

Contributions to the 2005 Annual Science Conference

MCAP	Management Committee for the Advisory Process	22
ACFM	Advisory Committee on Fishery Management Assessment Working Group Reports	22
ACME	Advisory Committee on the Marine Environment-related Working Group Reports	23
ACE	Advisory Committee on Ecosystems.....	23
A	Consultative Committee	23
B	Fisheries Technology Committee.....	23
C	Oceanography Committee	24
D	Resource Management Committee.....	25
E	Marine Habitat Committee	25
F	Mariculture Committee	26
G	Living Resources Committee	26
H	Baltic Committee.....	27
I	Diadromous Fish Committee.....	27
<i>Theme Sessions</i>		
K	Multidisciplinary Approaches to the Identification of Stock Structure of Small Pelagics: Implications for Assessment and Sustainable Management	28
L	The Spatial Dimension of Ecosystem Structure and Dynamics	29
M	Impact of External Forcing on Flows in Marine Trophic Networks	31
N	Elasmobranch Fisheries Science	33
O	Connecting Physical-Biological Interactions to Recruitment Variability, Ecosystem Dynamics, and the Management of Exploited Stocks.....	35
P	Regional Ecosystem Pilot Projects, Ecosystem Forecasting, and Operational Oceanography: Comparing and Contrasting Scientific Tools, Strategies, Outputs, and Applications	37
Q	Advances in Reproductive Biology: Methodology and Applications for Fisheries Science.....	38
R	Marine Mammals: Monitoring Techniques, Abundance Estimation, and Interactions with Fisheries	40
S	Oil Spills in Marine Ecosystems: Impacts and Remediation.....	42
T	Integrating/Implicating Genetics into Fisheries Management.....	44
U	Acoustic Techniques for Three-dimensional Characterization and Classification of the Pelagic Ecosystem	46
V	Fishers' Perceptions and Responses in Management Implementation	47
W	Rebuilding Programmes for Threatened Fish Populations.....	49
X	Mitigation Methods for Reduction of Marine Mammal and Sea Turtle Bycatch in Fisheries	50
Y	An Interactive Forum with the Fishing Industry	51
Z	How to Improve Environmental Monitoring and Biological Studies – Integrating Ecology and Statistics.....	51
AA	Cod in a Changing Climate	52
BB	Ecosystem Approach to Fisheries Management: Worked Examples	53

2005 Meeting documents and codes

Documents for the Business Meetings

MCAP

MCAP:01	MCAP report from January 2005 meeting
MCAP:02	Advisory Committee on Fisheries Management (ACFM) minutes from October 2004 meeting
MCAP:03	MCAP-MICC report from meeting (4–5 April 2005)
MCAP:04	Study Group on Quality Assurance [SGQUA]
MCAP:05	Advisory Committee on Ecosystems [ACE] minutes from May 2005 meeting
MCAP:06	Advisory Committee on Fisheries Management [ACFM] minutes from May 2005 meeting
MCAP:07	Advisory Committee on the Marine Environment [ACME] minutes from June 2005 meeting

ACFM

ACFM:01	Working Group on the Assessment of Northern Shelf Demersal Stocks [WGNSDS]
ACFM:02	Working Group on the Assessment of Southern Shelf Stocks of Hake, Monk and Megrin [WGHMM]
ACFM:03	Working Group on the Assessment of Southern Shelf Demersal Stocks [WGSSDS]
ACFM:04	Study Group on Sea Bass [SGBASS]
Ref. G	
ACFM:05	<i>Pandalus</i> Assessment Working Group [WGPAND]
ACFM:06	No Report
ACFM:07	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak [WGNSSK]
ACFM:08	Working Group on the Assessment of Mackerel, Horse Mackerel, Sardine, and Anchovy [WGMHSA]
ACFM:09	Study Group on Management Strategies [SGMS]
Ref. D, G	
ACFM:10	Study Group on Stock Identity and Management Units of Redfishes [SGIMUR]
ACFM:11	Workshop on Sampling Design for Fisheries Data [WKSDFD]
ACFM:12	Annual Meeting of Assessment Working Group Chairs [AMAWGC]
ACFM:13	Study Group on the Bycatch of Salmon in Pelagic Trawl Fisheries [SGBYSAL]
Ref. G, I	
ACFM:14	ICES/NSCFP Study Group on the Incorporation of Additional Information from the Fishing Industry into Fish Stock Assessments Cod [SGFI]
ACFM:15	Planning Group on Commercial Catch, Discards and Biological Sampling [PGCCDBS]
ACFM:16	Herring Assessment Working Group for the Area South of 62°N [HAWG]
ACFM:17	Working Group on North Atlantic Salmon [WGNAS]
Ref. I	
ACFM:18	Baltic Salmon and Trout Assessment Working Group [WGBAST]
Ref. I	

ACFM:19 Ref. H	Baltic Fisheries Assessment Working Group [WGBFAS]
ACFM:20	Arctic Fisheries Working Group [AFWG]
ACFM:21	North Western Working Group [NWWG]
ACFM:22	Fisheries Statistics Liaison Working Group [WGSTAL]
ACFM:23	No Report
ACFM:24	North Western Working Group <i>Sebastes mentella</i>
ACFM:25	Ad hoc Group on Long-Term Advice [AGLTA]

ACME

ACME:01 Ref. E	ICES/OSPAR Workshop on Integrated Monitoring of Contaminants and their Effects in Coastal and Open-Sea Areas [WKIMON]
ACME:02 Ref. C, E, H	ICES/HELCOM Steering Group on Quality Assurance of Chemical Measurements in the Baltic Sea [SGQAC]
ACME:03 Ref. C, E, H	ICES/OSPAR Steering Group on Quality Assurance of Biological Measurements in the Northeast Atlantic [SGQAE]
ACME:04 Ref. E	ICES/IOC/IMO Working Group on Ballast and Other Ship Vectors [WGBOSV]
ACME:05 Ref. E	Working Group on Introductions and Transfers of Marine Organisms [WGITMO]
ACME:06 Ref. C, E, H	ICES/HELCOM Steering Group on Quality Assurance of Biological Measurements in the Baltic Sea [SGQAB]

ACE

ACE:01 Ref. ACFM, ACME	Working Group for Regional Ecosystem Description [WGRED]
ACE:02 Ref. E, G	Working Group on Deep-water Ecology [WGDEC]
ACE:03	Study Group on Management of Integrated Data [SGMID]
ACE:04	Working Group on Ecosystem Effects of Fishing Activities [WGECO]
ACE:05	Working Group on Marine Mammal Ecology [WGMME]

CONC

A:01	Consultative Committee report from May 2005 meeting
A:02	Study Group on ICES Publication Practices regarding Ethical Concerns on the use of animals in scientific research [SGPPE]

Fisheries Technology Committee (B)

B:01 Ref. SGUFM, WGFTFB	Workshop on Unaccounted Fishing Mortality [WKUFM]
-------------------------------	---

B:02 Ref. D, G, WGFTFB	Study Group on Survey Trawl Standardisation [SGSTS]
B:03 Ref. WGFAST	Study Group on the Collection of Acoustic Data from Fishing Vessels [SGAFV]
B:04 Ref. FAO	ICES-FAO Working Group on Fishing Technology and Fish Behaviour [WGFTFB]
B:05	Working Group on Fisheries Acoustics Science and Technology [WGFAST]
B:06 Ref. E, WGFAST	Study Group on Acoustic Seabed Classification [SGASC]
B:07 Ref. D, G	Workshop on Survey Design and Data Analysis [WKSAD]
B:08 Ref. WGFTFB	Study Group on Unaccounted Fishing Mortality [SGUFM]
B:09 Ref. WGFAST	Planning Group on the HAC Data Exchange Format [PGHAC]
B:10 Ref. H, WGFAST	Study Group on Target Strength Estimation in the Baltic Sea [SGTSEB]

Oceanography Committee (C)

C:01 Ref. ACE, ACME	Working Group on Phytoplankton Ecology [WGPE]
C:02 Ref. ACE, ACME	Working Group on Zooplankton Ecology [WGZE]
C:03 Ref. ACME	ICES/IOC Working Group on Harmful Algal Bloom Dynamics [WGHABD]
C:04	Working Group on Modelling of Physical/Biological Interactions [WGPBI]
C:05 Ref. ACFM, ACE, ACME, D, E, G	ICES-EuroGOOS Planning Group on the North Sea Pilot Project [PGNSP]
C:06 Ref. ACE, ACME	Working Group on Oceanic Hydrography [WGOH]
C:07 Ref. ACE, ACME	Working Group on Marine Data Management [WGMDM]
C:08	Workshop on the Impact of Zooplankton on Cod Abundance and Production [WKIZC]

- C:09 ICES-IOC Steering Group on GOOS [SGGOOS]
Ref. ACE,
ACME
- C:10 Workshop on New and Classic Techniques for the Determination of
Ref. H Numerical Abundance and Biovolume of HAB-species [WKNCT]
- C:11 ICES/GLOBEC Working Group on Cod and Climate Change [WGCCC]
- C:12 Working Group on Recruitment Processes [WGRP]
- C:13 Steering Group for the ICES/GLOBEC North Atlantic Regional Office
Ref. Bureau [SGNARO]

Resource Management Committee (D)

- D:01 Study Group on Age-length Structured Assessment Models [SGASAM]
Ref. ACFM
- D:02 Study Group on Redfish Stocks [SGRS]
Ref. ACFM,
NWWG
- D:03 Study Group on Redfish Stocks [SGRS]
Ref, ACFM,
NWWG
- D:04 Workshop on Advanced Fish Stock Assessment Techniques [WKAFAT]
Ref. ACFM, G
- D:05 International Bottom Trawl Survey Working Group [IBTSWG]
- D:06 Study Group on Multispecies Assessments in the North Sea [SGMSNS]
Ref. ACFM,
ACE, G
- D:07 Working Group on Fishery Systems [WGFS]
Ref. ACFM,
ACE
- D:08 Regional Ecosystem Study Group for the North Sea [REGNS]
- D:09 Planning Group on Northeast Atlantic Pelagic Ecosystem Surveys
Ref. ACFM, [PGNAPES]
ACE, G

Marine Habitat Committee (E)

- E:01 Working Group on Marine Sediments in Relation to Pollution [WGMS]
Ref. ACME
- E:02 Working Group on Statistical Aspects of Environmental Monitoring
Ref. ACME [WGSAEM]
- E:03 Marine Chemistry Working Group [MCWG]
Ref. ACME, C
- E:04 Study Group on the North Sea Benthos Project 2000 [SGNSBP]
Ref. ACME,
ACE
- E:05 Working Group on Marine Habitat Mapping [WGMHM]
Ref. ACE, B

- E:06 Working Group on the Effects of Extraction of Marine Sediments on the Marine Ecosystem [WGEXT]
Ref. ACME
- E:07 Benthos Ecology Working Group [BEWG]
Ref. ACE,
ACME, B
- E:08 Working Group on Biological Effects of Contaminants [WGBEC]
Ref. ACME
- E:09 Working Group on Integrated Coastal Zone Management [WGICZM]
Ref. ACE,
ACME

Mariculture Committee (F)

- F:01 Working Group on the Application of Genetics in Fisheries and Mariculture [WGAGFM]
Ref. ACME,
ACE
(WGECO), I
- F:02 Working Group on Pathology and Diseases of Marine Organisms [WGPDMO]
Ref. ACME
- F:03 Working Group on Marine Fish Culture [WGMAFC]
Ref. ACME, I
- F:04 Working Group on Environmental Interactions of Mariculture [WGEIM]
Ref. ACME, I
- F:05 Working Group on Marine Shellfish Culture [WGMASC]
Ref. ACME, G

Living Resources Committee (G)

- G:01 Working Group on *Crangon* Fisheries and Life History [WGCRAN]
Ref. ACFM, B
- G:02 Study Group on the Estimation of Spawning Stock Biomass of Sardine and Anchovy [SGSBSA]
- G:03 Study Group on Stock Identity and Management Units of Whiting [SGSIMUW]
Ref. D, SIMWG
- G:04 Planning Group for Herring Surveys [PGHERS]
Ref. D, HAWG
- G:05 Working Group on Fish Ecology [WGFE]
Ref. ACE, D, I,
- G:06 Study Group on Regional Scale Ecology of Small Pelagics [SGRESP]
Ref. ACFM,
ACE
- G:07 Working Group on Seabird Ecology [WGSE]
Ref. ACME,
ACE
- G:08 Baltic International Fish Survey Working Group [WGBIFS]
Ref. D, H

- G:09 Working Group on Mackerel and Horse Mackerel Egg Surveys
Ref. D [WGMEGS]
- G:10 Study Group on the Biology and Life History of Crabs [SGCRAB]
Ref. D
- G:11 Planning Group on North Sea Cod and Plaice Egg Surveys [PGEGGS]
Ref. D
- G:12 Working Group on Beam Trawl Surveys [WGBEAM]
Ref. ACFM, D
- G:13 Planning Group on Aerial and Acoustic Surveys for Mackerel [PGAAM]
Ref. ACFM, B
- G:14 Working Group on Cephalopod Fisheries and Life History [WGCEPH]
Ref. ACFM,
ACE
- G:15 Stock Identification Methods Working Group [SIMWG]

Baltic Committee (H)

- H:01 Study Group on Baltic Ecosystem Health Issues in Support of the BSRP
Ref. ACE [SGEH]
- H:02 Study Group on Baltic Sea Productivity Issues in Support of the BSRP
[SGPROD]
- H:03 Study Group on Baltic Ecosystem Model Issues in Support of the BSRP
[SGBEM]
- H:04 Study Group on GEOHAB Implementation in the Baltic [SGGIB]
- H:05 Study Group on Baltic Fish and Fisheries Issues in the BSRP [SGBFFI]
Ref. ACE,
ACME
- H:06 Study Group on Multispecies Assessment in the Baltic [SGMAB]

Diadromous Fish Committee (I)

- I:01 Working Group on Eel [WGEEL]
Ref. ACFM, G
- I:02 Study Group on the Status of Diadromous Fish Species [SGSDFS]
Ref. ACFM,
ACE
- I:03 Study Group on Salmon Scale Readings [SGSSR]
Ref. H

Contributions for the Theme Sessions

Theme Session on Multidisciplinary Approaches to the Identification of Stock Structure of Small Pelagics: Implications for Assessment and Sustainable Management (K)

Code Author(s) and Title

- K:01 *Emma M.C. Hatfield, Alain F. Zuur, John Boyd, Neil Campbell, James C. Chubb, Catherine M. Collins, Jamie Coughlan, Marcus Cross, Tom F. Cross, Carey O. Cunningham, Audrey J. Geffen, Ken MacKenzie, Richard D.M. Nash, Soenke Jansen, Suzanne Kay, Ciarán J. Kelly, and David B. O'Le:* WESTHER: A multidisciplinary approach to the identification of herring (*Clupea harengus* L.) stock components west of the British Isles using biological tags and genetic markers
- K:02 *Danielle Mitchell, Pat McAllister, Greg Bargmann, and Lorenz Hauser:* Temporal changes in genetic population structure of Pacific herring (*Clupea pallasii*) in Puget Sound, Washington over three decades
- K:03 *Richard Gustafson:* Multidisciplinary examination of Pacific herring (*Clupea pallasii*) population discreteness: the Cherry Point population and the USA's Endangered Species Act
- K:04 Withdrawn
- K:05 *L. A. W. Clausen, E. Hatfield, and H. Mosegaard:* Application and validation of otolith microstructure as stock identifier in mixed Atlantic herring (*Clupea harengus*) stocks in the North Sea and Western Baltic
- K:06 *Lorenz Hauser, Gary R. Carvalho, and Emma M. C. Hatfield:* Big questions on small fish: Conceptual, methodological and analytical challenges in the population identification of pelagic species
- K:07 *R. Cimmaruta, P. Abaunza, and G. Nascetti:* The horse mackerel stock assessment: the use of allozymes in a multidisciplinary approach to define stock boundaries and state
- K:08 *Dorte Bekkevold, Stefano Mariani, Lotte A. W. Clausen, William F. Hutchinson, Emma M. C. Hatfield, Carl Andre, Gary R. Carvalho, Else Torstensen, Henrik Mosegaard, Thomas G. Dahlgren, E. John Simmonds, Jennifer Brigham, Linda Laikre, Lena C. Larsson, René J. M. Stet, Nils Ryman, and Daniel E. Ruzzante:* Using genetic markers to determine Atlantic herring population structure in the North Sea–Baltic transition zone and to monitor mixed stock fisheries in the Skagerrak
- K:09 *Steven X. Cadrin, Kevin D. Friedland, Karen L. Bolles, William J. Overholtz, and Michael P. Armstrong:* Using multidisciplinary stock identification to optimize morphometric discrimination of Atlantic herring spawning groups off New England
- K:10 *Julie Marcil, Douglas P. Swain, and Jeffrey A. Hutchings:* Countergradient variation in body shape of Atlantic cod: implications for studies of stock structure
- K:11 *Kym Jacobson, Rebecca Baldwin, and Robert Emmett:* Parasites as biological tags for separating North Eastern Pacific sardine (*Sardinops sagax*) stocks
- K:12 *Mark Dickey-Collas, Cindy van Damme, and Lotte Worsøe Clausen:* Within stock structure and TACs: an investigation into the spawning origin of North Sea herring using otolith microstructure and the dynamics of Downs herring
- K:13 *Noirin Burke, D. Brophy, and P. King:* The use of otolith characteristics to trace juvenile origin in herring (*Clupea harengus*) populations
- K:14 *D. E. Hay and T. Beacham:* Stock identification of eulachon (*Thaleichthys pacificus*), an anadromous smelt in the Pacific

- K:15 *C. I. Zhang and D. E. Hay*: Stock identification of small pelagics: a different perspective from the western Pacific
- K:16 *Carl André, D. Bekkevold, S. Mariani, L. Laikre, L.A.W. Clausen, H. Mosegaard, T.G. Dahlgren, W. F. Hutchinson, J. Brigham, L.C. Larsson, K. Mudde, R. J. M. Stet, D.E. Ruzzante, G. R. Carvalho, and N. Ryman*: Comparison of four different genetic markers for stock identification in Atlantic herring
- K:17 *Ken MacKenzie, Pablo Abaunza, and Neil Campbell*: The use of parasites as biological tags in multidisciplinary stock identification studies of small pelagic fish
- K:18 *Deirdre Brophy, Stefano Mariani, Maria E. Mannarelli, Gary R. Carvalho, Pauline King, and Emma M. C. Hatfield*: Complex population structure in juvenile Atlantic herring in Scottish west coast sea lochs: a multi-marker approach
- K:19 *S. Mattiucci, P. Abaunza, and G. Nascetti*: Parasites of the genus *Anisakis* as “biological tags”: their genetic identification for horse mackerel stock definition in a multidisciplinary approach
- K:20 *Daniel E. Ruzzante, Stefano Mariani, Dorte Bekkevold, Carl Andre, Henrik Mosegaard, Lotte A. W. Clausen, Thomas G. Dahlgren, William F. Hutchinson, Emma M. C. Hatfield, Else Torstensen, Jennifer Brigham, E. John Simmonds, Linda Laikre, Lena C. Larsson, René J. M. Stet, Nils Ryman, and Gary R. Carvalho*: Mixed stock analysis in a migratory pelagic fish, Atlantic herring (*Clupea harengus*) in the North Sea and adjacent areas
- K:21 *Robin S. Waples*: Insights into stock structure of marine species: Opportunities and challenges
- K:22 *Tiit Raid, Georgs Kornilovs, and Heli Shpilev*: Stock diversity of herring in the Northern Baltic: is the separate assessment of herring natural stock units possible?
- K:23 *Maria Antsalo, Aril Slotte, Dankert Skagen, and Øyvind Ulltang*: Abundance estimation of the western spawning stock component of the Northeast Atlantic mackerel (*Scomber scombrus*) with the use of Norwegian tagging data
Poster
- K:24 *N. Campbell, C. Collins, M.A. Cross, J. C. Chubb, C. O. Cunningham, K. MacKenzie, and E. M. C. Hatfield*: Sequencing the Cytochrome Oxidase I (COI) region of the parasitic nematode *Anisakis simplex* to identify spawning populations of herring, *Clupea harengus*, to the west of the British Isles
Poster

Theme Session on the Spatial Dimension of Ecosystem Structure and Dynamics (L)

- L:01 *Elizabeth T. Methratta and Jason Link*: Vital population rates across multiple spatial scales: A geostatistical analysis
- L:02 *Jason Link, William Overholtz, Jay O’Reilly, Jack Green, Elizabeth Methratta, David Dow, Debra Palka, Chris Legault, Steve Edwards, Gordon Waring, William Stockhausen, David Mountain, Joseph Vitaliano, Vincent Guida, Joe Kane, Jack Jossi, Michael Fogarty, and Jon Brodzia*: An Overview of EMAX: The Northeast U.S. Continental Shelf Ecological Network
- L:03 *Aril Slotte, Arne Runde, Georg Skaret, Bjørn Erik Axelsen, Anders Fernö, Arne Johannessen, Leif Nøttestad, and Jan Tore Øvredal*: Spatial and temporal overlap and trophic interactions between Atlantic saithe (*Pollachius virens*) and Norwegian spring-spawning herring (*Clupea harengus*) on herring spawning grounds
- L:04 *Xabier Irigoien, A. Urtizberea, L. Zarauz, M. Santos, Y. Sagarminaga, P. Alvarez, and A. Uriarte*: Factors affecting sardine and anchovy egg distribution in the Bay of Biscay
- L:05 *Arne Johannessen, Leif Nøttestad, Bjørn Erik Axelsen, Anders Fernö, Rune Vabø, and Jan Tore Øvredal*: A natural "model" environment (MARE MINIMUM) for studies of ecosystem dynamics with emphasis on herring spawning dynamics

- L:06 *Tu H. Truong, Yue Jiao, Farhad Azadivar, and Brian J. Rothschild*: SMAST Decision Support System: a spatially quantitative tool for ecosystem fisheries management
- L:07 *Jacob I. Nogueira and Kevin D.E. Stokesbury*: Implications of marine protected areas on sea scallop recruitment in the Northwest Atlantic
- L:08 *Vlad Kostylev and Charles G. Hannah*: Benthic habitat mapping: The habitat template approach
- L:09 *S.I. Rogers, P.D. Eastwood, C.A. Houghton, and C. Mills*: Developing a UK framework for defining the spatial interactions between human activities in the marine environment
- L:10 *Jonathan Side and Paul Jowitt*: Incorporating spatial dimension into descriptive fishery models
- L:11 *Fabio Pranovi*: The source-sink model and the fishing disturbance: a dynamic perspective
- L:12 Withdrawn
- L:13 *Edwige Bellier, Grégoire Certain, Joël Chadœuf, Vincent Bretagnolle, and Pascal Monestiez*: How foraging strategy influence spatial pattern in seabirds distribution: The case of northern gannets in the Bay of Biscay
- L:14 Withdrawn
- L:15 Withdrawn
- L:16 *Mathieu Woillez, Pierre Petitgas, Jacques Rivoirard, Jean Charles Poulard, and Nicolas Bez*: Indices for capturing spatial pattern and change across years of a fish population: an application on European hake (*Merluccius merluccius*) in the Bay of Biscay
- L:17 *Leonie Robinson, Simon Greenstreet, and Gerjan Piet*: The importance of including spatial dynamics in models of fisheries disturbance
- L:18 Withdrawn
- L:19 *Yolanda Sagarminaga, Victoriano Valencia, and Angel Borja*: Spatio-temporal distribution of phytoplankton in the Bay of Biscay (1998–2004)
- L:20 *Beatriz Mendes*: Spatial distribution of seven species captured by bottom trawling in Algarve (Portuguese southern coast): using multivariate geostatistical methods
- L:21 *S. Vaz, C. S. Martin, B. Ernande, F. Coppin, S. Harrop, and A. Carpentier*: Using geostatistics to quantify annual distribution and aggregation patterns of fishes in the Eastern English Channel
- L:22 *James E. Overland and N. A. Bond*: Upscaling unique ecosystem-climate relationships for the Bering Sea
- L:23 *Pierre Petitgas and Sandrine Vaz*: Investigating the interaction between population spatial organisation and population dynamics using an age-structured multi-site matrix model on anchovy in Biscay
- L:24 *Esben Moland Olsen, W. Melle, S. Kaartvedt, J. C. Holst, and K. A. Mork*: Distribution and feeding of herring (*Clupea harengus*) in the Norwegian Sea during spring, as determined from generalised additive models
- L:25 *A. Sinclair, K. Conway, and W. Crawford*: Associations between bathymetric, geologic and oceanographic features and the distribution of the British Columbia groundfish trawl fishery

- L:26 *Sophie Bertrand, Erich Diaz, Boris Dewitte, Gordon Swartzman, Arnaud Bertrand, and Mariano Gutiérrez: From Kelvin waves to fishers' trajectories: evidences of multi-scale teleconnections in the Peruvian upwelling ecosystem*
- L:27 *Evald Ojaveer and Margers Kalejs: The Baltic Sea as habitat*
Poster
- L:28 *Aida Campos, Paulo Fonseca, Tereza Fonseca, and Joaquim Parente: Definition of fishing trip types in the bottom trawl fisheries off the Portuguese coast*
Poster
- L:29 *Vadim A. Shtrik: The changes of marine algae flora and phytocenoses of Barents Sea (Russian coast) as the indicator of climatic fluctuations of North Atlantic region*
Poster
- L:30 *Colm Lordan, Glen Nolan, Fiona FitzPatrick, and Richard Briggs: Using UWTV surveys to test conceptual ecosystem models of *Nephrops* population distributions*
Poster
- L:31 *Michael C. Marino II and Kevin D. E. Stokesbury: Impact of sea star predation on sea scallops in marine protected areas on Georges Bank*
Poster
- L:32 Withdrawn
- L:33 *Monika Haugland, Jens Christian Holst, Marianne Holm, and Lars Petter Hansen: Feeding of Atlantic salmon (*Salmo salar* L.) postsmolts in the Northeast Atlantic*
Poster
- L:34 Withdrawn
- L:35 *P. L. Luque, G. Hernandez Milian, M. Bulling, Kirstie Dyson, E.N. Ieno, G.J. Pierce, M. Solan, D. Raffaelli, and D. Paterson: Biodiversity-ecosystem processes in heterogeneous environments*
Poster
- L:36 *Guillermo Boyra, Paula Alvarez, Unai Cotano, and Andres Uriarte: Spatial onset of anchovy recruitment in the Bay of Biscay: JUVENA surveys*
Poster
- L:37 *Fátima Cardador, Maria de Fátima Borges, Corina Chaves, and Steve Groom: Hake (*Merluccius merluccius* L.) spatial and temporal recruitment variability as a key species in the Portuguese upwelling ecosystem*
Poster
- L:38 *Eveliina Lindén, Maiju Lehtiniemi, Sini Heino, and Markku Viitasalo: Predator-prey interactions in a changing habitat: examples from Baltic littoral planktivores*
Poster
- L:39 *Bradley P. Harris and Kevin D. E. Stokesbury: Mapping benthic substrate along the northwest Atlantic Ocean continental shelf with underwater video surveys*
Poster

Theme Session on Impact of External Forcing on Flows in Marine Trophic Networks (M)

- M:01 *Maciej T. Tomczak, L. Järv, J. Kotta, G. Martin, A. Minde, B. Müller-Karulis, A. Põllumäe, A. Razinkovas, and S. Strake: Trophic networks and carbon flows in South Eastern Baltic coastal ecosystems*
- M:02 *V. N. Feldman, A. S. Zezera, N. A. Nazarov, F. A. Patokina, N. N. Zhigalova, and S. N. Semionova: Variability in the Baltic marine trophic network structure under the influence of hydrological regime and fishery*
- M:03 *Dave Schoeman, Anthony Richardson, Martin Edwards, and Reg Watson: Standing back and taking in the view: broad-scale impressions of pelagic ecosystem function*
- M:04 *Andrés C. Milessi, Hugo Arancibia, and Sergio Neira: Simulating the effects of El Niño Southern Oscillation and fishing effort on the marine ecosystem of central Chile*
- M:05 Withdrawn

- M:06 *Maiju Lehtiniemi and Eveliina Lindén*: Exotic predatory cladoceran *Cercopagis pengoi* adapts to the food chain as a competitor for mysid shrimps and food for planktivorous fishes
- M:07 *Kenneth Sherman and Porter Hoagland*: Driving forces affecting resource sustainability in large marine ecosystems
- M:08 *John Steele, J. Bisagni, J. Collie, D. Gifford, M. Sieracki, and B. Sullivan*: Constructing end-to-end budgets for shelf ecosystems
- M:09 *Hsing-Juh Lin, Jia-Jang Hung, Kwang-Tsao Shao, Huei-Meei Su, Wen-Tseng Lo, Hwey-Lian Hsieh, and Xiao-Xun Dai*: Effects of system-scaled removal of oyster-culture pens on the structure and functioning of a tropical lagoon
- M:10 Withdrawn
- M:11 *Alida Bundy*: On fishing and forcing: gauging the role of environmental and anthropogenic forces on the ecosystem dynamics of the eastern Scotian Shelf, Canada
- M:12 *Georg Skaret and Tony Pitcher*: The impact of a fluctuating herring stock on the Norwegian Sea ecosystem
- M:13 *S. V. Aleksandrov, O. A. Dmitrieva, and Yu. M. Senin*: Effect of climatic conditions on long-term variability of trophic state of the Curonian and Vistula Lagoons of the Baltic Sea
- M:14 Withdrawn
- M:15 *M. R. Heath*: Changes in the structure and function of the North Sea fish foodweb, 1973–2000, and the impacts of fishing and climate
- M:16 *Kathryn Lees, Steve Mackinson, Catherine Scott, and Chris Frid*: Characterising climatic and ecological regime shifts in marine ecosystems
- M:17 *Howard Townsend*: Modeling the influence of water quality on the Chesapeake Bay fisheries ecosystem
- M:18 *Sergio Neira and Hugo Arancibia*: Simulating the effects of internal and external forcing in the trophic structure and energy flows in the upwelling system off central Chile
- M:19 *Villy Christensen*: Evaluating environmental and anthropogenic impact on marine ecosystems: a cross-system comparison
- M:20 *Artūras Razinkovas, Juratė Lesutienė, and Rita Jankauskienė*: The role of introduced Ponto-Caspian crustaceans in the Curonian lagoon ecosystem
- M:21 *James E. Overland, Jennifer Boldt, and Phyllis J. Stabeno*: Multiple indicators track major ecosystem shifts in the Bering Sea
- M:22 *Sheila J. J. Heymans, S. Guénette, V. Christensen, and A. W. Trites*: Changes in Gulf of Alaska ecosystems due to ocean climate change and fishing
- M:23 *Simone Libralato, Marta Coll, Sergi Tudela, Isabel Palomera, and Fabio Pranovi*: Quantifying ecosystem overfishing with a new index of fisheries' impact on marine trophic webs
- M:24 *Tony J. Pitcher, Cameron Ainsworth, Hector Lozano, William Cheung, and Georg Skaret*: Evaluating the role of climate, fisheries and parameter uncertainty using ecosystem-based viability analysis
- M:25 *H. A. Lizárraga-Cubedo, I. Tuck, N. Bailey, G. J. Pierce, A. F. Zuur, and J. Drewery*:
Poster Analysing the variance partitioning on the effects of soak time, region and year in a Scottish mixed fishery

- M:26 *Kathryn Lees, Steve Mackinson, Catherine Scott, and Chris Frid*: Driving ecological regime shifts in Ecopath models of the UK's marine environment
Poster
- M:27 *Miina Karjalainen, Eveliina Lindén, Satu Viitasalo, and Markku Viitasalo*: The effects of cyanobacteria on copepod production in the Gulf of Finland, Baltic Sea
Poster

Theme Session on Elasmobranch Fisheries Science (N)

- N:01 *Emma Jones, Doug Beare, Helen Dobby, and Kirsteen MacKenzie*: Comparison of trends in long-term survey data for *Squalus acanthias* with a preliminary stock assessment for this species
- N:02 *N. Baumgartner, A. I. Arkhipkin, Z. N. Shcherbich, and P. Brickle*: Age, growth and maturity of the broad nose skate, *Bathyraja brachyurops* (Fowler, 1910) and the gray tail skate, *Bathyraja griseocauda* (Norman, 1937) around the Falkland Islands
- N:03 *Mark Meekan and Mike Cappo*: Non-destructive assessment of the effects of small-scale fisheries on tropical shark stocks
- N:04 *J. C. Mahé and J. C. Poulard*: Spatial distribution and abundance trends of main elasmobranch species in the Bay of Biscay and Celtic Sea from bottom trawl surveys
- N:05 *Ron Heintz, Lawrence Schuafler, Mike Sigler, and Lee Hulbert*: Fatty acid composition of sleeper shark (*Somniosus pacificus*) liver and muscle reveals nutritional dependence on planktivores
- N:06 *Niels Daan, Henk Heessen, and Remment ter Hofstede*: North Sea elasmobranchs: distribution, abundance and biodiversity
- N:07 *Nils-Roar Hareide, Dominic Rihan, Myles Mulligan, Philip McMullen, Greta Garnes, Maurice Clark, Paul Connolly, Peter Tyndall, Robert Misund, Dag Furevik, Andrew Newton, Kjartan Høydal, Tom Blasdale, and Odd Børre Humborstad*: A preliminary investigation on shelf edge and deepwater fixed net fisheries to the west and north of Great Britain, Ireland, around Rockall and Hatton Bank
- N:08 *Sarah Fowler and Charlotte B. Mogensen*: Why hasn't fisheries science enabled managers to implement precautionary elasmobranch management, and could other tools complement their efforts?
- N:09 *Persefoni Megalofonou, Dimitris Damalas, and G. De Metrio*: Size, age and sexual maturity of blue shark, *Prionace glauca*, in the Mediterranean Sea
- N:10 Withdrawn
- N:11 *Konstantin V. Dreventyakov, A. V. Dolgov, K. M. Sokolov, E. V. Gusev, and A. A. Grekov*: Skates in the Barents Sea: stock status and catch by fishing fleet
- N:12 *F. Serena, M. Barone, C. Mancusi, and A. J. Abella*: Reproductive biology, growth and feeding habits of *Raja asterias* (Delaroche, 1809), from the north Tyrrhenian and Ligurian sea (Italy), with some notes on trends in landings
- N:13 *Douglas P. Swain, H. P. Benoît, and T. R. Hurlbut*: Changes in the abundance, size and habitat associations of skates in the southern Gulf of St. Lawrence, 1971–2002
- N:14 *Vladimir Laptikhovsky, Alexander Arkhipkin, Paul Brickle, and Joost Pompert*: Biology and fishery of rays, *Bathyraja brachiurops* and *B. griseocauda* around the Falkland Islands
- N:15 Withdrawn

- N:16 *Emma Jones, Maurice Clark, Helen Dobby, Doug Beare, Nolwenn Trinkler, Finlay Burns, Francis Neat, Paul Fernandes, and Kevin Peach*: The potential impact of commercial fishing activity on the ecology of deepwater chondrichthyans from the west of Scotland
- N:17 *Bárbara Serra-Pereira, I. Figueiredo, P. Bordalo-Machado, I. Farias, T. Moura, and L. Serrano Gordo*: Age and growth of *Raja clavata* Linnaeus, 1758 – evaluation of ageing precision using different types of caudal denticles
- N:18 *Bárbara Serra-Pereira, I. Figueiredo, P. Bordalo-Machado, I. Farias, T. Moura, and L. Serrano Gordo*: Description of Portuguese mixed-fisheries with positive landings of *Raja brachyura* Lafont, 1873 and *Raja montagui* Fowler, 1910
- N:19 *Juan Carlos Quiroz and Rodrigo Wiff*: Demographic analysis and exploitation vulnerability of beaked skate (*Dipturus chilensis*) off the Chilean austral zone
Poster
- N:20 *F. Serena, C. Mancusi, M. Barone, and A. J. Abella*: Abundance and distribution of rays in the south Ligurian and north Tyrrhenian sea
- N:21 *Michael J. Gallagher and Conor P. Nolan*: Age, growth and maturity of four commercial bathyrigid species from the Falkland Islands' Interim Conservation Zone
- N:22 *Graham Johnston and Maurice Clarke*: Separation of species data from national landing figures
- N:23 *C. S. Martin, S. Vaz, B. Ernande, J. R. Ellis, P. D. Eastwood, F. Coppin, S. Harrop, G. J. Meaden, and A. Carpentier*: Spatial distributions (1989–2004) and preferential habitats of thornback ray and lesser spotted dogfish in the Eastern English Channel
- N:24 *Edd Codling, Ciaran Kelly, and Maurice Clarke*: Comparison of the effects of exploitation on theoretical long-lived fish species with different life-history strategies and the implications for management
- N:25 *Francesco Ferretti, Ransom A. Myers, Fabrizio Serena, and Paolo Sartor*: Long-term dynamics of chondrichthyan fish community in the upper Tyrrhenian Sea
- N:26 *F.A. Patokina and F.F. Litvinov*: Food composition and distribution of elasmobranchs on the shelf and upper slope of the Eastern Central Atlantic
- N:27 *F.F. Litvinov and V.V. Laptikhovskiy*: The quantitative assessment of heterodonty in the blue shark *Prionace glauca* and its modification through the life history
- N:28 *Inês Farias, I. Figueiredo, B. Serra-Pereira, P. Bordalo-Machado, T. Moura, and L. Serrano Gordo*: Diet comparison of four ray species [*Leucoraja naevus* (Müller & Henle, 1841); *Raja brachyura* (Lafont, 1873); *Raja clavata* (Linnaeus, 1758); and *Raja montagui* (Fowler, 1910)] caught along the Portuguese continental coast
- N:29 *Persefoni Megalofonou and A. Chatzisprou*: Observations on the biology and ecology of the deep sea shark, *Centrophorus granulosus*, in the eastern Mediterranean Sea
Poster
- N:30 *Rui Coelho, Ivone Figueiredo, Pedro Bordalo Machado, and Karim Erzini*: Depth distribution of the velvet belly lantern shark, *Etmopterus spinax*, in southern Portugal
Poster
- N:31 *A. Rosa, M. Pinho, G. Menezes, and O. Melo*: Deep-water elasmobranchs of the Azores: a vertical distribution
Poster

**Theme Session on Connecting Physical-Biological Interactions to Recruitment Variability,
Ecosystem Dynamics, and the Management of Exploited Stocks (O)**

- O:01 *E. W. North, M. Christman, J. Volstad, R. R. Hood, T. F. Gross, L. Zhong, D. Lewis, M. Li, J. L. Manuel, R. I. E. Newell, and V. S. Kennedy*: Linking larval transport and fisheries demographic models to investigate the influence of environmental variability and larval behavior on oyster population growth and dispersal
- O:02 *H. A. Lizárraga-Cubedo, I. Tuck, N. Bailey, G.J. Pierce, A.F. Zuur, and D. Bova*: Environmentally caused variability in the fluctuations of the European lobster, *Homarus gammarus*, fishery in Scottish coasts
- O:03 *Yu. M. Lepesevich*: Abundance of Northeast Arctic haddock year classes and its governing factors
- O:04 *K. Świtek, A. Gallego, and M. Heath*: Modeling the growth of sandeel larvae as a function of temperature and zooplankton concentration: “Do larvae eat temperature?”
- O:05 *H.-H. Hinrichsen and H. Baumann*: Combining otolith microstructure analysis and hydrodynamic modeling: an approach to link Baltic sprat larval and juvenile growth to variability of the physical environment
- O:06 Withdrawn
- O:07 *Åse Husebø, Aril Slotte, and Arild Folkvord*: Growth differences in juvenile Norwegian spring-spawning herring (*Clupea harengus* L.) related to temperature conditions in the nursery areas
- O:08 *Åse Husebø, Erling Kåre Stenevik, Aril Slotte, Frode Vikebø, Arild Folkvord, and Petter Fossum*: Size-selective mortality in Norwegian spring-spawning herring juveniles?
- O:09 *Enrique Portilla, Doug Beare, Eddie McKenzie, I. Gibbs, F. Burns, and Dave Reid*: Small-scale variation on mackerel egg mortality over a high density patch
- O:10 *Thomas Neumann and Wolfgang Fennel*: A method to represent vertical migration of zooplankton in 3D-Eulerian models
- O:11 Withdrawn
- O:12 *H. A. Lizárraga-Cubedo, I. Tuck, N. Bailey, G. J. Pierce, and A. F. Zuur*: Common trends in two populations of the European lobster, *Homarus gammarus*, in Scottish waters
- O:13 *Lauri Urho*: Environmental changes and varying conditions shape reproduction limits and interactions in the Baltic fish community
- O:14 *Akihide Kasai and Kousei Komatsu*: Transport and survival processes of eggs and larvae of jack mackerel in the East China Sea
- O:15 *Yoshiki Kato and Shingo Kimura*: Effects of turbulence on the ingestion rate and survival rate of bluefin tuna, *Thunnus thynnus*, larvae
- O:16 *J. Portela, J. Wang, M. Sacau, G. J. Pierce, M. B. Santos, and X. Cardoso*: Variability in the abundance of the argentine squid *Illex argentinus* in relation to environmental conditions on the high seas of the Patagonian Shelf
- O:17 *Benjamin Planque, Pascal Lazure, Marc Segond, Cyril Fonlupt, and Denis Robillard*: Detection and historical reconstruction of mesoscale hydrographic features: an application to the Bay of Biscay continental shelf
- O:18 *U. Hochbaum, M. A. Peck, W. Kühn, M. A. St. John, and C. Schrum*: Simulating the influence of climate variability on larval fish survival: An example using sprat (*Sprattus sprattus*) in the southern North Sea

- O:19 *T. Kristiansen, R. G. Lough, F. E. Werner, Ø. Fiksen, and L. J. Buckley*: A comparison of larval cod (*Gadus morhua*) growth models applied to the Georges Bank and Norwegian Sea regions
- O:20 *Lewis S. Incze, Huijie Xue, Danya Xu, Yong Chen, Carl Wilson, David Greenberg, Robert Steneck, Minoru Kanaiwa, Peter Lawton, Randall Losier, Frederick Page, Richard Wahle, and Nicholas Wolff*: Multiple grid-scale model for egg production, larval transport, recruitment and fishery production for lobsters in the Gulf of Maine
- O:21 *Laure Pecquerie, Pierre Petitgas, Martin Huret, and Alain Ménesguen*: Which time and spatial scales should be used to model anchovy seasonal distribution in the Bay of Biscay according to physical and biological conditions?
- O:22 *E.M. Karasiova and A.S. Zezera*: Inter-annual variability of sprat abundance at early ontogenetic stages in the Gdansk Deep of the Baltic Sea: retention contribution into high density aggregation formation
- O:23 *S. Vaz, C. S. Martin, B. Ernande, P. D. Eastwood, F. Coppin, S. Harrop, G. J. Meaden, and A. Carpentier*: Modelling fish habitat suitability in the Eastern English Channel
- O:24 *J. P. Jonasson, G. Thorarinsdottir, H. Eiriksson, and G. Marteinsdottir*: The effects of environment and fishing on the abundance and condition of Iceland scallop in Breidifjordur
- O:25 *J. E. Stiansen, B. Bogstad, A. Aglen, E. Svendsen, H. Loeng, S. Mehl, and O. Nakken*: Including climate into the assessment of future fish stock recruitment using multiple regression models
- O:26 *J. E. Stiansen, S. Sundby, A. Jenkins, and J. E. O. Nilsen*: Swells as a turbulence source in shallow water
- O:27 *Øyvind Fiksen, F. Vikebø, T. Kristiansen, and S. Sundby*: Drift and growth of larval Northeast Arctic cod emerging from behavioural rules
- O:28 *Corinna Schrum, Irina Alekseeva, and Michael St. John*: Modelling zooplankton and characteristic larval feeding environments in the North Sea with an NPZD model
- O:29 *Andrei Makarchouk*: Interannual and seasonal changes of the mortality rates of sprat eggs in the Gotland Basin (Eastern Baltic Sea)
- O:30 *Peter Munk, S. Jonasdottir, and H. A. Thomsen*: The linkage between frontal hydrography and distributional patterns of meso-zooplankton and fish larvae
- O:31 *Mohamed Elzeir and Steve Hay*: Investigating effect of circulation on jellyfish transport in the waters around Shetlands
- O:32 *A. I. Krysov and E.V. Sentyabov*: Biological and hydrographic aspects of the Norwegian spring-spawning herring migration variations before and after collapse in the 20th century
- O:33 *Dimitrios Damalas, M. Apostolopoulou, C. Yannopoulos, and P. Megalofonou*: Environmental, spatio-temporal and operational effects on long-line swordfish catch rates in the Eastern Mediterranean Sea
- O:34 *Pierre Petitgas, Pascal Lazure, and Patrick Grellier*: Validation of a biophysical larvae drift, growth and survival model on anchovy in Biscay with a framework for its operational use
- O:35 *Pavel P. Chernyshkov, N. M. Timoshenko, and A. M. Sirota*: Physical-biological factors affecting recruitment of small pelagic fish off the Northwest African coast
- O:36 *Alexander M. Sirota, S. N. Burykin, and P. P. Chernyshkov*: Application of satellite altimetry for fisheries research
- O:37 *Andrei S. Krovnin and G. P. Moury*: How climate affects year-class strength: case studies for three Northeast Atlantic commercial fish stocks

- O:38 *J.F. Caddy, E. Wade, T. Surette, M. Hebert, and M. Moriyasu*: Using an empirical traffic light procedure for monitoring and forecasting in the Gulf of St Lawrence fishery for the snow crab, *Chionoecetes opilio*
- O:39 *B.E. Scott, J. Sharples, O. Ross, and K. Camphuysen*: Hotspots: Marine top predator foraging habitat predicted from a detailed understanding of temporal and spatial oceanographic processes
- O:40 *Mario Pinho, J. Gonçalves, and O. Melo*: Abundance and potential fishing estimates of the deep-water red crab (*Chaceon affinis*) off the Azores
Poster
- O:41 *Alexander Kempf, Jens Floeter, and Axel Temming*: Importance of variations in 0-group fish predation mortalities for recruitment success and implications for fisheries management
Poster
- O:42 *Francisco Leotte, M. Guerra, C. Silva, and M. J. Gaudêncio*: Characterisation of bottom sediment on *Nephrops Norvegicus* (Decapoda: Nephropidae) grounds off the southwest and south-eastern coast of Portugal
Poster
- O:43 *Jari-Pekka Pääkkönen, Sanna Rönkkönen, Miina Karjalainen, and Markku Viitasalo*: Growth of juvenile three-spined stickleback (*Gasterosteus aculeatus*) sublethally exposed to harmful algal blooms in the Baltic Sea
Poster
- O:44 *Konrad Thorisson*: The spawning of cod (*Gadus morhua* L.) in Eyjafjordur, N-Iceland and the survival of its larvae
Poster
- O:45 *D. Demain, A. Gallego, E. Jones, and I. Priede*: Temporal patterns of settlement and dietary changes of 0-group cod, haddock and whiting.
Poster
- O:46 *A. Carpentier, C. S. Martin, S. Vaz, B. Ernande, P. D. Eastwood, F. Coppin, P. Koubbi, G. J. Meaden, M. Walkey, N. Desroy, J. -C. Dauvin, Z. Kemp, J. -M. Dewarumez, A. Lefebvre, and S. Harrop*: Eastern Channel Habitat Atlas for Marine Resource Management (CHARM Phase I)
Poster

Theme Session on Regional Ecosystem Pilot Projects, Ecosystem Forecasting, and Operational Oceanography: Comparing and Contrasting Scientific Tools, Strategies, Outputs, and Applications (P)

- P:01 *Juha Flinkman*: Developing techniques for operational zooplankton monitoring in the Baltic Sea: adapting a CPR (Continuous Plankton Recorder) for small-size brackish water zooplankton, and ensuring the compatibility of new CPR data and old WP-2 net data
- P:02 *Wulf Greve*: The biometeorological closure of the gap between trophic level modelling and the operative prognosis of population seasonality
- P:03 *Andrew Kenny*: An integrated ecosystem assessment of the North Sea – A pilot project
- P:04 *Jake Rice, Co-authors from ESSIM and GOSLIM*: Documentation needed for conducting and reporting on integrated ecosystem assessments
- P:05 *Skip McKinnell and Ian Perry*: Marine ecosystem reporting and analysis in PICES; from Shanghai to Acapulco to Honolulu and all points between!
- P:06 *Joseph Arbour*: Development of an Integrated Management Plan for the Eastern Scotian Shelf, Nova Scotia, Canada
- P:07 *Odette Paramour, Leonie Robinson, Gerjan Piet, Stuart Rogers, and Jake Rice*: Integrated ecosystem assessments for regional pilot projects
- P:08 *Antonio Bode, Charo Carballo, Nicolás González, Jorge Lorenzo, Alejandra Roura, Manuel Varela, and Marta M. Varela*: Trends in fertilization and phytoplankton biomass in a coastal upwelling ecosystem

- P:09 Withdrawn
- P:10 *D. Mountain, G. Harrison, W. Gabriel, and S. Gavaris*: GoMA GOOS: A GOOS Pilot Project in the Gulf of Maine Region
- P:11 *Alberto Serrano, F. Sánchez, J. Cartes, J.C. Sorbe, S. Parra, I. Frutos, I. Olaso, F. Velasco, A. Punzón, A. Muñoz, M. Gómez, C. Pola, and I. Preciado*: Multidisciplinary study of Le Danois Bank (Cantabrian Sea, N. Spain): ECOMARG Project
- P:12 *Lewis Incze, Evan Richert, Nicholas Wolff, and Thaddeus Wheeler*: A biological component for the Gulf of Maine Ocean Observing System
- P:13 *Nicolas Dupont and Benjamin Planque*: Plankton community structure and production indicators in the Bay of Biscay, using a Laser Optical Plankton Counter
- P:14 *Teunis Jansen, Lena Larsen, Henrik Kjems-Nielsen, and Steen Silberg*: InterCatch: Fisheries Poster and stock assessment data processing and documentation system
- P:15 *Gema Martínez, Luís González, Jesús Torres, and Juan M. Corchado*: Forecasting system for fishing effort in Galician craft fleet

**Theme Session on Advances in Reproductive Biology: Methodology
and Applications for Fisheries Science (Q)**

- Q:01 *Andrei Makarchouk*: Interannual changes in the time of spawning of sprat in the Gotland Basin (Eastern Baltic Sea) in relation to the hydrographical conditions and the structure of spawning stock
- Q:02 Withdrawn
- Q:03 *C. J. G. van Damme, L. Dransfeld, A. T. G. W. Eltink, M. Krüger-Johnsen, J. R. Pérez, J. Ulleweit, and P. R. Witthames*: Horse mackerel fecundity in relation to lipid content
- Q:04 *Gudrún Marteinsdóttir*: Historical variation in reproductive output of cod in Icelandic waters
- Q:05 *C. T. Marshall, C. L. Needle, A. Thorsen, O. S. Kjesbu, and N. A. Yaragina*: Systematic bias in estimates of reproductive potential of cod stocks: implications for stock/recruit theory and management
- Q:06 *Svetlana Pianova*: Reproductive adaptations of haarder (*Liza haematocheila*) to the new environment of the Russian South Seas
- Q:07 *P. J. Wright*: Temporal variation in reproductive investment of cod and haddock in the North Sea
- Q:08 *Holger Haslob, Jonna Tomkiewicz, and Hans-Harald Hinrichsen*: Spatial and temporal variability in Baltic sprat (*Sprattus sprattus balticus* S.) batch fecundity
- Q:09 *Aisling Lannin, E. Rogan and P. Connolly*: A bet hedging strategy for hake enables maximum viable egg production
- Q:10 *Richard D.M. Nash, Olav S. Kjesbu, Anders Thorsen, Merete Fonn, and Maria Krüger-Johnsen*: The potential importance of the paternal contribution to the ‘Stock Reproductive Potential’ of North-East Arctic cod (*Gadus morhua*)
- Q:11 *Christian Jørgensen, Bruno Ernande, and Øyvind Fiksen*: Fisheries-induced life history evolution reduces per-biomass egg production of the Northeast Arctic cod stock

- Q:12 *Anders Thorsen, O. S. Kjesbu, and P. R. Witthames*: Estimation of potential and realised fecundity of fish
- Q:13 *Yvan Lambert, Olav S. Kjesbu, Gerd Kraus, Gudrun Mateinsdottir, and Anders Thorsen*: How variable is the fecundity within and between cod stocks?
- Q:14 *Jon Eigil Skjæraasen, T. Nielsen, and O. S. Kjesbu*: Timing and determination of potential fecundity in Atlantic cod
- Q:15 *H. Murua, P. Álvarez, M. Korta, and L. Motos*: European hake, *Merluccius merluccius*, spawning biomass assessed by an egg production method in the Bay of Biscay
- Q:16 *Rosario Domínguez, F. Saborido-Rey, and H. Murua*: Effects of proximate composition on fecundity and reproductive potential of *Merluccius merluccius* (L., 1758) at the Galician Coast
- Q:17 *Caroline Durif, Sylvie Dufour, and Pierre Elie*: Impact of individual morphological and physiological characteristics on the sexual maturation of the European eel (*Anguilla anguilla*)
- Q:18 *João Pereira, Ana Costa, and Silvia Lourenço*: An integrated historic perspective of female fecundity of the common squid *Loligo vulgaris* from Portuguese waters
- Q:19 *James Kennedy, Peter R. Witthames, and Richard D. M. Nash*: Temporal and spatial variation in fecundity of Irish Sea plaice
- Q:20 *Ed Trippel*: Reproduction to recruitment to recovery? Significance of parental effects to marine fish stocks
- Q:21 *F. Saborido-Rey, H. Murua, D. Garabana, and T. Sigurdsson*: Impact of mass atresia in reproductive ecology, maturity ogive, spawning migration and population dynamics on *S. mentella* and *S. marinus* in Icelandic waters
- Q:22 *Gudmundur J. Oskarsson and Christopher T. Taggart*: When it comes to recruitment variation in Icelandic herring, it is the eggs of the repeat spawners that make the difference
- Q:23 *Jonna Tomkiewicz and Gerd Kraus*: Timing of Baltic cod spawning and spawner demography
- Q:24 *Isabel González Herraiz and A. C. Fariña*: Approach to the realized fecundity of *Nephrops norvegicus* in the Porcupine Bank
Poster
- Q:25 *A. Alday, A. Uriarte, M. Santos, I. Martín, A. Martínez de Murguía, and L. Motos*: Staging and ageing the degeneration of postovulatory follicles for the Bay of Biscay anchovy (*Engraulis encrasicolus*)
- Q:26 Withdrawn
- Q:27 Withdrawn
- Q:28 *Else Torstensen*: Maturity classifications in herring – results of an exchange of digital images of gonads
Poster
- Q:29 *Rosario Domínguez, María Korta, Hilario Murua, F. Saborido-Rey, and Iñaki Quincoces*: Variability in size at maturity of European hake (*Merluccius merluccius*) at Bay of Biscay and Galician Coast
Poster
- Q:30 *Nuala McQuaid and Richard Briggs*: Sexual maturity of male *Nephrops norvegicus* (L.) in the Irish Sea
Poster
- Q:31 *Konstantin V. Drevetnyak and A. I. Kluev*: On fecundity of *Sebastes viviparus* from the North East Arctic
Poster
- Q:32 *Hans Gerritsen and D. McGrath*: Improving the consistency in the assignment of maturity stages
Poster

Q:33 *Fran Saborido-Rey, R. Dominguez, D. Garabana, and T. Sigurdsson: S. mentella* maturity ogive in the Irminger Sea and Iceland waters
Poster

Q:34 Withdrawn

Q:35 Withdrawn

Q:36 *Rosario Domínguez and F. Saborido-Rey: New atretic structures identified in ovary of*
Poster European hake (*Merluccius merluccius*, L. 1758) in Galician coast

Q:37 Withdrawn

Theme Session on Marine Mammals: Monitoring Techniques, Abundance Estimation, and Interactions with Fisheries (R)

R:01 *Sophie Smout and Ulf Lindstrøm: The multi-species functional response of northeast Atlantic minke whales*

R:02 Withdrawn

R:03 *Tiu Similä: Interactions between herring fishery and killer whales in northern Norway*

R:04 *Arnt-Børre Salberg, Garry B. Stenson, Tore Haug, and Kjell T. Nilssen: Estimation of harp seal pup production in the Greenland Sea using spatial analyses on aerial survey data*

R:05 *Grégoire Certain, Claire Pusineri, Vincent Ridoux, and Vincent Bretagnolle: Trophic interactions between fisheries and small delphinids in the Bay of Biscay*

R:06 *G. B. Stenson, M. O. Hammill, J. Lawson, J. F. Gosselin, and T. Haug: Estimating abundance of seals in a drifting environment: 2005 pup production of harp seals, *Pagophilus groenlandicus*, in the Northwest Atlantic*

R:07 *Debra Palka: Evaluating assumptions underlying a line transect analysis of a 2004 Northwest Atlantic shipboard abundance survey for cetaceans*

R:08 *Clare B. Embling, P. G. Fernandes, P. S. Hammond, F. Armstrong, and J. Gordon: Investigations into the relationship between pelagic fish and dolphin distributions off the west coast of Scotland*

R:09 *Mette Mauritzen, H. J. Skaug, N. Øien, and U. Lindstrøm: Distributions, competitive and trophic interactions of cetaceans along the Barents Sea shelf edge*
Poster

R:10 *Kjell T. Nilssen and Ulf Lindstrøm: Use and selection of prey by harp seals during summer in the northern Barents Sea*

R:11 *J.A. Learmonth, P. Luque, M.B. Santos, I. A. P. Patterson, R. J. Reid, N. J. Spencer, and G. J. Pierce: Mortality and pregnancy rates in harbour porpoises in Scotland (UK) as estimated from stranded animals*

R:12 *D. G. Pike, Th. Gunnlaugsson, N. Øien, G. Desportes, G. A. Vikingsson, C. G. M. Paxton, and D. Bloch: Distribution, abundance and trends in abundance of fin and humpback whales in the North Atlantic*

R:13 *J. A. Learmonth, G. Stowasser, G. J. Pierce, and C. F. Moffat: Predator–prey interactions – does fatty acid analysis provide the answers?*

- R:14 *Callan D. Duck and Beth L. Mackey*: Recent changes in grey seal pup production in Scotland
- R:15 *M.B. Santos, G. J. Pierce, E. N. Ieno, M. Addink, C. Smeenk, and C. C. Kinze*: Harbour porpoise (*Phocoena phocoena*) feeding ecology in the eastern North Sea
- R:16 *M. B. Santos, G. J. Pierce, A. F. Zuur, and E. N. Ieno*: Relating trends in marine mammal diet to fish abundance: determining functional responses from dietary data
- R:17 *Mike Lonergan, Peter Reijnders, Sophie Brasseur, Kai Abt, Svend Tougaard, Michael Stede, and Dave Thompson*: A comparison of the population dynamics of two harbour seal (*Phoca vitulina*) populations in the southern North Sea
- R:18 *G. B. Stenson and M. O. Hammill*: Quantifying uncertainty in estimates of Atlantic cod (*Gadus morhua*) consumption by harp seals (*Phoca groenlandica*)
- R:19 *Olle Hjerne, K. Lundström, and O. Karlsson*: Effects of grey seal (*Halichoerus grypus*) predation on Baltic Sea fish stocks and fisheries
- R:20 *Kevin Robinson*: Environmental factors affecting the fine-scale distribution of minke whales Poster (*Balaenoptera acutorostrata*) in a dynamic coastal ecosystem
- R:21 *C. D. MacLeod, G. J. Pierce, and M. B. Santos*: An examination of the potential effects on Poster toothed whales of body size reduction in prey species resulting from over-fishing
- R:22 *C. D. MacLeod*: Using available but imperfect datasets for monitoring trends in cetacean Poster populations: a novel niche-based approach
- R:23 *Ruth M. Casper, S. N. Jarman, B. E. Deagle, N. J. Gales, and M. A. Hindell*: Comparing the Poster utility of otoliths versus fish DNA in seal scats for estimating diet
- R:24 *James R. Gilbert*: Alternative approaches to estimation of harbor seal numbers: the role of Poster spatial scale
- R:25 *Helen Bailey and Paul Thompson*: Quantitative analysis of dolphin movement paths and their Poster relationship with foraging
- R:26 *P. L. Luque, M. Arbelo, A. Fernández, M. B. Santos, and G. J. Pierce*: Preliminary analysis of Poster mineralization anomalies in tooth structure in relation to life history events in *Stenella* sp. stranded animals in Canary waters
- R:27 *S. J. Canning, P. G. Evans, M.B. Santos, R. J. Reid, and G. J. Pierce*: Distribution of and Poster habitat use of white-beaked dolphins (*Lagenorhynchus albirostris*) along the Aberdeenshire (UK) coastline, with new information on diet
- R:28 *Rebeca Lago, G. Martinez, L. González, and J. Torres*: Study of the spatial distribution of Poster cetaceans in Galician waters from sighting data collected on-board fishing boats using GIS and remote sensing techniques
- R:29 *M. B. Santos, G. J. Pierce, R. Fernández, A. López, J. A. Martínez, and E. N. Ieno*: Variability Poster in the diet of bottlenose dolphins (*Tursiops truncatus*) in Galician waters and relationship with prey abundance
- R:30 Withdrawn
- R:31 *Louise Cunningham and Callan D. Duck*: Variability in harbour seal counts during consecutive Poster aerial surveys
- R:32 *Line Bang Christensen and Steven J. D. Martell*: A stochastic framework for reconstructing Poster historical marine mammal abundance from catch records and sparse abundance information: application to the Southern minke whale

- R:33 *Gordon T. Waring, R. DiGiovanni, A. Ferland, and S. Wood*: Review of criteria for index sites for monitoring seal abundance and trends: Application to Southern New England
Poster
- R:34 *Martin Isæus, T. Bekkby, T. Kroglund, F. Moy, K. M. Norderhaug, A. Pedersen, and E. Rinde*: HAMOD – HARD bottom MODelling GIS-modelling of hard bottom species distributions
Poster
- R:35 *Tore Haug, Kjell Tormod Nilssen, Lotta Lindblom, and Ulf Lindström*: Diets of hooded seals in coastal and drift ice waters along the east coast of Greenland
Poster
- R:36 *F. Marubini, G. J. Pierce, and P. G. Evans*: What information on harbour porpoise distribution can be extracted from heterogenous datasets?
Poster
- R:37 *Raul Castro*: BIZKAIZET: Cataloguing areas of interest for cetacean conservation in the Bay of Biscay
Poster
- R:38 Withdrawn
- R:39 *G. Hernández-Milián, M. B. Santos, G. J. Pierce, C. D. MacLeod, R. Fernández-García, and K. L. Brier*: Improvement in traditional methods of studying marine mammal diet: use of fish jaw bones to augment studies based on otoliths
Poster
- R:40 *G. J. Pierce, M. B. Santos, S. Cerviño, A. F. Zuur, E. N. Ieno, and R. J. Reid*: Assessing sources of variation in cetacean diet: a simulation study on analysis of harbour porpoise diet in Scottish waters
Poster

Theme Session on Oil Spills in Marine Ecosystems: Impacts and Remediation (S)

- S:01 *Robin Law, Carole Kelly and Kevin Colcomb*: Opportunities for at-sea response and beach clean-up to reduce the impact of oil spills: examples from the “Sea Empress” incident
- S:02 *T. Juntunen, T. Rosqvist, S. Kuikka, and J. Rytönen*: How to model the oil combating technologies and their impacts on ecosystem: a Bayesian networks application in the Baltic Sea
- S:03 *F. Sánchez, A. Serrano, F. Velasco, S. Parra, and I. Frutos*: Monitoring the “Prestige” oil spill impacts on the northern Iberian shelf ecosystem
- S:04 *R. A. Sueiro, S. Suárez, M. Araujo, and M. J. Garrido*: Effects of bioremediation on mutagenicity of fuel oil coming from the “Prestige” spill: *in situ* experiments in Sorrizo’s Beach (NW Spain)
- S:05 *I. Olaso, F. Velasco, and I. Preciado*: Seasonal variability of predator fish trophic levels before and after the “Prestige” oil spill
- S:06 *Concepción Martínez-Gómez, J. A. Campillo, J. Benedicto, B. Fernández, J. Valdés, I. García, and F. Sánchez*: Biomarker responses in demersal fish from the northern Iberian shelf: Results one year after the “Prestige” oil spill
- S:07 *Ron A. Heintz*: Chronic exposure to polynuclear aromatic hydrocarbons in natal habitats leads to decreased productivity and fitness in pink salmon populations
- S:08 *S. D. Rice, J. W. Short, M.R. Lindeberg, R. A. Heintz, B. E. Ballachey, and J. L. Bodkin*: “Exxon Valdez” oil spill: PAH persistence in intertidal sediments, bioavailability, and long-term effects
- S:09 *Kenneth Lee, Albert D. Venosa, and Francois Xavier Merlin*: Marine oil spill bioremediation: field studies for development of operational spill response strategies
- S:10 *Lucía Viñas, Ángeles Franco, José-Antonio Soriano, and Juan-José González*: PAH levels and evolution in water, sediments and biota after the “Prestige” oil spill

- S:11 *A. Punzón, Trujillo, V., Abad, E., Pampillón, C., Velasco, F., Abaunza, P., Villamor, B., Perez, N., and Hernández, C:* Fisheries and “Prestige”. Review and update of the studies on the effects of the “Prestige” oil spill
- S:12 *S. Kuikka, T. Lecklin, T. Juntunen, M. Rahikainen, K. Vainio- Mattila, T. Rosqvist, K. Jolma, A. Mäkinen, J. Ikävalko, J. Mattila, and A. Aalto:* Use of biological life history, genetic, and vulnerability information to optimize oil combating technologies
- S:13 *Robin Law, Carole Kelly, Patrick Roose, Jacek Tronczynski, Lucía Viñas, and Lynda Webster:* Assessing the long-term impact of oil spills: an examination of recent incidents
- S:14 *J. C. Mendes, D. G. Johns, and A. J. Richardson:* Assessing the impact of oil spillages on plankton using the Continuous Plankton Recorder (CPR) survey
- S:15 *Núria Jiménez, Sergi Díez, Jordi Sabaté, Marc Viñas, Josep M. Bayona, Joan Albaigés, and Anna M. Solanas:* Enhanced biodegradation of the “Prestige” fuel oil: laboratory and field observations
- S:16 Withdrawn
- S:17 *Hideaki Maki, T. Hiwatari, K. Kohata, and M. Watanabe:* Crude oil bioremediation field experiment at a shore in the Sea of Okhotsk in Hokkaido, Japan
- S:18 Withdrawn
- S:19 *Franck Laruelle and Ivan Calvez:* Oil spill monitoring : analysis of similarities and differences in approaches and methodologies
- S:20 *Manuel González, Ad. Uriarte, R. Pozo, M. Collins, and L. Ferrer:* The “Prestige” crisis: Operational oceanography applied to oil recovery by the Basque fishing fleet and the study of the long-term environmental impacts
- S:21 *Lucía Viñas, Ángeles Franco, José-Antonio Soriano, Inmaculada Alves, Jessica Bargiela, and Juan-José González:* Evolution of the PAH content in commercial shellfish from Galicia (NW Spain) after the “Prestige” oil spill
Poster
- S:22 *Esther Abad, J. M. Bellido, A. Punzón, N. Pérez, and M. A. Ámez:* Analysis of the Spanish trawl fleet spatial distribution during and post-“Prestige” oil spill by GIS simulations and real data
Poster
- S:23 *J. H. Pedersen and T. Kristiansen:* Degradation of oil with regard to the Barents Sea
Poster
- S:24 *Stephen O'Neill and Ian. M. Davies:* Microbial detection of hydrocarbon contamination in fish
Poster
- S:25 *I. Olaso, B. Villamor, F. Velasco, J. L. Gutiérrez-Zabala, and I. Preciado:* May the “Prestige” oil spill have affected mackerel trophic structure?
Poster
- S:26 *Victoriano Valencia, Ángel Borja, Iñigo Muxika, and Andrea del Campo:* Medium-term monitoring of polycyclic aromatic hydrocarbons in mussels of the estuaries of the Basque coast (NE Spain) following the “Prestige” oil spill
Poster
- S:27 *Z. Chen, K. Lee and S. Sultana:* Oil fate during oil spills in the marine environment – mathematical modeling and future needs
Poster
- S:28 *J. S.-Landaluze, L. Bartolome, O. Zuloaga, and C. Cámara:* A fast and simple extraction procedure for polycyclic aromatic hydrocarbons in marine biota: Application to mussel samples from the Cantabrian coast after the “Prestige” oil spill
Poster

- S:29 *Antonio Bode, Nicolás González, Jorge Lorenzo, Joaquín Valencia, Manuel Varela, and Marta Varela*: Bacterioplankton activity off A Coruña (Galicia, NW Spain) after the “Prestige” oil spill in November 2002
Poster
- S:30 *Niranjan Deshpande, Subhashini Chandrasekar, George A. Sorial, and James W. Weaver*: Dispersant effectiveness on oil spills – impact of environmental factors
Poster
- S:31 *Elsa Vázquez, Milagros Penela-Arenaz, Gonzalo Macho, and Esther Pérez-Fernández*: Recruitment of cirripeds after “Prestige” oil spill on rocky shores of Galicia (NW Iberian Peninsula)
Poster
- S:32 *J. A. Soriano-Sanz, M.A. Franco Hernández, L. Viñas-Diéguez, B. Cambeiro-Cambeiro, J. Bargiela-Barros, C. González-Castro, and J. J. González-Fernández*: Polycyclic Aromatic Hydrocarbons (PAHs) levels in cultivated and wild mussels from a Galician site (NW Spain) affected by the “Prestige” oil spill
Poster
- S:33 *Victoria Besada, Fernando Schultze, José Antonio Soriano, Lucía Viñas, Ángeles Franco, Bruno Cambeiro, and Juan José González*: Levels and evolution of V, Ni and PAHs in mussels after the “Prestige” oil spill
Poster
- S:34 *Luis González, Gema Martínez, Rebeca Lago, and Jesús Torres*: Evaluation of the impact of the “Prestige” oil spill using remote sensing and GIS techniques
Poster
- S:35 *Marie Russell, L. Webster, P. Walsham, G. Packer, E.J. Dalgarno, A.D. McIntosh, R. J. Fryer, and C.F. Moffat*: The composition and concentration of hydrocarbons in the East Shetland Basin oil exploration and production area
Poster
- S:36 Withdrawn
- S:37 *Iñigo Muxika, Víctor Valencia, and Ángel Borja*: Effects of “Prestige” oil spill upon subtidal soft-bottom macrobenthic communities in the Basque continental shelf
Poster
- S:38 *A. D. McIntosh and A. E. Craig*: Sensory assessment of hydrocarbon taint in fish and shellfish from the North Sea
Poster
- S:39 *A. Craig, A. F. Zuur, R. J. Fryer and I. M. Davies*: Performance of sensory assessment panels for the detection of petrogenic taint in fish
Poster
- S:40 *Abdulwaheed S. Ahmed, Lynda Webster, Ian M. Davies, Pat Pollard, Marie Russell and Colin F. Moffat*: Distribution of hydrocarbons in the Fladen Ground
Poster
- S:41 *Carl Van Colen, M. Vincx, and S. Degraer*: Tidal flat macrobenthos resistance to medium-term emersion: the case of the “Tricolor” oil pollution prevention in the Zwin nature reserve (Belgium)
Poster
- S:42 *Ángeles Franco, Lucía Viñas, José-Antonio Soriano, Jessica Bargiela, Cristina González, and Juan-José González*: Concentrations of polycyclic aromatic hydrocarbons (PAHs) in sediments on the Spanish Coast, one year after the “Prestige” fuel-spill
Poster

Theme Session on Integrating/Implicating Genetics into Fisheries Management (T)

- T:01 *E. Verspoor, J. Gilbey, and D. Knox*: Comparative phylogeography of salmonids in the British Isles: Implications for the management of biodiversity
- T:02 *Filip Volckaert, Gregory Maes, and Marti Pujolar*: Management implications of panmixia, introgression and a reduced reproductive potential – the case of the European eel
- T:03 *William S. Davidson and Ben F. Koop*: The potential of genomics research for fisheries management

- T:04 *Gary R Carvalho*: Fisheries genetics and evolutionary thinking: reconciling theory with practice (“or what can genes tell us about how many fish we are likely to catch?”)
- T:05 *Stefano Mariani, William F. Hutchinson, Emma M.C. Hatfield, Daniel E. Ruzzante, E. John Simmonds, Thomas G. Dahlgren, Carl Andre, Dorte Bekkevold, Jennifer Brigham, Else Torstensen, and Gary R. Carvalho*: Microsatellite analysis of North Sea herring spawning aggregations
- T:06 *Ellen Kenchington*: The effects of fishing on the genetic diversity of non-target benthic species
- T:07 *Einar Eg Nielsen and Michael Møller Hansen*: Historical, present and future application of genetics for sustainable management of the Atlantic cod
- T:08 *Ulf Dieckmann and Mikko Heino*: Fisheries-induced evolution: Toward the evolutionarily sustainable management of living marine resources
- T:09 *Philippe Lenfant, Pierre Petitgas, Carlos Gonzalez, and Patrick Grellier*: Tracking individual variability in Bay of Biscay anchovy population using genetics and otolith analysis to understand the mechanisms of population maintenance
- T:10 *C. T. Taggart, G. Oskarsson, A. McPherson, C. Reiss, K. Smedbol, and R. Stephenson*: Challenging population genetics with stock attributes in a stock-comparative manner: can we gain new insights for advanced management of Atlantic herring fisheries?
- T:11 *Magnus Stefánsson, D. Gíslason, B. Þorgilsson, A. Ragnarsdóttir, C. Pampoulie, V. Chosson, Þ. D. Jörundsdóttir, A. K. Daniëlsdóttir, and Þ. Sigurðsson*: Depth as a barrier to gene-flow in *Sebastes mentella* within the Irminger Sea
- T:12 Withdrawn
- T:13 *C.T. Taggart, E. Kenchington, B. Nakashima, J. Lawlor, and L. Hamilton*: The application of molecular genetics to assess scale-dependent (cm to 1000 km) population structure in capelin
Poster
- T:14 *Yuri V. Gerasimov and Oleg M. Lapshin*: Behaviour of homozygous bream (*Abramis brama*
Poster L.) with different peroxidase alleles in the operation zone of active fishing gears
- T:15 *Anna Was, Karen McCrann, and Elizabeth Gosling*: Genetic structure of blue whiting
Poster (*Micromesistius poutassou*) from the North-East Atlantic
- T:16 *Anna Was, Magdalena Podolska, Gary Carvalho, and Roman Wenne*: Genetic characteristics
Poster of herring catches from the southern Baltic
- T:17 *Magnus Stefánsson*: Population structure of the redfish species *Sebastes mentella* within the
Poster Northern Hemisphere: Irminger Sea and the Icelandic shelf
- T:18 *M. O' Sullivan, P.J. Wright, E. Verspoor, David Knox, and S. Piertney*: Absence of spatial and
Poster temporal genetic differentiation at microsatellite loci in north east Atlantic anglerfish (*Lophius piscatorius*)
- T:19 *A.-B. Florin, J. Höglund, and T. Aho*: Genetic variation and stock identification of flatfishes in
Poster the Baltic Sea
- T:20 *C. Pampoulie, Þ. D. Jörundsdóttir, M. Ö. Stefánsson, B. S. Danilowicz, and A. K. Daniëlsdóttir*:
Poster Genetic variability of the Northeast Atlantic cod: past, present and future
- T:21 *I. M. Davies, U. Barg, and E. Black*: Progress report on GESAMP/ICES initiative on
Poster environmental risk analysis for coastal aquaculture

Theme Session on Acoustic Techniques for Three-dimensional Characterization and Classification of the Pelagic Ecosystem (U)

- U:01 *Steven J. Barbeaux, Martin Dorn, Jim Ianelli, and John Horne*: Visualizing Alaska pollock (*Theragra chalcogramma*) aggregation dynamics
- U:02 *Francois Gerlotto, S. Bertrand, N. Bez, and M. Gutierrez*: Communication inside anchovy schools: a way to facilitate fast 3-D changes in school morphology and structure in response to predation, as observed using multibeam sonar on anchovy aggregations in Peruvian waters
- U:03 Withdrawn
- U:04 *Aril Slotte, Rolf Korneliussen, and Dankert Skagen*: Three-dimensional distribution of Northeast Atlantic mackerel in the northern North Sea during autumn related to ambient temperature
- U:05 *Andrzej Orłowski*: Acoustic information applied to implement environmental studies in the Baltic
- U:06 *Julian M. Burgos and John K. Horne*: Characterizing the spatial distribution of a semi-demersal gadoid
- U:07 *John K. Horne*: Seeing sound: visualizing acoustic backscatter from fish
- U:08 Withdrawn
- U:09 *Matthew P. Wilson*: Directions in three- and four-dimensional acoustic data visualisation and analysis
- U:10 *Arnaud Bertrand, Mariano Gutiérrez, François Gerlotto, Pepe Espinoza, Sophie Bertrand, Jesús Ledesma, Roberto Quesquén, and Luis Alza*: How does fish habitat suitability shape the 3-D spatial organisation of anchovy across scales?
- U:11 *Frédéric Ménard, J. J. Léveze, M. Potier, J. F. Ternon, F. Baurand, O. Maury, and F. Marsac*: Acoustic characterization of tropical tuna prey in the Western Indian Ocean in relation to local environmental conditions
- U:12 *Hideaki Tanoue, A. Hamano, and T. Komatsu*: Three-dimensional distributions of pelagic fish detected with an echo-sounder and environmental parameters around the seamount, Hachirigase, in the Sea of Japan
- U:13 *Mikhail L. Zaferman*: Fine structure of fish aggregations: methods of study, effect on acoustic characteristics and fishing gear catchability
- U:14 *Héctor Villalobos, Jacques Massé, Pierre Petitgas, and Pierre Beillois*: Evolution of the aggregation pattern in pelagic fish echotraces during spring acoustic surveys in the Bay of Biscay, 1989–2004
- U:15 *Mathieu Doray, Erwan Josse, Stéphanie Mahévas, and Pierre Petitgas*: 3-D acoustic characterization of the spatial and temporal dynamics of large pelagic fish aggregations around moored Fish Aggregating Devices in Martinique (Lesser Antilles)
- U:16 *Cathy Goss*: The effect of seabed topography on the distribution of components of the pelagic ecosystem found off the coast of the sub-Antarctic island of South Georgia
- U:17 *R. J. Korneliussen and E. Ona*: Detection of spatial distribution of acoustic categories
- U:18 *John Breslin, Paul Connolly, Noel Dumortier, Edward Fahy, Fiona Fitzpatrick, Veronique Jegat, Angela Morando, Terry McMahon, Glenn Nolan, Francis O'Beirn, Fabio Sacchetti, David Stokes, and Guy Westbrook*: Employing nested survey techniques to identify the relationships between benthic and pelagic environments within a 3-dimensional framework

- U:19 *Akira Hamano and Hideaki Tanoue*: The three-dimensional GIS using sonar information for coastal fisheries
- U:20 *Juan Zwolinski, Paulo Oliveira, and Yorgos Stratoudakis*: Visualisation of coastal internal waves in plankton scattering layers during fisheries acoustic surveys
- U:21 *S. M. Kasatkina, V. F. Ivanova, and Yu. V. Kadilnikov*: Analysis of spatial distribution characteristics of fishing species as the important factor in stock management
- U:22 *Mariano Gutierrez, Andres Chipollini, Luis Vasquez, and Francois Gerlotto*: Anchovy and munida spatio-temporal dynamics and interactions of diel cycles of aggregation
- U:23 Withdrawn
- U:24 *Juan Zwolinski, Paul G. Fernandes, and Yorgos Stratoudakis*: Uncertainty in acoustic estimation of abundance in an unstable multi-species environment
- U:25 *Carlos J. Robinson and Jaime Gómez-Gutiérrez*: Tidal front dynamics and Pacific sardine aggregations in Bahia Magdalena, south west coast of Baja California, México
- U:26 *Viacheslav A. Ermolchev and T. M. Sergeeva*: TS measurement of capelin (*Mallotus villosus villosus*) *in situ* at 38 kHz frequency in the Barents Sea
Poster
- U:27 Withdrawn
- U:28 *Bo Lundgren and J. Rasmus Nielsen*: Direct spectral calibration of an experimental wideband echosounder. Procedures and results
Poster
- U:29 *Viacheslav A. Ermolchev*: On measurements of cod target strength *in situ* in the Barents and Norwegian Seas
Poster
- U:30 *Martin J. Cox and Andrew S. Brierley*: Planned observations of interactions between Antarctic krill “*Euphausia superba*” and predators using a multi-beam sonar
Poster

Theme Session on Fishers’ Perceptions and Responses in Management Implementation (V)

- V:01 *Paul Marchal and Floor Quirijns*: The influence of management, market and fish stocks density on fishermen’s foraging
- V:02 *Joseph E. Powers*: MSY, bycatch and minimization to the “extent practicable”
- V:03 *William A. Karp and Karl Haflinger*: Intended and unintended consequences: Fisher responses to bycatch reduction requirements in the Alaska groundfish fisheries
- V:04 *Steven Mackinson, Robert Brown, Jeroen van der Kooij, Hazel Curtis, Mike Myers, and Ross Leach*: Mind games: Cognitive mapping of fishers’ knowledge and perceptions on the impacts of wind farms on fisheries
- V:05 *John H. Annala and Laura T. Singer*: Comparison of collaborative fisheries research in New England and New Zealand
- V:06 *Dick Ferro and Rob Kynoch*: Information collected on Scottish commercial fishing gear and its use in fisheries management
- V:07 *Päivi Haapasaari, Timo P. Karjalainen, and Kalle Reinikainen*: Commitment to salmon: using Bayesian modeling to create a sustainable fisheries management tool based on commitment of fishermen

- V:08 *Cristina Pita*: Fishers' perception on local support to the fishing activity and attitudes towards a new management regime
- V:09 *T. L. Catchpole, T. S. Gray, and C. L. J. Frid*: A multidisciplinary study of discarding in North Sea fisheries
Poster
- V:10 *Paul Marchal, Benoît Caillart, Ole Eigaard, Olivier Guyader, Ane Iriondo, Fanny Le Fur, Paul Prellezo, Jacques Sacchi, and Marina Santurtun*: A retrospective analysis of technical creeping: trends, determinant factors and effects
- V:11 Withdrawn
- V:12 *Jari-Pekka Pääkkönen, Miina Karjalainen, Maiju Lehtiniemi, Jonna Engström-Öst, and Markku Viitasalo*: Harmful blooms of cyanobacteria: A threat to fishermen's livelihood in the Baltic Sea?
- V:13 *Mette Termansen and Alberto Ansuategi*: Economic analysis of marine reserve creation: an agent-based simulation model
- V:14 *Murdoch McAllister*: Evaluating the impacts of bycatch on implementation uncertainty and the definition of reference points
- V:15 Withdrawn
- V:16 *Fernando González-Laxe*: Mechanisms and evaluation indicators in fisheries management
- V:17 *J. Modin, T. Aho, L. Piriz, M. Sköld, and H. Svedäng*: Ecological aspects on co-management of coastal fish resources in Sweden
- V:18 *Sarah B. M. Kraak, Loes J. Bolle, and Adriaan D. Rijnsdorp*: Uncertainty in the determination of biomass reference points for North Sea plaice: The influence of assumptions about discards, weight, maturity and stock-recruitment relationships
Poster
- V:19 *Cyprian Kapasa, Isaac Malasha, and Doug Wilson*: Experience-based knowledge and fisheries management in the Mweru-Luapula system, Zambia
- V:20 *Martin Pastoors*: Evaluating fisheries management advice for some North Sea stocks: is bias inversely related to stock size?
- V:21 Withdrawn
- V:22 *Thorolfur Matthiasson*: Possible stakeholder conflicts in quota-regulated fisheries
- V:23 *Kate Johnson, Mark Baine, Climis Davos, Joanna Henley, and Jonathan Side*: Resolving conflicts in selecting a programme of fisheries science investigation
- V:24 *Stéphanie Mahévas and Dominique Pelletier*: Simulation designs to compare management scenarios using ISIS-Fish V2.0: application to a demersal mixed fishery in the Bay of Biscay
- V:25 *Leili Järv, Ahto Järvik, and Tiit Raid*: Can the technical regulatory measures restore the local fish stocks? Case study of the perch (*Perca fluviatilis* L.) stocks in the Riga Bay and the Western-Estonian Archipelago
- V:26 *Robert Aps, H. Lassen, and W. Ranke*: International Baltic Sea Fisheries Commission – a case study in multi-agent negotiations
- V:27 *Catherine G.J. Michielsens, S. Kuikka, P. Haapasaari, S. Kulmala, A. Romakkaniemi, and J. Erkinaro*: Interdisciplinary modelling through probabilistic networks: impact of fishermen's commitment on the management of wild Baltic salmon stocks

- V:28 *Pekka Salmi*: Small-scale fishers' perceptions about fisheries governance and other stakeholder groups
- V:29 *Juhani Salmi and Pekka Salmi*: Governance of the Baltic salmon fishery – Fishers' views
- V:30 *R. Quentin Grafton and Tom Kompas*: The payoffs from marine reserves in a stochastic environment; shocks, rents and resilience
- V:31 *Kalle Reinikainen, Timo P. Karjalainen, and Päivi Haapasaari*: Applying Bayesian modeling to social sciences: methodological perspective
- V:32 *Odette Paramor, J. L. Hatchard, K. H. Mikalsen, T. S. Gray, C.L. Scott, and C. L. J. Frid*: Involving fishers in the development of a fisheries ecosystem plan

Theme Session on Rebuilding Programmes for Threatened Fish Populations (W)

- W:01 *Andrew A. Rosenberg and Charlotte B. Mogensen*: How can rebuilding plans achieve the objective of recovery for overfished stocks?
- W:02 *Philip Johnston, Graham Savidge, and Derek Mc Cullan*: Strangford Lough – A unique opportunity for a coastal sea-trout fishery in the British Isles
- W:03 *Ted Potter (CEFAS) and Peter Hutchinson (NASCO)*: The use of stock rebuilding programmes in the precautionary management of salmon stocks
- W:04 *Ron Fricke*: Marine protected areas as a tool to rebuild both commercial and threatened fish stocks
- W:05 *Catherine G.J. Michielsens, S. Kuikka, P. Haapasaari, S. Kulmala, A. Romakkaniemi, and J. Erkinaro*: Interdisciplinary probabilistic network to examine the possibility to restore potential Baltic salmon rivers
- W:06 *Ralf Thiel, Helmut M. Winkler, Philip Riel, and Renate Neumann*: Survey of river and sea lampreys in German waters of the Baltic Sea – basis of successful rebuilding programmes
- W:07 *Timo P. Karjalainen, Päivi Haapasaari, and Kalle Reinikainen*: Commitment – an indicator of fishers' support to salmon stock recovery program?
- W:08 *Polina Levontin and Murdoch McAllister*: Evaluating management options for Baltic salmon (*Salmo Salar*) using species-tailored operating models in a generic simulation framework
- W:09 *Igor Studenov*: Estimation of total allowable catch of Atlantic salmon using precautionary approach principles
- W:10 *E. J. Simmonds*: Comparison of two periods of North Sea herring stock management; success, failure and the value of management
- W:11 *Tim King, Tim Sheehan, Dave Reddin, Russell Brown, John Kocik, and Barbara Lubinski*: A decade of determining the continent-of-origin of Atlantic salmon collected at west Greenland with microsatellite DNA: A review of the findings and a look at what the future holds for molecular genetic methods of mixed-stock assignment
- W:12 *Philip McGinnity and Niall O' Maoileidigh*: Rebuilding Irish salmon stocks: a genetic perspective
- W:13 Withdrawn
- W:14 *Andrew B. Cooper and René Taudal Poulsen*: The importance of historical baselines to fisheries management – An abundance estimate of ling (*Molva molva*) in the northeastern North Sea, 1872

- W:15 *Eckhard Bethke*: A rebuilding and recovery plan for Baltic ground-fish stocks by long-term profit maximization
- W:16 *Rebecca Whitlock and M. McAllister*: Developing a Bayesian mark-recapture modelling framework to inform stock recovery and rebuilding strategies for long-lived, anadromous species
- W:17 Withdrawn
- W:18 Withdrawn
- W:19 *Alvaro J. Abella, Michela Ria, and Fabrizio Serena*: Usefulness of legal size for the recovery of a European hake stock in a Northwestern bottom trawl fishery
Poster

Theme Session on Mitigation Methods for Reduction of Marine Mammal and Sea Turtle Bycatch in Fisheries (X)

- X:01 *Bruno Díaz López*: Interactions between bottlenose dolphins with trammel nets in the Sardinia Island
- X:02 *G. Desportes, L. R. Poulsen, A. Amundin, F. Larsen, A. Bjørge, J. H. Rye, L. Buholzer, N. Eriksen, I. Eskesen, S. Ingversen, T. B. Jepsen, L. Kindt-Larsen, N. K. Petersen, and C. Vanman*: Testing a pinger activated by porpoise sonar
- X:03 *Simon Northridge, Dave Sanderson, and Alice Mackay*: The net effect: understanding how porpoise bycatches occur when you cannot see them
- X:04 *S. G. Lunneryd, A. Fjälling, M. Hemmingsson, and S. Tärnlund*: Monitoring bycatch with a voluntary logbook for seal- and bird-induced damage in the Swedish coastal fisheries
- X:05 *Petri Suuronen, Pekka Jounela, and Russell B. Millar*: Interactions between seal stocks, salmon stocks and harvest controls of the salmon fishery in the Gulf of Bothnia
- X:06 *Edmund Ceurstemont and Dominic Rihan*: Design of an Interactive Acoustic Deterrent to prevent bycatch of cetaceans in pelagic trawl fisheries
- X:07 *Saifullah A. Jaaman, Yuhana U. Lah-Anyi, and Graham J. Pierce*: Incidental catches of marine mammals in fisheries in Sabah and Sarawak waters, East Malaysia
- X:08 *Heather Haas, R. Merrick, H. Milliken, K. Murray, K. Bisack, and C. Orphanides*: Assessing and reducing sea turtle bycatch in commercial fisheries in the Northwest Atlantic
- X:09 *R. Caslake*: Trial of acoustic deterrents ('porpoise pingers') for prevention of porpoise (*Phocoena phocoena*) bycatch in static net fisheries
- X:10 *Bruno Díaz López*: Interaction between bottlenose dolphins and fish farms: could there be an economic impact?
- X:11 *C. T. Taggart, A. Serdynska, T. Johnston, K. Smedbol, L. Harris, and R. Stephenson*: Estimating the time and space relative probabilities of right whale and fishing gear entanglement in the Scotia Fundy region of the North West Atlantic
- X:12 *Sara Königson, Arne Fjälling, and Sven-Gunnar Lunneryd*: Impact of grey seals in the herring gillnet fishery along the Swedish Baltic coast
- X:13 *Petri Suuronen, Antti Siira, and Tiina Kauppinen*: Design principles of seal-safe salmon trap-net
- X:14 *Arne Fjälling*: Estimation of hidden seal-inflicted losses in the Baltic Sea set trap salmon fisheries

- X:15 *Gustav Björnstad and Arne Fjälling*: Obstacles to prevent grey seals (*Halichoerus grypus*) from entering static fishing gear
- X:16 *Arne Fjälling, Magnus Wahlberg, and Håkan Westerberg*: Acoustic Harassment Devices (AHD) at salmon trapnets in the Baltic Sea
- X:17 *Dick de Haan, B. van Marlen, D. Burggraf, and J. B. van Duyn*: Field tests of two cetacean barrier designs rigged in a pelagic trawl: effects on trawl-geometry and catch efficiency of target fish
Poster
- X:18 *Jorge M. S. Goncalves, J. Araujo, L. Bentes, P. Monteiro, R. Coelho, M. Corado, and K. Erzini*: Evaluation of survivorship of fish that have escaped through a demersal purse seine BRD
Poster
- X:19 *Simon Northridge, Alice Mackay, Terry Cross, Dave Sanderson, and Richard Woodcock*: Investigations into dolphin bycatch in a pelagic trawl fishery
Poster
- X:20 *R. Caslake*: Trial of acoustic deterrents ('porpoise pingers') for prevention of porpoise (*Phocoena phocoena*) bycatch in static net fisheries
Poster

Theme Session on an Interactive Forum with the Fishing Industry (Y)

- Y:01 *Ian Tuck, Anne McLay, and Nick Bailey*: Incorporating fishers' data into the fisheries management process – a Scottish perspective
- Y:02 *F. J. Quirijns, A. D. Rijnsdorp, O. A. van Keeken, and J. J. Poos*: The use of fine-scaled fisheries data for estimation of bias in North Sea plaice and sole CPUE by ICES rectangle
- Y:03 *Rachel M. Gallant*: Northeast Consortium: Fishermen and scientists taking stock
- Y:04 Withdrawn
- Y:05 *Dmitri Vasilyev*: Positive impact from fishing industry to stock assessment modelling
- Y:06 *Mike Armstrong, Doug Beveridge, John Cotter, Andrew Revill, and Carl O'Brien*: Fisheries Science Partnership programmes off the NE and SW coasts of England and in the Irish Sea: experiences gained and future directions

Theme Session on How to Improve Environmental Monitoring and Biological Studies – Integrating Ecology and Statistics (Z)

- Z:01 *Catherine Longo, Simon P. R. Greenstreet, Helen Fraser, and Graham J. Pierce*: Can size-spectra reveal the impact of fisheries on biodiversity?
- Z:02 *Jean-Charles Poulard and Verena M. Trenkel*: How to improve environmental monitoring and biological studies – integrating ecology and statistics
- Z:03 *Magnus Appelberg, I. Abrahamsson, J. Andersson, U. Bergström, A-B. Florin, B. Fagerholm, F. Franzén, A. Lingman, G. Sundblad, and K. Söderberg*: Statistical power in coastal fish monitoring with passive gears – effects of sampling strategy and environmental characteristics
- Z:04 *F. Smedes, I. M. Davies, and R. Fryer*: Pragmatic estimation of uncertainty in normalized concentrations of contaminants in sediments
- Z:05 *Rob Fryer, Judy Dobson, Alistair McIntosh, Brian Miller, and Lynda Webster*: Redesign of the UK National Marine Monitoring Programme for contaminants in sediment

- Z:06 *Robert Aps, R. Tamsalu, T. Kollo, T. Kullas, and V. Zalesny*: Application of modeling to Baltic environmental monitoring design
- Z:07 *Joel Vigneau and Stéphanie Mahévas*: A new statistic for sampling design investigation: an application to length-structured landings sampling
- Z:08 *B. Fagerholm, F. Franzén, G. Sandberg, and K. Söderberg*: Eelpout (*Zoarces viviparus*), an useful bio-indicator in coastal fish monitoring
Poster
- Z:09 Withdrawn
- Z:10 *Joachim P. Gröger, Rodney Roundtree, and Uffe Høgsbro Thygesen*: Geolocation of Cape Cod Bay cod using tidal information
- Z:11 *Tracy McCollin and Aileen Shanks*: An assessment of the efficiency of ballast water exchange
Poster
- Z:12 *Ahto Järvi, Tenno Dreves, Leili Järv, Tiit Raid, and Andres Jaanus*: Monitoring of the impact of Muuga Port activities on fish communities and fishery in Muuga Bay in 1994–2004: difficulties in results definition and needs for method improvement
Poster
- Z:13 *Massoud A.H. Saad and Nadia B. El-Sayed*: Dissolved oxygen and organic matter in a harbor and a bay in Egypt receiving organic pollutants from different sources
Poster
- Z:14 *Lotta Fyrberg*: SEA-SEARCH – Your gateway to oceanographic and marine data and information in Europe
Poster
- Z:15 *E. Bresnan, R. Fryer, S. Fraser, N. Smith, A. Scott, N. Brown, E. Smith, and L. Stobo*: A statistical examination of the ability of phytoplankton monitoring to act as an indicator of toxin accumulation in the blue mussel (*Mytilus edulis*)
Poster
- Z:16 *T. Kristiansen, D. S. Danielssen, E. Svendsen, and E. Aas*: Year-to-year variation and quantification of German Bight Water in the Skagerrak and Kattegat in the years 1996–2000
Poster

Theme Session on Cod in a Changing Climate (AA)

- AA:01 *Joël M. Durant, Dag Ø. Hjermmann, Nils Chr. Stenseth, and Grégory Beaugrand*: Match-mismatch and threshold in the North Sea cod recruitment
- AA:02 *Matthias Schaber, Daniel Stepputtis, Hans-Harald Hinrichsen, and Gerd Kraus*: Distribution of adult cod (*Gadus morhua* L.) in the Central Baltic Sea in relation to hydrographic conditions based on hydro-acoustic single-fish detection
- AA:03 *Lawrence C. Hamilton*: The human dimensions: Demographic impacts of fisheries decline
- AA:04 *C. J. Fox, on behalf of the PGECCS/PLACES consortium*: Results from the 2004 ichthyoplankton survey of the North Sea
- AA:05 *Geir Ottersen and Douglas P. Swain*: The impact of climate on distribution and migration of Atlantic cod (*Gadus morhua*)
- AA:06 *Keith Brander*: Relevance of the Cod and Climate Change programme to the assessment and management of cod stocks
- AA:07 *Hans-Joachim Rätz, Christoph Stransky, and Josep Lloret*: Abundance, condition and growth of Atlantic cod (*Gadus morhua* L.) off Greenland 1982–2004
- AA:08 *S. Holmes and P. Wright*: Regional variability in cod dynamics in the North Sea and West of Scotland and its implications to management

- AA:09 *P. Pepin and H.-H. Hinrichsen*: An overview of the state of knowledge of the transport of cod eggs and larvae
- AA:10 *Mike Heath and Greg Lough*: A review of the biological oceanography of cod early life stages
- AA:11 *Lorenzo Ciannelli, G. E. Dingsør, G. Ottersen, B. Bogstad, H. Gjøsæter, K. S. Chan, and N.C. Stenseth*: Nonadditive survival of the Barents Sea cod during early life stages
- AA:12 *Ken Drinkwater and H. Loeng*: Physical oceanography of Atlantic cod habitats
- AA:13 *Ken Drinkwater*: The response of Atlantic cod (*Gadus morhua*) to future climate change
- AA:14 *V. Buehler and F. J. Jochem*: How an oscillating environment may influence cod (*Gadus morhua*) growth and survival during the initial stages and possible consequences to the future recruitment
- AA:15 *Fritz Köster, Michael J. Fogarty, and Anne Johanne Tang Dalsgaard*: Cod recruitment and climate change – a comparative approach
- AA:16 *Anne Maria Eikeset, Dag Ø. Hjermann, Erin Dunlop, Nils Chr. Stenseth, Geir Ottersen, Esben M. Olsen, and Ulf Dieckmann*: Fisheries-induced evolution in the Northeast Arctic cod
- AA:17 *Brian J. Rothschild and Svein Sundby*: History of cod and climate research in the North Atlantic – past, present, and future
- AA:18 *L. J. Buckley, J.-D. Dutil, and C. T. Marshall*: Growth, condition and production of cod in a changing climate
- AA:19 *Gudrun Marteinsdottir, Daniel Ruzzante, and Einar Eg Nielsen*: History of the North Atlantic cod stocks
- AA:20 *Jason Link, Bjarte Bogstad, Henrik Sparholt, and George Lilly*: The role of cod in the ecosystem
- AA:21 *E. Júlíusson*: Recruitment and stock size for some cod stocks
Poster
- AA:22 *Dag Ø. Hjermann, Anne Maria Eikeset, Geir Ottersen, and Nils Christian Stenseth*: Climatic effects filtered through the food web affect the dynamics of Arcto-Norwegian cod
- AA:23 *Victor L. Tretyak*: Adaptive relation between life cycle parameters of Northeast Arctic cod
Poster

Theme Session on an Ecosystem Approach to Fisheries Management: Worked Examples (BB)

- BB:01 *Jason Link, Michael Fogarty, Jon Brodziak, William Overholz, Thomas Noji, Steven Murawski, and Fredrik Serchuk*: A case history of ecosystem considerations for science supporting fishery management in the Northeast US
- BB:02 *Robert Y. George*: Ecosystem-based fisheries management for *Lophelia* Reef HAPC at the northern-most “Agassiz Coral Hills” at bathyal depths off Cape Lookout, North Carolina
- BB:03 *C.H. Ainsworth and T.J. Pitcher*: A whole ecosystem approach to marine restoration: optimal strategies for Northern British Columbia
- BB:04 *Luis Ridao Cruz*: An Ecosim model for the Faroe Islands ecosystem
- BB:05 *S. Gavaris, J. M. Porter, and R. L. Stephenson*: Review of management plan conservation strategies for Canadian fisheries on Georges Bank

- BB:06 *Chris Frid, Odette Paramor, and Catherine Scott*: A North Sea fisheries ecosystem plan: delivering an ecosystem-based approach?
- BB:07 Withdrawn
- BB:08 *Robert J. Brock*: Understanding the ocean in order to support decision-making: An introduction to NOAA's 5-year research plan and 20-year research vision
- BB:09 Withdrawn
- BB:10 *Tony Smith, David Smith, Jeremy Prince, Ian Knuckey, Margot Sachse, Sonia Talman, Pascale Baelde, Terry Walker, Gerry Geen, and Peter Franklin*: Application of MSE methods at "whole of fishery" level to evaluate alternative EBFM strategies for a large complex fishery in Australia
- BB:11 *Simone Libralato, Marta Coll, Alberto Santojanni, Cosimo Solidoro, Enrico Arneri, and Isabel Palomera*: Comparison between trophic models of protected and fishing areas for an ecosystem approach to fisheries in the Adriatic Sea
- BB:12 *Lynne Shannon*: EAF in South Africa
- BB:13 *Philippe Cury and Manuel Barange*: Promotion, implementation and communication of the EAMR (Ecosystem Approach to Marine Resources): the Eur-Oceans approach
- BB:14 *Souad Kifani, A. Faraj, and H. Masski*: Ecosystem approach to fisheries management: The Moroccan upwelling resources case
- BB:15 *Marie-Joëlle Rochet, Verena Trenkel, Jean-Charles Poulard and Jacques Bertrand*: The Combined Indicator Trends method to translate indicators into a diagnostic on fishing impact useful for fisheries management
- BB:16 *Hugo Arancibia and Sergio Neira*: Predation on common hake (*Merluccius gayi*) by jumbo squid (*Dosidicus gigas*) in central Chile (33°–39°S)
- BB:17 *Sergio Neira and Hugo Arancibia*: Role of predation in the collapse and recovery of two *Galatheid* crustaceans in central Chile (33°S–39°S)
- BB:18 *M. Sinclair and R. O'Boyle*: The management of human impacts on the benthic communities of the Scotian Shelf: A case study on ecosystem-based management
- BB:19 *Chris Frid, Paddy Walker, Stuart Rogers, and Jake Rice*: Including ecosystem consideration into ICES advice
Poster
- BB:20 *A. Sinclair, J. Fargo, R. Stanley, and B. Turriss*: Evolution of an ecosystem-based management approach in the British Columbia groundfish fishery