and Western Baltic herring conducted by different labs, specifically the definition of mature and immature fish;
- e) report on the possible bias introduced by a change in gear in the Dutch herring larvae survey.

PGHERS will report by 5 February 2007 for the attention of the Living Resources, and the Resource Management Committees as well as to HAWG and ACFM.

Supporting Information

PRIORITY	International Acoustic and Larvae surveys provide essential data for the assessment of pelagic stocks in and around the North Sea (Divisions IV, VIa, IIIa, and Western Baltic).
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>The work of this Expert Group refers to Action Items 1.2.1, 1.2.2 and 1.13.</p> <p>Term of reference a) and b)</p> <p>Surveys for herring are currently carried out by five different countries, covering the whole of the North Sea, Western Baltic and the west coast of Scotland. Effective co-ordination and quality control for these surveys is essential and while data combination can be managed by mail, a meeting is required to ensure that the larvae database is being used correctly and that the acoustic surveys are being carried out and analysed on a consistent basis.</p> <p>Term of reference c)</p> <p>The HERSUR database was developed in Hirtshals within the framework of the EU-funded projects “Herrings Surveys in the North Sea and West of Scotland” I and II, and has been online since 2001. It is intended to hold all primary acoustic and trawl data from the North Sea Herring Acoustic Survey (including West of Scotland and Kattegat/Skagerrak) and to provide primary outputs (tables and figures). Use of the HERSUR database, as it currently stands, requires an implementation of a flexible combination of biological and acoustic data that matches current national procedures. In 2005 PGHERS decided therefore agreed to follow a two-track approach: The HERSUR database (“step 1”) should be maintained and completed. In parallel, a higher-level database holding national aggregated data with survey results was developed and successfully tested in 2006. This database is used to provide an automated system for delivering the outputs needed for the combined survey report from 2007 onwards (“step 3”). To finalise the database developments for the group’s data, a system to derive global estimates of target species’ abundance and biomass from acoustic and trawl haul raw data will be developed during 2006 (“step 2”). These routines and the updates of step 1 and step 3 databases have to be intensively tested by the group.</p>

SCIENTIFIC JUSTIFICATION (CONTINUED)	<p>Term of reference d) There are apparently still different definitions applied by the different laboratories to the maturity of herring both in the North Sea and in the Western Baltic. As this has significant implications for the definition of the Spawning stock biomass, these definitions urgently have to be harmonized</p> <p>Term of reference e) The Dutch larvae survey has changed the sampling gear and the impact of this will be addressed in a special study.</p>
RELATION TO STRATEGIC PLAN:	Directly relevant – it allows ICES to respond to requested advice on herring and sprat fisheries.
RESOURCE REQUIREMENTS:	No specific resource requirements beyond the need for members to prepare for and participate in the meeting
PARTICIPANTS	At least one scientist (preferably the cruise leader) from each survey; hence a minimum of 6 members.
SECRETARIAT FACILITIES	None
FINANCIAL:	None
LINKAGES TO ADVISORY COMMITTEES:	The survey data are prime inputs to the assessments which provide ACFM with information required for responding to requests for advice/information from NEAFC and EC DGXIV.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	Survey results are conveyed directly to the Herring Assessment Working Group for the Area South of 62°N (HAWG). HAWG to see this report
LINKAGES TO OTHER ORGANISATIONS:	None

2006/2/LRC02 ICES/GLOBEC Workshop on Long-term Variability in SW Europe
[WKLTVSWE] (Co-Chairs: Jürgen Alheit*, Germany, Maria Fatima Borges,* Portugal, Alicia Lavín*, Spain and Andres Uriarte*, Spain) and will be held in Lisbon Portugal, from 13–16 February 2007 to:

- 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 a focus on long-term changes of small pelagic fish;
- b) to identify possible links to climate variability;
- c) look for possible telecommunication patterns with European and other marine ecosystems.

WKLTVSWE will report by 31 March 2007 for the attention of the Living Resources Committee.

Supporting Information

PRIORITY:	This workshop will provide important synthesised ecosystem fishery interaction information for an area where this has not yet been carried out systematically. It has high priority as it provides the baseline data assessing the impact of a changing climate.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>Action Plan Numbers: 1.1, 1.2, 1.3, 1.6, 4.1, 4.2, 4.11, 5.3</p> <p>Over the last decade, there have been many efforts to analyze decadal-scale long-term time series in relation to marine ecosystems, particularly in the North Pacific and the North Atlantic. The goal was too better understand links between climate variability and the dynamics of marine ecosystems in the light of anticipated global climate changes.</p>

SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN CONTINUED:	The results demonstrate that climate variability can heavily impact on marine ecosystems and re-organize food chains up to fish populations and other top predators. The GLOBEC-SPACC programme has been very active in this field. Of research and initiated several regional Workshops to investigate the influence of climate variability on small pelagic fish. The planned Workshop will bring together experts in the fields of physical oceanography, phytoplankton, zooplankton and fisheries biology who have the task to analyze all relevant long-term series of marine ecosystems from the Iberian peninsula.
RESOURCE REQUIREMENTS :	None
PARTICIPANTS :	10–15
SECRETARIAT FACILITIES:	N/A
FINANCIAL:	None
LINKAGES TO ADVISORY COMMITTEES:	ACE
LINKAGES TO OTHER COMMITTEES OR GROUPS:	LRC, OCC, RMC, WGRESP, WGMHSA, WG southern shelf
LINKAGES TO OTHER ORGANISATIONS:	GLOBEC-SPACC

2006/2/LRC03 **The Working Group on Fish Ecology [WGFE]** (Chair: D. Duplisea, Canada) will meet back-to-back with the Working Group on Life History and Ecology of Small Pelagic Fish [WGLESP] in Nantes, France, from 5–9 March 2007 to:

- a) assess and report on changes in the distribution, population abundance and condition of fish in the OSPAR maritime area in relation to changes in hydrodynamics and sea temperature, drawing on expertise from assessment groups as appropriate. Co-ordinate with WGLESP Chair as WGLESP is providing a response to this request for some pelagic fishes. (Further details on the interpretation and handling of this ToR will be provide by ACE);
- b) assess and report on the extent to which the changes reported in (a) can reliably be attributed to changes in hydrodynamics and sea temperature. (Further details on the interpretation and handling of this ToR will be provide by ACE);
- c) EcoQOs: continue analyses of the sensitivity, response and specificity of fish community indicators using simulation approaches and supporting empirical analyses;
- d) essential fish habitat: (i) study the functional coupling between fish and their biotic and abiotic environment to identify the characteristics of essential habitats for fish species (and life-history stages) of interest. Examine the distributions of demersal and pelagic fish in relation to habitat properties, and identify those ecological, physiological and behavioural components that may affect the distribution of fish. (ii) Estimate the cumulative area representing (1) the core abundance of eggs, larvae and nursery areas of commercial species; (2) the survey abundance of all fish species completing their total life cycle within a particular management area as a hypothetical implementation of essential fish habitat (EFH) protection. (iii) Explore the utility of using IBTS and other national data to identify the broadscale distribution of nursery grounds of commercial and vulnerable fish species in the ICES area. (iv) Overlay fish distribution maps with habitat and environmental layers for available data as an exploratory exercise for developing hypotheses on mechanisms;
- e) Abundance-Occupancy:
 - i) further work regarding the abundance-occupancy relationships should be undertaken, with special reference to fisheries and ecosystem management issues, and the underlying mechanisms that affect such relationships and to

- examine new techniques for analysis and compared between more species, life-history stages and areas.
- ii) look for difference in the nature of the abundance-occupancy relationship within a species but between populations in the ICES and compare with the same species in distant areas (e.g. NAFO) and attempt to relate any difference to historical ecological, environmental and/or fishery conditions.
 - iii) examine how fishery catchability is likely to change in the presence or absence of abundance-occupancy relationships.
- f) from current model population estimates and survey data show the historical trend in the proportion of large fish and mean fish weight (North Sea);
- g) for current models of North Sea fish communities:
- i) determine future trajectories of the proportion of large fish (<30 cm) and mean fish weight under different scenarios of fishing mortality.
 - ii) from (g-i) determine the time to recover to reference levels in the early 1980s as determined in (f) for the selected indicators.

WGFE will report by 30 April 2007 for the attention of the Living Resource Committee as well as ACE and ACFM.

Supporting Information

PRIORITY:	High. OSPAR has requested advice in relation to those fish species that are proposed by member countries to be listed as 'threatened and declining species', and such requests are likely to continue. OSPAR has requested advice in relation to possible EcoQOs for both threatened and declining fish species and fish communities.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>a) and b) These two ToR are based on a request from OSPAR. They represent a detailed request in the context of EcoQOs and so are related to ToR c) and e)</p> <p>c) The development of EcoQOs for fish communities and threatened and declining fish species are required by OSPAR. This work supports Action Points 2.2 and 3.2.</p> <p>d) Essential fish habitat studies have implications to management issues and will also aid in the interpretation of abundance-range size relationships. EFH work particularly supports Action Points 1.2.1 and 1.4.2.</p> <p>e) Abundance-range size relationships show clear links to other work covered by the group (e.g. fish habitat issues and the development of EcoQOs). This work supports Action Points 1.2.1 and 1.2.2.</p> <p>f) and g) These ToRs are to assist WGECO in delivering advice to OSPAR on EcoQOs for fish community</p>
RESOURCE REQUIREMENTS:	None
PARTICIPANTS:	15–20 with expertise in fish community analyses, fisheries modelling techniques, fish taxonomy, theoretical ecologist and statisticians.
SECRETARIAT FACILITIES:	None.
FINANCIAL:	No financial implications.
LINKAGES TO ADVISORY COMMITTEES:	ACE, ACFM
LINKAGES TO OTHER COMMITTEES OR GROUPS:	WGECO, WGEF, SGMSNS, IBTSWG
LINKAGES TO OTHER ORGANIZATIONS:	EC, OSPAR, HELCOM

2006/2/LRC04 The **Study Group on Regional Scale Ecology of Small Pelagic Fish** [SGRESP] will be renamed the **ICES/GLOBEC Working Group on Life Cycle and Ecology of Small Pelagic Fish** [WGLESP] (Chair: P. Petitgas, France) and will meet back-to-back with the Working Group on Fish Ecology [WGFE] in Nantes, France, from 5–9 March 2007 to:

- a) complete specific work emanating from past activity (e.g. SGRESP, workshop);
- b) present and discuss new results on life cycle spatial patterns, environmental forcing on fish habitats and their modelling;
- c) maintain overview of developments in the field and report to relevant ICES WGs (especially WGRED);
- d) provide synthetic contributions from the ICES area to the SPACC program of GLOBEC, in particular review the outcome of the ICES ASC 2006 Theme Session on Large-scale changes in the migration of small pelagic fish and the factors modulating such changes;
- e) program new workshops;
- f) assess and report on changes in the distribution, population abundance and condition of pelagic fish in the OSPAR maritime area in relation to changes in hydrodynamics and sea temperature, taking account of work conducted in the fish stock assessment working groups. (Further details on the interpretation and handling of this ToR will be provide by ACE);
- g) assess and report on the extent to which the changes reported in (f) can reliably be attributed to changes in hydrodynamics and sea temperature (Further details on the interpretation and handling of this ToR will be provide by ACE).

WGLESP will report by 15 May 2007 for the attention of the Living Resources Committee, ACFM and ACE.

Supporting Information

PRIORITY:	The work of the Group is essential if ICES is to progress the understanding of environmental forcing on life history, spatial and population dynamics of pelagic fish to provide alternative basis to management on stocks recognised to fluctuate under environmental forcing. There is no other group within ICES on this thematic that is also the key for recovery plans of depleted stocks.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>The purpose of the WG is i) to integrate various survey data together as well as with meteo, satellite, fishery and/or ecosystem model outputs and ii) feed in the assessment process with synthetic understanding of how the spatial dynamics of the biological cycle and the stock dynamics are related to the ecosystem thus increasing ICES ability to use ecological information in assessment and prediction of small pelagics. The WG will work on different case studies in the ICES waters.</p> <p>This WG addresses Goal 1 Understand the physical, chemical, and biological functioning of marine ecosystems, in particular action numbers 1.2.2 Changes in spatio-temporal distributions in relation with environmental change, 1.6 assess and predict impact of climate variability and 1.7 play an active role in collaborations between ICES and other international research such as GLOBEC. This WG is also related to Goal 4 Advise on the sustainable use of living marine resources, in particular action number 4.11 Develop the scientific basis for an ecosystem approach to management.</p>
RESOURCE REQUIREMENTS:	No specific resource requirements beyond the need for members to prepare for and participate in the meeting.
PARTICIPANTS:	The Group is normally attended by some 15 members and guests. These would include scientists working on survey data, population modelling, environmental change and scientists participating to GLOBEC/SPACC.

SECRETARIAT FACILITIES:	None specific
FINANCIAL:	None specific
LINKAGES TO ADVISORY COMMITTEES:	Link with ACFM through WG MHSA and WGRED (advise on recruitment scenarios as deduced from environment and spawning habitat selection)
LINKAGES TO OTHER COMMITTEES OR GROUPS:	Link with WGPBI and WGRP of the Oceanography Committee (link fish populations to meso-scale physical structures, use of hydrodynamics model outputs). Link with groups dealing with environmental and fisheries survey data.
LINKAGES TO OTHER ORGANIZATIONS:	This group is acknowledged to be of relevance to the GLOBEC/SPACC programme by its executive committee since 2005.

2006/2/LRC05 The **Working Group on Seabird Ecology [WGSE]** (Chair: S. Garthe, Germany) will meet in Barcelona, Spain from 19–23 March 2007 to:

- a) finalize reviewing the current approaches for identifying offshore seabird aggregations and delineating Important Bird Areas (IBAs) and Special Protection Areas (SPAs);
- b) continue developing recommendations for a comprehensive monitoring programme for seabirds;
- c) finalise reviewing on how to sample diet and how to report results of dietary studies in seabirds, and develop recommendations for future field studies and analyses;
- d) consider scientific ecological issues linked to the circulation of parasites and pathogens within seabird populations;
- e) assess and report on changes in the distribution, population abundance and condition of seabirds in the OSPAR maritime area in relation to changes in hydrodynamics and sea temperature. (Further details on the interpretation and handling of this ToR will be provided by ACE);
- f) assess and report on the extent to which the changes reported in (e) can reliably be attributed to changes in hydrodynamics and sea temperature. (Further details on the interpretation and handling of this ToR will be provided by ACE);
- g) assess and report on the evidence on which the nominations of Arctic loon *Gavia arctica*, Balearic shearwater *Puffinus mauretanicus*, Band-rumped storm-petrel *Oceanodroma castro*, European shag *Phalacrocorax aristotelis*, Greater scaup *Aythya marila*, White-winged scoter *Melanitta fusca*, Black-legged kittiwake *Rissa tridactyla*, Ivory gull *Pagophila eburnea* and Thick-billed murre *Uria lomvia* for the OSPAR List of Threatened and/or Declining Species and Habitats are based. The purpose of each assessment is to ensure that the data used to support each nomination are sufficiently reliable and adequate to serve as a basis for conclusions that these species can be identified as threatened and/or declining species according to OSPAR's Texel/Faial criteria. [Note: this Term of Reference only has to be addressed if this request has not been fulfilled by an ad-hoc group in advance of the Expert Group meeting. Whether an ad-hoc group will be required can only be decided after further consultations with OSPAR. based on input from OSPAR MASH which meets in October. The ACE Chair will inform the Chair on the outcome of these discussions in November 2006].

WGSE will report by 30 April 2007 for the attention of the Living Resources Committee and ACE.

Supporting Information

PRIORITY:	This is the only forum for work being carried out by ICES in relation to marine birds. If ICES wishes to maintain its profile in this area of work, then the activities of WGSE must be regarded as of high priority.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	Action Plan No: 1.2, 1.7, 1.8, 2.2, 4.1, 4.15. Term of Reference a) This very comprehensive ToR could not be finalised at the 2006 WGSE meeting. Term of Reference b) This comprehensive ToR could not be finalised at the 2006 WGSE meeting. Term of Reference c) This comprehensive ToR could not be finalised at the 2006 WGSE meeting. Term of Reference d) This issue is of relevance because of the current general interest in the role of wild birds in the epizootology of some disease, and because seabirds represent interesting biological models for scientific investigations on the ecology of host-parasite interactions. Term of Reference e), f) and g) These ToRs are set to provide information for a request from OSPAR.
RESOURCE REQUIREMENTS:	Facilities for WGSE to work in Barcelona are anticipated to be excellent.
PARTICIPANTS:	The Group is normally attended by some 10–15 members and guests. The Working Group should be able to achieve most of the above objectives. However, some members may not be able to attend through lack of funding. Funding of these members from Member Countries would be very welcome.
SECRETARIAT FACILITIES:	None.
FINANCIAL:	No financial implications.
LINKAGES TO ADVISORY COMMITTEES:	ACE, ACME
LINKAGES TO OTHER COMMITTEES OR GROUPS:	WGSE is keen to continue the process of integration of seabird ecology into ICES work.
LINKAGES TO OTHER ORGANIZATIONS:	EU, OSPAR, HELCOM

2006/2/LRC06 **The Working Group on Baltic International Fish Survey [WGBIFS]** (Chair: R. Oeberst, Germany) will meet in Rostock, Germany, from 26–30 March 2007 to:

- a) combine and analyse the results of the 2006 acoustic surveys and experiments and report to WGBFAS;
- b) update the hydro-acoustic databases BAD1 and BAD2 for the years 1991 to 2006;
- c) plan and decide on acoustic surveys and experiments to be conducted in 2007 and 2008;
- d) discuss and report on the results from BITS surveys performed in autumn 2006 and spring 2007;
- e) plan and decide on demersal trawl surveys and experiments to be conducted in autumn 2007 and spring 2008;
- f) update and correct the Tow database;
- g) review and update the Baltic International Trawl Survey (BITS) manual;
- h) review and update the Baltic International Acoustic Survey (BIAS) manual;

- i) study the vertical distribution of the cod during the BITS survey in a situation with oxygen deficiency close to the bottom and produce report and recommendations;
- j) discuss the extension of the DATRAS data in time and space.

WGBIFS will report by 1 May 2007 for the attention of the Living Resources Committee and ACFM.

Supporting Information

PRIORITY:	The work of the Group is essential to the development of internationally coordinated trawl surveys and research on medium- and long-term changes of population structure of Baltic cod, herring and sprat stocks. These stocks are key elements of the Baltic Sea ecosystems.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>Action Numbers a): 1.2.1, 1.2.2 b): 1.2.2, 1.13.3 c): 1.11 d): 1.2.1, 1.2.2 e): 1.11, f): 1.11, g): 1.11, h): 1.13.4, 1.11 i): 1.13.4 j): 1.13.4 k): 1.13.4, 1.11</p> <p>The above Terms of Reference are set up to provide ACFM with information required to respond to requests for advice/information from the Inter-national Baltic Sea Fishery Commission and Science Committees.</p> <p>The main objective of WGBIFS is to coordinate and standardize national research surveys in the Baltic for the benefit of accurate resource assessment of Baltic fish stocks. From 1996 to 2003 attention has been put on evaluations of traditional surveys, introduction of survey manuals and consideration of sampling design and standard gears as well as coordinated data exchange format. In recent years activities have been devoted to co-ordinate international coordinated demersal trawl surveys using the new standard gear TV3 and to continue the analyses of the conversion factors between the new and old survey trawls.</p> <p>The most important future activities are to combine and analyze acoustic survey data for the Baltic Fisheries Assessment Working Group, develop a disaggregated hydroacoustic database, plan and decide on acoustic surveys and experiments to be conducted. The quality assurance of ICES will require achievements towards a fully agreed calibration of processes and internationally agreed standards.</p>
RESOURCE REQUIREMENTS:	No special/additional resources required.
PARTICIPANTS:	Relevant scientists from all institutes that participate in the Baltic International Fish Survey
SECRETARIAT FACILITIES:	Normal Secretariat facilities are necessary for running the meeting.
FINANCIAL:	None.
LINKAGES TO ADVISORY COMMITTEES:	ACFM: The quality of stock assessments and management advice of Baltic herring, sprat and cod stocks.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	WGBFAS, SGMPB, Resource Management Committee, Fisheries Technology Committee/ Study Group on Target Strength Estimation in the Baltic Sea (SGTSEB), Baltic Committee
LINKAGES TO OTHER ORGANISATIONS:	IBSFC

2006/2/LRC07 The Study Group on Recruitment Variability in North Sea Planktivorous Fish [SGRECVAP] (Chair: Mark Dickey-Collas, The Netherlands) will meet in Plymouth, UK from 7–11 May 2007 to: (ConC suggested that SGRECVAP should meet back to back with WKHRPB, BCC, Chairs have been asked to try to organise this)

- a) Produce a synthesis of quantitative estimates of the annual and seasonal anomalies of the following characteristics of the North Sea between at least 1980 to 2006 (at both the whole North Sea and sub region level) with access to the REGNS database:
 - i) Oceanic water inflow into the southern and northern North Sea.
 - ii) Hydrographic induced transport fluxes across the North Sea.
 - iii) Temperature and salinity by region, including water mass characteristics.
 - iv) The relative strength and locations of frontal features.
 - v) Copepod biomass and abundance.
 - vi) Total zooplankton biomass and abundance.
 - vii) Mismatch index, as defined by SAHFOS.
 - viii) The abundance and distribution of planktivorous fish larvae.
 - ix) Recruitment indices of planktivorous fish.
 - x) Spatial and temporal overlap of sprat, adult herring, mackerel, horse mackerel and seabirds with pre-recruits of planktivorous fish.
- b) To contrast this synthesis with the results from bio-physical models hindcast through the same period (1980–2006) to determine if any further hypotheses can be ruled out as the cause of the poor recruitment of North Sea planktivorous fish;
- 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;
- d) Report any evidence for the causes of the poor recruitment in recent years in North Sea herring to the HAWG meeting in 2008.

SGRECVAP will report by 30 August 2007 for the attention of the Living Resources Committee, and ACFM.

Supporting Information

PRIORITY:	The current activities of this Group will lead ICES into issues related to the ecosystem affects of fisheries, especially with regard to the Regional Ecosystem Approach to Integrated Management (REAIM). Consequently these activities are considered to have a very high priority.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	It is proposed that this be the second of two meetings of SGRECVAP. The poor recruitment in recent years in plantivorous fish in the North Sea has become cause for concern for fishers, managers and scientists alike. Working groups, managers and fishers have requested more information on the issue. SGRECVAP is designed to address these requests. There are many data and studies available that can be synthesised to help investigate the probable causes of the reduced recruitment in herring, sandeel and Norway Pout. By design the approach is non-correlative and hypothesis driven. This would allow the findings of SGRECVAP to be intergrated at a later date into advice, IBM approaches and studies on stock recoveries and ecosystem change.

	ToR d) This is in compliance with a recommendation from HAWG for further work to identify the causes and dynamics of the serial poor recruitment of North Sea herring. SGRECVAP supports directly ICES Goals 1, 3 and 4 in the action plan. The work spans the interests of many working groups,
RESOURCE REQUIREMENTS:	The research programmes which provide the main input to this group are already underway, and resources already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
PARTICIPANTS:	It is hoped that fish biologists, zooplankton ecologists, bird specialists, oceanographers and specialists in climate and regime change will attend the study group. This Study group will not meet if insufficient interest is shown by scientists from across the disciplines required.
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 both ACFM and ACE. It is supported by both Living Resources and Resource Management committees.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	The SG will have clear links to WGRP, WGZE, WGRES, SGMSNS, REGNS and WGRED plus others.
LINKAGES TO OTHER ORGANISATIONS:	The remit for this group is within the brief of GLOBEC, and the SPACC working groups.

2006/2/LRC08 **The Working Group on Crangon Fisheries and Life History [WGCRAN]**
(Chair: Andy Revill, UK) will meet at the University campus on Helgoland, Germany from 21–25 May 2007 to:

- a) produce protocols for the swept area estimate of *Crangon* biomass in the North Sea. Stratification by depth 0–10, 11–20, 21–30, >30 method to include ability to change gear and gear efficiency at a later date;
- b) initiate a new time series of the number of active vessel in fishery for each nation;
- c) review of MSC certification process;
- d) collate and update landings and effort data;
- e) review and report on recent *Crangon* R and D activity. Make recommendations on the basis of this.

WGCRAN will report by 14 September 2007 for the attention of the Living Resources Committee.

Supporting Information

PRIORITY:	<i>C. crangon</i> fisheries are economically important with landings value that rank this species in the top three species caught from the North Sea.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<i>Justification for the action plan TOR is as follows:</i> Despite the economic importance and regional dependencies of this species, we still have much to learn and understand on the natural history of this species, particularly in respect of its ecology, stock dynamics, mortality patterns, distribution etc.

CONTINUED	<p>We (WGCRAN) know much more about the fishery itself, how much is caught, who catches it, where and when etc. Such information, has limited utility however, and ICES will continue to have a retarded capacity to produce sound effective management advice in relation to these fisheries, if we use such information in isolation. For the production of more robust and flexible managerial advice, we need to combine our current knowledge of fisheries landings and effort with a good supportive biological understanding of the Crangon stocks and their ecological interactions. To this end, we make this our priority for the WGCRAN.</p> <p>In support of this aim, we note that much routine survey data on <i>C. crangon</i> abundance and distribution is collected annually across the North Sea during national demersal young fish surveys. We intend to collate such data to produce swept area estimates of <i>C. crangon</i> biomass and its distribution, thus improving our biological understanding of this species while providing a useful tool for management.</p> <p>This last aim is not without its obstacles, and includes determining the relative and absolute efficiencies of the different survey gears used on the various national surveys in respect of <i>Crangon</i>. Such things are rarely insurmountable, so progress is expected.</p> <p>The <i>C. crangon</i> fishery may also become a focus of further attention in the future, particularly in relation to its discarding practices, impacts upon benthic communities, technological innovations (i.e. electric shrimp beam trawl), the efficacy of existing technical measures, economic performance, and the sustainability of stocks. This attention may arise directly from the current process of MSC (Marine Stewardship Council) certification that is now underway, renewed NGO activity and interest, licensing of fisheries activities within Wadden Sea Marine Protected Areas, etc. It is for this reason that we have made some recommendations to other ICES working groups.</p>
RESOURCE REQUIREMENTS:	The research programmes which provide the main input to this group are already underway, and resources already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
PARTICIPANTS:	The Group is normally attended by <10 members and guests.
SECRETARIAT FACILITIES:	None.
FINANCIAL:	No financial implications.
LINKAGES TO ADVISORY COMMITTEES:	There are no obvious direct linkages with the advisory committees.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	There is linkage to the Living Resources Committee
LINKAGES TO OTHER ORGANIZATIONS:	No linkage beyond that of the WG membership

2006/2/LRC09 The Study Group on the Biology and Life History of Crabs [SGCRAB] (Chair: Julian Addison, UK) will be renamed the **Working Group on the Biology and Life History of Crabs [WGCRA B]** and will meet in Lowestoft, UK from 30 April to 3 May 2007 to:

- a) compile data on landings, discards, effort and catch rates (CPUE) for the important crab fisheries in the ICES area;
- b) standardize methods for the acquisition, analysis and interpretation of CPUE, size frequency and research survey data and produce user manual;
- c) define and report stock structure / management units for crab stocks;
- d) assess and report on environmental effects including diseases on crab fisheries;
- e) assess and report on the interaction between net/dredge fisheries, other anthropogenic activities and crab stocks;
- f) assess and report on the effects of fishing on the biological characteristics of crab stocks;
- g) review and report on the methods for estimating recruitment in crab stocks.

WGCRA B will report by 30 June 2007 for the attention of the Living Resources Committee.

Supporting Information

<p>PRIORITY:</p>	<p>The fisheries for crabs are becoming socio-economically more important and trans-national in Europe and Canada with the demise of fin fisheries in some regions. Management of stocks in Europe is usually by technical measures only and there are generally no management instruments to control effort. Knowledge of the population dynamics of these species is also weak. These stocks may be at risk from over-fishing. The activity of the Group is, therefore, considered to be of high priority in particular if it's activity can move towards resource assessment without losing biological inputs.</p>
<p>SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:</p>	<p>a) The European <i>Cancer</i>, <i>Maja</i> and <i>Paralithodes</i> stocks, some of the Kamchatka crab (<i>Paralithodes camtschatica</i>) and the Atlantic Canadian snow crab (<i>Chiononectes</i>) stocks are apparently in a phase of expansion with effort, catch, and CPUE increasing in a number of fisheries. In addition these fisheries are becoming more international in nature and more highly capitalised with the expansion of effort to offshore grounds. [Action Plan Number 1.2.2]</p> <p>b) There is a high reliance on CPUE data in the assessment of European crab fisheries and this is likely to remain the case in the medium term. Size frequency data are also collected in a number of fisheries. Small scale temporal and spatial variability in size frequency data may affect the estimates of fishing mortality in analytical assessments. Methods of aggregation of size frequency data are therefore important. In Canada snow crab are assessed by trawl and pot surveys. Longer and better quality data time series and automated methods for acquisition of CPUE data are becoming available. These data are reliable indicators of changes in stock abundance. More international collaboration and standardisation of methods for monitoring and assessment will be necessary given the increasing trans-national distribution of crab fishing. [Action Plan Number 1.2.2]</p> <p>c) Although crab stocks are heavily fished and there is no effort control in European fisheries, catch rates appear stable or are increasing. The biotic and physical environment can be important in regulating crab populations. Factors such as parasites, diseases, habitat degradation, temperature change, and removal of predators or competitors are potentially important. Increased understanding of such interactions will be necessary for the proper management of crab stocks. The use of MPAs may be useful in demonstrating fishing and non-fishing effects on population dynamics. [Action Plan Number 1.2.1]</p>

<p>SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:</p>	<p>d) Size selective and single sex fisheries can have substantial impacts on the biological functioning and dynamics of crab stocks. Size and age structure, sex ratio, selection for slower growth, changes in density dependent rates, reproductive behaviour and functioning can be affected. These effects can have long-term implications for the productivity of the stocks. Changes in stock characteristics have important implications for analytical assessments. Analysis of these effects by comparison of populations managed by different regulations may be informative. For instance comparison of predominantly female <i>Cancer pagurus</i> fisheries in the east Atlantic and male only <i>C. irroratus</i> and <i>C. borealis</i> fisheries on the west Atlantic may give insight into the biological effects of fisheries. [Action Plan Number 1.6]</p> <p>e) By-catch of crab (<i>Maja</i> and <i>Cancer</i>) can be significant in bottom trawl fisheries and significant quantities of juvenile crab and soft shell crab may be killed by trawled gear in coastal areas. Mature female crab relies to some extent on gravel substrates during incubation of eggs and extraction of gravel aggregates may have an affect on spawning activity. [Action Plan Numbers 2.13 and 3.16]</p> <p>f) Assess the effects of fishing on the biological characteristics of crab stocks [Action Plan Number 1.2.1]</p> <p>Size selective and single sex fisheries can have substantial impacts on the biological functioning and dynamics of crab stocks. Size and age structure, sex ratio, selection for slower growth, changes in density dependent rates, reproductive behaviour and functioning can be affected. These effects can have long term implications for the productivity of the stocks. Changes in stock characteristics have important implications for analytical assessments. Analysis of these effects by comparison of populations managed by different regulations may be informative. For instance comparison of predominantly female <i>Cancer pagurus</i> fisheries in the east Atlantic and male only <i>C. irroratus</i> and <i>C. borealis</i> fisheries on the west Atlantic may give insight into the biological effects of fisheries.</p> <p>g) The reliance on CPUE as an assessment method may be inadequate for long lived species where the recruitment of cohorts to the fisheries is protracted due to variable growth and where the recruitment to the fishery lags a number of years behind recruitment to the population. Pre-recruit surveys have only short term forecasting capacity. Ability to estimate the abundance of settlers or early benthic phases has been a milestone in the development of management measures for a number of crustacean fisheries worldwide (e.g., western Australian rock lobster, American lobster). These methods are feasible for a number of species studied by this group and should be developed</p>
<p>RESOURCE REQUIREMENTS:</p>	<p>Existing national programmes provide the main input for discussion. The level of activity and approaches taken in these programmes determine the capacity of the Group to make progress.</p>
<p>PARTICIPANTS:</p>	<p>Additional members working on other <i>Cancer</i> and King crab species in particular, specialists in resource modelling of fisheries data, and fisheries managers should be invited into the Group in order to deliver the terms of reference. Comparison of <i>Cancer pagurus</i> with <i>C. borealis</i> and <i>C. irroratus</i> on the east and west Atlantic may be informative. No independent survey work is undertaken for any of these species.</p>
<p>SECRETARIAT FACILITIES:</p>	<p>None</p>
<p>FINANCIAL:</p>	<p>No financial implications</p>
<p>LINKAGES TO ADVISORY COMMITTEES:</p>	<p>None</p>
<p>LINKAGES TO OTHER COMMITTEES OR GROUPS:</p>	<p>Resource Management Committee</p>
<p>LINKAGES TO OTHER ORGANISATIONS:</p>	<p>None</p>

2006/2/LRC10 A Workshop on Testing the Entrainment Hypothesis [WKTEST] (Co-Chairs: P. Petitgas*, France, and I. McQuinn*, Canada) will meet in Nantes, France from 4–7 June 2007 to:

- a) document diagnostic case studies in pelagic, demersal and benthic fish that evidence / falsify the entrainment hypothesis;
- b) based on the above further define the understanding of the mechanisms by which life cycles patterns are maintained or change;
- c) report on the consequences of the understanding for spatial fisheries management and recovery plans.

WKTEST will report by 1 August 2007 for the attention of the Living Resources Committee.

Supporting Information

PRIORITY:	The workshop is an essential milestone for ICES in the building scientific knowledge to deliver biological advice on recovery plans in the context of climate change and depleted populations.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>Variation / maintenance in fish stocks are usually seen as responses to external forcing. The workshop addresses behavioural processes internal to the stock, changing the perspective of external forcing into a stock-climate interaction in which internal population properties is the key in population response to climate. SGRESP has formulated the entrainment hypothesis which states that life cycle closure and spatial pattern are sustained by repeat spawners behaviourally entraining first-spawners into the spawning migration. The hypothesis is a novel way of thinking population functioning since Sinclair's essay on population regulation and speciation (1988). The workshop is designed to test the hypothesis on demonstrative case studies as well as consider its implications for (alternative) management scenarios.</p> <p>The workshop addresses Goal 1 Understand the physical, chemical, and biological functioning of marine ecosystems, in particular action numbers 1.2.2 Changes in spatio-temporal distributions in relation with environmental change, 1.6 assess and predict impact of climate variability and 1.7 play an active role in collaborations between ICES and other international research such as GLOBEC. This WG is also related to Goal 4 Advise on the sustainable use of living marine resources, in particular action number 4.11 Develop the scientific basis for an ecosystem approach to management. WKTEST is an activity of WGLESP.</p>
RESOURCE REQUIREMENTS:	None specific.
PARTICIPANTS:	20–30 participants are expected, representing key geographical systems and species populations across the North Atlantic for analysing impact of climate change and stock collapse and recovery. Participants would belong to fisheries and academic institutes and be related to GLOBEC programs.
SECRETARIAT FACILITIES:	None specific
FINANCIAL:	None specific
LINKAGES TO ADVISORY COMMITTEES:	No explicit linkage to advisory committees. Thematic link to ACFM through WGRED in providing a framework for advising on recovery plans under climate change.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	No explicit linkage to other committees. Thematic link to WGRP in providing spawning habitat selection processes to serve as initial condition for larval drift and survival.
LINKAGES TO OTHER ORGANIZATIONS:	No explicit linkage. Thematic link to GLOBEC/SPACC on selection of spawning habitats under climate change and population depletion.

2006/2/LRC11 The Working Group on Beam Trawl Surveys [WGBEAM] (Chair: R Millner, UK) will meet in Oostend, Belgium from 11–15 June 2007 to:

- a) prepare a progress report summarising the results of the 2007 beam trawl surveys (and consider presenting as a poster, ICES ASC 2007);
- b) calculate population abundance indices by age-group for sole and plaice in the North Sea, Division VIIa and Divisions VIId-g;
- c) further co-ordinate offshore and coastal beam trawl surveys in the North Sea and Divisions VIIa and VIId-g;
- d) describe and evaluate the current methods for calculating population abundance indices with emphasis on the inshore surveys;
- e) continue the work on developing relative catchabilities and gear efficiencies of the different gears, report on progress;
- f) continue work of developing and standardising an international database of beam trawl survey data and co-ordinate such activities with those of the IBTSWG, report on progress;
- g) continue the work on collating information on the epibenthic invertebrate by-catch during beam trawl surveys into a common database and agree which summary results should be reported;
- h) develop protocols and criteria to ensure standardisation of all sampling tools and surveys gears.

WGBEAM will report by 31 August 2007 for the attention of the Living Resources and the Resource Management Committees, ACFM and WGNSSK.

Supporting Information

PRIORITY:	Essential. Beam trawl surveys provide essential abundance indices for the assessments of North Sea and area VII plaice and sole stocks.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>WGBEAM is particularly active in addressing the ICES' action plan Goal 1 issues. The beam trawl surveys are an important source of information (for various taxa only) that allows quantification of stock structure, dynamics, and spatial distribution of commercially and ecologically important demersal fish as well as epibenthic invertebrate species. The aim is to develop a standardized monitoring program that can adequately deliver this information.</p> <p>ToRs a) and b) are standard tasks for WGBEAM i.e. collating data in a standardized manner and making the data and extractions of the data accessible to the scientific community. The results can be used for tuning assessments and ecosystem monitoring. [Action number 1.2.2]</p> <p>ToRs c) and d) WGBEAM has previously concentrated on offshore beam trawl surveys. There continues to be a need to focus on the coastal beam trawl surveys which have been less effectively coordinated, despite providing an index for the assessment of plaice and sole. [Action number 1.11]</p> <p>ToR e) Further work in developing and applying relative catchabilities between the different surveys is necessary in order for the beam trawl survey database to be used for the whole area covered by the surveys. [Action number 1.11 and 1.13.4]</p> <p>ToR f) Additional work is needed to ensure data from all the surveys can be provided to ICES in compliance with DATRAS [Action number 6.1]</p> <p>ToR g) The bycatch of epibenthic invertebrates in the beam trawl surveys can provide information on both the abundance and distribution of these species. For most of these species this is the only regular source of information. WGBEAM aims at making this information available. [Action numbers 1.2.2 and 6.1]</p>

	ToR h) The WG will assist in developing standard protocols for sampling, survey design and implementation. [Action numbers 1.11 and 1.13.1]
RESOURCE REQUIREMENTS:	The research programmes which provide the main input to this group are already underway, and resources already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
PARTICIPANTS:	Experts actively involved in the beam trawl surveys should participate.
SECRETARIAT FACILITIES:	None
FINANCIAL:	No financial implications
LINKAGES TO ADVISORY COMMITTEES:	The Terms of Reference are set up to provide ACFM with the information required to respond to requests for advice/information from NEAFC and EC DGXIV. ACE
LINKAGES TO OTHER COMMITTEES OR GROUPS:	Resource Management Committee, in particular IBTSWG , WGNSSK, WGNSDS & WGSSDS
LINKAGES TO OTHER ORGANISATIONS:	None

2006/2/LRC12 The **Stock Identification Methods Working Group [SIMWG]** (Co-Chairs: S. Cadrin USA, J. Waldman, USA, and S. Mariani, Ireland) work by correspondence in 2006/2007 to:

- a) liaise with ICES working groups and study groups dealing with stock identification issues; providing technical reviews to expert groups and LRC; Specifically provide advice methods, analyses and procedures, on; Redfish to NWWG; wide ranging shark species to WGEF, and deep water spp, Tusk, Ling and Blue Ling to WGDEEP;
- b) review and report on new advances in stock identification methods as they develop;
- c) advise on the need for future meetings of the SIMWG, and prepare appropriate Terms of Reference if required;
- d) review the papers presented at Theme Session Q at the 2006 ASC and make recommendations for future work.

SIMWG will report by 31 May 2007 for the attention of the Living Resources Committee and will also report on the progress at the 2007 Annual Science Conference.

Supporting Information

PRIORITY:	Essential. Stock structure is a fundamental requirement before any assessment or modelling on a stock level can be contemplated. SIMWG liaises with ICES study groups and workings groups on stock identification issues and continues to review new methods as they develop.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	Action Plan No 1 – Action 1.2.1: Understand and quantify stock structure of commercially and ecologically important species. [LRC] Stock structure and stock identification have been identified as part of the work programme of the Living Resources Committee and SIMWG continues to make progress on the development of its Stock Identification Methodology. This group has recently completed the publication of a book on methods and their application. It will now act by correspondence to maintain the highest levels of these methods. It will actively review the field in general, and the actions of particular relevant EG.
RESOURCE REQUIREMENTS:	Additional resources required are negligible.
PARTICIPANTS:	41
SECRETARIAT FACILITIES:	None
FINANCIAL:	No financial implications
LINKAGES TO ADVISORY COMMITTEES:	ACFM
LINKAGES TO OTHER COMMITTEES OR GROUPS:	WGAGFM – Chairs of these two Working Groups are corresponding to ensure that there is no unnecessary overlap in their work. SGSIMUW is coordinating a study on the stock identity and management units of whiting in the North Sea and liaising with SIMWG.
LINKAGES TO OTHER ORGANIZATIONS:	There are no direct linkages to other organizations.

2006/2/LRC13 The Planning Group on North Sea Cod and Plaice Egg Surveys in the North Sea [PGEAGGS] (Chair: C. Fox, UK) will work by correspondence during 2006–2007 to:

- a) produce published outputs based on data collected during the 2004 North Sea Egg Surveys, and prepare for publication as an *ICES Cooperative Research Report*;
- b) investigate and report on long-term archiving of the survey data at the ICES Data Centre;
- c) undertake initial planning for a North Sea ichthyoplankton survey in 2009.

PGEAGGS will report by 30 June 2007 for the attention of the Living Resources and the Resource Management Committees.

Supporting Information

PRIORITY:	The current activities of this Group will ensure that the results of the 2004 North Sea Egg Survey are widely publicised and made available to interested groups such as REGNS. The planned 2009 surveys are important in that they will confirm finding from 2004 in relation to locations of cod spawning and further investigate whether cod in the northern North Sea are actively spawning. It is also planned to attempt to produce an egg production estimate for plaice in the southern North Sea. These results are important in relation to on-going management issues with these two key commercial stocks. Consequently, these activities are considered to have a very high priority.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	Action Plan: 1.2.1, 1.2.2, 1.8, 1.10 Terms of reference a) The rationale for establishing co-ordinated international North Sea ichthyoplankton surveys was presented in the report of PGEGBS which met in IJmuiden from 24-26 June 2003 and endorsed by the LRC. A successful survey was planned and undertaken in 2004 under the direction of PGEGBS. The results confirmed reduced egg production for plaice compared with earlier surveys and raised important scientific questions regarding effective cod spawning areas. It is now vital that these results are made available to as wide an audience as possible and that data are made available to other WGs such as REGNS. Term of reference b) Particularly for cod the 2004 results need to be confirmed and in particular the apparent low egg production of northerly areas investigated. The situation should be monitored by regular surveys. Because of the cost of undertaking such surveys, PGEGBS has recommended that they be undertaken every 5 years.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN CONTINUED:	Term of reference c) Monitoring spawning areas of main fish species has been recommended as a high priority for Ecosystem Based Approach to Management by the Bergen Declaration Meeting of Scientific Experts.
RESOURCE REQUIREMENTS:	The additional resource required to undertake additional activities by correspondence is negligible.
PARTICIPANTS:	
SECRETARIAT FACILITIES:	None.
FINANCIAL:	No financial implications.
LINKAGES TO ADVISORY COMMITTEES:	Data are required by the ICES Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak, and REGNS.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	Links should be established with the Working Group on Zooplankton Ecology since additional plankton samples could be collected during the surveys at minimal extra cost. The value of such additional sampling should be explored in conjunction with WGZE.
LINKAGES TO OTHER ORGANIZATIONS:	No formal linkages

2006/2/LRC14 The Working Group on Mackerel and Horse Mackerel Egg Surveys
 [WGMEGS] (Chair: P. Alvarez*, Spain) will work by correspondence in 2006/2007 to:

- a) examine the results of the Lowestoft workshops (October 2006) on mackerel and horse mackerel egg staging and identification and histology, and incorporate these into the Survey Manual for the 2007 survey;
- b) fine-tune survey execution in 2007.

WGMEGS will report by 1 June 2007 for the attention of the Living Resources and the Resource Management Committees.

Supporting Information

PRIORITY:	Essential. Terms of Reference are set up to provide ACFM with the information required for responding to requests for advice/information from NEAFC and EC DGXIV.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	Action Plan No: 1. The egg survey provides the only fishery-independent stock estimate for north-east Atlantic mackerel and for both the western and the southern horse mackerel stocks. The surveys provide the most essential indices for the tuning of the VPAs. The survey is based on a time series since 1977. The ToR for this year is largely routine, as the group does not meet in the year of a survey. Term of Reference a) WGMEGS has previously sponsored pre-survey Workshops in 2000 and 2003. These are essential to standardize many aspects of the survey protocol, but particularly egg sample collection, sorting, species ID and staging. In 2003 the workshop was expanded to provide the same standardisation for the histological work required for the survey estimates; fecundity and atresia. As the surveys are held only once every 3 years it is vital to have all participants working in concert. The workshop will make recommendations for survey procedures and analysis, and these will be assimilated into the survey manual and used for the 2007 survey.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN CONTINUED:	Term of Reference b) The 2006 report of WGMEGS outlined the <i>provisional</i> plan for the 2007 surveys. The group will maintain a watching brief on how this transpires in practice. The main actions are to ensure that the best coverage is obtained for the survey in the five survey periods. Problems with weather, vessels etc must be taken account of. The group will also maintain oversight of the adult sampling aspects of the work, to ensure the best temporal and spatial coverage of these samples.
RESOURCE REQUIREMENTS:	None. The surveys are all part of the national programmes. The surveys and associated meetings are also partially funded under the EU data directive
PARTICIPANTS:	N, NL, P, ESP, UK (E), UK (Scot), D, IRL. Usually 25 – 30 participants
SECRETARIAT FACILITIES:	None.
FINANCIAL:	No financial implications.
LINKAGES TO ADVISORY COMMITTEES:	ACFM.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	Reports to the Living Resources and the Resource Management Committees, as well as WGMHSA. Other less formal links with WGRES, WKSAD, and WGACEGG
LINKAGES TO OTHER ORGANIZATIONS:	There are or have been a number of associated EU funded projects which make reports to the Group

2006/2/LRC15 The **Working Group on Cephalopod Fisheries and Life History** [WGCEPH] (Chair: Joao Pereira, Portugal) will work by correspondence in 2007 to:

- a) update and evaluate landing statistics across the ICES area;
- b) report on innovative cephalopod research results in the ICES area;
- c) finalise production of the *ICES Cooperative Research Report* and submit for publication.

WGCEPH will report by 31 July 2007 for the attention of the Living Resources Committee, ACFM and ACE.

Supporting Information

PRIORITY:	High. The work of the Group is of high priority to ICES because cephalopods are an important component of marine ecosystems.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>Cephalopods support important fisheries in the ICES area. However, they remain outside the scope of the European Community's Common Fisheries Policy and understanding of stock dynamics, particularly in European coastal waters, remains heterogeneous: although population assessments and fishery diagnostics are developed in some areas, time series of recruitment estimates are still too short to analyse stock/recruitment relationships.</p> <p>Specific comments to the Terms of Reference are:</p> <p>a) This activity remains fundamental to the work of the Group. The past broadening of the remit to include effort, discard, and survey data was useful but improved data, and improved access to data, are needed before the collection of the same may be resumed. [Action Number 1.2.2]</p>
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN CONTINUED:	<p>b) With the current uncertainty on the level of financing that may be obtained to proceed research on cephalopods in European waters, it is to a large degree difficult to predict what the direction of the research will be. Thus not being able to be pro-active on the research, we consider that being reactive will help maintain the interest and demonstrate the advantages of the work that can be carried out, while submitting results and analyses that will be directly applicable to the ICES action plan. It is expected that several new research projects will be developed on a local basis, which will be relevant to several action plan points [e.g. assessment in the U.K. to Action Number 1.2.1]</p> <p>c) The final ToR aims to disperse the findings of the CEPHSTOCK project to the wider community. A CRR aimed manuscript is to a large degree compiled but actual production and presentation for publication requires additional work to be carried out during 2006 [Action Number 10.4].</p>
RESOURCE REQUIREMENTS:	WGCEPH, more than most ICES Working Groups, relies on participation from a wide range of scientists working outside the traditional government fisheries laboratories in ICES countries and has, indeed, benefited enormously over the last 10-15 years from the input of other scientists working often in universities where no funding is available for participation in ICES activities. This must be taken into account in the organisation of WGCEPH meetings. In particular, the opportunity to use project funding must be seized when they present themselves. Without this source of funding, the group must resort to meeting by correspondence.
PARTICIPANTS:	In addition to European Atlantic Scientists involved in CEPHSTOCK, input from scientists in the USA and Canada (where some cephalopod fisheries are routinely assessed and managed) is useful.
SECRETARIAT FACILITIES:	None
FINANCIAL:	None

LINKAGES TO ADVISORY COMMITTEES:	Terms of Reference a) and b) are set up to provide ACFM with the information required to respond to requests for advice/information from NEAFC and EC DGXIV.
LINKAGES TO OTHER COMMITTEES OR GROUPS:	None
LINKAGES TO OTHER ORGANISATIONS:	None

2006/2/LRC16 The Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES Areas VIII and IX [WGACEGG]. (Chair: M. Bernal, Spain) will meet in Palma de Mallorca, Spain from the 26–30 November 2007 to:

- a) plan and coordinate egg surveys in ICES Areas VIII and IX and standardize analysis procedures;
- b) plan and coordinate acoustic surveys in ICES Areas VIII and IX and standardize analysis procedures;
- c) develop a framework to cross-validate egg production and acoustic methods for the estimation of Spawning stock biomass and its distribution;
- d) explore the possibilities to integrate egg production and acoustic based Spawning stock biomass estimates;
- e) finalise new egg production procedures and associated software developed under SGSBSA;
- f) integrate biological/environmental information from surveys and additional sources to study the relationships between sardine and anchovy and the pelagic community in ICES Areas VIII and IX.

WGACEGG will report by 21 December 2007 for the attention of the Living Resources Committee.

Supporting Information

PRIORITY:	The Group has high priority as it will be responsible for providing integrated advice for two major and depleted 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 WGMHSA for assessment purposes. It will also capitalise on the successful work of SGSBSA and of the EU project PELASSES.
SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN:	<p>ToR a) Plan and coordinate 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. Also, attention will be paid to the coordination, planning and standardization of CUFES surveys through all VIII and IX ICES Areas. [Action Numbers 1.11; 1.13].</p> <p>ToR b) Plan and coordinate acoustic surveys in ICES Areas VIII and IX and standardize analysis procedures. Planning and coordination of acoustic surveys in ICES Areas VIII and IX have been attempted within the EU project PELASSES. WGACEGG is expected to improve planning and coordination between Spanish (IEO, AZTI), Portuguese (IPIMAR) and France (IFREMER) acoustic surveys, as well as standardising methods and analysis procedures between these countries/institutes. [Action Numbers 1.11; 1.13].</p>

SCIENTIFIC JUSTIFICATION AND RELATION TO ACTION PLAN (CONTINUED)	<p>ToR c) Develop a framework to cross-validate 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. [Action Numbers 1.2; 1.11; 1.13].</p> <p>ToR d) Explore the possibilities of integrating egg production and acoustic based Spawning stock biomass estimates. Building from the knowledge of differences and sources of uncertainty/bias in each of the methods, obtained in ToR c) above, WGACEGG will explore the possibility of using both methods to obtain an integrated estimate of SSB. [Action Number 1.11].</p> <p>ToR e) Finalise new egg production procedures and associated software developed under SGSBSA. Both newly developed DEPM and traditional egg production methods have been explored in SGSBSA, and associated robust and user-friendly software to perform egg production estimates is under development. WGACEGG will continue to support this attempt, by validation and testing of these methods, with the aim of producing a complete manual with associated software for performing such analysis. [Action Number 1.10]</p> <p>ToR f) Integrate biological/environmental information from surveys and additional sources to study the relationships between sardine and anchovy and the pelagic community in ICES Areas VIII and IX. 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:	15–20
SECRETARIAT FACILITIES:	None
FINANCIAL:	None
LINKAGES TO ADVISORY COMMITTEES:	ACFM
LINKAGES TO OTHER COMMITTEES GROUPS:	WGMHSA, WGLESP
LINKAGES TO OTHER ORGANIZATIONS:	Other countries/institutions applying the DEPM, or carrying out integrated acoustic-egg surveys worldwide.