

List of ICES CM 2011 document codes

Joint ACOM/SCICOM

ACOMSCICOM:01	Joint ACOM/SCICOM Marine Strategy Framework Directive Steering Group (STGMSFD) Correspondence
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Advisory Committee (ACOM)

ACOM:01	Advisory Committee (ACOM) November 2011
ACOM:02	Partner Commissions, Joint Norwegian-Russian Fisheries Commission, ACOM leadership (MICC) month XX
ACOM:03	Regional Advisory Council, stakeholders, ACOM leadership (MIRAC) January 2011
ACOM:04	Annual Meeting of Advisory Working Group Chairs (WGCHAIRS) January 2011
ACOM:05	Arctic Fisheries Working Group (AFWG) April–May 2011
ACOM:06	Herring Assessment Working Group for the Area South of 62°N (HAWG) March 2011
ACOM:07	North-Western Working Group (NWWG) April–May 2011
ACOM:08 Ref. PGCCDBS	Baltic Salmon and Trout Assessment Working Group (WGBAST) March 2011
ACOM:09	Working Group on North Atlantic Salmon (WGNAS) March 2011
ACOM:10	Baltic Fisheries Assessment Working Group (WGBFAS) April 2011
ACOM:11	Working Group on the Assessment of Southern Shelf Stocks of Hake, Monk and Megrin (WGHMM) May 2011
ACOM:12	Working Group for the Celtic Seas Ecoregion (WGCSE) May
ACOM:13	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak (WGNSSK) May 2011
ACOM:14	Joint NAFO/ICES <i>Pandalus</i> Assessment Working Group (NIPAG) October 2011
ACOM:15	Working Group on Widely Distributed Stocks (WGWIDE) August 2011
ACOM:16	Working Group on Anchovy and Sardine (WGANSA) June 2011
ACOM:17	Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources (WGDEEP) March
ACOM:18 Ref. WGRECORDS, SGEF	Joint EIFAC/ICES Working Group on Eels (WGEEL) September 2011
ACOM:19	Working Group Elasmobranch Fishes (WGEF) June 2011
ACOM:20 Ref. NAFO Scientific Council	Working Group on Harp and Hooded Seals (WGHARP) August 2011
ACOM:21	Fishery Statistics Liaison Working Group (WGSTAL) May 2011
ACOM:22	Working Group on Mixed Fisheries Advice for the North Sea (WGMIXFISH) August–September 2011

ACOM:23	Planning Group on Recreational Fisheries Surveys (PGRFS) May 2011
ACOM:24	Working Group on the Ecosystem Effects of Fishing Activities (WGECO) April 2011
ACOM:25	Working Group on Marine Mammal Ecology (WGMME) February 2011
ACOM:26	Working Group on Bycatch of Protected Species (WGBYC) February 2011
ACOM:27	ICES/NAFO Joint Working Group on Deep-water Ecology (WGDEC) February–March 2011
ACOM:28	ICES/IOC/IMO Working Group on Ballast and Other Ship Vectors (WGBOSV) March 2011
ACOM:29	ICES Working Group on Introduction and Transfers of Marine Organisms (WGITMO) March 2011
ACOM:30	Study Group on Integrated Monitoring of Contaminants and Biological Effects (SGIMC) March 2011
ACOM:31	Study Group on Recruitment Forecasting (SGRF) February 2011
ACOM:32	FIMPAS Workshop 3 (FIMPAS3) January 2011
ACOM:33	Second Workshop on Implementing the ICES FMSY Framework (WKFRAME2) January 2011
ACOM:34	Workshop to consider reference points for all stocks based on WKFRAME2 (WKMSYREF) February 2011
ACOM:35	Workshop on Frequency of Assessments and Updating Advice (WKFREQ) March 2011
ACOM:36	Workshop on splitting of deep water shark historical catch data WKSHARK (WKSHARK) June 2011
ACOM:37 Ref. OSPAR	ICES/OSPAR Workshop on the lysosomal stability data quality and interpretation (WKLYS) September 2011
ACOM:38	Benchmark Workshop on Saithe, Haddock, Herring and Horse Mackerel Stocks (WKBENCH) January 2011
ACOM:39	Benchmark Workshop on Flatfish Species (WKFLAT) February 2011
ACOM:40	Planning Group on Commercial Catches, Discards and Biological Sampling (PGCCDBS) February 2011
ACOM:41	Workshop on Age Reading of Greenland Halibut (WKARGH) February 2011
ACOM:42 Ref. PGCCDBS	Workshop on Age reading of European Atlantic Sardine (WKARAS) February 2011
ACOM:43 Ref. WGRECORDS, WGEEL, SGIPEE, SGAESAW and PGCCDBS	Workshop on Age Reading of European and American Eel (WKAREA-2) March 2011
ACOM:44 Ref. WGBAST, WGRECORDS and SSGEF	Workshop on Age Determination of Salmon (WKADS) January 2011
ACOM:45	Workshop of National Age Readings Coordinators (WKNARC) September 2011
ACOM:46	Workshop on Sexual Maturity Staging of Herring and Sprat (WKMSHS) June 2011
ACOM:47	Workshop on Sexual Maturity Staging of Redfish and Greenland Halibut (WKMSREGH) December 2011

ACOM:48 Ref. PGCCDBS, RCMs, and STECF/SGRN,	Workshop on practical implementation of statistical sound catch sampling programmes (WKPICS) November 2011
ACOM:49 Ref. PGCCDBS, RCMs, STECF/SGRN	Workshop on the utility of commercial CPUE and VMS data in assessments (WKCPUEFFORT) April 2011
ACOM:50 Ref. PGCCDBS and RCMs	Study Group on Practical Implementation of Discard Sampling Plans [SGPIDS] June–July 2011
ACOM:51	Workshop on the analysis of the benchmark of cod in Subarea IV (North Sea), Division VIIId (Eastern Channel) and Division IIIa (Skagerrak) (WKCOD) February 2011
ACOM:52	Report of the FIMPAS 3 Workshop – Management proposals for Dogger Bank, Cleaver Bank and Frisian Front
ACOM:53	Data Deficiency Workshop with the RACs [WKDDRAC] 26-27 January
ACOM:54	Ad hoc Group on Deep-sea Survey [ADGSS] 3 March
ACOM:55	Joint ICES-STEFC Workshop on management plan evaluations for roundfish stocks (WKROUNDMP/EWG 11-01)
ACOM:56	ICES WKROUNDMP 2011 / STECF EWG 11-07.. Evaluation and Impact Assessment of Management Plans PT II
ACOM:57	Technical Evaluation of Rockall Haddock proposed harvest control Rules – August 2011
ACOM:58	Workshop 1 on Marine Strategy Framework Directive – Descriptor 3+ (WKMSFD1 D3+)
ACOM:59	Workshop 2 on Marine Strategy Framework Directive – Descriptor 3+ (WKMSFD2 D3+)
ACOM:60	Second Data Deficiency Coordination Workshop with the RACs [WKDDRAC2]
ACOM:61	Workshop on Redfish and Oceanographic Conditions (WKREDOCE)
ACOM:62	Workshop on Herring Interim Advice on the Management Plan (WKHIAMP)
ACOM:63	Report of the Workshop on Western Horse Mackerel Management Plan Evaluation (WKWHMMP1)

Science Committee (SCICOM)

SCICOM:01	SCICOM Midterm Report
SCICOM:02	SCICOM September Report
SCICOM:03 Ref. ACOM	Working Group on Data and Information Management (WGDIM) May 2011
SCICOM:04 Ref. Council	SCICOM Progress Report 2010
SCICOM:02 Ref. ACOM	ICES Publications and Communications Group (PUBCOM) During ASC
SCICOM:03 Ref. ACOM	ICES Training Group [ITG] During ASC
SCICOM:04 Ref. ACOM	Joint SCICOM and ACOM Strategic Initiative on Biodiversity Science and Advice (SIBAS)
SCICOM:05	Joint ACOM and SCICOM Strategic Initiative on Area Based Science and

Ref. ACOM	management (SIASM)
SCICOM:06 Ref. ACOM	ACOM and SCICOM Strategic Initiative on Stock Assessment Methods (SISAM)
SCICOM:07	SCICOM Steering Group on Ecosystem Surveys Science and Technology (SSGESST) Correspondence
SCICOM:08	SCICOM Steering Group on Sustainable Use of the Ecosystem (SSGSUE) Correspondence
SCICOM:09	SCICOM Steering Group on Human Interactions on Ecosystems (SSGHIE) Correspondence
SCICOM:10	SCICOM Steering Group on on Regional Sea Programmes (SSCRSP) Correspondence
SCICOM:11	SCICOM Steering Group on Ecosystem Functions (SSGEF)

SCICOM Steering Group on Ecosystems Function (SSGEF)

SSGEF:01 Ref. SCICOM and ACOM	Working Group on Zooplankton Ecology (WGZE) January 2011
SSGEF:02 Ref. SCICOM	Working Group on Biodiversity Science (WGBIODIV) February 2011
SSGEF:03 Ref. SCICOM	Working Group on Cephalopod Fisheries and Life History (WGCEPH) February-March 2011
SSGEF:04 Ref. SCICOM	Working Group on Phytoplankton and Microbial Ecology (WGPME) March 2011
SSGEF:05 Ref. SCICOM and ACOM	Working Group on Oceanic Hydrography (WGOH) March 2011
SSGEF:06 Ref. WGNAS, ACOM, WGRECORDS and SCICOM	Study Group on Salmon Stock Assessment and Forecasting (SGSSAFE) March 2011
SSGEF:07 Ref. SCICOM and ACOM	Working Group on Seabird Ecology (WGSE) Correspondence March 2011
SSGEF:08 Ref. SCICOM	Working Group on Modelling of Physical-Biological Interactions (WGPBI) April 2011
SSGEF:09 Ref. SCICOM, PICES POC and MONITOR Committees	ICES/PICES Workshop on the Reaction of Northern Hemisphere Ecosystems to Climate Events: a Comparison (WKNORCLIM) May 2011
SSGEF:10 Ref. SCICOM	Benthos Ecology Working Group (BEWG) May 2011
SSGEF:11 Ref. SCICOM	Working Group on Crangon fisheries and life history (WGCRAN) May 2011
SSGEF:12 Ref. SCICOM, ACOM and BEWG	Study Group on Climate Related Benthic Processes in the North Sea (SGCBNS) May 2011
SSGEF:13 Ref. WGEEL, WGRECORDS and SCICOM	Study Group on International Post-Evaluation on Eels (SGIPEE) May 2011
SSGEF:14 Ref. SCICOM	Workshop on Basin-wide Impact of Atlantic Multidecadal Oscillation (WKAMO) June 2011
SSGEF:15 Ref. SCICOM and WGZE	Study Group on Integrated Morphological and Molecular Taxonomy (SGIMT) Correspondence 2011

SSGEF:16 Ref. SCICOM	Working Group on Small Pelagic Fishes, their Ecosystems and Climate Impact (WGSPEC) Correspondence 2010–2011
SSGEF:17 Ref. WGRECORDS, WGNAS and SCICOM	Study Group on Effectiveness of Recovery Actions for Atlantic Salmon (SGERAAS) Correspondence 2011
SSGEF:18 Ref. WGBAST, ACOM, SCICOM and WGRECORDS	Study Group on Data Requirements and Assessment Needs for Baltic Sea Trout (SGBALANST) Correspondence 2011
SSGEF:19 Ref. WGRECORDS, WGNAS and SCICOM	Workshop on Salmon Tagging Archive (WKSTAR) Correspondence 2011–2012
SSGEF:20 Ref. SCICOM	Working Group on the Biology and Life History of Crabs (WGCRAAB) June 2011
SSGEF:21 Ref. SCICOM	Working Group on Fish Ecology (WGFE) October 2011
SSGEF:22 Ref. SCICOM	Working Group on the Science Requirements to Support Conservation, Restoration and Management of Diadromous Species (WGRECORDS) Correspondence and September 2011

SCICOM Steering Group on Human Interactions on Ecosystems (SSGHIE)

SSGHIE:01 Ref. SCICOM	(SIASM/STIG-MSP) Workshop on ‘The Science for area-based management: Coastal and Marine Spatial Planning in practice (WKCMSMSP) November 2010
SSGHIE:02 Ref. SCICOM	Working Group on Biological Effects of Contaminants (WGBEC) February 2011
SSGHIE:03 Ref. SCICOM and ACOM	Marine Chemistry Working Group (MCWG) February–March 2011
SSGHIE:04 Ref. SCICOM and ACOM	Working Group on Pathogens and Diseases of Marine Organisms (WGPDMO) March 2011
SSGHIE:05 Ref. SCICOM and ACOM	Working Group on Marine Sediments in Relation to Pollution (WGMS) March 2011
SSGHIE:06 Ref. SCICOM and ACOM	Working Group for Marine Planning and Coastal Zone Management (WGMPCZM) March 2011
SSGHIE:07 Ref. SCICOM	Study Group on Environmental Impacts of Wave and Tidal Energy (SGWTE) March 2011
SSGHIE:08 Ref. SCICOM	Working Group on Marine Shellfish Culture (WGMASC) April 2011

SSGHIE:09 Ref. SCICOM	ICES–IOC Working Group on Harmful Algal Bloom Dynamics (WGHABD) April 2011
SSGHIE:10 Ref. SCICOM	Working Group on the Effects of Extraction of Marine Sediments on the Marine Ecosystem (WGEXT) April 2011
SSGHIE:11 Ref. SCICOM	Study Group on Socio-Economic Dimensions of Aquaculture (SGSA) April 2011
SSGHIE:12 Ref. SCICOM	Working Group on Environmental Interactions of Mariculture (WGEIM) May 2011
SSGHIE:13 Ref. SCICOM	Working Group on the Application of Genetics in Fisheries and Mariculture (WGAGFM) May 2011
SSGHIE:14 Ref. SCICOM	Workshop on Biological Consequences of a Decrease in Sea Ice in Arctic and Sub-Arctic Seas (WKBCASAS) May 2011
SSGHIE:15 Ref. SCICOM	Working Group on Forecasting Climate Change Impacts on Fish and Shellfish (WGFCCIFS) October 2010 May 2011, September 2011
SSGHIE:16 Ref SCICOM/ ACOM	Strategic Initiative Group on Marine Spatial Planning (STIGMSP) June 2011

SCICOM Steering Group on Sustainable Use of Ecosystems (SSGSUE)

SSGSUE:01 Ref . SCICOM	Study Group on Designing Marine Protected Area Networks in a Changing Climate (SGMPAN) November 2010
SSGSUE:02 Ref. SCICOM	Workshop on Marine Biodiversity (WKMARBIO) February 2011
SSGSUE:03	Workshop on the Implications of Stock Structure (WKISS) April 2011
SSGSUE:04 Ref. SCICOM and ACOM	Working Group on Fisheries-Induced Evolution (WGEVO) May 2011
SSGSUE:05 Ref. SCICOM and ACOM	Working Group on Marine Habitat Mapping (WGMHM) May 2011
SSGSUE:06 Ref. SCICOM	Stock Identification Methods Working Group (SIMWG) Correspondence, reporting July 2011
SSGSUE:07 Ref. SCICOM and WGDIM	Study Group on VMS data, its storage, access and tools for analysis (SGVMS) September 2011
SSGSUE:08 Ref. SCICOM	Working Group on Methods of Fish Stock Assessments (WGMG) October 2011
SSGSUE:09 Ref. SCICOM	Working Group on operational oceanographic products for fisheries and environment (WGOOFE) February and November 2011
SSGSUE:10 Ref. SCICOM	Working Group on Multispecies Assessment Methods (WGSAM) October 2011
SSGSUE:11 Ref. SCICOM	Study Group on the History of Fish and Fisheries (SGHIST) October 2011

SSGSUE:12 Ref. SCICOM	Working Group on Maritime Systems (WGMARS) November 2011
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SCICOM Steering Group on Regional Sea Programmes [SSGRSP]

SSGRSP:01 Ref. SCICOM	Working Group on the Northwest Atlantic Regional Sea (WGNARS) February 2011
SSGRSP:02 Ref. SCICOM	Working Group on Integrated Assessments of the North Sea (WGINOSE) February 2011
SSGRSP:03 Ref. SCICOM	ICES/HELCOM Working Group on Integrated Assessments of the Baltic Sea (WGIAB) April 2011
SSGRSP:04 Ref. SCICOM, SSGHIE	Study Group for the Development of Integrated Monitoring and Assessment of Ecosystem Health in the Baltic Sea (SGEH) April 2011
SSGRSP:05 Ref. SCICOM	Working Group on Ecosystem Assessment of Western European Shelf Seas (WGEAWESS) May 2011
SSGRSP:06 Ref. SSGSUE, SCICOM and ACOM	Study Group on Integration of Economics, Stock Assessment and Fisheries Management (SGIMM) June 2011
SSGRSP:07 Ref. SCICOM, ACOM	Working Group on Large Marine Ecosystem Programme Best Practices (WGLMEBP) July 2011
SSGRSP:08 Ref. SCICOM	Workshop on Benchmarking Integrated Ecosystem Assessments (WKBEMIA) November-December 2011

SCICOM Steering Group on Ecosystem Surveys Science and Technology (SSGESST)

SSGESST:01 Ref. SCICOM and WGACEGG	Joint AcousMed project/ICES WGACEGG Workshop on Geostatistics (WKACUGEO) November 2010
SSGESST:02 Ref. SCICOM, WGISUR, ACOM and HAWG	Working Group for International Pelagic Surveys (WGIPS) January 2011
SSGESST:03 Ref. SCICOM and ACOM	Working Group on Redfish Surveys (WGRS) February 2011 and two other dates in 2011
SSGESST:04 Ref. SCICOM	Workshop on seine net selectivity (WKSEINE) February 2011

SSGESST:05 Ref. SCICOM	Baltic International Fish Survey Working Group (WGBIFS) March 2011
SSGESST:06 Ref. SCICOM, WGISUR, and ACOM	International Bottom Trawl Survey Working Group (IBTSWG) March–April 2011
SSGESST:07 Ref. WGISUR, ACOM and WGWIDE	Working Group on Mackerel and Horse Mackerel Egg Survey (WGMEGS) April 2011
SSGESST:08 Ref. SCICOM	Study Group on Turned 90° Codend Selectivity, focusing on Baltic Cod Selectivity (SGTCOD) April 2011
SSGESST:09 Ref. SCICOM	Study Group on Electrical Trawling (SGELECTRA) May 2011
SSGESST:10 Ref. SCICOM	Working Group on Fisheries Acoustics Science and Technology (WGFAST) (JFATB) May 2011
SSGESST:11 Ref. SCICOM	Working Group on Fishing Technology and Fish Behaviour (WGFTFB) May 2011
SSGESST:12 Ref. SCICOM and ACOM	Working Group on Fisheries Acoustics, Science and Technology (WGFAST) May 2011
SSGESST:13 Ref. WGFAST, SCICOM and ACOM	Study Group on Calibration of Acoustic Instruments in Fisheries Science (SGCal) May 2011
SSGESST:14 Ref. SCICOM, WGISUR and ACOM	Working Group on Beam Trawl Surveys (WGBEAM) June 2011
SSGESST:15	Working Group on North-east Atlantic continental slope surveys (WGNEACS) June 2011
SSGESST:16 Ref. SCICOM and ACOM	Working Group on Northeast Atlantic Pelagic Ecosystem Surveys (WGNAPES) August 2011
SSGESST:17 Ref. SCICOM	Workshop on the identification of clupeoid, flatfish, gadoids and other fish larvae (WKIDFL) September 2011
SSGESST:18 Ref. SCICOM, WGISUR, WGMEGS and WGWIDE	Workshop on Egg staging, Fecundity and Atresia in Horse mackerel and Mackerel (WKFATHOM) autumn 2011
SSGESST:19 Ref. SCICOM, ACOM, WGISUR	Working Group on North Sea Cod and Plaice Egg Surveys in the North Sea (WGEGBS) November 2011

SSGESST:20 Ref. SCICOM and ACOM	Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES Areas VIII and IX (WGACEGG) Correspondence 2011, Meeting November 2011
SSGESST:21 Ref. SCICOM and ACOM	Working Group on Redfish Surveys (WGRS) August 2011 meeting
SSGESST:22 Ref SCICOM	Working Group on Improving use of Survey Data for Assessment and Advice (WGISDAA) September 2011

Theme Session A

Atlantic redfish and Pacific rockfish: comparing biology, ecology, assessment and management strategies for *Sebastes* spp. (Joint ICES/PICES theme session)

Conveners: Benjamin Planque (Norway), Paul Spencer (USA), Christoph Stransky (Germany), and Steve Cadrin (USA)

CM Code	
A:01 Paper	Title: Modeling the effect of climate variability on rockfish growth rates in the North Pacific: Empirical evidence for biophysical coupling Authors: Thomas E. Helser, Bryan A. Black, and Vanessa R. von Biela Keywords: climate change, fish growth, Bayesian inference, North Pacific
A:02 Paper	Title: Biology and fishery of red fish, <i>Sebastes oculatus</i> around the Falkland Islands (Southwest Atlantic) Authors: Alexander Arkhipkin and Vladimir Laptikhovsky Keywords: Patagonian red fish, <i>Sebastes oculatus</i> , Falkland Islands, ecosystem
A:03 Paper	Title: The influence of maternal age on fishery harvest reference points Authors: Paul D. Spencer, Sarah B. M. Kraak, and Edward A. Trippel Keywords: maternal effects, rockfish, fishing reference points
A:04 Paper	Title: Feeding of redfish <i>Sebastes mentella</i> in the Irminger Sea and adjacent waters – what data on diet indicate? Authors: A. V. Dolgov, V. I. Popov, and A. Yu Rolsky Keywords: biotope, diet, feeding, Irminger Sea, redfish
A:05 Paper	Title: Studies of biology and history of fisheries on <i>Sebastes mentella</i> in the Barents Sea and adjacent waters as a basis for future development of technical regulations for this stock Author: Konstantin V. Drevetnyak

	Keywords: Barents Sea, biology, fishery, management, redfish
A:06 Paper	Title: Hybridization of redfish (<i>genus Sebastes</i>) in the Irminger Sea and its significance for studies of population structure of beaked redfish <i>S. mentella</i> Authors: Valentina S. Artamonova, Alexander A. Makhrov, Alexey Yu. Rolskiy, Yuri I. Bakay, and Victor I. Popov Keywords: hybridization, interspecific population structure, <i>S. mentella</i> , Irminger Sea
A:07 Paper	Withdrawn
A:08 Paper	Title: Feeding ecology of juvenile rockfishes off Oregon and Washington: insights into life history patterns based on stomach content and stable isotope analyses Authors: Keith L. Bosley, Richard D. Brodeur, Todd W. Miller, Katelyn M. Bosley, Ahna Van Gaest, and Anna Elz Keywords: feeding ecology, juvenile rockfishes, stomach analysis, carbon and nitrogen stable isotopes
A:09 Paper	Title: Stochastic population dynamics of beaked redfish (<i>S. mentella</i>) Authors: Eirin Bjørkvoll, Vidar Grøtan, Sondre Aanes, Bernt-Erik Sæther, Steinar Engen, and Ronny Aanes. Keywords: none
A:10 Paper	Withdrawn
A:11 Paper	Title: Assessment and status of the US Gulf of Maine-Georges Bank Acadian redfish stock Authors: Timothy J. Miller and Steven X. Cadrin Keywords: <i>Sebastes</i> , redfish, stock assessment
A:12 Paper	Title: The red- and rockfishes around the world: a history of divergence Author: Fran Saborido-Rey Keywords: <i>Sebastes</i> , rockfish, redfish
A:13 Paper	Title: Evaluating the role of predation by harbour seals and sea lions in the lack of recovery of British Columbia inside waters yelloweye rockfish Authors: M. K. McAllister and K. L. Yamanaka Keywords: Rockfish, pinniped predation, stock recovery, Bayes factors
A:14 Paper	Title: Multidecadal growth-increment chronologies for North Pacific and North Atlantic rockfish species Authors: Bryan Black, Isaac Schroeder, William Sydeman, and Steven Bograd Keywords: climate, rockfish, North Atlantic, North Pacific
A:15 Paper	Title: Monitoring beaked redfish in the North Atlantic: current challenges and future prospects Authors: Benjamin Planque, Kristján Kristinsson, Alexey Astakhov, Yuri Bakay, Matthias Bernreuther, Eckhard Bethke, Konstantin Drevetnyak, Kjell Nedreaas, Jakup Reinert, Alexey Rolskiy, Thorsteinn Sigurdsson, and Christoph Stransky

	Keywords: <i>Sebastes mentella</i> , survey design, trawling, hydroacoustics, tagging, assessment, management
A:16 Paper	Title: Population structure of <i>Sebastes mentella</i> in the Norwegian Sea inferred from microsatellites Authors: Torild Johansen, Tuula Skarstein, Jon-Ivar Westgaard, and Benjamin Planque Keywords: Norwegian Sea, Barents Sea, beaked redfish, stock structure
A:17 Paper	Title: Recruitment of beaked redfish (<i>Sebastes mentella</i>) from the Greenland shelf into the pelagic of the Irminger Sea: Have we located the origin? Authors: Matthias Bernreuther, Heino Fock, and Christoph Stransky Keywords: Beaked redfish, recruitment, length-based, Greenland shelf, Irminger Sea
A:18 Paper	Title: Growth and production of Pacific ocean perch (<i>Sebastes alutus</i>) in nursery habitats of the Gulf of Alaska Authors: Christopher N. Rooper, Jennifer L. Boldt, Sonia Batten, and Christopher Gburski Keywords: Alaska, <i>Sebastes</i> , recruitment prediction, bioenergetics
A:19 Paper	Title: Review of the fishery, biological research, assessment and management of golden redfish (<i>Sebastes marinus</i>) in Icelandic waters Authors: Kristjan Kristinsson and Thorsteinn Sigurdsson Keywords: <i>Sebastes marinus</i> , fishery, assessment, management, advice, protection
A:20 Paper	Title: Population characteristics of <i>Helicolenus dactylopterus</i> in the Azores. Authors: R. M. Higgins, A. I. Ferreira, and E. Isidro. Keywords: <i>Helicolenus dactylopterus</i> , otolith, trace element, age, growth model
A:21 Paper	Withdrawn
A:22 Paper	Title: Refinements to the exponential model index of inshore rockfish abundance based on hook timers and ROV observations of longlines Authors: Shannon G. Obradovich and Murdoch K. McAllister Keywords: rockfish, hook competition, exponential model
A:23 Paper	Title: Geographical and temporal variation of redfish (<i>Sebastes mentella</i>) microsatellite DNA in the Irminger Sea and adjacent waters. Authors: Daria A. Zelenina, Dmitry M. Schepetov, Alexander A. Volkov, Anna E. Barmintseva, Sergey P. Melnikov, and Nikolai S. Mugue Keywords: the Irminger Sea, <i>Sebastes mentella</i> , genetic structure
A:24 Paper	Title: Application of an adaptive acoustic/trawl survey to reduce uncertainty in rockfish biomass estimates Authors: Dana H. Hanselman, Paul D. Spencer, Denise R. McKelvey, and Michael Martin Keywords: <i>Sebastes</i> , sampling design, trawl survey, acoustics, rockfish
A:25	Title: Biology of Acadian redfish and implications for optimum yield in a mixed-species fishery

Paper	Author: Steven X. Cadrin
	Keywords: redfish, <i>Sebastes fasciatus</i> , fishery management
A:26 Poster	Title: Feeding of three species from genus <i>Sebastes</i> in the Barents Sea
	Authors: A. V. Dolgov and K. V. Drevetnyak
	Keywords: Barents Sea, diet, feeding, redfish
A:27 Poster	Withdrawn
A:28 Poster	Title: Discrimination of the redfish (<i>Sebastes mentella</i>) stock components in the Irminger sea and adjacent waters based on meristics, morphometry and biological characteristics
	Authors: K. Trella, M. Podolska, K. Nedreaas, and J. Janusz
	Keywords: <i>Sebastes mentella</i> , pelagic redfish, Irminger Sea, stock components, morphology
A:29 Poster	Title: Cohort-specific mortality and growth-selective survival of juvenile black rockfish <i>Sebastes cheni</i> : does habitat complexity decrease predation?
	Authors: Yasuhiro Kamimura and Jun Shoji
	Keywords: Seto Inland Sea in Japan, <i>Sebastes cheni</i> , macroalgae bed, survival
A:30 Poster	Title: SNPfish: Use of single nucleotide polymorphisms to improve fisheries management
	Authors: Torild Johansen, Benjamin Planque, Lorenz Hauser, Steve Cadrin, Halvor Knutsen, Matthew Kent, Jon-Ivar Westgaard, and Sigbjørn Lien
	Keywords: North Atlantic, redfish, Saithe, Greenland halibut, stock identification
A:31 Poster	Title: Documenting the collective experience in the assessment and provision of management advice for data-poor <i>Sebastes</i> species on the Canadian Atlantic and Pacific coasts
	Authors: Murdoch K. McAllister and Daniel Duplisea
	Keywords: <i>Sebastes</i> species, data poor, Bayesian state-space surplus production, threatened and endangered
A:32 Poster	Title: Cross-dating in a deep-sea species from Azores
	Authors: A. I. Ferreira, R. M. Higgins, and E. Isidro
	Keywords: <i>Helicolenus dactylopterus</i> ; Sclerochronology; ageing; cross-dating; master chronology; age validation
A:33 Poster	Title: Depth goes the distance regarding <i>Sebastes mentella</i> genetic population structure across the North Atlantic
	Authors: Alexandra Valentin, Cathrin Bunke, Don Power, Jochen H. Trautner, and Jean-Marie Sévigny
	Keywords: North Atlantic, <i>Sebastes mentella</i> , population structure, depth
A:34 Poster	Withdrawn
A:35	Title: Species composition of historic recruitment pulses in the St. Lawrence system as revealed by the genetic analyses of archived otoliths

Poster **Authors:** Alexandra Valentin, Don Power, and Jean-Marie Sévigny

Keywords: Atlantic Canada, archived otoliths, genetics, recruitment

Theme Session B
Ecological response of phytoplankton and other microbes to global change processes in ocean basins, shelf seas and coastal zones

Conveners: William Li (Canada), Xosé Anxelu G. Morán (Spain), and Katja Metfies (Germany)

CM	
Code	
B:01	Withdrawn
B:02	Title: Towards an ecological status report for phytoplankton and microbial plankton in the North Atlantic
Paper	Authors: William K. W. Li, Xosé Anxelu G. Morán, and Todd D. O'Brien
	Keywords: phytoplankton, microbial plankton, ecological status, WGPME
B:03	Title: Enrichment of highly competitive omnivorous cercozoan nanoflagellates from coastal Baltic Sea waters
Paper	Authors: Kasia Piwosz and Jakob Pernthaler
	Keywords: cercozoa, omnivory, intra-guild predation, Baltic Sea
B:04	Title: Coastal bacterioplankton in the southern Bay of Biscay: changes in abundance and cell size at seasonal and interannual scales
Paper	Authors: Xosé Anxelu G. Morán, Laura Díaz-Pérez, Enrique Nogueira, and Antonio Bode
	Keywords: Bacterioplankton, time series, ocean warming, North Atlantic
B:05	Title: Data analysis and archival mechanisms at the Alfred-Wegemer Institute: examples from the Helgoland Roads long-term plankton monitoring site
Paper	Author: Alexandra Kraberg, Marja Schlüter, and Karen H. Wiltshire
	Keywords: none
B:06	Title: Effect of experimental additions of black carbon on nutrients elements and planktonic marine communities
Paper	Authors: Aurore Trottet, Xavier Mari, Eric Fouilland, Jean-Pascal Torretton, Thierry Bouvier, Corinne Bouvier, Chu Van Thuoc, Cao Thi Thu Trang, and Nghiem Ngoc Min
	Keywords: Black Carbon, Bacterio-/Phyto-plankton, Nutrient, Halong Bay
B:07	Title: Effects of sewage effluent diversion on nutrient and phytoplankton dynamics in French Mediterranean lagoons: results from a ten-year survey
Paper	Authors: B. Bec, N. Malet, L. Dubroca, D. Munaron, A. Vaquer, and Y. Collos
	Keywords: Mediterranean, lagoons, phytoplankton, water quality improvement

B:08 Paper	<p>Title: Observed changes in the marine phytoplankton community in the north east of Scotland over the last decade</p> <p>Authors: Eileen Bresnan, Sarah L. Hughes, Sheila Fraser, Ana-Louisa Amorim, Kerry Smith, Pam Walsham, Lynda Webster, Barbara Berx, George Slessor, Jens Rasmussen, and Steve Hay</p> <p>Keywords: Phytoplankton, spring bloom, dinoflagellates, Northern North Sea</p>
B:09 Paper	<p>Title: Comparison of temporal variation of chlorophyll-<i>a</i>, environmental parameter in the south-eastern Black Sea coast during the periods of 1993–1994 and 2001–2002</p> <p>Authors: Ali Muzaffer Feyzioglu, and Ulgen Kopuz</p> <p>Keywords: phytoplankton, Chlorophyll-<i>a</i>, Black Sea</p>
B:10 Paper	<p>Title: Phytoplankton phenology in the Northwest Atlantic: observation and modeling</p> <p>Author: Rubao Ji</p> <p>Keywords: phytoplankton; phenology; observation; modeling; Northwest Atlantic</p>
B:11 Paper	Withdrawn
B:12 Paper	<p>Title: Changes in chlorophyll-<i>a</i> concentrations in the Baltic Proper</p> <p>Authors: Anetta Ameryk, Mariusz Zalewski, and Marianna Pastuszek</p> <p>Keywords: chlorophyll-<i>a</i>, temperature, nutrients, Baltic Proper</p>
B:13 Paper	Withdrawn
B:14 Paper	<p>Title: Ecological changes in the Iceland Sea</p> <p>Authors: Hafsteinn G. Gudfinnsson and Sólveig R. Ólafsdóttir</p> <p>Keywords: Iceland Sea, nutrients, phytoplankton biomass, primary production</p>
B:15 Paper	<p>Title: Use of phytoplankton for the monitoring and assessment of ecological status of the Russian parts of the Curonian and Vistula Lagoons (Baltic Sea)</p> <p>Author: Olga Dmitrieva</p> <p>Keywords: indicator species, Curonian, Vistula Lagoons, phytoplankton, ecological quality assessment, Water Framework Directive</p>
B:16 Paper	<p>Title: Heterotrophic nanoflagellate and bacteria dynamics in South Eastern Black Sea during late spring 2010</p> <p>Authors: Ulgen Kopuz, Ali Muzaffer Feyzioglu, and Ertugrul Agirbas</p> <p>Keywords: heterotrophic bacteria, heterotrophic nanoflagellate, Black Sea</p>
B:17 Paper	<p>Title: Mesoscale variability of chlorophyll-<i>a</i> in North Sea coastal waters</p> <p>Authors: Anouk N. Blauw, Elisa Benincà, Remi W.P.M. Laane, Naomi Greenwood, and Jef Huisman</p>

	Keywords: Chlorophyll- <i>a</i> , variability, North Sea
B:18 Paper	Title: Microbial dynamics and response to a changing polar ocean climate Authors: Richard. B. Rivkin, Kimberley Keats, and Michelle Hale Keywords: bacteria, biogeochemistry, climate, food webs, microbial dynamics, nutrients
B:19 Paper	Title: Factors controlling the onset of spring blooms in the German Bight 2002–2005: light, wind and stratification Authors: Tian Tian, Jian Su, Goetz Floeser, Karen Wiltshire, and Kai Wirtz Keywords: spring bloom, turbidity, tidal front, wind, nearshore-offshore gradient, Helgoland Roads
B:20 Poster	Title: Changes in the phytoplankton of Vyborg Bay (eastern Gulf of Finland) in the area of Port Vysotsk construction Author: Olga B. Maximova Keywords: Phytoplankton, eutrophication, hydroengineering works, Baltic Sea.
B:21 Poster	Title: Semi – decade dynamic of the summer phytoplankton community from the southern Baltic Proper. Authors: Janina Kownacka and Sławomira Gromisz Keywords: Southern Baltic, phytoplankton, biomass, summer community, clustering analysis
B:22 Poster	Title: Chromatic adaptation in three Baltic picocyanobacteria of the genus <i>Synechococcus</i> Author: Sabina Jodłowska Keywords: Baltic, chromatic adaptation, picocyanobacteria, <i>Synechococcus</i>
B:23 Poster	Title: A study of toxic effect of five ionic liquids on Baltic microalgae Authors: Małgorzata Chobot and Adam Latała Keywords: ionic liquids, Baltic microalgae, cyanobacteria, growth inhibition toxicity tests
B:24 Poster	Title: The toxic effect of nanosilver on Baltic green algae <i>Chlorella vulgaris</i> and cyanobacteria <i>Synechococcus</i> sp. Authors: Marta Brucka and Adam Latała Keywords: Baltic microalgae, chlorofil a fluorescence, cyanobacteria, nanosilver
B:25 Poster	Title: Temperature and light effects on photosynthesis and respiration – implications for phytoplankton survival during deep convection Authors: Bettina Walter, Janna Peters, Justus van Beusekom, and Michael St. John Keywords: deep convection, North Atlantic, photosynthesis and respiration, temperature
B:26	Title: Shift in the dominant cyanobacteria species complex in the Curonian Lagoon, Baltic Sea in the 2000s

Poster **Author:** Evgenia Lange

Keywords: coastal lagoon, cyanobacteria, *Planktothrix agardhii*, algae bloom, the Baltic Sea

B:27 **Withdrawn**

Poster

Theme Session C
Harmful algal blooms in the Baltic Sea

Conveners: Bengt Karlson (Sweden) and Emil Vahtera (USA)

CM Code	
C:01 Paper	<p>Title: Toxic effect of harmful algae on zooplankton in the Curonian Lagoon (Baltic Sea)</p> <p>Authors: Anna Semenova and Olga Dmitrieva</p> <p>Keywords: Curonian Lagoon, zooplankton, mortality, <i>Microcystis</i> spp., toxic effect</p>
C:02 Paper	<p>Title: The effects of the 2010 Vistula River spring flood in the Gulf of Gdańsk measured by Ferry Box system on the Gdynia–Karlskrona ferry</p> <p>Authors: Elżbieta Łysiak-Pastuszek, Wojciech Kraśniewski, Katarzyna Sutryk, Hanna Mazur-Marzec, Łukasz Lewandowski, and Włodzimierz Krzymiński</p> <p>Keywords: Gulf of Gdańsk (Baltic Sea), Ferry Box, phytoplankton bloom, algal toxins</p>
C:03 Paper	<p>Title: The extensive bloom of the alternate stage <i>Chrysochromulina polylepis</i> in the Baltic Sea during winter and spring 2007–2008</p> <p>Authors: Markus Majaneva, Janne-Markus Rintala, Susanna Hajdu, Seija Hällfors, Guy Hällfors, Ann-Turi Skjevik, Slawomira Gromisz, Janina Kownacka, Susanne Busch and Jaanika Blomster</p> <p>Keywords: <i>Chrysochromulina polylepis</i> bloom; <i>Chrysochromulina polylepis</i> alternate stage; winter; 18S rDNA; Baltic Sea</p>
C:04 Paper	<p>Title: Effects of increased temperature and pCO₂ on growth and toxicity of a northern Baltic <i>Alexandrium ostenfeldii</i> population</p> <p>Authors: Anke Kremp, Anna Godhe, Jenny Egardt, Sam Dupont, Sanna Suikkanen, Silvia Casabianca, and Antonella Penna</p> <p>Keywords: <i>Alexandrium ostenfeldii</i>, climate change, phenotypic variability, toxicity</p>
C:05 Paper	<p>Title: PST production of the bloom-forming dinoflagellate <i>Alexandrium ostenfeldii</i> in the Baltic Sea and bioaccumulation of the toxins</p> <p>Authors: Sanna Suikkanen, Outi Setälä, Sari Lehtinen, Päivi Hakanen, Harri Kankaanpää, and Anke Kremp</p> <p>Keywords: <i>Alexandrium ostenfeldii</i>, dinoflagellates, PSP, Baltic Sea</p>
C:06 Paper	<p>Title: Cyanobacterial blooms, cyanotoxin production and its bioaccumulation in the southern Baltic Sea</p> <p>Authors: Katarzyna Sutryk, Monika Błońska, Agnieszka Hebel, Natalia Hohlfeld, Iwona Jasser, Justyna Kobos, and Hanna Mazur-Marzec</p> <p>Keywords: Southern Baltic Sea, cyanobacteria, nodularin, chemotaxonomy</p>
C:07 Paper	<p>Title: Genetic structure of the toxic dinoflagellate <i>Alexandrium ostenfeldii</i> in the Baltic Sea</p> <p>Authors: P. Tahvanainen, R. Figueroa, S. Nagai, J. Blomster, S. Suikkanen, P.</p>

	Hakanen, and A. Kremp
	Keywords: <i>Alexandrium ostenfeldii</i> , AFLP, genetic structure
C:08 Paper	Title: Eutrophication and harmful algal blooms in the Curonian Lagoon of the Baltic Sea
	Author: Sergey Aleksandrov
	Keywords: eutrophication, climate change, hyperblooms, Curonian Lagoon
C:09 Paper	Title: Overview of harmful algal blooms in the Baltic Sea
	Author: Bengt Karlson and Emil Vahtera
	Keywords: phytoplankton, harmful algae, Baltic Sea
C:10 Poster	Title: Cyanobacterial neurotoxins in the ecosystem of the Gulf of Gdańsk (Baltic Proper)
	Authors: Agata Błaszczuk and Hanna Mazur-Marzec
	Keywords: anatoxin-a, β -N-methylamino-L-alanine (BMAA), cyanobacteria, Gulf of Gdańsk
C:11 Poster	Title: The role of cyanobacterial peptides in the interactions among microorganisms in the Southern Baltic
	Authors: Anna Toruńska, Monika Błońska, Ewa Kotlarska, Przemysław Kowal, and Hanna Mazur-Marzec
	Keywords: cyanobacteria, Baltic bacteria, nodularin, biodegradation
C:12 Poster	Title: Applying <i>in situ</i> measurement to monitoring blue-green algae in the coastal zone
	Authors: Katarzyna Bucholc, Małgorzata Szymczak-Żyła, Ludwik Lubecki, Przemysław Makuch, and Grażyna Kowalewska
	Keywords: <i>in-situ</i> monitoring, blue-green algae, blooms, phycocyanin
C:13 Poster	Title: Histopathological changes in the liver of the round goby (<i>Neogobius melanostomus</i>) after treating with nodularin extracts
	Authors: Ilona Złoch, Marta Jaroszevska, and Mariusz R. Sapota
	Keywords: round goby, nodularin, Gulf of Gdańsk, histopathological changes
C:14 Poster	Title: Harmful algal blooms on inshore fish nursery grounds of the Gulf of Gdansk
	Authors: Anna J. Pawelec, Justyna Kobos, and Mariusz R. Sapota
	Keywords: shallow waters, fish, abundance, harmful algal blooms
C:15 Poster	Title: Allelopathic effects of the cyanobacteria <i>Nodularia spumigena</i> on green algae <i>Chlorella vulgaris</i> and <i>Oocystis submarina</i>
	Authors: Sylwia Śliwińska and Adam Latała
	Keywords: allelopathy, cyanobacteria, green algae, Baltic Sea
C:16	Title: Will the Baltic Proper get more toxic with less nitrogen? A multifactorial study on the production of the cyanotoxin nodularin

Poster	<p>Authors: A. Wulff, B. Pattanaik, M. Y. Roleda, K. Garde, and M. Mohlin</p> <p>Keywords: Baltic Sea; Cyanobacteria; <i>Nodularia spumigena</i>; Nodularin; Nutrient; UV radiation</p>
C:17 Poster	<p>Title: Monitoring of harmful algal blooms in the Baltic Sea using a combination of ship sampling and remote sensing</p> <p>Authors: Bengt Karlson, Cia Hulcrantz, Marie Johansen, Martin Hansson, Ann-Turi Skjevik, and Jörgen Öberg</p> <p>Keywords: phytoplankton, harmful algae, Baltic Sea, FerryBox, monitoring, remote sensing</p>
C:18 Poster	<p>Title: Cyanobacteria blooms and fish, invertebrate and bird kills in the Curonian Lagoon, Baltic Sea</p> <p>Authors: Elena Ezhova and Evgenia Lange</p> <p>Keywords: The Curonian Lagoon, cyanobacterial toxins, fish kills, invertebrate kills</p>
C:19 Poster	<p>Title: The use of <i>in situ</i> phycocyanin fluorescence as a proxy for estimating cyanobacteria biomass in the Baltic Sea</p> <p>Authors: Kevin Vikström, Angela Wulff, Seppo Kaitala, Jukka Seppälä, and Bengt Karlson</p> <p>Keywords: phytoplankton, cyanobacteria, blue green algae, phycocyanin, fluorescence, Baltic Sea, FerryBox, monitoring</p>

Theme Session D
Linking the history to the present: understanding the history of fish, fisheries and management

Conveners: Andy Rosenberg (USA), Max Cardinale (Sweden), and Bo Poulsen (Denmark)

CM Code	
D:01 Paper	<p>Title: Regional depletion of haddock and pollack during the last century in the Kattegat-Skagerrak</p> <p>Authors: Massimiliano Cardinale, Henrik Svedäng, Valerio Bartolino, Luigi Maiorano, Michele Casini, and Hans Linderholm</p> <p>Keywords: historical data; Atlantic gadoids; spatial stock structure; regional depletion</p>
D:02 Paper	<p>Title: Movement modeling in stock assessment: from Beverton and Holt and back again</p> <p>Authors: Daniel Goethel and Steven X. Cadrin</p> <p>Keywords: Beverton and Holt, movement models, tagging models, tag-integrated models</p>
D:03 Paper	<p>Title: The post-war evolution of the Norwegian longline fishery for ling and tusk</p> <p>Authors: Kristin Helle and Michael Pennington</p> <p>Keywords: Norwegian longline fleet, ling, tusk, autolines</p>
D:04 Paper	<p>Title: Long term trends in the population dynamics of northwestern Ireland herring revealed by data archaeology</p> <p>Author: Maurice Clarke</p> <p>Keywords: herring, northwest Ireland, catch-at-age, productivity, historical analyses</p>
D:05 Paper	<p>Title: The relative roles of fishing and biological productivity in fish stock dynamics: history can help to understand the present and design the future</p> <p>Author: Margit Eero</p> <p>Keywords: fish biomass, stock productivity, fishing mortality, North Atlantic</p>
D:06 Paper	<p>Title: Cod behaves in mysterious ways: shifting distribution in the North Sea during the last century</p> <p>Authors: Georg H. Engelhard, David A. Righton, Tina K. Kerby, and John K. Pinnegar</p> <p>Keywords: cod, distribution shift, climate, North Sea</p>
D:07 Paper	<p>Title: Herring in the Celtic Sea: a history of life on the edge</p> <p>Authors: Deirdre Lynch, Jim Wilson, and Maurice Clarke</p> <p>Keywords: herring, Celtic Sea, size-at-age, condition, historical analyses</p>
D:08	<p>Title: Investigating key drivers of trends in Atlantic herring biology using over</p>

Paper	a half-century of highly resolved catch data
	Authors: Harma Clémentine, Minto Cólín, Clarke Maurice, and Brophy Deirdre
	Keywords: Ireland, herring, time-series analysis
D:09 Paper	Title: Long-term (1920–2010) changes in the structures of the Polish long-distance and Baltic Sea fisheries – an effect of mutual concurrence or a decree of the fate?
	Authors: Włodzimierz Grygiel, Kordian Trella, and Emil Kuzebski
	Keywords: long-distance and Baltic fishery, Poland
D:10 Paper	Title: The history of exploitation of Northeast Atlantic fish stocks in the past half century highlights the need to protect immature fish
	Authors: Paraskevas Vasilakopoulos, Finbarr G. O'Neill, and C. Tara Marshall
	Keywords: exploitation rate, exploitation pattern, meta-analysis, NE Atlantic
D:11 Paper	Title: Long-term (1781–2010) eel fishery in the coastal lagoon of Comacchio (northern Italy) and use of a new index for fish evaluation
	Authors: Federico Brunelli and Elena Fabbri
	Keywords: eel fishery, <i>Anguilla anguilla</i> , coastal lagoon, Northern Italy
D:12 Paper	Title: Changes in marine communities of the northern Adriatic Sea (Mediterranean) over the past six decades (1945–2008): insights from fisheries landings
	Authors: Tomaso Fortibuoni, Simone Libralato, Cosimo Solidoro, Otello Giovanardi, and Saša Raicevich
	Keywords: Landings, trophodynamic indicators, Northern Adriatic Sea, unbalanced fishery
D:13 Paper	Title: Historical spatiotemporal dynamics of eastern North Sea cod
	Authors: Valerio Bartolino, Massimiliano Cardinale, Hans W. Linderholm, and Anders Grimwall
	Keywords: historical spatial distribution, scale, cod, eastern North Sea
D:14 Paper	Withdrawn
D:15 Paper	Title: Lost migratory forage species and consequences on the function and structure of ecosystems
	Authors: A. Jordaan, C. J. Hall, M. A. Nuttall, R. M. Cerrato, and M. G. Frisk
	Keywords: Historical ecology, river herring, menhaden, ecological connectivity
D:16 Poster	Title: Great Britain's role in North Sea demersal fisheries: a long-term perspective over the past century
	Authors: Tina K. Kerby, William W.L. Cheung, and Georg H. Engelhard
	Keywords: historical perspective, demersal fisheries, Common Fisheries Policy, North Sea
D:17 Poster	Title: Long term dynamics of river lamprey fishery in Latvia
	Authors: Jānis Birzaks, Kaspars Abersons, and Tatjana Baranova
	Keywords: river lamprey, landing dynamics, Latvia

Theme Session E
**Upwelling events, coastal–offshore exchange and links to
biogeochemical processes in various parts of the oceans**

Conveners: Kai Myrberg (Finland), Andreas Lehmann (Germany), and Tom Anderson (UK)

ICES CM Code	
E:01 Paper	<p>Title: Sub Antarctic and temperate marine fauna links with oceanographic fronts on the Patagonian Shelf break and slope (Southwest Atlantic)</p> <p>Authors: A. Arkhipkin, P. Brickle, and V. Laptikhovsky</p> <p>Keywords: Falkland Current, frontal zones, Patagonian Shelf, distribution, Subantarctic and temperate marine fauna</p>
E:02 Paper	<p>Title: A statistical approach on upwelling in the Baltic Sea based on the analysis of satellite data for 1990–2009</p> <p>Authors: Andreas Lehmann, Kai Myrberg, and Katharina Höflich</p> <p>Keywords: satellite data, upwelling, statistics, Baltic Sea</p>
E:03 Paper	<p>Title: The Orange Banks: topographic setting and mid-shelf hydrographic conditions at the northern extremity of the southern Benguela upwelling regime.</p> <p>Authors: Marek Ostrowski Frank Shillington, and Marek Lipinski</p> <p>Keywords: Upwelling, coastal jet, topographic steering, hypoxia, retention, ADCP, ROMs, Benguela</p>
E:04 Paper	<p>Title: Wind curl-driven upwelling, the example of the Benguela system</p> <p>Authors: Wolfgang Fennel</p> <p>Keywords: Upwelling, Kelvin waves, wind curl, Benguela upwelling system</p>
E:05 Paper	<p>Title: Modeling the inter-annual variability of ocean circulation and marine ecosystem in the Canarian upwelling system</p> <p>Authors: Vladimir Ryabchenko, Victor Gorchakov, Nikolay Diansky, Anton Dvornikov, and Svetlana Pugalova</p> <p>Keywords: circulation, ecosystem, Canarian upwelling</p>
E:06 Paper	<p>Title: The influence of meteorological variation on the upwelling system off eastern Hainan during summer 2007–2008</p> <p>Authors: J. Su, J. Wang, T. Pohlmann, and D. F. Xu</p> <p>Keywords: none</p>
E:07 Paper	<p>Title: Mesofauna inhabiting algae in the tidal zone of the Barents Sea</p> <p>Authors: Izabella Olejniczak, Pawel Boniecki, Anita Kaliszewicz, and Ninel Panteleeva</p> <p>Keywords: Collembola, Acarina, algae, Barents Sea</p>
E:08	<p>Title: Time persistence of thermal fronts in the surface waters of the southern</p>

Poster	Baltic Sea
	Authors: Lena Szymanek and Katarzyna Bradtke
	Keywords: southern Baltic Sea, thermal front, stability, SST, upwelling
E:09	Title: Fluxes of particulate organic carbon and nitrogen in the Gulf of Gdansk
Paper	Authors: Dorota Burska, Dorota Pryputniewicz-Flis, and Witek Zbigniew
	Keywords: SPM, POC, PON, flux

Theme Session F

Applications of optical and image-based technologies in the ecosystem approach to fisheries management

Conveners: Eirik Tenningen (Norway) and Bill Michaels (USA)

ICES CM Code	
F:01 Paper	<p>Title: Using optical flow techniques on acoustic multi beam data</p> <p>Authors: Nils Olav Handegard, Kevin Boswell, Simon Leblanc, Dag Tjøstheim, and Iain Couzin</p> <p>Keywords: optical flow, multi beam sonar, collective behaviour, fish behaviour</p>
F:02 Paper	<p>Withdrawn</p>
F:03 Paper	<p>Title: Towed underwater television towards the quantification of Norway lobster, squat lobsters and sea pens in the Adriatic Sea</p> <p>Authors: M. Martinelli, E. B. Morello, I. Isajlovic, A. Belardinelli, A. Lucchetti, R. J. A. Atkinson, A. Santojanni, N. Vrgoc, and E. Arneri</p> <p>Keywords: towed UWTV; Norway lobster; squat lobster; Adriatic Sea</p>
F:04 Paper	<p>Title: Refining an optical tool for investigating spatial and substock structure in marine fish populations</p> <p>Authors: S. M. Bierman, H. M. J. van Overzee, M. Dickey-Collas, and C. J. G. van Damme</p> <p>Keywords: Otolith shape analysis, stock discrimination, Atlantic herring (<i>Clupea harengus</i>)</p>
F:05 Paper	<p>Title: Integrating benthic surveys and community analysis through image management: a case study from a biodiversity special area in the Lower St. Lawrence Estuary, Québec, Canada</p> <p>Authors: Claude Nozères, Lizon Provencher, François Roy, and Jean-Sébastien Lauzon-Guay</p> <p>Keywords: imaging, benthos, habitat classification, St Lawrence Estuary</p>
F:06 Paper	<p>Title: Autonomous underwater vehicle (AUV) based camera and side-scan sonar assessments of scallop grounds in western Iceland</p> <p>Authors: Warsha Singh, Erla B. Ornlófsdóttir, and Gunnar Stefansson</p> <p>Keywords: AUV, digital photos, side-scan sonar, West Iceland</p>
F:07 Paper	<p>Title: <i>In-situ</i> measurements of the individual acoustic backscatter of European anchovy (<i>Engraulis encrasicolus</i>) and sardine (<i>Sardina pilchardus</i>), with concurrent optical identification</p> <p>Authors: Mathieu Doray, Laurent Berger, Jean Yves Coail, Jean Philippe Vacherot, Gérard Bavouzet, and Pierre Petitgas</p> <p>Keywords: Target-strength, anchovy, sardine, video camera, echosounder,</p>

	target identification
F:08 Paper	<p>Title: Surveying sparsely distributed fish in large closed areas: a visual technique</p> <p>Authors: Paul Fernandes, Lorenzo Scala, Neil Collie, Michael Stewart, and Fiona McIntyre</p> <p>Keywords: Visual surveys; anglerfish; Rockall; deep-water coral</p>
F:09 Paper	<p>Title: Using underwater video cameras and stereo image analysis to groundtruth acoustic surveys of rockfish</p> <p>Authors: Christopher Rooper, Kresimir Williams, Jerry Hoff, and Alex DeRobertis</p> <p>Keywords: Alaska, optical technologies, acoustics, <i>Sebastes</i></p>
F:10 Paper	<p>Title: The use of CCTV for monitoring commercial fisheries</p> <p>Authors: Howard McElderry</p> <p>Keywords: electronic monitoring, catch monitoring, CCTV, discards, bycatch, self-reported data, vessel logbooks, observer programmes</p>
F:11 Poster	<p>Title: Agreement of net and acoustical methods for surveying euphausiids using a net based LED strobe light system</p> <p>Authors: Peter H. Wiebe, Gareth L. Lawson, Andone C. Lavery, Nancy J. Copley, Erich Horgan, and Albert Bradley</p> <p>Keywords: zooplankton, euphausiids, krill, acoustics, strobe light, avoidance</p>
F:12 Poster	<p>Title: Investigating mesoscale eddies in the California System as a survivor habitat for small pelagic fish larvae</p> <p>Authors: Karen Nieto, Sam McClatchie, and Ed Weber</p> <p>Keywords: mesoscale, eddies, California System, small pelagic fish, Remote Sensing</p>

Theme Session G
Habitat modelling and mapping for better assessment and monitoring of our seas

Conveners: Jacques Populus (France), Roger Coggan (UK), and Steven Degraer (Belgium)

ICES CM code	
G:01 Paper	<p>Title: Spatio-temporal variation in the distribution of gadoid fishes (family: Gadidae) in relation to the installation history of offshore artificial structures in the North Sea</p> <hr/> <p>Authors: Toyonobu Fujii</p> <hr/> <p>Keywords: Fish habitat utilisation, Gadidae, Offshore platforms, the North Sea</p>
G:02 Paper	<p>Title: Predicting the spatial presence of the youngest stages of sea-spawning whitefish (<i>Coregonus lavaretus</i> L. s.l.) larvae with an additive Gaussian process model</p> <hr/> <p>Authors: Jarno Vanhatalo, Lari Veneranta, and Richard Hudd</p> <hr/> <p>Keywords: Baltic Sea, predictive map, Gaussian process, Bayesian modelling</p>
G:03 Paper	<p>Title: Using the EUNIS habitat classification system in broadscale regional mapping: some problems and potential solutions from case studies in the English Channel</p> <hr/> <p>Authors: Roger Coggan, Ceri James, Bryony Pearce, and Jennifer Plim</p> <hr/> <p>Keywords: biological zone, thin sediment, habitat mapping, English Channel</p>
G:04 Paper	<p>Title: Acoustic studies of benthic habitats in south Baltic Sea using parametric signal processing technique for singlebeam and multibeam echosounders and side scan sonar data</p> <hr/> <p>Authors: Jaroslaw Tegowski, Natalia Gorska, Jaroslaw Nowak, Aleksandra Kruss, Mateusz Moskalik, and Kazimierz Szeffler</p> <hr/> <p>Keywords: habitat mapping, seafloor classification methodology, south Baltic Sea</p>
G:05 Paper	<p>Title: Rationalising seabed sediment classification to promote consistency in biotope classification and improve accuracy in predictive biotope mapping</p> <hr/> <p>Authors: Bryony Pearce, Ceri James, Roger Coggan, Caroline Chambers, Jacqueline Hill, and David Tappin</p> <hr/> <p>Keywords: sediment classification, Folk, habitat mapping, biotope modelling</p>
G:06 Paper	<p>Title: Exploring patterns of compositional change along environmental gradients, and mapping expected patterns of biodiversity composition at regional scale</p> <hr/> <p>Authors: C. Roland Pitcher, Nick Ellis, Peter Lawton, Stephen Smith, Chi-Lin Wei, Lew Incze, Michelle Greenlaw, Jess Sameoto, Nick Wolff, and Paul</p>

	Snelgrove
	Keywords: beta diversity prediction and mapping, Great Barrier Reef, Gulf of Maine, Gulf of Mexico
G:07 Paper	Title: Habitat suitability modelling as a tool in the Norwegian program for mapping of marine habitats Authors: Trine Bekkby, Eli Rinde, Heidi Olsen, Reidulv Bøe, Henning Steen, Nina M. Jørgensen, and Frithjof Moy Keywords: Norway, habitat suitability modelling, marine spatial planning, marine
G:08 Paper	Title: Nature Index of Norway – spatial predictive modelling of soft sediment reference conditions along the Norwegian coast Authors: Hege Gundersen, Trine Bekkby, Karl Norling, Eivind Oug, Brage Rygg, and Mats Walday Keywords: Norway, spatial predictive modelling, marine infauna, NQI
G:09 Paper	WITHDRAWN
G:10 Paper	Title: A methodology to map the extent of the seabed significantly affected by bottom trawling Authors: Markus Diesing, John Aldridge, and David Stephens Keywords: Sea-floor integrity; Fishing pressure; Natural disturbance; English Channel
G:11 Paper	Title: Geostatistical modelling of surficial sediment composition in the North Sea and English Channel: using historical data to improve confidence in seabed habitat maps Authors: David Stephens, Roger Coggan, and Markus Diesing Keywords: Kriging, habitat mapping, surficial sediments, North Sea
G:12 Paper	Title: Quantification and prediction of the impact of fishing on epifaunal communities from a benthic photographic survey Authors: G. I. Lambert., S. Jennings, M. J. Kaiser, H. Hinz, and J. G. Hiddink Keywords: sessile benthos, fishing impact, photographic survey, Irish Sea
G:13 Paper	Title: Modelling kelp species occurrence and biomass along temperate rocky coastlines Authors: Daniel Gorman, Touria Bajjouk, Jacques Populus, and Axel Ehrhold Keywords: Brittany, Laminariales, Generalised Additive Modeling, Ecological distribution
G:14 Paper	Title: Application of species distribution models in the marine environment Authors: Henning Reiss, Sarah Cunze, Konstantin König, Hermann Neumann, and Ingrid Kröncke Keywords: habitat suitability modelling, niche modelling, marine ecosystems, macrofauna, benthic communities, North Sea
G:15	Title: Developing a habitat template for offshore benthic habitats of Rhode Island, USA

Paper	Authors: E. J. Shumchenia, J. W. King, and M. LaFrance
	Keywords: biotope, broad spatial scales, top-down, ecosystem-valuation
G:16 Paper	Title: EUSeaMap: modelling a consistent map for Europe
	Authors: Andy Cameron, Anita Carter, EUSeaMap consortium
	Keywords: habitat mapping, MSFD, confidence, EUNIS
G:17 Poster	Title: The use of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ stable isotope maps to trace site fidelity and the tropic base of fish populations in the eastern Gulf of Mexico.
	Authors: Kara R. Radabaugh, Sheri A. Huelster, David J. Hollander, and Ernst B. Peebles
	Keywords: Gulf of Mexico, stable isotopes, food webs, fish site fidelity
G:18 Poster	Title: Spatial distribution and structure of benthic communities in Herve and Cardozo Coves (Admiralty Bay, King George Island, South Shetlands, Antarctica)
	Authors: Anna Kidawa and Tomasz Janecki
	Keywords: benthic communities, climate changes, Antarctica
G:19 Poster	Withdrawn
G:20 Poster	Title: Sublittoral habitat mapping: remote sensing and modelling
	Authors: Rosa Freitas, Victor Quintino, and Ana Maria Rodrigues
	Keywords: Mapping benthic habitats, single beam acoustic system (QTC VIEW, Series V), models
G:21 Poster	Title: Spatial explicit tools to support an ecosystem-based management: modelling of nursery grounds in the German EEZ
	Authors: Antje Gimpel, Vanessa Stelzenmüller, Jens Floeter, and Axel Temming
	Keywords: Generalized additive models (GAM), geographic information system (GIS), marine spatial planning (MSP), nursery grounds
G:22 Poster	Title: Changes in spatial distribution of North Sea herring (<i>Clupea harengus</i>) in relation to abiotic and biotic factors
	Authors: Dominik Gloe, Saskia Otto, and Christian Möllmann
	Keywords: acoustic abundance estimates, International Herring Acoustic Survey, spatial distribution, habitat modelling, biotic and abiotic factors
G:23 Poster	Title: Marine landscapes mapping in the Russian part of the Gulf of Finland
	Authors: D. Ryabchuk, M. Orlova, V. Zhamoida, and N. Kovalchuk
	Keywords: Eastern Gulf of Finland, marine landscapes
G:24 Poster	Title: Mapping megabenthic diversity and AMBI index: the Portuguese platform between Aveiro and Porto
	Authors: N. Silva, P. Santos, E. Soto, P. Moura, and M. Gaspar
	Keywords: Diversity, AMBI. Portuguese platform, benthos, ecological quality
G:25 Poster	Title: Habitats and associated benthic-demersal communities of mud volcanoes and adjacent zones in the Gulf of Cadiz (southern Iberian Peninsula)
	Authors: Emilio González, Juan Gil, José Luis Rueda, Carlos Farias, Alejandra

Fernández, Nieves López, Luis M. Fernández, Victor Díaz del Río, and Candelaria Burgo

Keywords: Gulf of Cadiz, mud volcanoes, habitats, pennatulaceans

G:26 **Title:** The INDEMARES CHICA Project: A proposal to make habitat mapping
Poster and biodiversity inventory in the Gulf of Cadiz

Authors: Juan Gil, José Luis Rueda, Marina Delgado, Candelaria Burgos, Carlos Farias, Emilio González, Víctor Díaz del Río and INDEMARES/CHICA team

Keywords: Gulf of Cádiz, Natura 2000 Network, INDEMARES CHICA project

G:27 **Title:** The use of ROV images from the gas pipelines inspection survey in the
Poster Strait of Gibraltar area to estimate habitats and its associated benthic-demersal communities

Authors: María Elena de la Calle, Juan Gil, Carlos Farias, Emilio González, José Luis Rueda, and Ignacio Sobrino

Keywords: Strait of Gibraltar, ROV, habitats

G:28 **Title:** Fishery and biology of *Cancer bellianus* off the Azores: considerations for
Poster management

Authors: M. Inácio, E. Isidro, J. Gonçalves, and M. R. Pinho

Keywords: *Cancer bellianus*; exploratory fishing, biology, seamounts, habitat and fishing areas, management

**Theme Session H on
Recruitment processes: Early life history dynamics – from eggs to juveniles
(Joint ICES/PICES theme session)**

Conveners: Richard D.M. Nash (Norway), Ed Houde (USA), and Rick Brodeur
(USA)

ICES CM code	
H:01 Paper	<p>Title: A multi-species synthesis approach to understanding early life history aspects of recruitment dynamics in relation to environmental change</p> <p>Authors: Miriam J. Doyle and Kathryn L. Mier</p> <p>Keywords: ichthyoplankton, early life history, exposure-response coupling, recruitment</p>
H:02 Paper	<p>Title: Externally driven mortality of cod early life stages in the central Baltic: hydrography vs. predation</p> <p>Authors: Viola Neumann, Fritz Köster, Matthias Schaber, Hans Harald Hinrichsen, Margit Eero, and Axel Temming</p> <p>Keywords: Baltic Sea, cod egg, mortality, hydrography</p>
H:03 Paper	Withdrawn
H:04 Paper	<p>Title: An integrative approach to model recruitment dynamics in barnacles</p> <p>Authors: Luis Giménez and Staurt Jenkins</p> <p>Keywords: recruitment, competition, trait-mediated effects</p>
H:05 Paper	<p>Title: The effects of environmental conditions and spawning stock size on year-class strength of Northeast Arctic haddock in the period from 1950 to 2006</p> <p>Authors: V. P. Serebryakov, M. V. Bondarenko, B. N. Kotenev, A. S. Krovnin, and A. D. Morozov</p> <p>Keywords: Northeast Arctic haddock, stock–recruitment, spawning stock size, population fecundity, survival rates, climatic changes</p>
H:06 Paper	<p>Title: Larval fish retention in the northwest African upwelling in spring</p> <p>Authors: Marta Moyano, Jose María Rodríguez, and Santiago Hernández-León</p> <p>Keywords: larval fish assemblages, larval transport, Canary upwelling</p>
H:07 Paper	<p>Title: Temporal settlement patterns and size at transition of juvenile cod (<i>Gadus morhua</i>), haddock (<i>Melanogrammus aeglefinus</i>) and whiting (<i>Merlangius merlangus</i>) in the northern North Sea</p> <p>Authors: Dorota K. Demain, Alejandro Gallego, Colin Millar, Imants G. Priede and Emma G. Jones</p> <p>Keywords: settlement size, 0-group gadoids, northern North Sea</p>
H:08	<p>Title: The potential for larval fish data from continuous plankton recorder (CPR) surveys to inform survival and recruitment of sandeels in the North Sea</p>

Paper	Authors: Christopher Lynam, Sophie Pitois, Cindy Van Damme, Nicholas Halliday, and Martin Edwards
	Keywords: Recruitment, spatial, temporal, seasonality
H:09 Paper	Title: Environmental influences on reproductive traits of anchoveta, maternal effects and the chances of egg and larval survival under contrasting spawning habitats
	Authors: Leonardo Castro, Gabriel Claramunt, Humberto González, María C. Krautz, Alejandra Llanos-Rivera, Joyce Méndez, Wolfgang Schneider, and Samuel Soto
	Keywords: <i>Engraulis ringens</i> , Humboldt Current, fatty acids, lipids, egg quality
H:10 Paper	Title: Climate-driven changes in recruitment success of marine invertebrates: the role of food supply
	Authors: K. M. Griffith, L. Giménez, and S. R. Jenkins
	Keywords: barnacle larvae, food availability, recruitment success, UK
H:11 Paper	Title: Identifying and monitoring limiting factors of recruitment: anchovy in the Bay of Biscay
	Authors: Pierre Petitgas, Martin Huret, and Fabien Léger
	Keywords: recruitment, anchovy, quantile regression, physical-biogeochemical models, hindcast
H:12 Paper	Title: Dynamics of larval and juvenile rockfishes (<i>Sebastes</i> spp.) recruitment in coastal waters of the northern California Current
	Authors: Richard D. Brodeur, Toby D. Auth, Tristan Britt, Elizabeth A. Daly, Robert L. Emmett, and Marisa N. C. Litz
	Keywords: rockfish, ichthyoplankton, juveniles, recruitment indicators
H:13 Paper	Title: Changes in the reproductive success of the Gulf of Riga herring
	Authors: Ivars Putnis, Bärbel Müller-Karulis, and Georgs Kornilovs
	Keywords: Baltic Sea, Gulf of Riga herring, reproduction
H:14 Paper	Title: Recruitment of Pacific cod (<i>Gadus macrocephalus</i>) in southern Korean coastal waters
	Authors: Sukgeun Jung, Suam Kim, and Il Su Choi
	Keywords: Pacific cod, Pacific herring, climate change, recruitment, western North Pacific
H:15 Paper	Title: Spatial and Temporal Patterns in the Dynamics of Pre-Recruit Rockfishes on the U.S. West Coast
	Authors: Stephen Ralston, John C. Field, and Keith M. Sakuma
	Keywords: rockfish, year-class strength, recruitment, California
H:16 Paper	Withdrawn
H:17 Paper	Title: Resolving the relative importance of fish nursery habitats using otolith elemental fingerprints
	Authors: Holly J. Rolls, David L. Jones, Carole C. McIvor, Janet A. Ley, and Ernst B. Peebles
	Keywords: nursery habitat, natural tags, otolith elemental fingerprinting, west-

	central Florida (USA)
H:18 Paper	<p>Title: Effects of photoperiod and temperature on recent growth rates of sprat larvae in the Baltic Sea</p> <p>Authors: C. Clemmesen , E. M. Caldarone, R. Voss, and H.-H. Hinrichsen</p> <p>Keywords: growth rate, temperature, photoperiod, GAM model approach, larval sprat, effect on recruitment</p>
H:19 Paper	<p>Title: Environmental and habitat effects on early life stages and subsequent recruitment variability of the common cuttlefish (<i>Sepia officinalis</i>) within the English Channel</p> <p>Authors: Isobel Bloor, Emma Jackson, Jean-Paul Robin and Martin Attrill</p> <p>Keywords: English Channel, Cephalopod, Recruitment, Habitats</p>
H:20 Paper	<p>Title: Examine and quantify connectivity between spawning areas and nursery habitats of two North Sea key species: brown shrimp and plaice</p> <p>Authors: Mark Hufnagl, Adriaan Rijnsdorp, Richard Nash, Axel Temming, Thomas Pohlmann, Maarten Boersma, and Myron Peck</p> <p>Keywords: connectivity, brown shrimp, plaice, nursery areas, spawning grounds, drift, recruitment</p>
H:21 Paper	<p>Title: The different approaches to evaluations of eastern Baltic cod annual egg production on diverse spawning grounds and a possible role of skipped spawning in stock decline</p> <p>Author: E. M. Karasiova</p> <p>Keywords: Baltic Sea, cod annual egg production, different environmental conditions, skipped spawning</p>
H:22 Paper	Withdrawn
H:23 Paper	<p>Title: Recruitment of Atlantic menhaden to Chesapeake Bay: ecological processes during the larval-juvenile transition</p> <p>Authors: E. D. Houde, C. Lozano, E. R. Annis, L. W. Harding, Jr., D. H. Secor, M. J. Wilberg, and R. L. Wingate</p> <p>Keywords: Atlantic menhaden, Chesapeake Bay, recruitment variability</p>
H:24 Paper	<p>Title: Exploring larvae recruitment variability of Peruvian anchovy and sardine with modeling and data assimilation</p> <p>Authors: Olga Hernandez, Patrick Lehodey, Inna Senina, Patricia Ayon, Arnaud Bertrand, Vincent Echevin, and Philippe Gaspar</p> <p>Keywords: end-to-end model, SEAPODYM, anchoveta, sardine, upwelling ecosystem, parameter optimization, population dynamics, spawning habitat</p>
H:25 Paper	<p>Title: The impact of climate change on Baltic sprat population dynamics – a matrix model approach</p> <p>Authors: H. Haslob, M.A. Peck, C. Clemmesen, C., Petereit, and G. Kraus</p> <p>Keywords: sprat, Baltic Sea, life stage based model</p>
H:26 Paper	<p>Title: Cuttlefish (<i>Sepia officinalis</i> L.) early life history from different coastal areas of the English Channel: comparison between experimental hatchlings and wild pre-recruits physiological performances</p> <p>Authors: G. Safi, I. Bloor, E. Jackson, M. Gras, J. P. Robin, and N. Koueta</p>

	Keywords: Cuttlefish, <i>Sepia officinalis</i> , Physiological performance, habitats, spawning sites, juveniles, hatchlings, prerecruits
H:27 Paper	Title: Population Dynamics of Plankton in the Gulf of Maine Authors: Brian J. Rothschild and Yue Jiao Keywords: plankton dynamics, Northwest Atlantic
H:28 Paper	Title: Trait-based modelling of marine fish early life stages Authors: Klaus B. Huebert and Myron A. Peck Keywords: fish larvae, individual-based model, morphometrics
H:29 Paper	Title: Multiple indices shed light on transport-related condition of coral reef fish larvae Authors: M. J. Hauff, S. Sponaugle, K. D. Walter, and R. K. Cowen Keywords: Early life history, larval condition, RNA/DNA, Florida Keys
H:30 Paper	Title: Predator-specific growth-selective predation and dynamics of the growth-based survival mechanisms in anchovy larvae Authors: Akinori Takasuka, Ichiro Aoki, Ayumu Sakai, Yoshioki Oozeki, and Dominique Robert Keywords: growth-selective predation, bigger is better, stage duration, anchovy larvae
H:31 Poster	Title: Overwinter survival of larval herring <i>Clupea harengus</i> Authors: Björn Illing, Marta Moyano, and Myron A. Peck Keywords: herring larvae, overwinter survival, ecophysiology, Baltic and North Seas
H:32 Poster	Title: Maternal effects: from environment through molecular and individual level, towards population ecology; the shore crab (<i>Carcinus maenas</i>) as model species Authors: Gabriela Torres, David Wilcockson, David Thomas, Nia Whiteley, and Luis Giménez Keywords: none
H:33 Poster	Title: Is recruitment of plaice in the Irish Sea constrained by predation of eggs by sprat? Authors: Antonio Plirú, Jeroen van der Kooij, Georg H. Engelhard, Clive J. Fox, Stephen P. Milligan, and Ewan Hunter Keywords: early life-history, eggs, predation, Irish Sea
H:34 Poster	Title: Choice of age to assess year-class strength in small pelagic fishes of the Canary upwelling region Authors: N. Timoshenko and N. Barkova Keywords: Canary upwelling region, small pelagic, recruitment
H:35 Poster	Title: Environmental factors influencing abundance fluctuations and distribution of fish maturity early stages in the central-east Atlantic Author: A. Arkhipov Keywords: fish maturity early stages, environmental factors, the Central-East Atlantic

H:36 Poster	<p>Title: Recruitment dynamics of Baltic sprat and yield prediction of generations in the medium term</p> <hr/> <p>Authors: Fausts Svecovs, Guntars Strods, Alla Vingovatova, and Tatiana Vasilieva</p> <hr/> <p>Keywords: Baltic sprat, Baltic sea, sprat generations</p>
H:37 Poster	<p>Title: Internal brooding as a beneficial reproductive strategy for sea anemones in the intertidal zone</p> <hr/> <p>Authors: Anita Kaliszewicz, Ninel Panteleeva, Izabella Olejniczak, Paweł Boniecki</p> <hr/> <p>Keywords: internal brooding, sea anemones, spatial structure, reproductive strategies</p>
H:38 Poster	<p>Title: “Puffing” under the water surface – hatching process in <i>Balanus improvisus</i></p> <hr/> <p>Authors: Anna Dziubińska and Anna Szaniawska</p> <hr/> <p>Keywords: acorn barnacle, hatching, Gulf of Gdańsk</p>
H:39 Poster	<p>Title: Spatial variability in zooplankton and feeding of larval Atlantic mackerel (<i>Scomber scombrus</i>) in the southern Gulf of St. Lawrence</p> <hr/> <p>Authors: Vanessa Paradis, Pascal Sirois, Martin Castonguay and Stéphane Plourde</p> <hr/> <p>Keywords: Recruitment, Larval feeding, Atlantic mackerel, Gulf of St Lawrence</p>
H:40 Poster	<p>Title: A north-south comparison of abundance, growth and mortality of juvenile black rockfish (<i>Sebastes cheni</i>) in seagrass beds around Japan</p> <hr/> <p>Authors: Jun Shoji, Ken-Ichiro Mizuno, Yasuhiro Kamimura, Atsushi Fukuta, Shun-Ichi Toshito, and Hikari Kinoshita</p> <hr/> <p>Keywords: juveniles. rockfish, abundance, growth, growth-selective survival, seagrass</p>
H:41 Poster	<p>Title: Cohort-specific survival of larvae and juveniles of an estuarine-dependent fish, Japanese seabass <i>Lateolabrax japonicus</i>: comparison between artificial and natural habitats</p> <hr/> <p>Authors: Yuji Iwamoto and Jun Shoji</p> <hr/> <p>Keywords: <i>Lateolabrax japonicus</i>, mortality, estuary, The Ohta River in Japan</p>
H:42 Poster	<p>Title: Some factors influencing year-class strength of Baltic sprat (<i>Sprattus sprattus balticus</i>)</p> <hr/> <p>Authors: Andrei Makarchouk, Galina Grauman, and Viesturs Berzinsh</p> <hr/> <p>Keywords: Baltic sprat, recruitment, wind, temperature</p>
H:43 Poster	<p>Title: Success of reproduction in the Baltic herring: connections between maternal properties, environmental conditions, and herring fishery</p> <hr/> <p>Authors: Päivi Laine, Jan Eklund, Eila Lahdes, Raimo Parmanne, and Marjut Rajasilta</p>

	Keywords: Baltic herring, Archipelago Sea, maternal effects, reproductive success
H:44 Poster	Title: Growth-selective recruitment from pelagic to demersal habitats for juvenile jack mackerel (<i>Trachurus japonicus</i>) in the East China Sea Authors: M. Takahashi, C. Sassa, and Y. Tsukamoto Keywords: growth rate, selective recruitment, habitat change, East China Sea
H:45 Poster	Title: Identification of recruitment bottlenecks in the early life history of western Baltic herring (<i>Clupea harengus</i> , L.) Authors: P. Polte, S. Beyer, P. Kotterba, C. Hammer, R. Oeberst, and C. Zimmermann Keywords: herring recruitment, inshore ecosystems, Western Baltic Sea.
H:46 Poster	Title: Effects of temperature and salinity on the abundance of larval herring in the Pomeranian Bay during 1992–98 and 2007–10 Authors: Agnieszka Pawełczyk, Dariusz Fey, and Adam Woźniczka Keywords: Pomeranian Bay, herring larvae, density
H:47 Poster	Title: Cannibalism as regulating mechanism in the recruitment of crustaceans over their distributional range in European waters – a theoretical approach Authors: Joana Campos, Cláudia Moreira, Fabiana Freitas, and Henk W. van der Veer Keywords: cannibalism, recruitment regulation, <i>Carcinus maenas</i> , <i>Crangon crangon</i>
H:48 Poster	Title: Turbot sperm quality changes during the spawning season Authors: E. Gosz, J. Horbowy, and Z. Mirny Keywords: <i>Psetta maxima</i> , spermatozoa, day of spawning, morphometry
H:49 Poster	Title: Herring recruitment ecology: looking at the youngest Authors: S. Beyer, C. Hammer, C. Zimmermann, O. Goni, P. Polte, and P. Kotterba Keywords: yolk-sac larvae, actively feeding larvae, variability, recruitment
H:50 Poster	Title: The pattern of genetic structuring in the European hake is highly dependent on the Bayesian model enforced but insensitive to the differentiation parameter used Authors: A. Pita, M. Pérez, F. Velasco, and P. Presa Keywords: European hake, <i>Merluccius merluccius</i> , genetic structure, differentiation coefficients, Bayesian inference
H:51 Poster	Title: Development of invertebrate assemblages on hard substrate in the coastal region of the Gulf of Gdańsk Authors: Marcelina Ziólkowska, Adam Sokołowski ¹ , Irmina Plichta, Piotr Kukliński, Piotr Bałazy, and Maciej Wołowicz Keywords: colonization, succession, hard substrate, field experiment, Gulf of Gdańsk, Baltic Sea

H:52 Poster	<p>Title: Larval development of the prawn <i>Palaemon serratus</i> under limited access to prey</p> <hr/> <p>Authors: Enrique González-Ortegón and Luis Giménez</p> <hr/> <p>Keywords: none</p>
H:53 Poster	<p>Title: Pre-recruit survival and immune system evolution of cuttlefish (<i>Sepia officinalis</i> L.) from different spawning sites of the English Channel</p> <hr/> <p>Authors: G. Safi, C. Le Pabic, J. P. Robin, and N. Koueta</p> <hr/> <p>Keywords: Immune assays, English Channel, <i>Sepia officinalis</i>, juveniles.</p>
H:54 Poster	<p>Title: Inbreeding among farmed Atlantic cod (<i>Gadus morhua</i>) and possible effects on offspring quality</p> <hr/> <p>Authors: Olivia A. Puckrin, Edward A. Trippel, Craig F. Purchase, and Ian A. Fleming</p> <hr/> <p>Keywords: Northwest Atlantic cod (<i>Gadus morhua</i>), Aquaculture, inbreeding, mating competition</p>
H:55 Poster	<p>Withdrawn</p>
H:56 Poster	<p>Title: Individual growth trajectories identify critical periods in finfish early life stages</p> <hr/> <p>Authors: Fabian J. Schäfer, Sebastian Flues, Stefan Meyer, David A. Bengtson, and Myron A. Peck</p> <hr/> <p>Keywords: individuals, larval fish, critical period, gross growth efficiency</p>
H:57 Poster	<p>Title: Changes in growth and condition of larval herring in the Greifswalder Bodden (southwest Baltic Sea) reveal match-mismatch dynamics</p> <hr/> <p>Authors: Lars Christiansen and Myron A. Peck</p> <hr/> <p>Keywords: Western Baltic Spring Spawner (WBSS), match–mismatch, larvae, growth, biochemical condition, field survey</p>

Theme Session I
Integrating top predators into ecosystem management

Conveners: Begoña Santos (Spain), Mark Dickey-Collas (the Netherlands), and
 Stefan Neuenfeldt (Denmark)

ICES CM Code	
I:01 Paper	<p>Title: Body condition of predatory fish linked to the availability of sandeels</p> <p>Authors: Georg H. Engelhard, Julia L. Blanchard, John K. Pinnegar, Jeroen van der Kooij, Ewen D. Bell, Steven Mackinson, and David A. Righton</p> <p>Keywords: sandeel, predators, body condition, North Sea</p>
I:02 Paper	<p>Title: Spatial selection of sandeel (<i>Ammodytes marinus</i>) by Grey seals (<i>Halichoerus grypus</i>)</p> <p>Authors: Geert Aarts, Sophie Brasseur, Anna Rindorf, Sophie Smout, Mark Dickey-Collas, and Jason Matthiopoulos</p> <p>Keywords: predator-prey, marine mammals, spatial distribution, North Sea</p>
I:03 Paper	<p>Title: Consistent differences in fish and marine mammal diets at closely located sites, revealed through stable isotope analyses, despite seasonal migration and population mixing.</p> <p>Authors: John K. Pinnegar, Katherine Read, Georg H. Engelhard, and Julia L. Blanchard</p> <p>Keywords: Dogger Bank, sandeel, predation, seal, porpoise, seasonality</p>
I:04 Paper	<p>Title: Spatial and temporal variability of tuna predation upon juvenile anchovy in the Bay of Biscay</p> <p>Authors: Nicolas Goñi, Valérie Peninon, Haritz Arrizabalaga, and Andrés Uriarte</p> <p>Keywords: anchovy, albacore, bluefin tuna, Bay of Biscay, predation</p>
I:05 Paper	<p>Title: Monitoring life history parameters in harbour porpoises</p> <p>Authors: Graham J. Pierce, Sinead Murphy, Jennifer A. Learmonth, Bob Reid, and M. Begoña Santos</p> <p>Keywords: top predators, cetaceans, population status, monitoring, life history</p>
I:06 Paper	<p>Title: Indirect effects of a bottom trawl fishery on the diet of demersal fish species</p> <p>Authors: A. F. Johnson, G. Gorelli, J. Hiddink, S. Jenkins, and H. Hinz</p> <p>Keywords: demersal fish, Irish Sea, predator-prey interactions, trawl fishery</p>
I:07 Paper	<p>Withdrawn</p>

I:08 Paper	<p>Title: How does prey availability affect the provisioning of chicks by parent birds? A functional response for guillemots in the North Sea</p> <hr/> <p>Authors: Sophie Smout, Francis Daunt, Sarah Wanless, Mike Harris, Jason Matthiopoulos, and Anna Rindorf</p> <hr/> <p>Keywords: <i>Uria aalge</i>, top predators, GES, functional response</p>
I:09 Paper	<p>Title: Do seals and man fish in the same spots? Evidence of low spatial overlap between a top predator and specific fisheries off Irelands' west coast</p> <hr/> <p>Authors: M. A. Cronin, H. D. Gerritsen, and D. G. Reid</p> <hr/> <p>Keywords: Grey seal, fishery interactions, resource overlap, Irish continental shelf</p>
I:10 Paper	<p>Title: Stickleback predation on early life stages of herring (<i>Clupea harengus</i>, L.) in a shallow western Baltic retention area</p> <hr/> <p>Authors: P. Kotterba, S. Beyer, C. Hammer, and P. Polte</p> <hr/> <p>Keywords: predation, herring recruitment, stickleback, Western Baltic Sea</p>
I:11 Paper	<p>Title: Fish consumption by cetaceans in Scottish (UK) and Galician (Spain) waters</p> <hr/> <p>Authors: M. Begoña Santos, Ruth Fernández, Katharina Sollmann, Imogen German, Diana Correia, Anabela Gouveia, Alfredo López, Bob Reid, and Graham J. Pierce</p> <hr/> <p>Keywords: common dolphin, harbour porpoise, diet, food consumption, Scotland, Galicia</p>
I:12 Paper	<p>Title: Estimating fish predation by marine mammals on the northeast US continental shelf</p> <hr/> <p>Authors: Laurel Col, Jason link, Steve Cadrin, and Debra Palka</p> <hr/> <p>Keywords: marine mammals, diet compositions, consumption estimates, Northeast US continental shelf</p>
I:13 Paper	<p>Title: Consumption of prey by minke whales in Icelandic Waters</p> <hr/> <p>Authors: Bjarki Þór Elvarsson and Gísli Víkingsson</p> <hr/> <p>Keywords: top predator, prey suitability</p>
I:14 Paper	<p>Title: Squid in the North Sea: a new effective top predator with potential impact on fish recruitment and ecosystem shift</p> <hr/> <p>Authors: Daniel Oesterwind and Uwe Piatkowski</p> <hr/> <p>Keywords: North Sea, squid, predation, ecosystem</p>
I:15 Paper	<p>Title: From past to future: environmental variability impacts on the distribution of oceanic predators</p> <hr/> <p>Authors: Maite Louzao, Thorsten Wiegand, Clara Péron, Karine Delord, and Henri Weimerskirch</p> <hr/> <p>Keywords: oceanic predators, Southern Ocean, wandering albatross, spatial modelling</p>
I:16	<p>Withdrawn</p> <hr/> <hr/>

I:17 Paper	<p>Title: Consumption of fish by top predators in the North Sea</p> <hr/> <p>Authors: Sophie Smout, Anna Rindorf, Morten Vinther, Ayoe Hoff, Hans Frost, Simon Northridge, and Phil Hammond</p> <hr/> <p>Keywords: diet, consumption, cost, top predator</p>
I:18 Paper	<p>Title: Assessing the effects of small pelagics fisheries on marine top-predators: the Bay of Biscay case study</p> <hr/> <p>Authors: Géraldine Lassalle, Jérôme Spitz, Vincent Ridoux, Hélène Peltier and Nathalie Niquil</p> <hr/> <p>Keywords: <i>Ecopath with Ecosim</i>, Foodweb modelling, ecosystem-based fishery management, Northeast Atlantic</p>
I:19 Paper	<p>Title: Effects of mammal predation on small pelagic fish</p> <hr/> <p>Authors: Anna Gårdmark, Örjan Östman, Karl Lundström, Olle Karlsson, Jukka Pönni, Martin Lindegren, Anders Nielsen, Olavi Kaljuste, and Teija Aho</p> <hr/> <p>Keywords: Top-predators, trophic interactions, ecosystem management, Bothnian Sea herring</p>
I:20 Paper	<p>Title: Defining management reference points for a rockfish stock with fluctuating rates of natural mortality arising from changes in predator abundance</p> <hr/> <p>Authors: Shannon G. Obradovich and Murdoch K. McAllister</p> <hr/> <p>Keywords: pinnipeds, management reference points, predator-prey, stock assessment</p>
I:21 Paper	<p>Title: Top predator – prey interactions in the Barents Sea and implications for ecosystem monitoring and management</p> <hr/> <p>Authors: Mette Skern-Mauritzen, Per Fauchald, Edda Johannesen, Ulf Lindstrøm, and Harald Gjøsæter</p> <hr/> <p>Keywords: Pelagic community, top predators, trophic interactions, ecosystem management</p>
I:22 Paper	<p>Title: Significance of seal feeding on cod west of Scotland – results from a state space stock assessment model and comparison with an ecosystem model</p> <hr/> <p>Authors: S. J. Holmes and G. Tyldesley</p> <hr/> <p>Keywords: assessment, cod, ICES division VIa, seals</p>
I:23 Paper	<p>Title: Grey seal predation on forage fish in the Baltic Sea</p> <hr/> <p>Authors: Eero Aro, Stefan Neuenfeldt, Teija Aho, Pekka Jounela, Karl Lundström, and Fritz Köster</p> <hr/> <p>Keywords: Grey seal, Baltic herring, sprat, multispecies interactions, ecosystem management</p>
I:24 Paper	<p>Title: Could seals prevent cod recovery in the Baltic Sea?</p> <hr/> <p>Authors: Brian MacKenzie, Margit Eero, and Henn Ojaveer</p> <hr/> <p>Keywords: cod, seals, climate change, fishery, ecosystem, Baltic Sea, sustainability, management</p>
I:25 Poster	<p>Withdrawn</p>

I:26 Poster	<p>Title: Feeding ecology of black scabbardfish, (<i>Aphanopus carbo</i> Lowe 1839), in the deep water of the Northeast Atlantic</p> <hr/> <p>Authors: Ana Ribeiro Santos, Emer Rogan, and Paul Connolly</p> <hr/> <p>Keywords: Black Scabbardfish, Deep Sea, Feeding habits, Seasonal variability</p>
I:27 Poster	<p>Title: Harbour porpoise and bottlenose dolphin in Ireland: diet and interactions with fisheries</p> <hr/> <p>Authors: Gema Hernandez-Milian, M. Begoña Santos, and Emer Rogan</p> <hr/> <p>Keywords: harbour porpoise, bottlenose dolphin, fishery, whiting, clupeids</p>
I:28 Poster	<p>Title: Overlapping on diet of some demersal fish off Angola</p> <hr/> <p>Authors: Kumbi Kilongo, Vanaquissa Jonico, Fatima Delicado</p> <hr/> <p>Keywords: Angola, overlapping, predator, prey</p>
I:29 Poster	<p>Title: Shifts in seabird species habitats owing to the global climatic change</p> <hr/> <p>Authors: Oleg Krasnoborodko, Feodor Litvinov, and Alexander Remeslo</p> <hr/> <p>Keywords: seabirds, Central Eastern Atlantic, Southwest Atlantic, Southeast Pacific, ecosystem shifts, global climatic changes</p>
I:30 Poster	<p>Title: Antarctic cranch squid (<i>Mesonychoteuthis hamiltoni</i>) - a top predator of the Antarctic waters - its distribution and relationship with Antarctic (<i>Dissosticus mawsoni</i>) and Patagonian (<i>Dissosticus eleginoides</i>) toothfish</p> <hr/> <p>Authors: Alexander Remeslo Alexander, Christine Hieber, and Oleg Krasnoborodko</p> <hr/> <p>Keywords: Antarctic cranch squid, Antarctic toothfish, Patagonian toothfish, CCALMR</p>
I:31 Poster	<p>Title: Identifying ecologically important marine areas in the Northeast Atlantic: preliminary results for the conservation of marine top predators</p> <hr/> <p>Authors: Maite Louzao, Xulio Valeiras, Salvador García-Barcelona, Ruth Fernández, Ariadna Acero, Silvia Monteiro, Helder Araújo, Paula Méndez, Rafael González-Quirós, and M. Begoña Santos</p> <hr/> <p>Keywords: ecologically meaningful marine areas, marine predators, ecosystem-based monitoring programme, NE Atlantic</p>
I:32 Poster	<p>Title: Cod as top predator in the southeastern Baltic: results of the winter observations in 1992–2010</p> <hr/> <p>Authors: F. A. Patokina, Ch. M. Nigmatullin, and S. M. Kasatkina</p> <hr/> <p>Keywords: none</p>
I:33 Poster	<p>Title: A study to evaluate survival of adult spring/summer chinook salmon migrating from the mouth of the Columbia River to Bonneville Dam (Rkm 234)</p> <hr/> <p>Authors: A. Michelle Wargo Rub, Lyle G. Gilbreath, R. Lynn McComas, Lila Charlton, Benjamin P. Sandford, David J. Teel, and John W. Ferguson</p> <hr/> <p>Keywords: salmon, survival, pinniped, predation</p>
I:34 Poster	<p>Title: A role of clupeid predation on fish eggs and larvae in the Gdansk Deep of the Baltic Sea</p> <hr/> <p>Authors: E. M. Karasiova, F. A. Patokina, and N. A. Kalinina</p> <hr/> <p>Keywords: the Baltic Sea, clupeids, predation on fish and larvae, predominant prey</p>

I:35 **Title:** The importance of prey quality and availability on plankton predation by
Poster keystone Arctic species, the little auk

Authors: K. Błachowiak-Samołyk, L. Stempniewicz, E. Trudnowska, J. M. Węśławski, R. Boehnke, and M. Wichorowski

Keywords: climate change, zooplankton, bi-environmental seabirds, West Spitsbergen

I:36 **Title:** West African chondrichthyan species as top consumer and food
Poster competitor of economically important fishes

Authors: Litvinov Feodor, Faina Patokina and Nikolay Timoshenko

Keywords: Western African waters; sharks, skates, rays and chimaera diets; small pelagic fish consuming; feeding spectra overlap

I:37 **Title:** Comparative analysis of the impact of trawl and longline fishing on the
Poster Barents Sea ecosystem

Authors: Andrey A. Grekov and Konstantin V. Drevetnyak

Keywords: Barents Sea, bottom biocenosis, bottom trawl, longline, species and size selection

Theme Session J
**Climate and fisheries related influences on marine ecosystems at regional
and basin scales**

Conveners: Webjørn Melle (Norway) and Erica Head (Canada)

ICES CM Code	
J:01 Paper	<p>Title: Cyclic climate changes and major commercial stocks in the Arctic region</p> <p>Authors: O. A. Bulatov., L. B. Klyashtorin, and V. M. Borisov</p> <p>Keywords: Arctic climate impacts, cod, herring, walleye pollock fishable biomass</p>
J:02 Paper	<p>Title: Crustacean cross-roads: Comparative analysis of population connectivity of copepods and euphausiids in the North Atlantic Ocean</p> <p>Authors: Ann Bucklin, Leocadio Blanco-Bercial, Nancy J. Copley, and Peter H. Wiebe</p> <p>Keywords: zooplankton, connectivity, gene flow, population genetics</p>
J:03 Paper	<p>Title: Long-term changes in zooplankton community in the southern part of the Baltic Sea – search for evidence of climate change and impact of fisheries pressure</p> <p>Authors: P. Margonski, B. Kaczmaruk, and W. Krasniewski</p> <p>Keywords: southern Baltic Sea, zooplankton, climate change, fishery pressure</p>
J:04 Paper	<p>Title: Ecosystem responses in the North Atlantic to the cold period of the 1970s and 1980s</p> <p>Authors: Ken Drinkwater and Trond Kristiansen</p> <p>Keywords: Climate, cold period, North Atlantic, ecosystem response</p>
J:05 Paper	Withdrawn
J:06 Paper	Withdrawn
J:07 Poster	<p>Title: Oscillations in abundance of some economically important fishes related to hydro-climate of the Northwest Atlantic</p> <p>Author: Igor K. Sigaev</p> <p>Keywords: interannual variability; NAO index variability; Greenland halibut, redfish, cod and other economically important fish of NWA</p>
J:08 Paper	<p>Title: Environmental regulation of capelin in the Northwest Atlantic</p> <p>Authors: Alejandro D. Buren, Mariano Koen-Alonso, Fran Mowbray, Brian Nakashima, Garry Stenson, Pierre Pepin, and Neil Ollerhead</p>

	Keywords: sea ice, bottom–up, climate change, forage fish
J:09 Paper	Title: Applying the shiftogram approach for identifying ecosystem changes – the Baltic Sea as a multivariate test case Authors: Joachim Gröger, Christian Möllmann, Thorsten Blenckner, Anna Gårdmark, Martin Lindegren, Bärbel Müller-Karulis, Axe Philip, Maris Plikshs, and Georgs Kornilovs Keywords: none
J:10 Paper	Title: Improving the stock–recruitment relationship by including environmental data Authors: Geir Ottersen and Esben Moland Olsen Keywords: Recruitment, North Sea, cod, model
J:11 Paper	Title: Fishery- and climate-induced changes in predator distribution trigger a spatial reallocation of its prey: the cod–sprat dynamics in the Baltic Sea Authors: Michele Casini, Ulf Bergström, Valerio Bartolino, Eero Aro, Martin Lindegren, Philip Axe, and Markus Meier Keywords: spatial top–down control, geographical distribution, physical-biochemical modelling, Baltic Sea
J:12 Paper	Title: The influence of the North Atlantic Oscillation on the abundance of <i>Pagellus bogaraveo</i> of the Azores Authors: M. R. Pinho, I. Bashmachnikov, and A. Martins Keywords: deep-water, abundance, climate variability, management
J:13 Poster	Title: Rock cod, <i>Patagonotothen ramsayi</i> as a key species in the Falkland Islands' ecosystem Authors: Vladimir Laptikhovsky, Alexander Arkhipkin, and Paul Brickle Keywords: rock cod, <i>Patagonotothen ramsayi</i> , Falkland Islands, ecosystem
J:14 Poster	Withdrawn
J:15 Poster	Withdrawn
J:16 Poster	Title: The response of the Baltic Sea to climate variability Authors: K. Getzlaff, A. Lehmann, and H.-H. Hinrichsen Keywords: Climate variability, Baltic Sea, modelling
J:17 Poster	Title: Effects of future climate on physiology and egg production in Baltic Sea sprat Authors: Christina Frisk, Axel Temming, Jens-Peter Herrmann, Kristine Skovgaard Madsen, and Ken Haste Andersen Keywords: Baltic Sea, bioenergetic model, climate scenarios, <i>Sprattus sprattus</i>
J:18 Poster	Title: Possible impact of temporal changes of sea temperature on <i>Aurelia aurita</i> (L.) quantity in the Baltic Sea Author: Krzysztof Pawlikowski Keywords: <i>Aurelia aurita</i> , abundance, Baltic Sea, temperature

J:19 **Title:** Interannual dynamics of zoobenthos in the Vistula Lagoon, Baltic Sea in
Poster 1997–2010

Author: Elena Ezhova

Keywords: The Vistula Lagoon, biomass, production, zoobenthos

J:20 **Title:** Shifts in the genetic structure of the European hake met population as
Poster fingerprints of migration between fishery grounds

Authors: A. Pita, A. Leal, C. Piñeiro, and P. Presa

Keywords: European hake, *Merluccius merluccius*, genetic markers, connectivity
pattern

Theme Session K

Integrating micro- and meso-zooplankton in marine food web research

Conveners: James J. Pierson (USA), Steve Hay (UK), and Sigrún Jónasdóttir (Denmark)

ICES CM code	
K:01 Paper	<p>Title: Impact of the alien predatory cladoceran <i>Cercopagis pengoi</i> on zooplankton: evidence from laboratory experiments</p> <p>Authors: Henn Ojaveer, Mart Simm, and Maria Pöllupüü</p> <p>Keywords: Baltic Sea, alien species, zooplankton, predator-prey interactions</p>
K:02 Poster	<p>Title: Production of planktonic crustaceans in the southeastern part of the Baltic Sea (in 1995–2010)</p> <p>Authors: Anna Semenova and Natalia Zhigalova</p> <p>Keywords: South Baltic Sea, zooplankton, production, planktonic crustaceans</p>
K:03 Paper	<p>Title: From zooplankton to large pelagic fish: production and biomagnification in a tropical coastal pelagic food web adjacent to Lihir gold mine (Papua New Guinea)</p> <p>Authors: D. T. Brewer, A. J. Richardson, S. Griffiths, E. B. Morello, G. Fry, D. Heales, S. Apte, W.N. Venables, P. Rothlisberg, C. Moeseneder, M. Lansdell, B. Pendrey, D. Milton, M. Tonks, F. Coman, and J. Strzelecki</p> <p>Keywords: Deep sea tailings placement, pelagic food web, trace metals, Papua New Guinea</p>
K:04 Paper	Withdrawn
K:05 Paper	<p>Title: Trophic interactions among zooplankton and fish species within the pelagic ecosystem of the Iceland Sea</p> <p>Author: Hildur Petursdottir</p> <p>Keywords: trophic ecology, zooplankton, capelin, stable isotopes, fatty acids, Iceland Sea</p>
K:06 Paper	Withdrawn
K:07 Paper	<p>Title: Essential fatty acid (docosahexaenoic acid, DHA) affects RNA:DNA ratio of larval herring in the field</p> <p>Authors: Matthias Paulsen, Catriona Clemmesen, and Arne M. Malzahn</p> <p>Keywords: essential fatty acids, mesozooplankton, protists, nutritional condition, herring larvae</p>
K:08 Paper	Withdrawn
K:09 Paper	Withdrawn

-
- K:10 **Title:** Carbon dioxide affects copepod production by reducing the nutritional quality of their algal diet
Paper
-
- Authors:** Jorge Rafael Bermúdez, Dennis Rossoll, Monika Winder, Helena Hauss, Kai Schulz, Ulrich Sommer, and Ulf Riebesell
-
- Keywords:** copepods, diatoms, fatty acids, carbon dioxide
-
- K:11 **Title:** Egg or female: who decides the fate of an egg type? A laboratory study on Baltic *Acartia tonsa*
Paper
-
- Authors:** L. Holste, N. Schulz, A. B. S. Diekmann, J. Peters, J. Renz, and M. A. Peck
-
- Keywords:** *Acartia tonsa*, diapause eggs, egg morphology, hatching success
-
- K:12 **Title:** Results from zooplankton size structure surveys in the Bay of Biscay during the last decade.
Paper
-
- Authors:** Pieter Vandromme, Enrique Nogueira, Martin Huret, Ángel López-Urrutia, Gonzalo González-Nuevo, Pierre Petitgas, and Marc Sourisseau
-
- Keywords:** Zooplankton, Size-spectra, Bay of Biscay, L-OPC, ZooScan
-
- K:13 **Title:** Modeling the global-scale transfer of energy between primary producers and mesozooplankton
Paper
-
- Authors:** Charles A. Stock and John P. Dunne
-
- Keywords:** mesozooplankton, climate, energy transfer, plankton foodweb
-
- K:14 **Title:** Plankton trophic dynamics in hypoxic waters: seasonal effects and food web implications
Paper
-
- Authors:** James J Pierson, Diane K. Stoecker, Michael Roman, David Elliott, Ed Houde, Mary Beth Decker, Katherine Liu, and Ali Barba
-
- Keywords:** trophic interactions, copepods, hypoxia, Chesapeake Bay
-
- K:15 **Withdrawn**
Poster
-
- K:16 **Title:** State of the Canary upwelling zooplankton in winter
Poster
-
- Authors:** O. G. Glushko
-
- Keywords:** none
-
- K:17 **Title:** **Spatio-temporal** and inter-annual variability of mesozooplankton (holoplankton) in the eastern part of the Gulf of Gdańsk (Baltic Sea)
Poster
-
- Authors:** Luiza Bielecka, Paweł Maruszak, Beata Sobczak
-
- Keywords:** Baltic Sea, estuarine waters, zooplankton, variability
-
- K:18 **Title:** Interannual changes of holozooplankton in the southern Baltic (Gulf of Gdańsk, 2006–2007)
Poster
-
- Authors:** S. Mudrak-Cegiołka, M. Kalarus, A. Renusz
-
- Keywords:** southern Baltic, coastal waters, zooplankton, interannual changes
-
- K:19 **Title:** Hydrographic patterns conditioning variable trophic pathways and early life dynamics of bullet tuna larvae (*Auxis rochei*) in the Balearic Sea
Poster
-
- Authors:** R. Laiz-Carrión, J. M. Quintanilla, A. Pérez-Torres, P. Reglero, A. García, and F. Alemany
-

Keywords: bullet tuna larvae, mesozooplankton, trophism, growth, stable isotope, Balearic Sea

K:20 **Title:** Trophic interaction between zooplankton and anchovy larvae (*Engraulis*
Poster *encrasicolus*) with daily growth variability implications

Authors: J. M. Quintanilla, R. Laiz-Carrión, A. Uriarte, M. Iglesias, F. Alemany, and A. García

Keywords: anchovy larvae, zooplankton, trophic interactions, growth, stable isotope, Mediterranean Sea

K:21 **Title:** Feeding and fecundity of *Calanus finmarchicus* and *Temora longicornis* in
Poster Breiðafjörður, West Iceland

Authors: Vigdís Sigurðardóttir, Erla Björk Örnólfsdóttir, and Ástþór Gíslason

Keywords: Iceland, Copepods, Egg production, Gut fluoresces

Theme Session L
**Biophysical modelling tools and their potential use in marine spatial
management: a strategic dialogue**

Conveners: Myron A. Peck (Germany), Rubao Ji (USA), Pierre Petitgas (France),
and Vanessa Stelzenmüller (Germany)

ICES CM Code	
L:01 Paper	<p>Title: Biophysical assessments and adaptive spatial management for tropical trawling</p> <hr/> <p>Authors: Rodrigo H. Bustamante, Cathy M. Dichmont, Nick Ellis, Shane P. Griffiths, Wayne A. Rochester, and Aijun R. Deng</p> <hr/> <p>Keywords: Effects of trawling, ecological impacts, ecosystem processes, management strategy evaluation, adaptive spatial management, ecosystem-based management</p>
L:02 Paper	<p>Title: The impact of hydrodynamics and hydrography on western Baltic cod early life stage survival</p> <hr/> <p>Authors: H.-H. Hinrichsen, K. Hüsey, and B. Huwer</p> <hr/> <p>Keywords: spawning habitat, egg and larval development, transport processes, environment-related western Baltic cod stage specific survival</p>
L:03 Paper	<p>Title: The response of a Gulf estuary plume and hypoxia to wind forcing</p> <hr/> <p>Author: Meng Xia</p> <hr/> <p>Keywords: EFDC, Plume, Hypoxia</p>
L:04 Paper	<p>Title: Evaluating management scenarios using predictive habitat modelling – effects of eutrophication mitigation in the Baltic Sea</p> <hr/> <p>Authors: Ulf Bergström, Göran Sundblad, Anna-Leena Downie, Martin Snickars, and Mats Lindegarh</p> <hr/> <p>Keywords: Habitat modelling, MaxEnt, scenario analysis, eutrophication</p>
L:05 Paper	<p>Title: The application of a biophysical model to the north Aegean anchovy fishery: its implication for spatial management</p> <hr/> <p>Authors: D. V Politikos, G. Triantafyllou, K. Tsiaras, M. Giannoulaki, A. Machias, C. Maravelias, and S. Somarakis</p> <hr/> <p>Keywords: IBM anchovy model, spatial management, north Aegean Sea</p>
L:06 Paper	<p>Title: Modelling nutrient to fish model – an Eulerian approach</p> <hr/> <p>Authors: Wolfgang Fennel and Hagen Radtke</p> <hr/> <p>Keywords: 3d-modelling, herring, sprat, cod, predator-prey interaction, fish migration</p>
L:07 Paper	<p>Title: <i>Sepia officinalis</i>: spawning habitat modelling in the English Channel and its potential for fisheries management</p> <hr/> <p>Authors: Isobel Bloor, Charlotte Marshall, Emma Jackson, Jean-Paul Robin, and Martin Attrill</p>

	Keywords: English Channel, cephalopod, spawning habitats, fisheries management
L:08 Paper	Title: Spatial management scenarios for the brown shrimp fisheries in the German Bight: Possible influences of product prices, TAC for plaice and sole, and Nature 2000 management plans Authors: T. Schulze, V. Stelzenmüller, A. Sell, J. Berkenhagen, and K. Schulte Keywords: Brown shrimp, marine protection areas, economics, marine spatial planning
L:09 Paper	Title: Near real time prediction and spatial management of Pacific skipjack tuna Authors: Patrick Lehodey and Inna Senina Keywords: ecosystem modelling, population dynamics, pacific skipjack tuna, spatial management
L:10 Paper	Title: The potential use of operational biochemical models in marine spatial management Authors: Frank Janssen, Tian Tian, Zhenwen Wan, and Karen Edwards Keywords: ecosystem model, biochemical model, Baltic Sea, North Sea
L:11 Paper	Title: Retention of western Baltic herring larvae within the main spawning area Authors: Robert Bauer, Daniel Stepputtis, and Ulf Gräwe Keywords: bio-physical modeling, recruitment, larval drift, herring, Baltic Sea, retention, Greifswalder Bodden
L:12 Paper	Title: Can biophysical individual-based models reliably tell us why most larvae die in the sea? Authors: Myron A. Peck and Marc Hufnagl Keywords: Larval fish, IBMs, sensitivity, scenarios, mortality, advection, starvation
L:13 Paper	Withdrawn

Theme Session M
Assessment and management of Large Marine Ecosystems

Convener: Michael O'Toole (Ireland), Kenneth Sherman (USA), Gotthilf Hempel (Germany), and Yvonne Walther (Sweden)

ICES CM code	
M:01 Paper	<p>Title: Changing states and adaptive management actions of the Yellow Sea Large Marine Ecosystem</p> <hr/> <p>Authors: Qisheng Tang</p> <hr/> <p>Keywords: Large marine ecosystem, Yellow Sea, Changing states, Adaptive management actions, Carbon sink fisheries</p>
M:02 Paper	<p>Title: Environmental genotoxicity levels in the "Baltic Sea–North Sea–Atlantic" marine system</p> <hr/> <p>Authors: Janina Baršienė, Aleksandras Rybakovas, Thomas Lang, Laura Andreikėnaitė, Włodzimierz Grygiel, and Arvo Tuvikene</p> <hr/> <p>Keywords: genotoxicity, fish, Baltic Sea, North Sea, Atlantic Ocean</p>
M:03 Paper	<p>Title: On the way towards the MSFD: sensitivity analysis of size-based fish metrics for the use as indicators in an ecosystem-based assessment framework</p> <hr/> <p>Authors: W. N. Probst, H. Fock, V. Stelzenmüller, and M. Kloppmann</p> <hr/> <p>Keywords: large fish indicator, length-frequency distribution, assessment, marine strategy framework directive, viability analysis</p>
M:04 Paper	<p>Title: Main bio-productivity features of the western Arctic LMEs</p> <hr/> <p>Authors: G. G. Matishov, P. R. Makarevich, E. I. Druzhkova, O. V. Karamushko, and O. S. Lyubina</p> <hr/> <p>Keywords: Arctic, bio-productivity, LME, P/B-coefficient</p>
M:05 Paper	<p>Title: Assessing pelagic fish stocks from acoustic and trawl survey data in the Baltic Sea</p> <hr/> <p>Authors: Jarno Vanhatalo, Teppo Juntunen, Heikki Peltonen, and Samu Mäntyniemi</p> <hr/> <p>Keywords: acoustic survey, Bayesian spatial modeling, Gaussian process, multispecies</p>
M:06 Paper	<p>Title: Chloropigments-<i>a</i> in sediments in coastal zone as markers of eutrophication and environmental conditions</p> <hr/> <p>Authors: Małgorzata Szymczak-Żyła, Grażyna Kowalewska, and J. William Louda</p> <hr/> <p>Keywords: chloropigments-<i>a</i>, sediments, eutrophication, depositional conditions</p>

M:07 Paper	<p>Title: Towards holistic ecosystem assessments – achievements of the ICES/HELCOM Working Group on Integrated Assessments of the Baltic Sea (WGIAB)</p> <hr/> <p>Authors: Christian Möllmann, Lena Bergström, Thorsten Blenckner, Juha Flinkman, Anna Gårdmark, Martin Lindegren, and Bärbel Müller-Karulis</p> <hr/> <p>Keywords: Baltic Sea, holistic ecosystem assessments, ecosystem regime shifts, ecosystem modelling, ecosystem-based management</p>
M:08 Paper	<p>Title: The Celtic Sea Biscay Shelf and Western Iberian LMEs: how they differ from most other LMEs and why that difference should be valued</p> <hr/> <p>Authors: Dave Reid, Maria Fatima Borges, Pascal Laffargue, and Enrique Nogueira</p> <hr/> <p>Keywords: LME, Celtic Sea, Biscay, Western Iberia, spatial heterogeneity</p>
M:09 Paper	<p>Title: Implementation of the science plan in the Benguela Current Large Marine Ecosystem</p> <hr/> <p>Authors: Dr. Moses Maurihungirie</p> <hr/> <p>Keywords: Benguela Current Commission; Ecosystem Advisory Committee; sustainable utilization; transboundary stocks</p>
M:10 Paper	<p>Title: The Gulf of Mexico Large Marine Ecosystem Project: the way ahead</p> <hr/> <p>Authors: Porfirio Alvarez-Torres, Antonio Díaz de Leon-Corral, Jose Ignacio Fernandez- Mendez, Ramon Chavez-Amparan, Carolina Quiroz, Orlando Iglesias, Javier Acevedo, Ivonne Cruz, Susana Hernandez, Leoncio Frias, and Rafael Arreola</p> <hr/> <p>Keywords: Gulf of Mexico, Large Marine Ecosystem, Ecosystem-Based Management</p>
M:11 Paper	<p>Title: Organic contaminants in sediments as indicators of pollution – a case study of the Gulf of Gdańsk</p> <hr/> <p>Authors: Grażyna Kowalewska, Anna Filipkowska, Ludwik Lubecki, and Małgorzata Szymczak-Żyła</p> <hr/> <p>Keywords: organic pollutants, indicators, sediments, Baltic Sea</p>
M:12 Paper	<p>Title: Reversing the degradation of the Canary Current Large Marine Ecosystem</p> <hr/> <p>Authors: Birane Sambe, Birgitta Liss Lymer, Ana Maria Caramelo, and Merete Tandstad</p> <hr/> <p>Keywords: Canary Current, Ecosystem, Fisheries, Transboundary</p>
M:13 Paper	<p>Title: The application of MSFD indicators in the Baltic Sea: How good are they?</p> <hr/> <p>Authors: Daniel Oesterwind and Christian von Dorrien</p> <hr/> <p>Keywords: Marine Strategy Framework Directive, Indicator, Descriptor, Baltic Sea, Large Fish Indicator</p>
M:14 Paper	<p>Title: Decision-support for the economic analysis of trade-offs in Coastal and Marine Spatial Planning (CMSP) for the US Northeast Shelf LME</p> <hr/> <p>Authors: Porter Hoagland and Di Jin</p> <hr/> <p>Keywords: coastal and marine spatial planning; trade-offs; regional economic</p>

	models; Northeast Large Marine Ecosystem
M:15 Paper	Title: Best practices for assessments of LMEs (and larger) Author: Jake Rice Keywords: none
M:16 Paper	Withdrawn
M:17 Paper	Title: MESMA: Methodology for assessing the management of marine areas Authors: R. ter Hofstede, A. Paijmans, O. Box, J. van Dalssen, P. Jones, S. Katsanevakis, G. Sutton, M. Rabaut, F. Thomsen, V. Stelzenmüller, and M. Vincx Keywords: Marine Spatial Management, MSP, ecosystem-based approach, governance, sustainable development, SMA, CFP, MSFD
M:18 Poster	Title: Interannual dynamics of zooplankton in the Canary Current Ecosystem Author: V. V. Lidvanov Keywords: none
M:19 Poster	Title: Primary productivity and eutrophication in two different types of Large Marine Ecosystems – the Baltic Sea and the Canary Current Author: Sergey Aleksandrov Keywords: Canary Current, Baltic Sea, primary productivity, eutrophication
M:20 Poster	Title: Flying fishes, marine birds, and elasmobranchs as integrated biological indicators of LMEs' boundaries and their spatial and temporal changes Authors: Litvinov Feodor and Oleg Krasnoborodko Keywords: Eastern Pacific and Atlantic; biological indicators of LMEs boundaries; flying fishes, seabirds and elasmobranchs
M:21 Poster	Title: Who eats whom? Insights into the complex food web of Chesapeake Bay Authors: Maja Walter, Muriel-Marie Kroll, and Ute Jacob Keywords: Food web, Connectance, trophic interactions, Chesapeake Bay, cross-system comparison
M:22 Poster	Title: A two-stage biomass model to assess the English Channel cuttlefish stock Authors: Michael Gras, Beatriz Roel, Franck Coppin, Eric Foucher, and Jean-Paul Robin Keywords: Cuttlefish, <i>Sepia officinalis</i> , Stock assessment, Abundance index, English Channel, CPUE, Celtic Biscay shelf
M:23 Poster	Withdrawn
M:24 Paper	Title: Assessing changing states of Large Marine Ecosystems Author: Kenneth Sherman Keywords: none

Theme Session N

The future of marine fish stocks and food webs – advancing methods for projections in the face of uncertainty

Conveners: Anna Gårdmark (Sweden), Christian Möllmann (Germany), and Charles Stock (USA)

ICES CM Code	
N:01 Paper	<p>Title: Predicting recovery trajectories for the large species and large fish indicators</p> <p>Authors: Tak Fung, Keith D. Farnsworth, Samuel Shephard, David G. Reid, and Axel G. Rossberg</p> <p>Keywords: community structure, Large Fish Indicator, Northeast Atlantic, recovery</p>
N:02 Paper	<p>Title: A size-based modelling approach for the evaluation of ecological indicator performance under changing fishing pressure</p> <p>Authors: Jennifer E. Houle, Keith D. Farnsworth, Axel G. Rossberg, and David G. Reid</p> <p>Keywords: ecological indicators, marine community model, size-spectrum, ecosystem approach to fisheries management</p>
N:03 Paper	<p>Title: Scenarios of ecological and economic consequences of rebuilding paths of depleted populations</p> <p>Authors: Núria Calduch-Verdiell, Ken H. Andersen, Brian R. MacKenzie, Lars Ravn-Jonse, and James W. Vaupel</p> <p>Keywords: Overfishing, rebuilding plan, big old fecund female (BOFF), age-stock structure, cost-benefit analysis, maximum sustainable yield</p>
N:04 Paper	<p>Title: Estimating the minimum commercially viable population size and the maximum viable body size of harvested species</p> <p>Author: Matthew G. Burgess</p> <p>Keywords: extinction risk, global, minimum commercially viable population size, maximum viable body size</p>
N:05 Paper	<p>Title: An end-to-end model of a coastal upwelling system: propagation of lower trophic level variability to upper trophic levels in the Northern California Current</p> <p>Authors: James J. Ruzicka, John H. Steele, Marisa N.C. Litz, William T Peterson, Richard D. Brodeur, and Thomas C. Wainwright</p> <p>Keywords: Northeast Pacific, NPZD model, food web model, propagation of uncertainty</p>
N:06	<p>Title: Biological ensemble modelling to improve marine science and ecosystem-based management</p>

Paper	<p>Authors: Anna Gårdmark, Martin Lindegren, Stefan Neuenfeldt, Thorsten Blenckner, Eero Aro, Outi Heikinheimo, Bärbel Müller-Karulis, Susa Niiranen, Maciej Tomcz, Anders Wikström, and Christian Möllmann</p> <hr/> <p>Keywords: ensemble modelling, Baltic cod, ecosystem-based management, climate change</p>
N:07 Paper	<p>Title: Ecological-economic multi-species management of the Baltic Sea fisheries: tradeoffs between objectives in an ecosystem context</p> <hr/> <p>Authors: Rudi Voss, Jörn O. Schmidt, Maciej T. Tomczak, Martin F. Quaas, and Thorsten Blenckner</p> <hr/> <p>Keywords: Baltic Sea, ecological-economic model, multi-species</p>
N:08 Paper	<p>Title: What is the dominating contribution to the density-dependence of fish population growth?</p> <hr/> <p>Authors: Axel G. Rossberg, Tak Fung, David Reid, and Keith D. Farnsworth</p> <hr/> <p>Keywords: carrying capacity, density-dependence, stock-recruitment relations</p>
N:09 Paper	<p>Title: Bayesian learning and updating in selecting catch-at-age stock-assessment models and its implications for population projections in the face of uncertainty</p> <hr/> <p>Authors: Yan Jiao, Donald J. Orth, Eric P. Smith, and Robert L. O'Reilly</p> <hr/> <p>Keywords: Bayesian model averaging, statistical-catch-at-age, Bayesian learning, population projection</p>
N:10 Paper	<p>Title: Influence of possible long-term environmental condition development scenarios on Baltic cod stock and recruitment dynamics</p> <hr/> <p>Authors: Maris Plikshs and Bärbel Müller-Karulis</p> <hr/> <p>Keywords: Baltic Sea, cod, reproductive volume, long-term predictions</p>
N:11 Poster	<p>Title: Signatures of fishing on marine food web structure</p> <hr/> <p>Authors: Tak Fung, Keith D. Farnsworth, David G. Reid, and Axel G. Rossberg</p> <hr/> <p>Keywords: biodiversity, food web, Northeast Atlantic, productivity</p>
N:12 Poster	<p>Title: State of fish food supply in the eastern part of the Gulf of Finland in 2010</p> <hr/> <p>Authors: Olga N. Susloparova, Yuri A. Zuyev, and Vera A. Ogorodnikova</p> <hr/> <p>Keywords: food supply, zooplankton, zoobenthos, the Gulf of Finland</p>
N:13 Poster	<p>Title: Diet of Cunene horse mackerel (<i>Trachurus trecae</i>) off Angola</p> <hr/> <p>Authors: Henriette Lutuba Nsilulu, Filomena Vaz-Velho, and Carl Van Der Lingen</p> <hr/> <p>Keywords: Cunene horse mackerel, feeding periodicity, rate of gut evacuation, Angola</p>
N:14 Poster	<p>Title: Predicting ecosystem response to decadal-scale climate variability using an end-to-end ecosystem model</p> <hr/> <p>Authors: Kelly A. Kearney, Charles Stock, and Jorge L. Sarmiento</p> <hr/> <p>Keywords: end-to-end model, subarctic Pacific, climate variability</p>

Theme Session O
Surplus production models: quantitative tools to manage exploited fisheries
and compare the productivity of marine ecosystems

Conveners: Ken Drinkwater (Norway), Jason Link (USA), and Jennifer Boldt
(Canada)

ICES CM code	
O:01 Paper	Withdrawn
O:02 Paper	Title: A new quantitative tool for stock assessment Authors: Saang-Yoon Hyun Keywords: exploitable abundance, maximum sustainable yield, over-parameterization problem
O:03 Paper	Title: Contrasts across levels of aggregation, ecosystems and drivers: lessons learned from fisheries production estimates in 11 northern hemisphere ecosystems Authors: Jason S. Link, Sarah Gaichas, Thomas J. Miller, Tim Essington, Alida Bundy, Jennifer Boldt, Ken F. Drinkwater, and Erlend Moksness Keywords: ecosystem comparison, surplus production, multispecies models, aggregate biomass estimates, environmental covariates, fisheries management
O:04 Paper	Title: The effects and relative importance of fishing, trophodynamic and environmental drivers on ecosystems Authors: Caihong Fu, Jennifer Boldt, Jason Link, Alida Bundy, Sarah Gaichas, Robert Gamble, Adam Cook, Kjell Rong Utne, Hui Liu, and Kevin Friedland Keywords: ecosystem comparison, surplus production, multivariate statistical methods, indicators, fisheries management
O:05 Paper	Title: Modeling long-term population productivity variation using nonstationary surplus production models Authors: Yan Jiao and Rob O'Reilly Keywords: Bayesian, non stationary surplus production model, Atlantic weakfish, long-term population dynamics
O:06 Paper	Title: MSY oriented management of the Baltic Sea herring under regime shifts Authors: Noel M.A. Holmgren, Niclas Norrström, Robert Aps, and Sakari Kuikka Keywords: density-dependence, fishing mortality, productivity, sustainability, weight-at-age, yield
O:07 Paper	Title: Can a full multispecies production model tell us anything single-species models with covariates can't? Authors: William T. Stockhausen, Thomas J. Miller, Mariano Koen-Alonso,

Timothy E. Essington, Sean M. Lucey, Robert J. Gamble, Jason S. Link, and Sarah K

Keywords: none

O:08 **Title:** Assembly rules for aggregate species production models: simulations in
Paper support of management strategy evaluation

Authors: Michael Fogarty, Sarah Gaichas, Hugues Benoit, Tim Essington, Caihong Fu, Robert Gamble, Mariano Koen-Alonso, and Jason Link

Keywords: none

O:09 **Title:** Simulating the triad of drivers with MS-PROD, a multispecies production
Paper model

Authors: Robert Gamble, Jason Link, Michael Fogarty, Sarah Gaichas, Janet Nye, Hugues Benoit, and Tim Essington

Keywords: none

O:10 **Title:** Comparison of surplus production estimates with and without
Paper environmental co-variables: patterns for functionally aggregated groups across ten large marine ecosystems in the northern hemisphere

Authors: Sean M. Lucey, Robert J. Gamble, Thomas J. Miller, William T. Stockhausen, Jennifer L. Boldt, Dag O. Hjermann, Kevin Friedland, and Jason S. Link

Keywords: none

Theme Session P
The interface between management and science – moving forward

Conveners: Kjartan Hoydal (NEAFC), Ásmundur Guðjonsson (NMC), and Hans Lassen (Denmark)

ICES CM Code	
P:01 Paper	<p>Title: Development of a Revised Approach to Providing Fish Stock Assessment Advice in the northeast region of the United States</p> <hr/> <p>Authors: James R. Weinberg, Richard Merrick, Fredric Serchuk, Paul Rago, and George Darcy</p> <hr/> <p>Keywords: fishery science, stock assessment, fishery management, US Northeast Region</p>
P:02 Paper	<p>Withdrawn</p>
P:03 Paper	<p>Title: Co-production of science and policy – how does it works?</p> <hr/> <p>Authors: R. Aps, M. Fetissov, and Ü. Suursaar</p> <hr/> <p>Keywords: co-production of science and policy, hybrid management, Boundary Object Framework</p>
P:04 Paper	<p>Title: The added value of participatory modelling in fisheries management. What have we learned?</p> <hr/> <p>Authors: Christine Röckmann, Clara Ulrich, Marion Dreyer, Kjellrun Hiis Hauge, Edward Borodzicz, Daniel Howell, Ewen Bell, Päivi Haapasaari, Samu Mäntyniemi, George Tserpes, and Martin Pastoors</p> <hr/> <p>Keywords: EU waters, participatory modelling, uncertainty, JAKFISH</p>
P:05 Paper	<p>Title: The TAC fallacy</p> <hr/> <p>Author: Kjartan Hoydal</p> <hr/> <p>Keywords: fishing mortality, fisheries management, scientific management advice, management tools, social and economic consequences of management measures</p>
P:06 Paper	<p>Title: Arms length science: a communicative action approach to understanding the organizational challenges</p> <hr/> <p>Author: D. C. K. Wilson</p> <hr/> <p>Keywords: boundary objects; theory of communicative action; science-policy interface; Europe</p>
P:07 Paper	<p>Title: The interface between the fisheries science advice and management: Nordic experiences and thoughts for improvements</p> <hr/> <p>Author: Hans Lassen</p> <hr/> <p>Keywords: none</p>
P:08	<p>Title: A product of procedure? The apparent disconnect between science and</p>

Paper	management in New England
	Authors: Emily F. Keiley and Brian J. Rothschild
	Keywords: management system, objectives, constraints, institutional arrangements
P:09 Paper	Title: A Risk-Based Interface Between Science and Management in the U.S. Fisheries System
	Authors: Steven X. Cadrin and Daniel L. Georgianna
	Keywords: fishery management, risk, overfishing
P:10 Paper	Title: The advantages of proactive management over reactive regulations for implementing accountability in the US sea scallop fishery
	Author: Catherine E. O'Keefe
	Keywords: fisheries management, Accountability Measures, sea scallops
P:11 Paper	Title: 21st century fisheries management: a spatio-temporally explicit tariff-based approach combining multiple drivers and incentivising responsible fishing
	Authors: Sarah Kraak, Dave Reid, and Mike Fitzpatrick
	Keywords: Fisheries management, incentives, EAFM, tariffs
P:12 Paper	Title: Developing science for result-based management in fisheries – a digression?
	Authors: Mogens Schou
	Keywords: Result based management; Catch-Quota Management (CQM); full documentation; North Atlantic; EU fisheries policy
P:13 Paper	Title: New demands for science and other stakeholders in fisheries governance: implications of a “Reversed Burden of Proof” under a revised CFP
	Author: Sebastian Linke
	Keywords: fisheries governance, stakeholder involvement, CFP reform, reversing the burden of proof
P:14 Paper	Title: On The Same Team: A Focus Group For Improving The Management Of Blue Whiting
	Authors: David C. M. Miller and Aukje Coers
	Keywords: Blue whiting, Pelagic Regional Advisory Council, Assessment, Management
P:15 Paper	Title: Fisheries ecosystem plans: how will they work and what data do we need?
	Authors: H. J. Bloomfield <i>et al.</i>
	Keywords: sustainability; fisheries; ecosystem; stakeholder; management; knowledge base
P:16 Paper	Title: “Pretty good governance”: combining analytic hierarchy process, cognitive mapping and participatory modelling to assist in choosing and applying fisheries management solutions.
	Authors: Mike Fitzpatrick and David G. Reid.
	Keywords: fisheries governance, participatory modelling
P:17	Title: The COEXIST project – governance of fisheries and aquaculture for

Paper	integrating management and science
	Authors: Anne Marie O'Hagan and Vicki O'Donnell
	Keywords: Europe, governance, aquaculture, management
P:18 Paper	Title: Bringing multiple stakeholders together in the management of marine fisheries: the role of plan development teams in New England sector management
	Author: Anne Hawkins
	Keywords: fisheries management, policy, science/management interface, New England
P:19 Paper	Title: Public opinion and a new vision for Europe's seas
	Authors: Laurence Mee, Tavis Potts, Cristina Pita, Olivia Langmead and Tim O'Higgins
	Keywords: Public opinion; ecosystem services, ecosystem approach to management, European Seas
P:20 Paper	Title: National standards effective in US fisheries management
	Author: Sharon Lumsden
	Keywords: Fisheries management, United States Laws
P:21 Paper	Title: The science – management interaction on the Faroe Islands: A case study and proposal for changes
	Author: Hans Lassen
	Keywords: none
P:22 Paper	Title: The role of science as fisheries and biodiversity policies and programs converge
	Author: Jake Rice
	Keywords: none
P:23 Paper	Title: The ICES precautionary approach: failed attempts to neatly arrange the boundary between science and policy
	Author: Martin Pastoors
	Keywords: none
P:24 Poster	Title: An adaptative management in Polish inner marine waters
	Authors: I. Psuty, T. Krajniak, L. Szymanek, B. Draganik, M. Ramutkowski, and A. Czugala
	Keywords: small scale fishery, TAC, MPA's, selectivity, lagoon
P:25 Poster	Title: Knowledge engineering to improve the interface between stakeholders and management in the ecosystem approach to fisheries management
	Author: Deirdre Duggan
	Keywords: ecosystem approach, "common language" indicators, stakeholders, management interface
P:26 Poster	Title: The role of science in improving bycatch management in a high-volume fishery
	Authors: Jamie M. Cournane and Jake P. Kritzer

Keywords: New England, bycatch mitigation, anadromous fish, herring

Theme Session Q

Atmospheric forcing of the northern hemisphere ocean gyres, and the subsequent impact on the adjacent marine climate and ecosystems (Joint ICES/PICES theme session)

Conveners: Jürgen Alheit (Germany), Hjálmar Hátún (Faroe Islands), Emanuele Di Lorenzo (USA), and Ichiro Yasuda (Japan)

ICES CM Code	
Q:01 Paper	Withdrawn
Q:02 Paper	<p>Title: Oceanic and atmospheric forcing for the recruitment of Japanese sardine (<i>Sardinops melanostictus</i>)</p> <p>Authors: Ichiro Yasuda, Haruka Nishikawa, Sachihiko Itoh, and Kosei Komatsu</p> <p>Keywords: Japanese sardine, Northwestern Pacific, Kuroshio</p>
Q:03 Paper	<p>Title: Climate-driven shifts in fish communities in Korean waters detected by application of multivariate analyses and Bayesian Markov switching models</p> <p>Authors: Sukgeun Jung, Il Su Choi, and Suam Kim</p> <p>Keywords: regime shift, climate change, Tsushima warm current, fish, western North Pacific</p>
Q:04 Paper	<p>Title: Climatically induced impact of gyre dynamics on coastal ecosystems: a comparison of different oceans</p> <p>Author: Jürgen Alheit</p> <p>Keywords: Oceanic gyres, climate variability, North Atlantic and Pacific, fish, zooplankton</p>
Q:05 Paper	<p>Title: Atmospheric forcing of the North Atlantic Subpolar gyre</p> <p>Author: Hjálmar Hátún</p> <p>Keywords: subpolar gyre, atmospheric forcing, blue whiting, forecasting</p>
Q:06 Paper	<p>Title: Regime shift effects on fish and fisheries in the Northeast Pacific</p> <p>Authors: Anne Hollowed, Megan Stachura, Nate Mantua, and Ray Hilborn</p> <p>Keywords: regime shifts, gyre circulation, recruitment variability</p>
Q:07 Paper	<p>Title: The Pacific Decadal Oscillation and gyre-ecosystem linkages in the northern California Current (NCC): source waters which feed the NCC determine food web structure</p> <p>Authors: William T. Peterson, Hongsheng Bi, Cheryl A. Morgan, Jennifer Fisher, Jay Peterson, and Ryan R. Rykaczewski</p> <p>Keywords: Pacific Decadal Oscillation, transport, gyre-ecosystem linkages, copepod community structure</p>
Q:08 Paper	<p>Title: Exploring mechanisms for coherent variations between ocean gyres of the northern hemisphere</p> <p>Authors: Emanuele Di Lorenzo and Niklas Schneider</p>

Keywords: none

Q:09 **Title:** Influence of circulation variability on Scotian Shelf (Northwest Atlantic)
Poster zooplankton communities

Author: Catherine L. Johnson

Keywords: zooplankton, biogeography, advection, North Atlantic Oscillation

Q:10 **Title:** A PICES–ICES climate mode

Paper **Author:** Skip McKinnell

Keywords: none

Theme Session R
**Integration of multidisciplinary knowledge in the Baltic Sea to support
 science-based management**

Conveners: Sakari Kuikka (Finland), Michael Gilek (Sweden), Kari Lehtonen
 (Finland), and Markus Meier (Sweden)

ICES CM Code	
R:01 Paper	<p>Title: Investigation of spatial–temporal patterns of the eastern cod stock in the Baltic Sea for management application</p> <hr/> <p>Authors: S. Kasatkina and P. Gasyukov</p> <hr/> <p>Keywords: Baltic cod, spatial –temporal distribution, recruitment, trawl and acoustic surveys</p>
R:02 Paper	<p>Title: Assessment of genetic risk in fishes inhabiting zones of dumped chemical munitions in the Baltic Sea</p> <hr/> <p>Authors: Janina Baršienė, Aleksandras Rybakovas, Thomas Lang, Laura Andreikėnaitė, and Włodzimierz Grygiel</p> <hr/> <p>Keywords: genotoxicity, fish, dumped chemical munitions, Baltic Sea</p>
R:03 Paper	<p>Title: First attempt to use trends assessment in the Gulf of Gdansk: an ecosystem–integrated approach</p> <hr/> <p>Authors: Tomczak, M. T., Szymanek, L., Margoński, P., Ameryk, A., Gromisz, S., Grygiel, W., Grzebielec, R., Kownacka, J., Kuzebski, E., Pastuszak, M., Psuty, I., Warzocha, J., and Zalewski, M. (names updated)</p> <hr/> <p>Keywords: Gulf of Gdańsk, ecosystem change, Integrated Trend Assessment</p>
R:04 Paper	<p>Title: Science–policy interfaces and the governance of environmental risks in the Baltic Sea</p> <hr/> <p>Authors: Michael Gilek, Sebastian Linke, Oksana Udovyyk, and Mikael Karlsson</p> <hr/> <p>Keywords: Baltic Sea, scientific advice, risk management, risk assessment</p>
R:05 Paper	<p>Title: Baltic herring and <i>Anisakis simplex</i> larvae: acetylcholinesterase biomarker response and host–parasite interactions in a polluted environment</p> <hr/> <p>Authors: M. Podolska, K. Nadolna, B. Szostakowska, A. Was, and E. Gosz</p> <hr/> <p>Keywords: <i>Anisakis simplex</i>; herring; acetylcholinesterase</p>
R:06 Paper	<p>Withdrawn</p>
R:07	<p>Title: The usefulness of information on infection of herring with <i>A. simplex</i> larvae in management of Baltic herring stock</p>

Paper	Authors: J. Horbowy and M. Podolska
	Keywords: herring, migration, stock assessment, Baltic
R:08 Paper	Title: PBDE levels, profiles, inter-tissue distribution, and BSAFs in female flounder from the southern Baltic Sea
	Authors: Ilona Waszak, Henryka Dąbrowska, and Agnieszka Antoniak
	Keywords: PBDEs, flounder, BSAFs, Baltic Sea
R:09 Paper	Title: Challenges for stakeholder participation and communication within regional environmental governance. Comparing five environmental risks in the Baltic Sea
	Authors: Magnus Boström, Marion Dreyer, and Anna Maria Jönsson
	Keywords: Baltic Sea, Governance, Participation, Communication
R:10 Paper	Title: Changes in the annual life cycle of eastern Baltic cod during 1950–2010
	Authors: T. Barinova, B. Müller-Karulis, I. Šics, and M. Plikhs
	Keywords: Eastern Baltic cod, maturation, spawning, otolith growth zones
R:11 Paper	Title: A stochastic model to evaluate the impacts of nutrient abatement measures in the Baltic Sea
	Authors: Lassi Ahlvik, Kari Hyytiäinen, Petri Ekholm, and Heikki Pitkänen
	Keywords: Eutrophication, Nutrient pollution, Stochastic modelling, Baltic Sea
R:12 Paper	Title: Reference organisms for assessing the impact of ionising radiation on the southern Baltic environment
	Authors: Tamara Zalewska and Maria Suplińska
	Keywords: ionising radiation impact assessment, marine organisms, Baltic Sea
R:13 Paper	Title: Converging biology, economics and social science in fisheries research – lessons learned
	Authors: Päivi Haapasaari, Soile Kulmala, and Sakari Kuikka
	Keywords: Bayesian networks, interdisciplinarity, learning, multidisciplinary
R:14 Paper	Title: Dynamics of the key food-web flows in the central Baltic Sea
	Authors: M. T. Tomczak, S. Niiranen, T. Blenckner, and O. Hjerne
	Keywords: Central Baltic Sea, food-web, trophic flows, model
R:15 Paper	Title: Target-strength relationship for herring and sprat in the southern Baltic Sea
	Authors: Beata Schmidt, Natalia Gorska, and Joanna Szczucka
	Keywords: acoustic survey, Baltic Sea, target strength, sprat, herring
R:16 Paper	Title: The possible sources of conflicts between nature protection and Polish coastal fishery. The Pucka Bay case
	Authors: I. Psuty, B., Draganik, L. Szymanek, I. Wójcik, and R. Zaporowski
	Keywords: small scale fishery, gillnet, porpoise, grey seal, NATURA 2000
R:17	Title: An integrated assessment of pollution and biological effects of the southern Baltic Sea coastal waters

Paper	<p>Authors: H. Dabrowska, A. Antoniak, O. Kopko, R. Turja, K. K. Lehtonen, M. Balode, E. Strode, K. Broeg, B. Sundelin, M. Löff, J. Šyvokien, S. Kholodkevich, T. Kuznetsova, A. Kurakin, S. Sladkova, and N. Kamardin</p> <p>Keywords: Baltic Sea, anthropogenic stress, biomarkers, ecosystem assessment</p>
R:18 Paper	<p>Title: Projected Baltic Sea ecosystem changes in future climates</p> <p>Authors: H.E.M. Meier, H. Andersson, C. Dieterich, K. Eilola, B. Gustafsson, A. Höglund, R. Hordoir, I. Kuznetsov, T. Neumann, O. Savchuk, and S. Schimanke</p> <p>Keywords: Baltic Sea, eutrophication, climate change, modelling</p>
R:19 Paper	<p>Title: Herring as a link among pressures in multidimensional ecosystem management</p> <p>Authors: Mika Rahikainen, Samu Mäntyniemi, Inari Helle, and Sakari Kuikka</p> <p>Keywords: Bayesian assessment, risk, herring, Baltic Sea</p>
R:20 Paper	<p>Title: Experiences on ecological status assessment of the Gulf of Bothnia different sites based on cardiac activity biomarkers of caged mussels (<i>Mytilus edulis</i>)</p> <p>Authors: S. V. Kholodkevich, T. V. Kuznetsova, K. K. Lehtonen, and A. S. Kurakin</p> <p>Keywords: none</p>
R:21 Paper	<p>Title: Cross-scale linkages and tradeoffs in multi-level water governance – a case study from the northern Baltic Sea river basin district</p> <p>Authors: Monica Hammer, Mona Petersson, Ulla Mörtberg, and Jerker Jarsjö</p> <p>Keywords: Water Framework Directive, ecosystem approach, data and information management</p>
R:22 Paper	<p>Title: Cadastre of the coastal zone of the Russian sector of the Baltic Sea – integrated information system.</p> <p>Authors: V. Zhamoida, D. Ryabchuk, B. Arseniev, G. Gogoberidze, and V. Sivkov</p> <p>Keywords: coastal zone, cadastre, information system, Baltic Sea</p>
R:23 Paper	<p>Title: Stakeholders' participation and communication in invasive alien species risk governance in the Baltic Sea region</p> <p>Authors: A. Zgrundo, P. Lemke, K. Smolarz, D. Pyć, Ch. Halling, and M. Wołowicz</p> <p>Keywords: Baltic Sea, alien species, risk communication, risk governance</p>
R:24 Paper	<p>Withdrawn</p>
R:25 Paper	<p>Title: Policy-driven non-compliance in the Baltic Sea pelagic fishery</p> <p>Authors: Hentati-Sundberg J, Hjelm H, Österblom H</p> <p>Keywords: non-compliance, Baltic Sea, pelagic fishery, incentives, policy</p>
R:26 Poster	<p>Title: Selected highlights from the ECOSUPPORT project</p> <p>Authors: The ECOSUPPORT consortium</p> <p>Keywords: climate change, ecosystem drivers, eutrophication, modelling,</p>

	physical-biogeochemical, food web model
R:27 Poster	Title: Long-term changes of macrozoobenthos in the deep part of the Gdansk Basin (Baltic Sea)
	Authors: A. A. Gusev and L.V. Rudinskaya
	Keywords: none
R:28 Poster	Title: On the acoustic estimation of Baltic herring biomass
	Authors: Natalia Gorska and Jakub Idczak
	Keywords: herring, Baltic Sea, X-ray images, numerical modeling, target strength
R:29 Poster	Title: Management strategy evaluation of MSY fisheries with combined catch-and-effort quotas
	Authors: Noel M. A. Holmgren, Niclas Norrström, Robert Aps, and Sakari Kuikka
	Keywords: MSY, harvest control rule, SCAA, TAC, productivity, sustainability, yield

Theme Session S

Extracting energy from waves and tides – what are the consequences for ecosystems, physical processes and other sea users

Conveners: Jonathan Side (UK) and Michael Bell (UK)

ICES CM Code	
S:01 Paper	<p>Title: Accommodating wave and tidal energy - knowledge transfer and the role of marine spatial planning</p> <p>Authors: Kate Johnson and Sandy Kerr</p> <p>Keywords: Wave and tidal energy; Knowledge transfer; Marine Spatial Planning</p>
S:02 Paper	<p>Title: Marine Scotland Science: contribution of bathymetric surveys to marine planning for renewable energy developments off the west coast of Lewis</p> <p>Authors: P. J. Hayes, M. Harrald, and I. M. Davies</p> <p>Keywords: Renewable energy, marine spatial planning, bathymetry, geodatabase</p>
S:03 Paper	<p>Title: Marine Scotland Science: regional sea bed habitat mapping contributing to planning for marine renewable energy development</p> <p>Authors: M. Harrald, M. Robertson, P. J. Hayes, and I. M. Davies</p> <p>Keywords: Lewis, backscatter, bathymetry, habitat map</p>
S:04 Paper	<p>Title: Disturbances of natural physical fields by technical activities and their implications for marine life: the case of the Baltic Sea</p> <p>Authors: Eugeniusz Andrulowicz and Zbigniew Otremba</p> <p>Keywords: Baltic Sea, technical constructions, physical fields, environmental disturbances</p>
S:05 Paper	<p>Title: Seabird surveys at the wave energy test site, Co Mayo, Ireland</p> <p>Authors: Jackie Hunt, Jessica Beaubier, and Derek McLoughlin</p> <p>Keywords: none</p>
S:06 Paper	<p>Title: Benthic monitoring at Strangford Lough Narrows in relation to the installation of the SeaGen current turbine</p> <p>Authors: Robert Kennedy and Graham Savidge</p> <p>Keywords: Ireland, tidal energy, ecological impact, benthic community</p>
S:07 Paper	<p>Title: Ornithological interactions with wave and tidal energy developments in Scotland – filling the knowledge gaps</p> <p>Authors: Ross McGregor, Andy Douse, George Lees, and Ian Davies</p> <p>Keywords: birds, impacts, renewable energy</p>

S:08 Paper	Title: Coastal process impact assessment in relation to offshore wave energy development Authors: Jimmy Murphy Keywords: Wave Energy, Physical Processes, Ireland
S:09 Paper	Title: Sources of underwater noise and disturbance arising from marine renewable developments Authors: Jonathan Side and Robert Beharie Keywords: underwater noise; wave energy; tidal energy; marine mammals
S:10 Paper	Title: Facilitation of wave and tidal power developments through the application of a spatial planning approach Authors: Ian M. Davies, Marion Harrald, Mike Robertson, and Robert Watret Keywords: Renewable energy, wave and tidal, marine spatial planning, Saltire Prize, Scotland
S:11 Paper	Title: Assessment of collision risk for seals and tidal stream turbines Authors: Ian M. Davies and Fiona Thompson Keywords: Tidal energy, seals, collision risk, Appropriate Assessment
S:12 Paper	Title: Test centre to commercial arrays: progress towards wave and tidal energy in Scotland Authors: Ian M Davies, Mike Robertson, Gareth Jones, Robert Watret, and Jim McKie Keywords: Tidal energy, wave energy, Scotland, commercial scale
S:13 Paper	Title: Fish distributions around structures in fast currents:natural and man-made proxies for tidal stream energy devices Authors: I. M. Horsfall, J. Loman and T. D. Pritchard Keywords: tidal stream turbines, fast currents, fish distributions, proxy structures
S:14 Paper	Title: Hydrokinetic energy as an ecological factor – how might wave and tidal energy extraction affect the distribution of marine organisms? Authors: M. C. Bell, E. P. M. Grist, S. Baston, S. Rouse, M. Spencer Jones, J. S. Porter, A. Want, R. Harris, and J. C. Side Keywords: wave energy, tidal energy, marine biogeography, ecological impacts
S:15 Paper	Title: Bryozoans as an indicator for ecosystem change in relation to renewable energy devices and climate change: a case example from Scottish coastal waters Authors: S. Rouse, M. Spencer Jones, J. S. Porter, J. C. Side, and M. C. Bell Keywords: Bryozoa, marine renewable energy, biodiversity, ecosystem change
S:16 Paper	Title: Monitoring marine habitats of West Mainland Orkney: will wave energy extraction contribute to long-term change? Authors: A. Want, M. C. Bell, and J. C. Side Keywords: Rocky Shoreline, Wave Energy, Ecological Monitoring, Climate Change
S:17 Paper	Title: Wave energy converters, sediment transport and coastal erosion Authors: Arne Vögler, David Christie, Malcolm Lidster, and James Morrison

	Keywords: Sediment transport, wave energy converters, coastal erosion, Outer Hebrides
S:18 Paper	Title: SOWFIA: learning from impact assessments of European wave energy developments Authors: Ruth Leeney, Daniel Conley, Anne Marie O'Hagan, Brian Holmes, Cristina Huertas Olivares, Victoria Osta, and Deborah Greaves Keywords: wave energy, environmental impact assessment, socio-economic impacts, Europe
S:19 Paper	Title: A modelling study of the effect of tide energy extraction on estuarine circulation and its implications of changes in the marine ecosystem Authors: Zhaoqing Yang, Taiping Wang, and Andrea Copping Keywords: tidal energy extraction, numerical model, physical processes
S:20 Paper	Title: Incorporating easily disposable components into the design of small-scale marine hydrokinetic energy converters Authors: A. Johnson and B. Silvera Keywords: marine hydrokinetic energy, small-scale, disposable components, environmental impact, design strategy
S:21 Poster	Title: A simulation modelling approach to predicting the impact on seabirds of generating power from waves and tides Authors: R. Langton, I. M. Davies and B. E. Scott Keywords: Seabirds, Renewable Energy, Modelling, Scotland
S:22 Poster	Title: A comparative study of three methods for the derivation of seabed habitat information from multibeam acoustic backscatter data. Authors: M. R. Robertson, M. Harrald, T. LeBas, P. J. Hayes and I. M. Davies Keywords: multibeam acoustic survey, bathymetric maps, backscatter, facies maps, Fair Isle, Special Protection Area
S:23 Poster	Title: Quantification of littoral wave action to establish the influence from wave energy converters Authors: Robert A. Beharie and Jon Side Keywords: Wave action; Exposure; Rocky shore; Hydrodynamics; Classification systems; Littoral ecology
S:24 Poster	Title: An inventory of future combinations of aquaculture, fisheries and other activities Authors: Marnix Poelman and Bas Bolman Keywords: Aquaculture, Coastal Zone Management, Multifunctional use, future combinations
S:25 Poster	Title: Visual and acoustic monitoring of cetaceans at the wave energy test site, Co Mayo, Ireland Authors: Simon Berrow and Joanne O'Brien Keywords: wave energy, Ireland, marine mammals, acoustic monitoring
S:26 Poster	Title: Mapping fisheries for marine resource management using gear-specific vessel monitoring system data Authors: Kilian M. Stehfest, Maria S. Campbell, Stephen C. Votier and Jason M.

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Keywords: Fisheries, marine renewable energy, Marine Spatial Planning
