

#ICESASC15

21-25 September 2015



ICES ANNUAL SCIENCE CONFERENCE

Conference
handbook

DGI Byen
Copenhagen





endas for Theme sessions

e session A	Theme session L
e session B	Theme session M
e session C	Theme session N
e session D	Theme session O
e session E	Theme session P
e session F	Theme session Q
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e session J	

WELCOME

The International Council for the Exploration of the Sea is pleased to welcome you to the city of Copenhagen for our Annual Science Conference 2015.

Copenhagen is a place of fairy tales. Palaces, towers, and spires complete with dragons populate the cityscape. It was here in the 1800s that Hans Christian Andersen created his world of little mermaids, ugly ducklings, and great sea serpents. However, as a coastal city, Copenhagen doesn't expect happily ever afters. It leads the way globally in sustainable urban planning, preparing for the challenges that climate change will bring.

Change is also something that ICES is prepared for. When we launched our Strategic Plan and Implementation Plan last year, we wrote a new chapter in the story of our organization. Our Strategic Plan charts a course for ICES over the next five years against a rapidly changing marine science policy landscape. With the support of ICES member countries, our main pillars (science, advice, data and information, and the Secretariat) are committed to building a foundation of science around one key challenge: integrated ecosystem understanding.

The ICES Annual Science Conference is a meeting point for members of the ICES family, both old and new, to see how far we have come in our journey. The ASC showcases and shares our science with the global marine science community. One of the important and unique features of ICES is its capability to cover the entire spectrum from monitoring to data provision to science and advice. The ASC reflects this range in the 19 theme sessions that will take place at the conference.

Integrated ecosystem assessments in the regional seas provide a fundamental link between ecosystem science and the advice required in applying the ecosystem approach. A number of theme sessions will address this area, including: *Seafloor habitat mapping; from observation to management; Basin-scale dynamics at lower trophic levels in the North Atlantic; Ecosystem monitoring in practice; and Beyond ocean connectivity: embracing advances on early life stages and adult connectivity to assessment and management challenges.*

Another aspect of integration is bringing together the knowledge of fishers and the analytical knowledge of scientists through dedicated science-industry partnerships. This subject will be addressed by a theme session on the value of cooperative research in fisheries and marine management.

Genetics is a powerful tool that we can use to progress ecosystem understanding. This will be explored in the theme session *From genes to ecosystems: spatial heterogeneity and temporal dynamics of the Baltic Sea*.

Implementation of the Marine Strategy Framework Directive (MSFD) has become an increasingly important driver of marine science in Europe and the future challenges will be explored in *How to hit an uncertain, moving target: achieving GES under the MSFD*.

Marine spatial planning (MSP) is central for the implementation of an integrated management of multiple human activities at sea, their combined impacts on marine ecosystems, and the services they provide. A key human activity in the ocean will be brought under the spotlight in *Marine spatial planning and fisheries: A stock-take on approaches, examples, and future needs*.

Hypoxia is increasing worldwide due to the interaction of increased anthropogenic nutrient loadings with warming waters. The theme session *Causes and consequences of hypoxia* has gathered world-renowned scientists to discuss causes and consequences of low-oxygen events, focusing on several key regions in the ICES realm.

ICES is a community. We rely on the coordinated contributions from our international network of more than 4000 scientists. As we all work together on the implementation of our Strategic Plan, your participation at the conference is very important for ICES. The ICES family does not exist in isolation and we have forged strong partnerships with many organizations. We welcome their members to this week-long event.

Copenhagen has played host to ICES Secretariat since its creation in 1902 and we are happy to welcome all conference participants to this wonderful city for ICES Annual Science Conference 2015. We are sure you will have an enjoyable and productive week.

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Strategic initiatives

ICES-PICES Strategic Initiative

Denmark (2015), Joint

Strategic Initiative

Strategic Initiative

the Netherlands (2015)

Operational

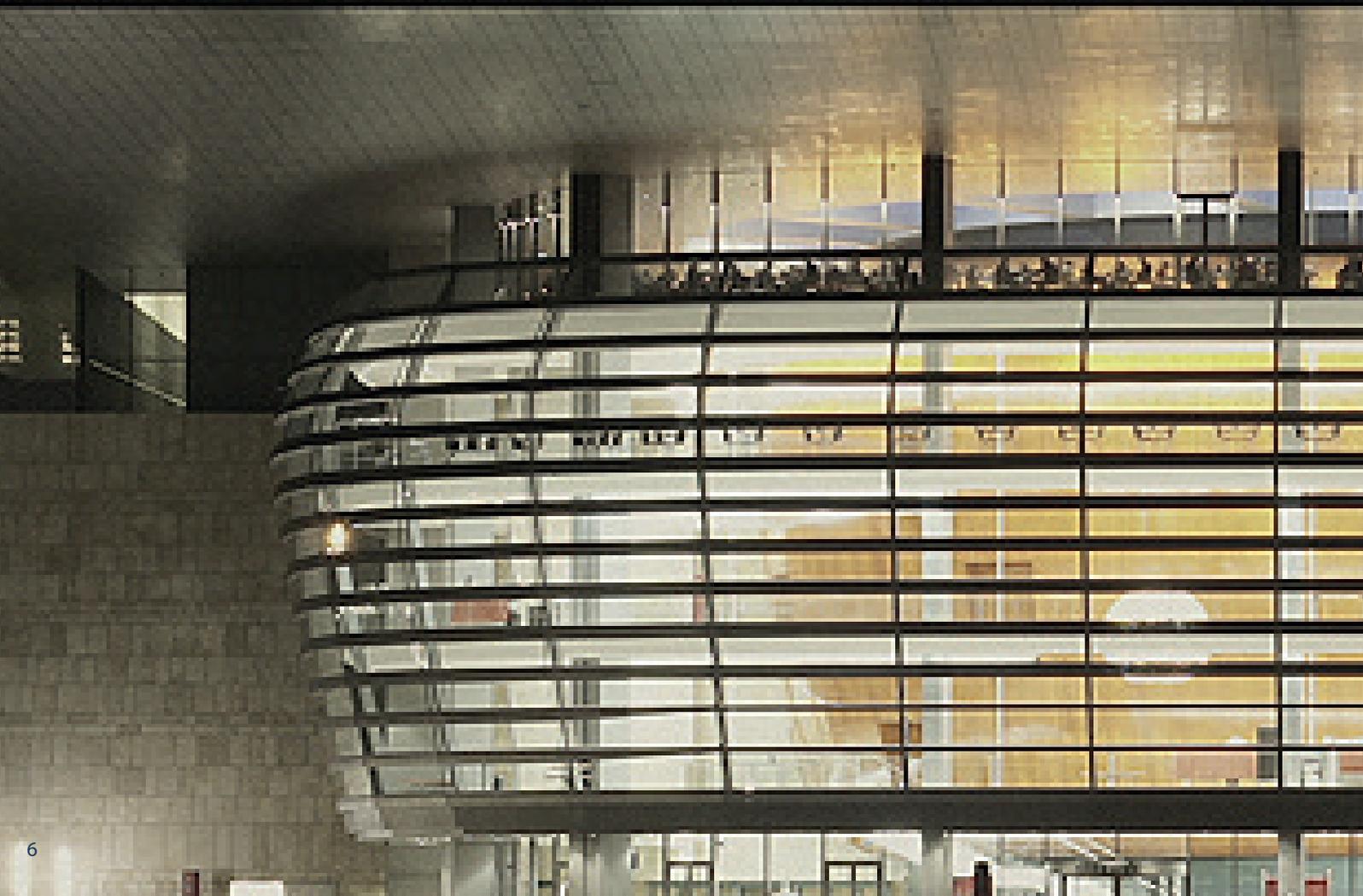
Awards Committee

Data and Information

Publications and Co

Training Group • St

(Year) for election/appointment of new officer/chair.



Groups

- Group on Ecosystem Processes and Drivers (SSGEPD) • Graham Pierce, UK (2015)
- Group on Ecosystem Pressures and Impacts (SSGEPI) • Henn Ojaveer, Estonia (2017)
- Steering Group on Integrated Ecosystem Assessments (SSG) • David Reid, Ireland (2016)
- Steering Group on Integrated Ecosystem Observation and Monitoring (SSGIEOM) • Nils Olav Handegard, Norway (2016) and Mike Armstrong, UK (2016)
- Benchmark Steering Group (BSG) • Carmen Fernandez, Spain (2016) and Jörn Schmidt, Germany (2016)

Initiatives

- Strategic Initiative on Climate Change Impacts on Marine Ecosystems (SICCME) • Brian R. MacKenzie, USA (2017), John Pinnegar, UK (2017), Anne B. Hollowed, USA (PICES), and Shin-ichi Ito, Japan (PICES)
- Workshop on Stock Assessment Methods (SISAM) • Steven Cadrin, USA (2016) and Ciaran Kelly, Ireland (2016)
- Workshop on the Human Dimension in Integrated Ecosystem Assessments (SIHD) • David Goldsborough, UK (2018), Eva-Lotta Sundblad, Sweden (2018), and Jörn Schmidt, Germany (2018)

Groups

- Advisory Group (AC) • Pierre Petitgas, France (2016)
- Advisory Group (DIG) • Ingeborg de Boois, the Netherlands (2016)
- Public Communications Group (PUBCOM) • Myron Peck, Germany (2015)
- Advisory Group (AC) • Steven Cadrin, USA (2015)



Photo by Robert Thomason - Wonderful Copenhagen

Monday 21 September 2015

	Foyer	Sankt Hans Torv	Nørrebro Runddel	Engelstang
09:00-10:00	Posters	SCICOM Open plenary Highlights from ICES Science and Advice		
10:00-10:30	Coffee break			
10:30-12:00	Posters			SCICOM Open plenary Bridging users
12:00-13:00	Lunch break			
13:00-14:30	Posters	Opening ceremony and Open plenary "Understanding patterns in marine species richness" Professor Henrik Gislason		
14:30-15:00	Coffee break			
15:00-18:30	Posters	D New approaches to measure and assess biodiversity		A Advanced assessment of sustainability
18:30-20:00	Welcome to Copenhagen walking tour			



ave Plads and Kødbyen	Hovedbanen	Spisehuset	Vesterbro Torv
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<p>SCICOM Open Sessions</p> <p>Closing the gap between data and data providers</p>	<p>SCICOM Open Sessions</p> <p>Climate change and marine ecosystems</p>	<p>SCICOM Open Sessions</p> <p>Ecosystem processes and dynamics</p>	<p>SCICOM Open Sessions</p> <p>Integrated Ecosystem Assessment</p>
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<p>Improvement of stock assessment methods for sustainable fisheries</p>	<p>I</p> <p>A holistic ecosystem approach for marine management and conservation: Opportunities through the application of genetic and genomic approaches</p>		<p>B</p> <p>Operationalizing ecosystem-based fisheries management</p>
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Photo by www.caecacph.com // Jacob Schjørring & Simon Lau - Wonderful Copenhagen

Tuesday 22 September 2015

	Foyer	Sankt Hans Torv	Nørrebros Runddel
08:30-09:30	Posters	Plenary lecture "Mapping migrations onto dynamic seascapes: 'The most essential things are invisible to the eye'" Dr David Secor	
09:30-10:00	Coffee break		
10:00-13:00	Posters	D New approaches to measure and assess biodiversity (10:00-11:30)	B Operationalizing ecosystem-based fisheries management (10:00-12:00)
		L Science-industry partnerships: The value of cooperative research in fisheries and marine management (11:30-13:00)	M Social, economic, and ecological impact assessment across marine sectors? (12:00-13:00)
13:00-15:00	Lunch break		
15:00-16:30	Posters	L Science-industry partnerships: The value of cooperative research in fisheries and marine management	M Social, economic, and ecological impact assessment across marine sectors?
16:30-17:00	Coffee break		
17:00-18:30	Posters	L Science-industry partnerships: The value of cooperative research in fisheries and marine management	M Social, economic, and ecological impact assessment across marine sectors?
19:00-20:00	Welcome reception, Copenhagen City Hall		

Enghave Plads and Kødbyen

Hovedbanen

A
Advancement of stock assessment methods for sustainable fisheries (10:00-12:00)

E
Beyond ocean connectivity: embracing advances on early life stages and adult connectivity to assessment and management challenges (12:00-13:00)

E
Beyond ocean connectivity: embracing advances on early life stages and adult connectivity to assessment and management challenges

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Beyond ocean connectivity: embracing advances on early life stages and adult connectivity to assessment and management challenges

G
Managing marine ecosystem services in a changing climate (Co-sponsored by PICES)

G
Managing marine ecosystem services in a changing climate (Co-sponsored by PICES)

S
Basin-scale dynamics at lower trophic levels in the North Atlantic

Wednesday 23 September 2015

	Foyer	Sankt Hans Torv	Nørrebro Runddel	Eng
08:30-10:00	Posters	L Science-industry partnerships: The value of cooperative research in fisheries and marine management	M Social, economic, and ecological impact assessment across marine sectors?	E Bey emb stag asse cha
10:00-10:30	Coffee break			
10:30-13:00	Posters	L Science-industry partnerships: The value of cooperative research in fisheries and marine management	P How to hit an uncertain, moving target: achieving Good Environmental Status under the Marine Strategy Framework Directive	E Bey emb stag asse cha
13:00-15:00	Lunch break			
15:00-17:00	Posters		SCICOM Open Sessions Human dimensions in Integrated Ecosystem Assessments	
17:00-17:30	Coffee break			
17:30-19:00	Posters			
18:00-20:00	Poster session, Foyer, DGI Byen			

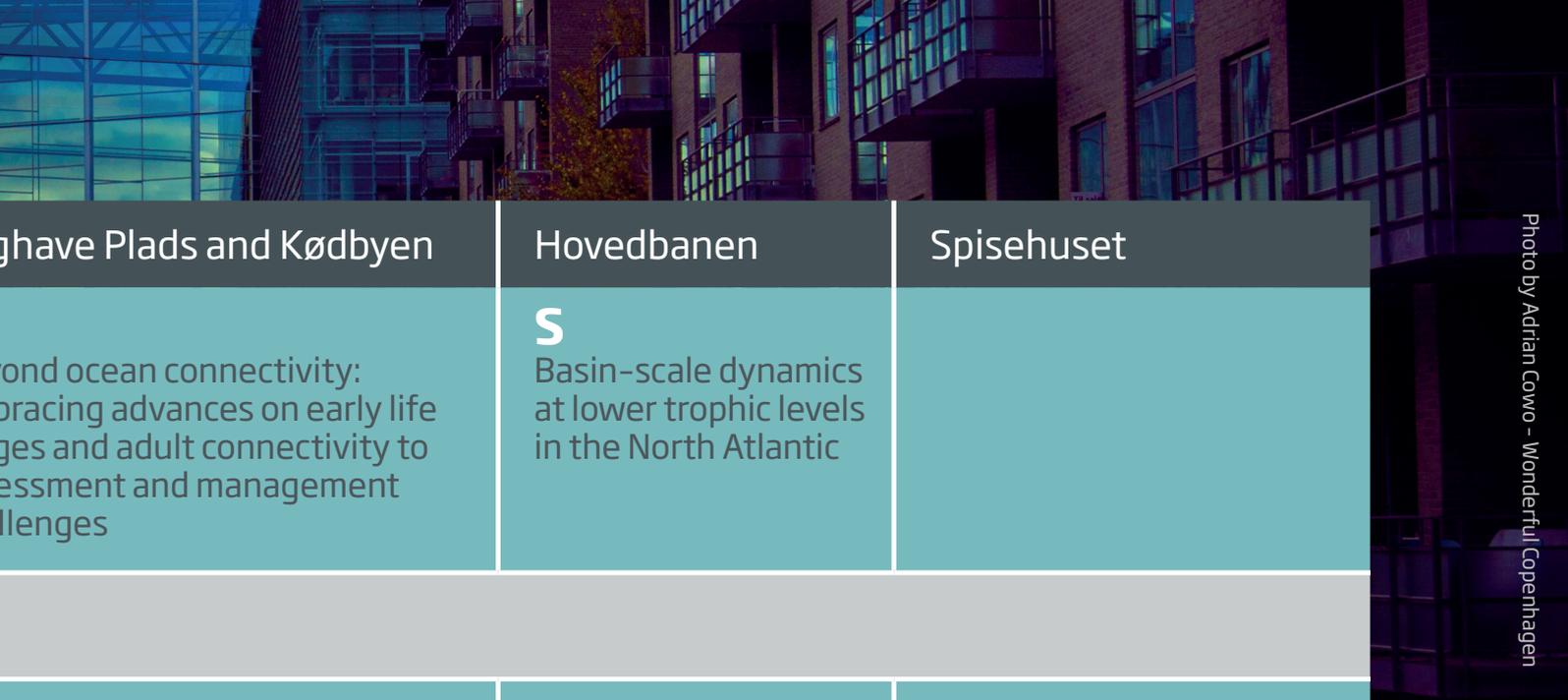


Photo by Adrian Cowo - Wonderful Copenhagen

Ghage Plads and Kødbyen	Hovedbanen	Spisehuset
<p>Transoceanic connectivity: Integrating advances on early life stages and adult connectivity to assessment and management challenges</p>	<p>S Basin-scale dynamics at lower trophic levels in the North Atlantic</p>	
<p>Transoceanic connectivity: Integrating advances on early life stages and adult connectivity to assessment and management challenges</p>	<p>S Basin-scale dynamics at lower trophic levels in the North Atlantic</p>	
<p>SCICOM Open Sessions</p> <p>Marine ecosystem baselines as the basis for reference points</p>		
	<p>Project marketplace</p>	

Thursday 24 September 2015

	Foyer	Sankt Hans Torv	Nørrebro Runddel	Enghave Plads a
09:00-10:00	Posters	Plenary lecture "Too important to fail: creating opportunities in small-scale fisheries" Professor Ratana Chuenpagdee		
10:00-10:30	Coffee break			
10:30-13:00	Posters	F Small-scale fisheries under data-limited scenarios	P How to hit an uncertain, moving target: achieving Good Environmental Status under the Marine Strategy Framework Directive (10:00-12:00)	H Ocean acidification: Understanding chemical, biological, and biological responses in marine ecosystems (Co-sponsored by IAEA) (10:00-13:00)
			N Seafloor habitat mapping: from observation to management (12:00-13:00)	
13:00-15:00	Lunch break			
15:00-16:30	Posters	F Small-scale fisheries under data-limited scenarios	N Seafloor habitat mapping: from observation to management	H Ocean acidification: Understanding chemical, biological, and biological responses in marine ecosystems (Co-sponsored by IAEA)
16:30-17:00	Coffee break			
17:00-18:30	Posters	F Small-scale fisheries under data-limited scenarios	N Seafloor habitat mapping: from observation to management	R Causes and consequences of hypoxia
19:30-22:00	Conference Dinner, Østerbro, DGI Byen			



and Kødbyen	Hovedbanen	Spisehuset
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	<p>SCICOM Open Session What makes a good conference? Come and shape the future of ICES ASC! (14:00-15:00)</p>
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n: emical, chemical ne ecosystems PICES)	<p>Q From genes to ecosystems: spatial heterogeneity and temporal dynamics of the Baltic Sea (Co-sponsored by BONUS)</p>	
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Photo by Thomas Rousing - Wonderful Copenhagen

Friday 25 September 2015

	Foyer	Sankt Hans Torv	Nørrebro Runddel	Enghave Plads
09:00-10:30	Posters	O Marine spatial planning and fisheries: A stock-take on approaches, examples, and future needs	N Seafloor habitat mapping: from observation to management	R Causes and consequences of hypoxia
10:30-11:00	Coffee break			
11:00-13:00	Posters	O Marine spatial planning and fisheries: A stock-take on approaches, examples, and future needs	N Seafloor habitat mapping: from observation to management (11:00-12:00)	R Causes and consequences of hypoxia
			C Ecosystem monitoring in practice (Co-sponsored by PICES) (12:00-13:00)	
13:00-14:00	Lunch break			
14:00-16:00	Posters	O Marine spatial planning and fisheries: A stock-take on approaches, examples, and future needs	C Ecosystem monitoring in practice (Co-sponsored by PICES) (14:00-16:30)	J CIA on the loose
16:00-16:30	Coffee break			
16:30-17:00	Closing session and Awards ceremony, Sankt Hans Torv, DGI By			



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sequences of	<p>T Practical application of Genetic Stock Identification for the conservation, management, and restoration of diadromous fish species</p>	
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	<p>T Practical application of Genetic Stock Identification for the conservation, management, and restoration of diadromous fish species</p>	<p>R Causes and consequences of hypoxia (14:30-15:30)</p>
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INVITED SPEAKERS



Open Lecture

*Monday 21 September, 13:30-14:30
Sankt Hans Torv/Nørrebros Runddel*

**Understanding patterns in marine species richness
Professor Henrik Gislason, DTU Aqua, Denmark**



Marine biodiversity is increasingly threatened by human activities such as fishing, species introductions and climate change. We know that conservation of biodiversity is important for maintaining the function and structure of marine ecosystems and models have recently been constructed to predict how reductions in biodiversity will affect their production. But the basic understanding of the processes generating the spatial and temporal patterns in diversity we observe in the oceans is still far from complete.

Nature is ripe with patterns in species diversity and abundance across time and space, and biology has provided a wealth of hypotheses to explain these patterns. Species richness declines from low to high latitudes in both the sea and on land, a pattern that has been known for more than three centuries. More than 32 hypotheses have been put forward to explain it, without being able to identify a single set of winning hypotheses that can link the pattern to the underlying processes. Species richness has furthermore been observed to decline with body size, but here we seem to know the cause. Size spectrum theory can be used to predict how species abundance in the sea should scale with body size, and in combination with assumptions about speciation, extinction, and migration, size spectra can be used to predict the diversity spectrum, the relative richness of large and small species. The first attempt to model the diversity spectrum has shown not only that a significant part of the variation in the size composition of marine pelagic species can be predicted from relatively simple assumptions, but also that species richness should scale with maximum body weight raised to a power of ca. -0.5 on the global scale. A prediction confirmed by an analysis of the number of fish species of different size that have been identified.

Fisheries science has access to a gold mine of data from trawl surveys where not only species absence/presence but also fish abundance has been recorded. Over the last decades a wealth of information about fish species density and distribution has become accessible, making it possible to analyze how fish community structure and



Species richness vary over time and space. These analyses reveal striking similarities across large areas in the size structure of density and richness and should allow us to test the hypotheses proposed to explain the patterns. Results from a dataset of trawl hauls obtained over an area from Guinea in Africa to the Scotian shelf show that a surprisingly large proportion of the variation in fish species richness can be explained by temperature, size, and density.

Recent advances in palaeontology, palaeogeography, and genetics have increased the understanding of how extinctions and diversification have driven marine evolution in the past. In the future this understanding should be placed in a common framework to explain how geological events and environmental conditions affect ecological and evolutionary processes to generate the biodiversity we observe in the oceans and to improve the strategies we use to protect it. Given the availability of long time-series survey data and being aware of the regularities we observe in marine biodiversity, I am confident that marine science can provide answers to how ecosystem diversity and function is linked. ICES could play an important role in this process by facilitating the necessary interdisciplinary research.

Bio:

Henrik Gislason is Professor at DTU Aqua (Technical University of Denmark) where his research has included multispecies modelling of fish communities, the effects of fishing on marine ecosystems, size-based modelling of fish communities, life history theory, and fish species richness. He has participated in ICES work for many years, serving as chair of the Industrial Fisheries Working Group and as member of a large number of assessment working groups. In 1990, he became the first chair of the ICES Working Group on the Ecosystem Effects of Fishing and was co-convenor of the 1999 ICES/SCOR Symposium on Ecosystem Effects of Fishing in Montpellier. He has given courses in fish stock assessment in Denmark, Africa, Asia, and South America.

INVITED SPEAKERS



Plenary Lecture

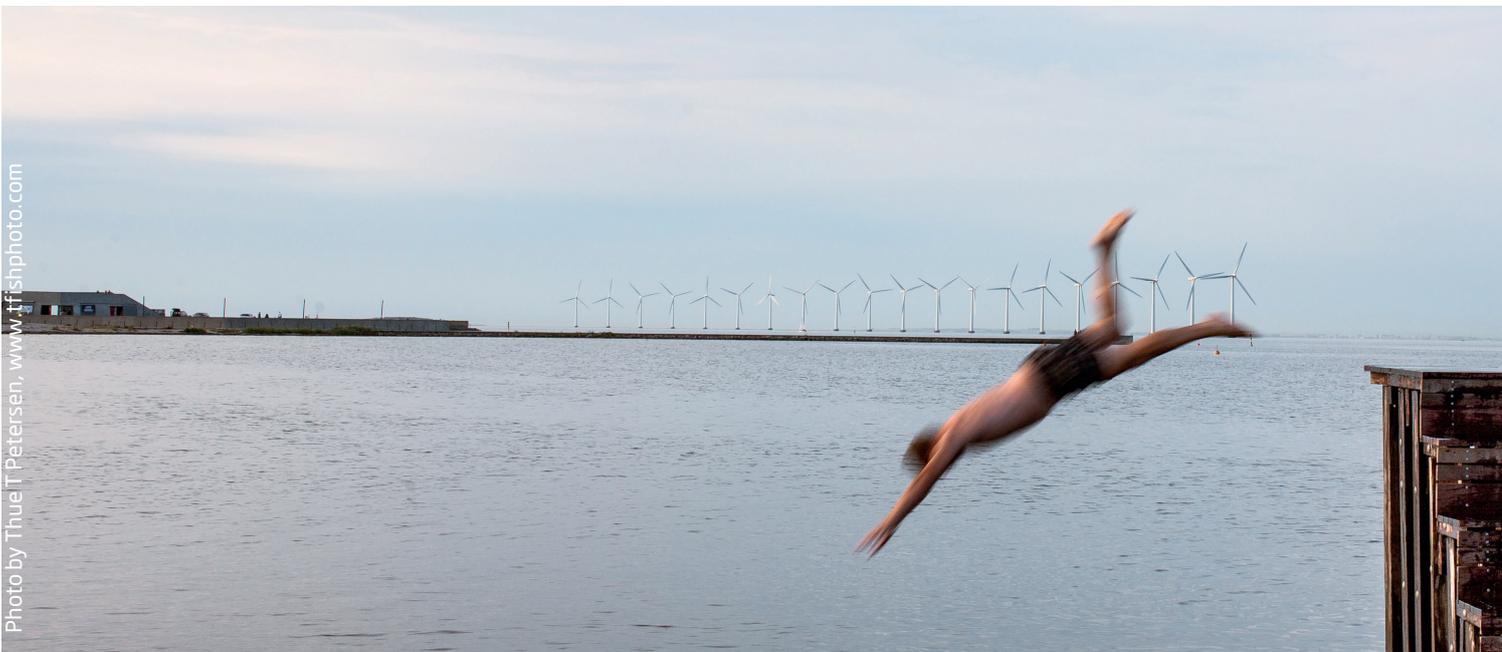
Tuesday 22 September, 08:30-09:30
Sankt Hans Torv

Mapping migrations onto dynamic seascapes:

"The most essential things are invisible to the eye"

Dr David H. Secor, University of Maryland Center for Environmental Science

The digital age has ushered in countless discoveries on the previously hidden lives of marine fishes. What have we learned from this deluge of discovery? What principles emerged from this deluge of discovery? Can we harness new-found diversity to improve stewardship of fisheries and ecosystems? From the millions of telemetered paths, turns, dives, stops, and spins comes movement ecology - a focus on the individual. Compelling and elegant rules such as Lévy flights and area-restricted search behaviours give rise to models of individual and aggregate behaviours. But across seasons and years, collective agencies (schooling, homing, straying, irruptions, partial migration) lead to non-linear, multi-modal, and transient population outcomes. Migration ecology embraces such collective emergence with an emphasis on (1) the alignment of mating systems with larval dispersal, (2) the migration of cohorts through size-structure, and (3) the synergy of natal homing, straying, and partial migration in populations that are both open and closed to immigration. In life cycles, populations build contingents for contingencies, a property that managers could harness to build stability and resilience in fisheries against future non-stationary and novel ecosystem states. Contingent structures and collective agencies will also be important in so accounting for these behaviours in stock assessments promises to be expensive and uncertain. Here simulation models explore constructs of life cycle diversity against their likely influences on stock performance.



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Photo by Marius Dahl - Wonderful Copenhagen

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Bio:

Dr David Secor is Regents Professor at University of Maryland Center for Environmental Science, Chesapeake Biological Laboratory. His primary interest is how diversity in life history and migration contribute to resilience in exploited species and species of concern. He earned his PhD in 1990, developing otolith-based applications to study recruitment and larval dispersal and studying aquaculture in Japan. Since then he has been at Chesapeake Biological Laboratory where he, his students, and collaborators have contributed "digital-age" discoveries on the migration ecology of coastal fishes in 150 journal articles, chapters, and books. Currently his laboratory oversees large telemetry projects on coastal migrations of striped bass and Atlantic sturgeon. Secor's views on fish migration have evolved through his career-long association with ICES scientists, working groups, conferences, and opportunities to publish. Secor provides scientific advice on issues related to stock structure, stock assessment, climate impacts, and ecosystem-based fisheries management to the Chesapeake Bay Program, the US Atlantic States Marine Fisheries Commission, the US Mid-Atlantic Fisheries Management Council, ICES, and ICCAT. Dr Secor is an editor of ICES Journal of Marine Science and authored "Migration Ecology of Marine Fishes," (2015, Johns Hopkins University Press) a follow-up to Harden Jones' classic "Fish Migration," which was published nearly 50 years ago.



INVITED SPEAKERS



Plenary Lecture

*Thursday 24 September, 09:00-10:00
Sankt Hans Torv*

Too important to fail: creating opportunities in small-scale fisheries
Professor Ratana Chuenpagdee, Memorial University, St. John's, Canada

An estimated 560 million people, or 8% of the global population, directly or indirectly depend on fishing for a living. According to the Organization of the United Nations, more than 90% of these people are involved in small-scale fisheries. These figures are simply “too big to ignore”. The contribution of small-scale fisheries to food security, poverty alleviation, employment means that they are “too important to fail.” For the most part, research and management efforts have not differentiated, leaving the former at a disadvantage and worsening their marginalized conditions. New thinking in research, education is necessary, which is what the project “Too Big To Ignore: Global Partnership for Small-Scale Fisheries Research” aims to elevate the profile of small-scale fisheries, to help rectify their marginalization, and to develop local and global capacity facing this sector. This presentation describes the initiatives taken to provide comprehensive information about small-scale knowledge about social and institutional issues affecting their sustainability, and to broaden perspective in research and





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According to the Food and Agriculture Organization, small-scale fisheries are essential for food security, economic development and sustainable livelihoods. Small-scale fisheries are also important for coastal sustainability, policy-making, and governance. The goals of this network are to address governance challenges of small-scale fisheries, to gain in-depth knowledge and education.

Bio:

Ratana Chuenpagdee is Canada Research Chair in Natural Resource Sustainability and Community Development and Professor of Geography at Memorial University of Newfoundland, St. John's, Canada. She conducts interdisciplinary research on topics related to small-scale fisheries, ocean governance, coastal sustainability, and science-policy integration. Ratana is currently leading a major global research partnership, Too Big To Ignore, which aims at elevating the profile of small-scale fisheries and rectifying their marginalization in national and international policies.



This year's Open and Plenary speakers are sponsored by
CARLSBERG FOUNDATION



SCICOM OPEN SESSIONS

On behalf of ICES Science Committee (SCICOM), I would like to invite you to the SCICOM Open Sessions on Monday 21, Wednesday 23, and Thursday 24 September. These sessions provide a wider understanding of how both ICES and SCICOM work and create the future visions of ICES science through inspiring people and discussions, so please join us as your input is invaluable.

As the scientific discussions take off, the sessions are always directed towards landing in practical solutions that can help the sustainable use of the marine ecosystems and often result in new proposals for working groups, workshops, or theme sessions for forthcoming ASCs.

SCICOM Open Sessions begin at 09:00 on Monday 21 September with the SCICOM and ACOM Open Plenary, hosted by ACOM Chair Eskild Kirkegaard and myself, SCICOM Chair Yvonne Walther. During this session, we will provide you with a deeper insight into ICES science and advice, examine recent highlights, and look at how the two areas connect. We will also discuss how ICES can create the science required for future advice.



ICES Scientific Steering Groups and Strategic Initiatives handpick exciting and challenging topics for each ASC. This year, the topics include bridging the gap between data users and data providers, human dimensions within Integrated Ecosystem Assessments, and marine ecosystem baselines as the basis for reference points.

Last but not least, we would like to hear your views on what makes a good conference. On Thursday 25 September, from 14:00 to 15:00 we invite you to discuss this question. Your input will ensure future ASCs are more interesting, rewarding, and fun events.

Looking forward to seeing you in Copenhagen,
Yvonne Walther, SCICOM Chair

SCICOM OPEN SESSIONS

Session	Date	Time	Room
Open plenary: Highlights from ICES Science and Advice	Monday 21 September	09:00-10:00	Sankt Hans Torv and Nørrebros Runddel
Bridging the gap between data users and data providers (BSG/SSGIEOM)	Monday 21 September	10:30-12:00	Enghave Plads and Kødbyen
Climate change and marine ecosystems (SICCME)	Monday 21 September	10:30-12:00	Hovedbanen
Ecosystem processes and dynamics (SSGEPD)	Monday 21 September	10:30-12:00	Spisehuset
Integrated ecosystem assessment (SSGIEA)	Monday 21 September	10:30-12:00	Vesterbro Torv
Human dimensions in Integrated Ecosystem Assessments (SIHD)	Wednesday 23 September	15:00-17:00	Nørrebros Runddel
Marine ecosystem baselines as the basis for reference points (SSGEPI/SSGEPD)	Wednesday 23 September	15:00-17:00	Hovedbanen
What makes a good conference? Come and shape the future of ICES ASC!	Thursday 24 September	14:00-15:00	Spisehuset

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PLENARY THOUGHTS FROM ICES SCIENCE AND ADVICE

21 September 2015, 9:00-10:00

Jens Torv and Nørrebros Runddel

Yvonne Walther (Sweden) and Eskild Kirkegaard (Denmark)

is well known and based on solid scientific analysis. But what is ICES
and what is ICES science? How is the science that feeds into advice developed
and what can ICES do to create the science that is required for future advice?
The role of ICES Science Committee (SCICOM) and ICES Advisory Committee (ACOM)
will be discussed and these questions and give highlights of recent science and advice.



BRIDGING THE GAP BETWEEN DATA USERS AND DATA PROVIDERS (BSG/SSGIEOM)

Monday 21 September 2015, 10:30-12:00

Enghave Plads and Kødbyen

Chairs: Jörn Schmidt (Germany) and Nils Olav Handegard (Norway)

This session is organized by ACOM/SCICOM Steering Group on Integrated Ecosystem Observation and Monitoring (SSGIEOM) and ACOM/SCICOM Benchmark Steering Group (BSG)

The link between data users and data providers has been identified as a bottleneck in our (integrated) assessment processes, and an improved flow of information between survey practitioners and data users is needed. The objective of this joint session is to explore these connections, and get feedback from the community on how to improve this.

Topics that need attention are: How is data presented by the survey groups? What is lacking? How are changes in time-series documented? When new information is requested, is there sufficient feedback to the survey groups whether the product was well received and used? Do we have an efficient IT infrastructure to handle the data? Is the survey following best practice in terms of statistical design, observation methodology, bias considerations, etc.

The output from the session should result in recommendations to SSGIEOM, BSG, and Data and Information Group (DIG) to improve and facilitate this change of information.

Agenda

- 10:30 Opening, Adoption of the agenda, nomination of rapporteurs
- 10:40 Overview of the work of BSG, SSGIEOM, and DIG
- 11:10 Open discussion session on the key issues
- 11:45 Summing up and action points
- 12:00 Closing

Photo by CAECA Copenhagen - Wonderful Copenhagen



ICES/PICES STRATEGIC INITIATIVE ON CLIMATE CHANGE (SICCME)

Monday 21 September 2015, 10:30-12:00

Hovedbanen

Chairs: Anne B. Hollowed (USA), Shin-ichi Ito (Japan), Brian R. MacKenzie (Denmark), and John Pinnegar (UK)

SICCME (Strategic Initiative on Climate Change Impacts on Marine Ecosystems) is a joint ICES/PICES initiative with the overall objective to improve understanding of climate change impacts on marine ecosystems. SICCME facilitates networking, organizing, coordination, and synthesis within the ICES, PICES, and international communities, including planning and arranging theme sessions, workshops, symposia, and joint papers.

This Open Session will present the main achievements of SICCME over the past year, including summaries of the Brazil 3rd Symposium on Effects of Climate Change on the World's Oceans and SICCME-related workshops and projects, and provide an opportunity for discussion of new networking activities.

Agenda

- 10:30 Welcome and introduction: What is SICCME and what do we want to achieve?
- 10:35 Presentations of recent SICCME activities:
- 3rd Intl. Symposium on Effects of Climate Change on the World's Oceans, Santos, Brazil, March 2015 (John Pinnegar)
 - Addressing uncertainty in projecting climate change impacts in marine ecosystems workshop, Santos, Brazil, March 2015 (Mark Payne)
 - ICES/PICES Workshop on Modelling the Effects of Climate Change on Fish and Fisheries (WK-SICCME), 10-12 August 2015, Seattle, Washington, USA (Anne Hollowed)
- 11:20 Forthcoming SICCME activities and new research programmes
- ICES ASC 2015 theme sessions: ICES/PICES Managing marine ecosystem services in a changing climate (G)
 - PICES ASC S7: Past, present, and future climate in the North Pacific Ocean: Updates of our understanding since IPCC AR5
 - Presentation of new or ongoing SICCME-related projects: Faroes-Greenland-Denmark project: Climatic and oceanographic changes in the marine area between Greenland and the Faroes - influences on plankton and fish (Eilif Gaard)
- 11:40 Forward planning
- Identification of research effort gaps within SICCME
 - Theme session suggestions for 2016 and 2017 (ICES and PICES)
 - New workshop suggestions for 2016 or beyond
- 12:00 Closing

ECOSYSTEM PROCESSES AND DYNAMICS (SSGEPD)

Monday 21 September 2015, 10:30-12:00

Spisehuset

Chair: Graham Pierce (UK)

ICES Steering Group on Ecosystem Processes and Dynamics (SSGEPD) provides a forum for ICES expert groups working primarily to improve our understanding of the structure and function of marine ecosystems in the North Atlantic.

The aim of this session is to discuss future directions for fundamental ecosystem science within ICES, its contribution to the ICES Science Plan, and its role in underpinning advice.

Agenda

10:30 Ecosystem processes and dynamics in ICES (SSGEPD Chair)

10:45 Ecosystem services (Sebastian Villasante)

11:00 Discussion

12:00 Closing



INTEGRATED ECOSYSTEM ASSESSMENT (SSGIEA)

Monday 21 September 2015, 10:30-12:00

Vesterbro Torv

Chair: Dave Reid (Ireland)

ICES Steering Group on Integrated Ecosystem Assessment (SSGIEA) provides a forum for ICES expert groups that work primarily on the development of integrated ecosystem assessment (IEA) methodologies and approaches that allow the use of both qualitative and quantitative data, and which can be used to address both specific advisory questions and broader ecosystem issues.

The aim of this session is to discuss the developments in IEA science within ICES, its contribution to the ICES Science Plan, and its role in underpinning advice. In particular, the session will focus on how to include the human dimension in IEA, including a presentation on the work being done by ICES Working Group on the Northwest Atlantic Regional Sea (WGNARS) on a conceptual model to combine ecosystem and human dimensions. Conveners of next year's ICES symposium on "Understanding marine socio-ecological systems: including the human dimension in Integrated Ecosystem Assessments", (June 2016, Brest, France) have been invited to present the details of the conference and where SSGIEA groups might fit in.

We aim to use these discussions to provide feedback from the SSG to the wider scope session on Human Dimensions in Integrated Ecosystem Assessments (SIHD) to be held at 15:00 on Wednesday.

Finally, we will have an open discussion about ideas for an integrated "Integrated Ecosystem Assessment group" joint meeting, where the groups can exchange experiences, ideas, and potentially prepare a position paper on IEA from the entire Steering Group.

Agenda

- 10:30 WGNARS conceptual model to combine ecosystem and human dimensions (Robin Anderson, Fisheries and Oceans Canada)
- 10:45 ICES symposium on "Understanding marine socio-ecological systems: including the human dimension in Integrated Ecosystem Assessments" (Olivier Thebaud, Ifremer)
- 11:00 Discussion on an integrated "Integrated Ecosystem Assessment group"
- 12:00 Closing

HUMAN DIMENSIONS IN INTEGRATED ECOSYSTEM ASSESSMENTS (SIHD) - A NEW INITIATIVE IN ICES

Wednesday 23 September 2015, 15:00-17:00

Nørrebro Runddel

Chairs: Jörn Schmidt (Germany), David Goldsborough (the Netherlands), and Eva-Lotta Sundblad (Sweden)

The human dimension encompasses the social, cultural, economic, and governance aspects of the Ecosystem-based Management (EBM). For an integrated understanding of marine socio-ecological systems, methodologies from both natural and social sciences need to be applied, while methodologies that integrate across disciplines need to be developed.

In contrast to natural sciences, within ICES, social sciences are less developed and not used to their full extent. If the integrated understanding is to be translated into advice and management, the interface between science and policy, i.e. the involvement of wider civil society needs to be taken into account. Input on IEA development within ICES will be specifically received from the SSGIEA open session on Monday.

Agenda

- 15:00 Short introduction to the new ICES Strategic Initiative on the Human Dimension in Integrated Ecosystem Assessments
- 15:05 Introduction to Integrated Ecosystem Assessments in ICES (David Reid, SSGIEA Chair)
- 15:15 I-ADApT for Global Change Response (Ratana Chuenpagdee)
The IMBER Human Dimensions Working Group has developed an interdisciplinary and holistic decision support tool called I-ADApT, to respond to global change challenges. The collaboration with the Too Big To Ignore Project (TBTI) places an emphasis on small-scale fisheries, which is often the most vulnerable coastal sector, to enable them to continue to make social and economic contributions to the society.
- 15:25 GAP-2 - connecting Science Stakeholders and Policy (Steve Mackinson)
Through participation in joint research and shared learning, we work together for healthy seas which society can depend upon for food, income, and livelihoods. The purpose of GAP-2 is to demonstrate the role and value of stakeholder-driven science within the context of fisheries' governance.



Photo by Thomas Høyrup Christensen - Wonderful Copenhagen

15:35 Working Group on Maritime Systems (David Goldsborough)

ICES Working Group on Maritime Systems (WGMARS) is a forum to articulate interdisciplinary perspectives regarding sustainable ecosystem science, advice, and governance and is an expert group based on interdisciplinary collaborations and understandings of the coupled human/ocean system.

15:45 Centre for Marine Socioecology (Stewart Frusher)

The Centre for Marine Socioecology is a recent initiative between the University of Tasmania, CSIRO, and the Australian Antarctic Division. The Centre brings together expertise across the physical and biological sciences, social sciences, economics, governance, and law to tackle key challenges associated with the multiple use of the marine realm.

15:55 General discussion on SIHD's objectives and possible tasks

17:00 Closing

MARINE ECOSYSTEM BASELINES AS THE BASIS FOR REFERENCE POINTS

Wednesday 23 September 2015, 15:00-17:00

Hovedbanen

Chairs: Henn Ojaveer (Estonia) and Graham Pierce (UK)

Organized by the SCICOM Steering Group on Ecosystem Processes and Dynamics (SSGEPD) and SCICOM Steering Group on Ecosystem Pressures and Impacts (SSGEPI)

Marine ecosystem management goals, including conservation and potential restoration, are often defined by historical baselines, i.e. conditions that occurred prior to a particular period of human disturbance. The ICES Science Plan specifically addresses this need: 'Develop historical baselines of population and community structure and production to be used as the basis for population and system level reference points'.

This session aims to review the state-of-the-art in the availability of information on historical baselines and the methodological challenges associated with interpreting historical data, accounting for the different characteristics of different ecosystem components, and the effects of human activities. In addition, major research gaps, both in terms of data needs and methodologies, will be identified and discussed.

Agenda

- 15:00 Opening
- 15:05 Historical baselines in the context of fish stock assessments and fishery management (Margit Eero)
- 15:20 Setting baselines for eutrophication status in the Baltic Sea: experiences from implementation processes of EU WFD and MSFD (Georg Martin)
- 15:35 Understanding Seafloor integrity: providing advice and advancing our current knowledge in support of MSFD (Silvana Birchenough)
- 15:50 Ecosystem dynamics in the central Baltic Sea during the twentieth century: what does the "desired or pristine state" really mean to us? (Maciej Tomczak) (supported by ICES Science Fund 2014)
- 16:05 Historical baselines for determination of reference points in the Black Sea transition zone areas (Borys Alexandrov)
- 16:20 Methodological considerations for defining historical baselines (Laura Uusitalo)
- 16:35 Panel discussion with all speakers
- 17:00 Closing

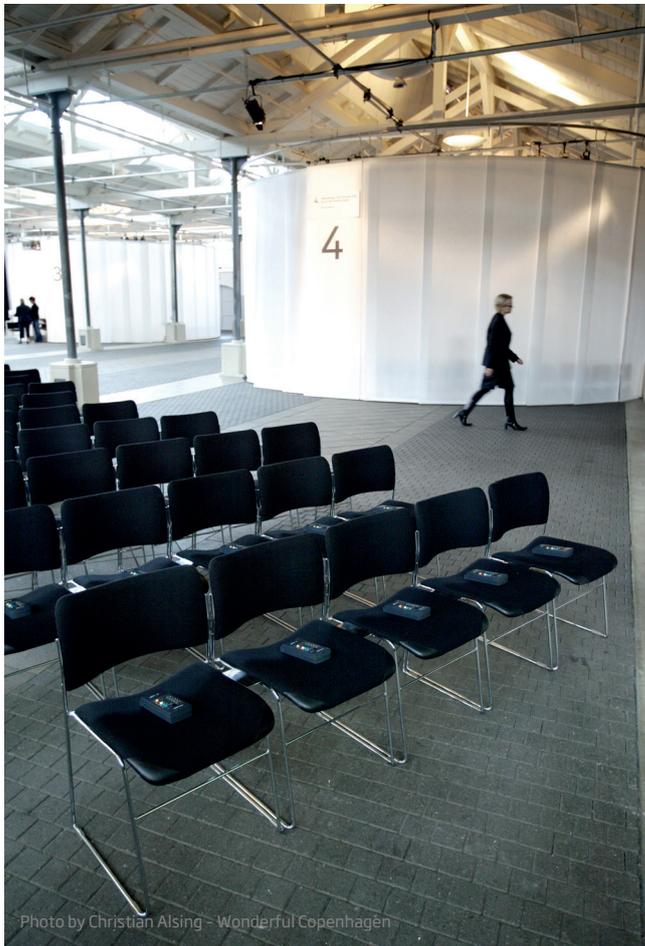
WHAT MAKES A GOOD CONFERENCE? COME AND SHAPE THE FUTURE OF ICES ASC!

Thursday 24 September 2015, 14:00-15:00

Spisehuset

Chairs: Pierre Petitgas (France) and Rudi Voss (Germany)

ICES invites all conference participants to attend a brainstorming session on how ASC can become an even more inspiring and useful conference.





PROJECT MARKETPLACE

Wednesday 23 September 2015

17:00-18:30

Spisehuset

ICES invites all Annual Science Conference participants to an international project marketplace that takes place on Wednesday 23 September. The ICES community will have the opportunity to interact with members of key marine projects and initiatives.

Sigi Gruber, the European Commission's Head of Marine Resources Unit, DG R&I, will present current and future opportunities for marine science within the Horizon 2020, EMFF, and other programmes and an invited panel will discuss opportunities for project cooperation and the application of outcomes.

Initiatives which will be represented

- BONUS • EU EMODNET
 - FP7 EcoFishMan • FP7 MAREFRAME • FP7 MicroB3
 - H2020 AORAC • H2020 COLUMBUS • H2020 AtlantOS
 - H2020 PrimeFish • H2020 DiscardLess • H2020 SAF21
 - IGBP IMBER • JPI-Oceans
-

ICES AWARDS

ICES Outstanding Achievement Award

recognizes sustained, outstanding performance and contributions by a member of the ICES community whose career has been distinguished by a commitment to excellence in endeavours of science, research, and leadership.

Presentation of the Outstanding Achievement Award:

Opening Ceremony, Monday 21 September 13:00-14:30

ICES Merit Awards

ICES recognizes the best research papers and posters at the conference. These awards include a financial contribution for the awardees to attend ICES workshops, working groups, or future conferences.

The award winners are selected by an evaluation panel appointed by ICES Science Committee (SCICOM).

Best Presentation - demonstrates scientific excellence, creativity, innovation, and leadership in addressing a particular science question in an objective, clear, and concise manner.

Best Poster - demonstrates creativity, is straightforward, and balanced, combining science and art. Integrates the text and figures in a creative way and presents them in a manner understandable by viewers with little previous knowledge of the scientific subject. The message of the poster is readily visible and understandable.

Early Career Scientists awards - two oral presentation awards and one poster presentation award will be provided to Early Career Scientists.

ICES Service Awards

Presented to scientists who play a significant role in the running of ICES and who are coming to the end of their tenures.

Presentation of Merit and Service Awards: Closing Session, Friday 25 September 16:30-17:00

EARLY CAREER SCIENTISTS

Early career scientist career chat

Wednesday 23 September 13:00-15:00

Spisehuset foyer, DGI Byen

Join a number of well-known members of the marine science community for a career chat. In an informal setting, you will have the opportunity to ask our experts about their respective career paths and what advice they may have for you.

Participants include:

- Sigi Gruber, Head of the Marine Resources Unit, Directorate General for Research and Innovation, European Commission (EC)
- Howard Browman, Editor-in-Chief, *ICES Journal of Marine Science*
- Laura Richards, PICES President
- Tom Redd, JPI Oceans
- Esben Sverdrup-Jensen, Danish Pelagic Producers Organisation
- Ratana Chuenpagdee, Canada Research Chair in Natural Resource Sustainability and Community Development, Memorial University of Newfoundland, St. John's, Canada
- David Secor, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, USA

This event represents a unique opportunity to meet experts from around the world that have taken different career paths into a range of disciplines.

Come along armed with your questions and create your own discussion.

As space is limited, you must register for this event by mailing celine.byrne@ices.dk or sign up at the registration desk.

SOCIAL EVENTS

ASC wouldn't be anything without the interaction and networking of our participants

Date	Event	Time
Monday 21 September	Walking tour of Copenhagen	18:30-20:00
Monday 21 September	#tweetup A get-together for the ASC Twitterati	20:00-21:00
Tuesday 22 September	Welcome reception	19:00-20:00
Wednesday 23 September	Poster session	18:00-20:00
Thursday 24 September	Conference dinner	19:30-22:00



Participants. Join these events to get to know your fellow scientists!

Location

Details

Leaving from DGI Byen

All ASC participants are invited

Kayak Republic, Børskaj 12

#ICESASC15 #TWEETUP

Copenhagen City Hall,
Rådhuspladsen

Sponsored by City of
Copenhagen

Foyer, DGI Byen

Sponsored by Danish Pelagic
Producers Organisation

Østerbro (3rd floor) DGI Byen

Tickets: €40, available for
purchase from ASC reception

STAY CONNECTED

Stay up to date on all things ASC

-  #ICESASC15
-  www.facebook.com/ICES.Marine
-  Inside the ASC blog on the ICES website

#CAPTUREICES2015

- *Make the conference your playground!*
- *Dive into the playful dimension of science!*
- *Take your ASC participation to a new level!*



Play the game

When? Tuesday lunchtime to Thursday lunchtime

Where? Second floor lounge area

How?

1. Follow @captureICES2015 on TWITTER!
2. If you do not have a Twitter account, get one at our base on second floor lounge area of DGI Byen
3. If you do not have a smartphone: no problem! Come and get the analogue version.
4. The game starts at lunchtime on Tuesday 22 September!

A bunch of playful challenges will be announced in the Twitter stream of @captureICES2015 and also at our second floor lounge area base.

Your goal?

Complete the challenges to collect as MANY POINTS as you can in order to be crowned CaptureICES2015 champion! Feel free to join any time!

Game developed by Invisible Playground, sponsored by University of Kiel Cluster of Excellence "The Future Ocean"



PRACTICAL INFORMATION

Registration and conference services

The ICES registration desk is on the ground floor of DGI Byen Conference Centre, in front of the main entrance. Any changes to the schedule will be posted at the desk.

Presentations

Hand in your PowerPoint presentation to the ICES presentations desk (located on the ground floor next to the registration desk) **no later than 16:00 on the day before your talk.**

We will upload it onto the conference server and check that everything functions properly. In case of technical problems with your presentation, we will contact you by e-mail.

In order to allow the sessions to run smoothly and in fairness to other speakers all presentations are expected to adhere strictly to the time allocated. Check the starting time for your presentation in the Theme Session agendas.

Posters

Posters will be displayed in the Foyer of DGI Byen Conference Centre, located on the ground floor. The poster boards will be ready for use by Sunday afternoon. Contact poster staff located in the poster area to record receipt of your submission and for assistance with mounting the poster to the board.

The poster session will be held on **Wednesday 23 September, 18:00-20:00**. At least one author of each poster is requested to be present at this session to answer any questions.

Extended abstracts

All registered participants will receive a link by email to a website containing all extended abstracts received by the 21 August deadline.

ICES CM Documents

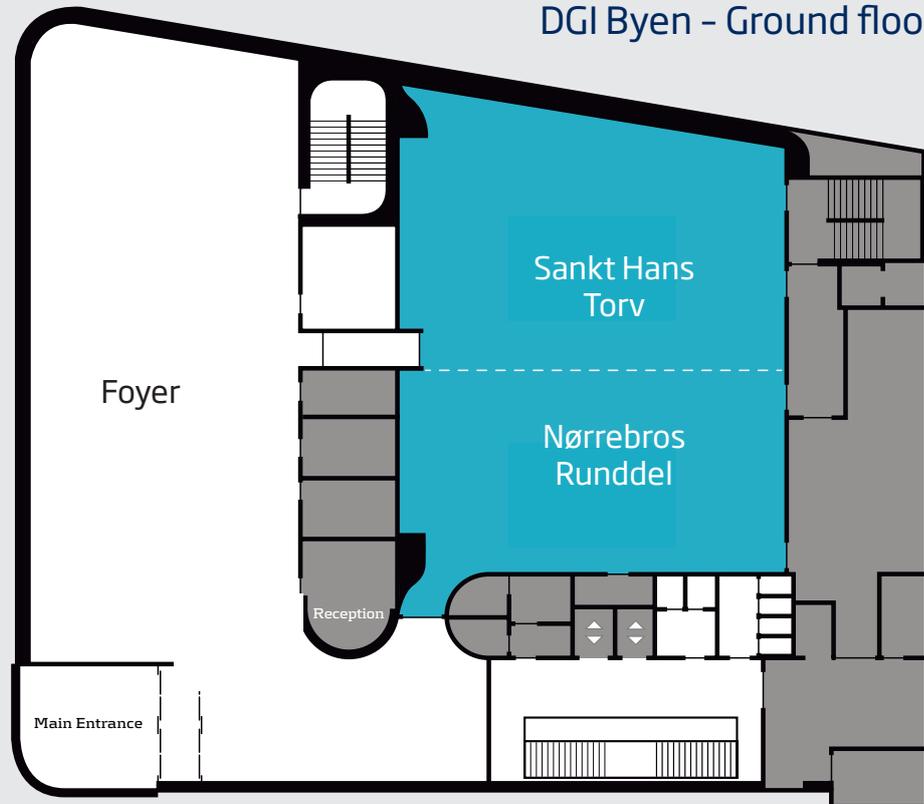
All ICES Conference and Meeting (CM) documents relating to ASC 2015 and ICES business meetings will be available after the conference on the ICES website .

Refreshments and lunches

Complimentary refreshments will be served during morning and afternoon breaks at the coffee stations located throughout the building. Lunch is not included but there is a restaurant in DGI Byen, as well as a kiosk selling sandwiches, wraps, and salads, and many cafes and restaurants in the surrounding area.

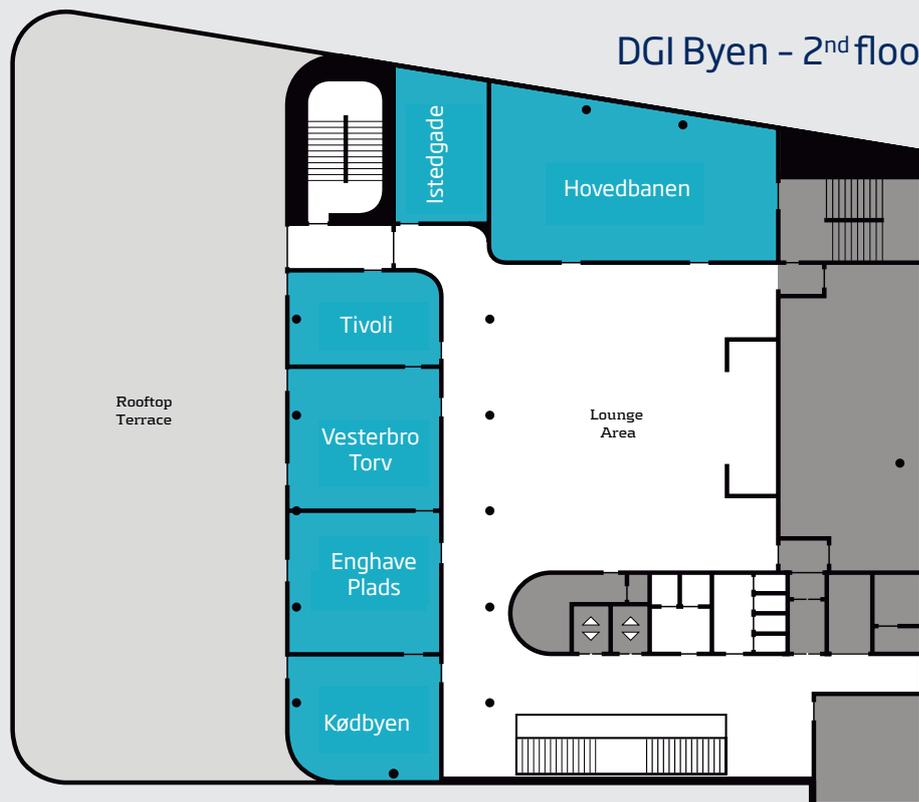
FLOOR PLAN

DGI Byen - Ground floor

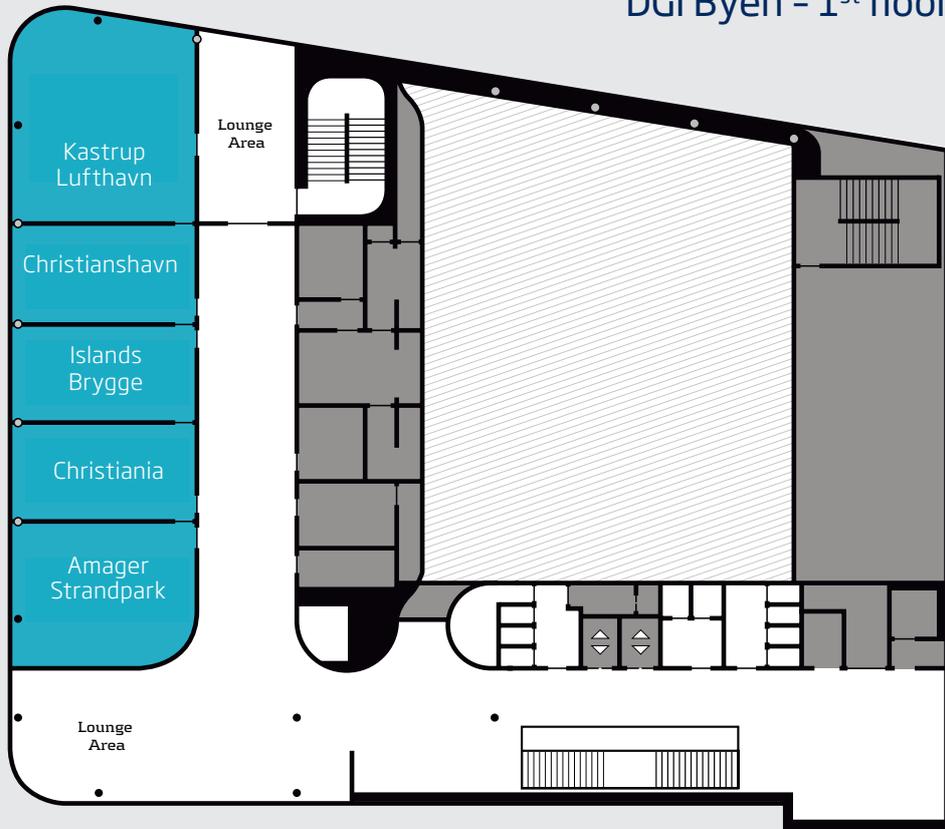


Spisehuset ↙

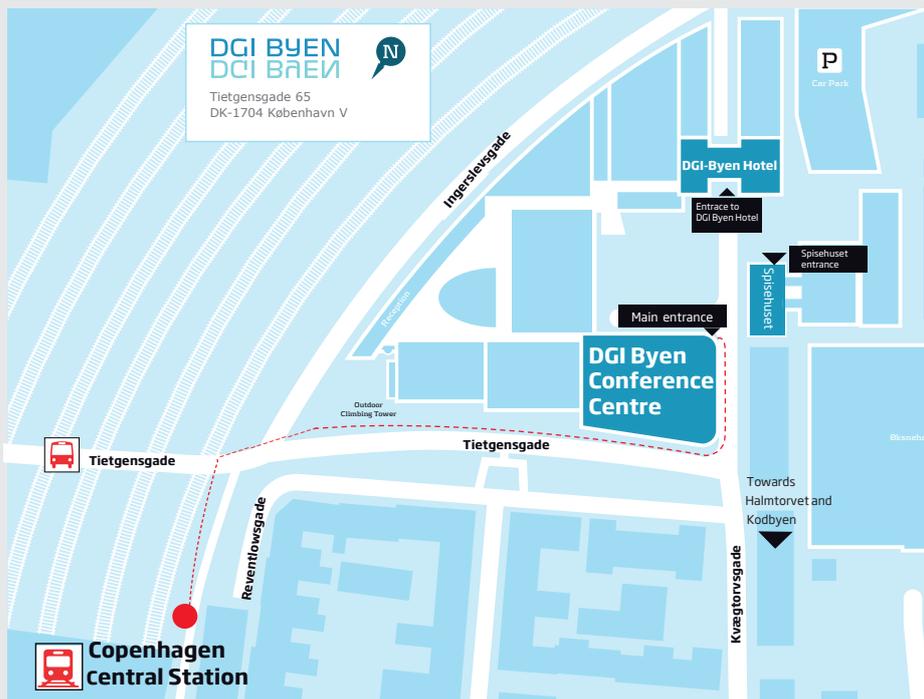
DGI Byen - 2nd floor



DGI Byen - 1st floor



DGI Byen - Overview





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University of Kiel, Cluster of Excellence "The Future Ocean"

ITORS



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THEME SESSIONS

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Theme session A

Advancement of stock assessment methods for sustainable fisheries

Conveners: Steve Cadrin (USA), Ciaran Kelly (Ireland), and Rick Methot (USA)

Monday 21 September, 15:00–18:30, Enghave Plads and Kødbyen

Tuesday 22 September, 10:00–12:00, Enghave Plads and Kødbyen

Monday 21 September

15:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

15:05 **Keynote presentation**
CM code: A:01 Oral
Title: Escaping the MSY Stranglehold
Authors: Sidney Holt
Keywords: MSY, economic benefit, sustainability, precaution

Theme: Methods

15:30 **CM code:** A:12 Oral
Title: Performance of a fish stock assessment model that incorporates a coefficient for catch calibration
Authors: Richard D. Methot Jr. and Patrick D. Lynch
Keywords: fish stock assessment, uncertainty, fishery catch

15:45 **CM code:** A:09 Oral
Title: Space oddity: recent advances incorporating spatial processes in the fishery stock assessment and management interface
Authors: Daniel Goethel, Aaron Berger, Patrick Lynch, and Terrance Quinn II
Keywords: spatial models, stock assessment, population dynamics, tagging models, fisheries management, management strategy evaluation, biological reference points

16:00 **CM code:** A:34 Oral
Title: Testing fish stock's spatial structure with assessment models
Authors: Ernesto Jardim, Nekane Alzorritz, José De Oliveira, Margit Eero, Steven J. Holmes, Finlay Scott, and Clara Ulrich
Keywords: spatial structure, stock sub-units, stock assessment, spatial heterogeneity, spatial overlap, stock structure

16:15 **CM code:** A:15 Oral
Title: Integration of spatially-resolved size-structure in the management of data-rich and data-limited fish stocks
Authors: Tanja B. Buch and Coby L. Needle
Keywords: length-based assessment, research survey data, spatio-temporal distribution, log Gaussian Cox process, haddock

16:30 **CM code:** A:13 Oral
Title: A new stock assessment tool, CASAL 2S
Authors: Ian Doonan and Alistair Dunn
Keywords: stock assessment program

16:45 **CM code:** A:16 Oral
Title: Robust statistical method in a single species age-structured state-space assessments model
Authors: Anders Nielsen and Casper W. Berg
Keywords: state-space assessment model, robust methods, single-species, age-structured

17:00 **CM code:** A:10 Oral
Title: Accounting for correlated observations in an age-based state-space stock assessment model
Authors: Casper W. Berg and Anders Nielsen
Keywords: age-based stock assessment, state-space model, correlated observations

17:15 **CM code:** A:11 Oral
Title: Choosing the observational likelihood in state-space stock assessment models
Authors: Christoffer Moesgaard Albertsen, Anders Nielsen, and Uffe Høgsbro Thygesen
Keywords: observational likelihood, numbers-at-age, proportions-at-age, data weighting, state-space model

Theme: Applications

17:30 **CM code:** A:07 Oral
Title: An integrated state-space stock assessment model for northern cod and short-term prospects for the fishery
Author: Noel Cadigan
Keywords: censored likelihood, compositional data, integrated likelihood, process error

17:45 **CM code:** A:06 Oral
Title: A Bayesian two-stage biomass model applied to the English Channel stock of cuttlefish (*Sepia officinalis*)
Authors: Juliette Alemany, Eric Foucher, Etienne Rivot, Joël Vigneau, and Jean-Paul Robin
Keywords: stock assessment, short-lived species, data-limited, cuttlefish, *Sepia officinalis*, English Channel, two-stage biomass model, Bayesian methods

Theme: Uncertainty

18:00 **CM code:** A:14 Oral
Title: Quantifying uncertainty in length-based fish stock assessment
Authors: Bjarki Þór Elvarsson and Hans J. Skaug
Keywords: stock assessment models, latent variables, process error

18:15 **Discussion**

18:30 **End of day**

Tuesday 22 September

10:00 **CM code:** A:05 Oral
Title: A multimodel approach to assess sustainable harvest levels for anadromous Arctic Char: challenges and implications for eco-socially feasible long-term co-management tools
Authors: Xinhua Zhu, Ross Tallman, Colin Gallagher, and Kimberly Howland
Keywords: data-limited, CPUE standardization, zero catch, Arctic Char, DB-SRA, SPM, SCA, reference points

10:15 **CM code:** A:08 Oral
Title: Incorporating the major elements of biological and model uncertainty in stock assessment using the a4a framework
Authors: Finlay Scott, Ernesto Jardim, Colin P. Millar, and Santiago Cerviño
Keywords: uncertainty, stock assessment, motörhead, hake, model averaging

Theme: Management

10:30 **CM code:** A:18 Oral
Title: Forget F, M, q, B, and selectivity: simple, cost-effective management of a sedentary resource (clams) for sustainability using surveyed catch rates
Author: John M. Hoenig
Keywords: area rotation, serial depletion, swept area, industry survey, resource mapping, adaptive sampling, recovery rate, patch depletion, depletion time, fishable stock, commercial gear

10:45 **CM code:** A:17 Oral
Title: Including regime shifts in fisheries assessments and harvest recommendations using hidden Markov models
Author: Gavin Fay
Keywords: stock assessment, ecosystem considerations, empirical approach, Markov switching models, Bayesian, state-space modeling

11:00 **CM code:** A:19 Oral
Title: A sustainability assessment framework for fish by-catch in New Zealand deep-water fisheries
Authors: Marie-Julie Roux, Charles T. T. Edwards, Alistair Dunn, Malcolm R. Clark, and Ian Doonan
Keywords: fish by-catch, assessment, sustainability risk, data-poor, impact/threshold, distribution, overlap, life history, spatially-explicit

Theme: Multispecies

11:15 **CM code:** A:03 Oral
Title: An interactive multispecies model of the North Sea suitable for stakeholders and managers to use to interpret multispecies and mixed fishery issues and their biological, economic, social and EAFM trade-offs
Author: John G. Pope
Keywords: multispecies, simple models. interactive, stakeholders, tradeoffs, fisheries, economic, social, EAFM

11:30 **CM code:** A:04 Oral
Title: GadCap: A Gadget multispecies stock assessment model for the Flemish Cap
Authors: Alfonso Pérez-Rodríguez, Daniel Howell, Mikel Casas, Fran Saborido-Rey, and Antonio Ávila-de Melo
Keywords: fisheries stock assessment, multispecies modelling, trophic interactions, water temperature, ecosystem approach

11:45 **CM code:** A:20 Oral
Title: Quantitative clairvoyance or deductive delusion? Do multi-species models improve fisheries management advice under climate change?
Authors: Kirstin K. Holsman and Anne Hollowed

Keywords: Multi-species stock assessment models, ecosystem based management, climate change

12:00 **End of Session**

Posters

CM code: A:21 Poster

Title: Assessing stock status instead of fishing mortality reduces the need for information on growth

Authors: Ken H. Andersen and Alexandros Kokkalis

Keywords: FMSY, size-based assessments, age-reading

CM code: A:22 Poster

Title: The impact of environmental processes on distribution and stock assessment of *Sebastes mentella* in the Irminger Sea and adjacent waters

Authors: Sergey P. Melnikov, A. S. Krovnin, and G. P. Vanyushin

Keywords: redfish, Irminger Sea, stock assessment, climatic variability, satellite monitoring

CM code: A:23 Poster

Title: Development of methods based around the un-centred moments of the population length distribution for multispecies assessments of marine fisheries

Author: John G. Pope

Keywords: simple assessments, multispecies, innovative methodology, multispecies, life history invariants

CM code: A:25 Poster

Withdrawn

CM code: A:27 Poster

Title: Catch curve analysis for the red black spot seabream (*Pagellus bogaraveo*) stock from the Azores (ICES Xa2)

Authors: Mário Rui Pinho, Ana Novoa-Pabon, João Gil Pereira, Priscila Silva, and Helena Krug

Keywords: total mortality, fishing mortality, assessment, red seabream, ICES Xa2

CM code: A:28 Poster

Title: Natural mortality for the red blackspot seabream (*Pagellus bogaraveo*) stock from the Azores (ICES Xa2)

Authors: Priscila Silva, Helena Krug, Mário Rui Pinho, and Ana Novoa-Pabon

Keywords: natural mortality (M), red blackspot seabream, data-limited, Azores

CM code: A:29 Poster

Title: Meta-analysis of US fisheries using delay difference models

Authors: Lynn Waterhouse, James T. Thorson, and Brice X. Semmens

Keywords: delay-difference, stock assessment, meta-analysis, survey data

CM code: A:30 Poster

Title: Assessing "medium data" stocks – making the best use of available data: case study of Greenland Halibut in the Barents Sea

Authors: Daniel Howell, Elvar H. Hallfredsson, Tone Vollen, Oleg Smirnov, and Sergey Bakanev

Keywords: assessment, modelling, Barents sea, gadget, Greenland halibut

CM code: A:32 Poster

Title: The main structural features of the simulation multispecies fish model for ecosystem upwelling zone of central-eastern part of Atlantic ocean

Author: Konstantin Podgornyj

Keywords: ecosystem models, fish model, upwelling

CM code: A:33 Poster

Title: Yield per recruit analysis for the red blackspot seabream (*Pagellus bogaraveo*) stock from the Azores (ICES area Xa2)

Authors: Ana Novoa-Pabon, Pedro Barros, Helena Krug, Priscila Silva, and Mário Rui Pinho

Keywords: yield per recruit, natural mortality, sex change, Azores, red blackspot seabream

CM code: A:35 Poster

Withdrawn

CM code: A:36 Poster

Title: Connectivity, growth and survival in a spatially structured fish population, which is currently managed as seven separate stock units

Authors: Kristian Ege Nielsen, Farivar Azour, Dorte Bekkevold, Asbjørn Christensen, Karin Hüßy, Louise Scherffenberg Lundgaard, Henrik Mosegaard, Peter Rask Møller, and Mikael van Deurs

Keywords: growth related survival, stock connectivity, otolith microstructure, hydrographical backtracking

CM code: A:37 Poster

Title: RGadget: a R-package for development, testing and analysis of Gadget models

Author: Bjarki Þór Elvarsson

Keywords: stock assessment models, Gadget, R

CM code: A:38 Poster

Title: GOFORIT: Intelligent Oceanographically-based short-term fishery forecasting applications

Authors: B. R. MacKenzie, O. Ak, O. S. Astthorsson, A. Gislason, S. Jonasdottir, G. Radu, B. Salihoglu, F. Timofte, and M. van Deurs

Keywords: forecast, fishery, zooplankton, climate, ecosystem approach

CM code: A:39 Poster

Title: Abundance index estimation from survey data as a reliable alternative in a mixed and multi-fleet fishery: Application to *Percophis brasiliensis* off Southwest Atlantic Ocean (34°S–39°S)

Authors: M. R. Rico and A. N. Lagos

Keywords: abundance index, *Percophis brasiliensis*, Southwest Atlantic Ocean, survey data, GLM

CM code: A:40 Poster

Title: What is driving the decline in fishing mortality?

Authors: M. A. Pastoors, T. van Schie, J. Batsleer, and P. A. M. van Zwieten

Keywords: CFP, fishing mortality, effort, fuel price, economics, North Sea, demersal, pelagic

CM code: A:41 Poster

Title: Preliminary stock assessment of blackspot seabream, *Pagellus bogaraveo*, in the Ionian Sea (Eastern Mediterranean): the case of a data poor situation

Authors: John Haralabous, Mytilineou Chryssi, and Damalas Dimitrios

Keywords: assessment, surplus production, GAM, *Pagellus bogaraveo*, Eastern Mediterranean

CM code: A:42 Poster

Title: Short-term pain and long-term gain: using phased-in minimum weights to rebuild the Pacific Bluefin tuna stock

Authors: Lisa E. Ailloud, Todd Gedamke, and John M. Hoenig

Keywords: minimum legal size, phased-in management, stock rebuilding strategy, *Thunnus orientalis*

CM code: A:43 Poster

Title: Stock assessment methods for data-limited situations: the case of elasmobranchs

Authors: Gadenne H  l  ne and Pawlowsky Lionel

Keywords: stock assessment, data-limited, *rajidae*

CM code: A:44 Poster

Title: Do modelled zooplankton abundances increase the hindcast and prediction strength of fish recruitment models?

Authors: M. Skern-Mauritzen, M. Sigler, S. Hj  llo, C. Hansen, K. K. Holsman, J. A. Jacobsen, G. Oskarsson, A. S. Samuelsen, E. Vendsen, and K. R. Utne

Keywords: recruitment, environmental covariates, stock assessment, climate change

CM code: A:45 Poster

Title: Abundance trends of highly migratory species in the Atlantic Ocean

Authors: Patrick D. Lynch, Kyle W. Shertzer, Enric Cort  s, and Robert J. Latour

Keywords: highly migratory, stock assessment, pelagic, tunas, billfish, sharks

CM code: A:46 Poster

Title: Spatial and temporal variations of size-at-age of Pacific cod in the eastern Bering Sea: implications for sampling strategies

Authors: Irina Tolikova, Alix Gitelman, Grant Thompson, Thomas Helser, and Robert Lauth

Keywords: size-at-age, growth, survey, climate

Theme session B

Operationalizing ecosystem-based fisheries management

Conveners: Tim Essington (USA) Kristin Marshall USA),
and Christian Möllmann (Germany)

Rapporteur: Charlotte Hudson (USA)

Monday 21 September, 15:00–18:30, Vesterbro Torv

Tuesday 22 September, 10:00–12:00, Nørrebros Runddel

Monday 21 September

Opening and introduction
Appointment of rapporteur
Presentation of papers

15:00 **CM code:** B:01 Oral

Title: The Lenfest Fishery Ecosystem Task Force: operationalizing ecosystem-based fisheries management

Authors: Timothy Essington, Phil Levin, Kristin Marshall, and Laura Koehn

Keywords: fisheries management, ecosystem

15:15 **CM code:** B:03 Oral

Title: Global case studies to identify common approaches to ecosystem based fisheries management

Authors: Laura Koehn, Tim Essington, Kristin Marshall, Phil Levin, Lee Anderson, Alida Bundy, Courtney Carothers, Felicia Coleman, Jonathan Grabowski, Ed Houde, Olaf Jensen, and Tony Smith

Keywords: ecosystem based fisheries management, trophic interactions, habitat, case studies

15:30 **CM code:** B:05 Oral

Title: Ecosystem drivers of stock production are rarely implemented in tactical fisheries management

Authors: Mette Skern-Mauritzen, Geir Ottersen, Nils Olav Handegard, Geir Huse, Gjert E. Dingsør, Nils Chr. Stenseth, and Olav Sigurd Kjesbu

Keywords: ecosystem approach to fisheries management, tactical decisions, ecosystem processes

15:45 **CM code:** B:06 Oral

Title: Bridging the gap between ecological and social objectives in ecosystem based management

Authors: Alida Bundy, Ratana Chuenpagdee, and IndiSeas experts

Keywords: ecosystem-based fisheries management, human dimension, indicators, Indiseas, interdisciplinary assessment

16:00 **CM code:** B:07 Oral

Title: How do we know when we're doing EBFM and whether it is good enough?

Authors: Jason Link, K. Osgood, J. Bosch, J. Bohnsack, R. Brainard, M. Ford, M. Fogarty, A. Hollowed, P. Levin, J. Polovina, A. Risenhoover, R. Shuford, M. Sigler, G. Tromble, and G. Watters

Keywords: ecosystem based fisheries management, implementation, performance measures, operational objectives

16:15	<p>CM code: B:33 Oral</p> <p>Title: Setting the stage for EBFM: Information needed to evaluate protected species bycatch mitigation strategies</p> <p>Author: Kimberly Murray</p> <p>Keywords: fisheries interaction, bottom trawl, protected species, mitigation, conservation metrics</p>
16:30	<p>CM code: B:09 Oral</p> <p>Title: The role of ecosystem information in stock assessments for fisheries management</p> <p>Authors: Kristin Marshall, Laura Koehn, Tim Essington, Olaf Jensen, and Phil Levin</p> <p>Keywords: ecosystem based management, stock assessment, ecosystem considerations, environmental indicators</p>
16:45	<p>CM code: B:02 Oral</p> <p>Title: Ecosystem switchpoints operationalize ecosystem-based reef fishery management</p> <p>Authors: Kendra Karr, Rod Fujita, Tim McClanahan, Aaron MacNeil, Nick Graham, and Doug Rader</p> <p>Keywords: ecosystem-based fishery management, tipping points, coral reefs, precautionary management</p>
17:00	<p>CM code: B:04 Oral</p> <p>Title: Establishing thresholds of multi-ecosystem responses to anthropogenic and environmental pressures</p> <p>Authors: Jamie C. Tam, Jason S. Link, Scott I. Large, Jameal Samhour, Elliott Hazen, Kelly Andrews, Stephani Zador, Mandy Karnauskas, Jamison Gove, and Rebecca Shuford</p> <p>Keywords: ecosystem-based fisheries management, ecosystem indicators, thresholds</p>
17:15	<p>CM code: B:19 Oral</p> <p>Title: Identifying optimal sets of ecosystem indicators: A comparative study of data analysis methods and regional results</p> <p>Authors: Danielle Dempsey, Wendy C. Gentleman, Mariano Koen-Alonso, Pierre Pepin, and Michael Fogarty</p> <p>Keywords: ecosystem based fisheries management, ecosystem indicators, neural network analysis, multivariate regression analysis, Grand Banks, Georges Bank, comparative analysis</p>
17:30	<p>CM code: B:17 Oral</p> <p>Title: Testing an ecosystem-based fisheries management procedure for Georges Bank: a multi-model approach for quantifying societal and ecological tradeoffs</p> <p>Authors: Gavin Fay, Sarah K. Gaichas, Geret S. DePiper, Michael J. Fogarty, Robert J. Gamble, Scott I. Large, Jason S. Link, Sean M. Lucey, Laurel A. Smith, and Jamie C. Tam</p> <p>Keywords: multispecies assessment, management strategy evaluation, Atlantis, simulation modeling, fishery ecosystem plan, ecosystem model</p>
17:45	<p>CM code: B:15 Oral</p> <p>Title: A multi-model approach to assessing the ecosystem impacts of Pacific sardine fisher</p> <p>Authors: Tessa B. Francis, André Punt, Francisco Chavez, Enrique Curchitser, Tim Essington, Kirstin Holsman, Felipe Hurtado, Kelli Johnson, Isaac Kaplan, Laura Koehn, Phil Levin, Salvador Lluçh Cota, Alec MacCall, Richard Parrish, William Sydeman, and Nathan Taylor</p> <p>Keywords: modelling, sardines, forage fish</p>
18:00	Discussion
18:30	End of day

Tuesday 22 September

- 10:00** **CM code:** B:13 Oral
Title: Short-term prediction and harvest control rules for Baltic cod (*Gadus morhua*): A generic method to include state of the art knowledge on environmental uncertainty and its consequences – would it make a difference for advice?
Authors: Stefan Neuenfeldt, Anna Gårdmark, Bärbel Müller-Karulis, Hans-Harald Hinrichsen, Christian Möllmann, Laura Uusitalo, Noél Holmgren, Niclas Norrström, Scott Large, and Maciej Tomczak
Keywords: environment-based harvest control rules, Baltic cod, recruitment, environment-based harvest control rules, Baltic cod, recruitment models
- 10:15** **CM code:** B:12 Oral
Title: Ecosystem-based assessment of a kelp-urchin-lobster system subject to multiple stressors drives spatial management of Tasmanian lobster fishery towards ecologically sustainable harvest rates
Authors: Martin P. Marzloff and Craig R. Johnson
Keywords: ecosystem-based fishery management; ecosystem modelling; ecologically sustainable target points; spatial management
- 10:30** **CM code:** B:10 Oral
Title: Development of new selective fishery methods – Fishing industry and science in the same boat: A partnership model to make best use of available knowledge in the development of selective fishing gears
Authors: Mats Svensson, Andreas Sundelöf, Hans Nilsson, Johan Löfgren, and Daniel Valentinsson
Keywords: fishery, selective methods, partnership model, landing obligation
- 10:45** **CM code:** B:11 Oral
Title: Real-case exploration of the RTI (Real-Time Incentive) tariff-based fisheries management approach for the mixed groundfish trawl fishery in the Western Baltic Sea
Authors: Andrea Rau, Sarah B. M. Kraak, Dave G. Reid, and Christian Möllmann
Keywords: choke species, cod, ecosystem approach to fisheries management, mixed fisheries, plaice, real-time incentives, spatio-temporal fisheries management
- 11:00** **CM code:** B:18 Oral
Title: Approaches and implementation of Ecological Risk Assessments (ERA) for ocean management
Authors: Jameal Samhouri, Kirstin Holsman, Geoffrey Cook, Elliott Hazen, Erik Olsen, Mike Fogarty, Steve Kasperski, Kelly Andrews, Maria Dillard, Chris Kelble, and Sarah Gaichas
Keywords: integrated ecosystem assessments, risk assessment, ecosystem based management
- 11:15** **CM code:** B:08 Oral
Title: Expanding the basis of harvest policy advice
Author: Richard D. Methot Jr.
Keywords: fish stock assessment, uncertainty, fishery catch
- 11:30** **CM code:** B:20 Oral
Title: Common sense in fisheries management: the ecosystem approach to fisheries
Authors: Gabriella Bianchi and Kwame Koranteng
Keywords: fisheries governance, ecosystem approach to fisheries

11:45 **CM code:** B:14 Oral
Title: Roadmap for the development of and ecosystem approach to fisheries for NAFO: incorporating benthic habitats and communities
Authors: E. Kenchington, M. Koen-Alonso, and F. J. Murillo Perez
Keywords: ecosystem approach, benthic habitats, Northwest Atlantic

12:00 **End of Session**

Posters

CM code: B:21 Poster
Title: Effects of mass mortality events on food-web dynamics
Authors: Øystein Langangen, J. Oehlberger, L. C. Stige, J. M. Durant, E. Ravagnan, N. C. Stenseth, and D. Ø. Hjermann
Keywords: mass mortality events, community level effects, Gompertz model, state space modelling, assessing anthropogenic impacts

CM code: B:22 Poster
Title: Generalisation across different marine ecosystems for revealing trophic dynamics and structure in fisheries ecology
Authors: Neda Trifonova, Allan Tucker, Daniel Duplisea, and Andrew Kenny
Keywords: generalisation, Bayesian networks, trophic structure, marine ecosystems, hidden variable

CM code: B:23 Poster
Title: Exploring uncertainties and subjective decisions in ecosystem modelling; the Icelandic Atlantis model
Author: Christopher David Desjardins
Keywords: ecosystem modelling, Atlantis, Iceland, ecosystem-based approach to fisheries management

CM code: B:24 Poster
Title: Simulation Testing of a Georges Bank Multispecies Assessment Pilot Project
Authors: Robert J Gamble, Sarah Gaichas, Michael Fogarty, Sean Lucey, and Laurel Smith
Keywords: multispecies assessment, EBFM, production model, delay difference model, estimation, simulation testing

CM code: B:25 Poster
Title: Social-economic drivers in (political) TAC setting decisions
Authors: Julia Hoffmann, Rudi Voss, Marcos Llope, Jörn O. Schmidt, Christian Möllmann, Lorena Fricke, and Martin F. Quaas
Keywords: GAM, TAC setting, economic drivers, social drivers, interaction, decision making, fisheries

CM code: B:26 Poster
Title: Disentangling habitat concepts for demersal marine fish management
Authors: Sophie A. M. Elliott, Rosanna J. Milligan, Michael R. Heath, William R. Turrell, and David M. Bailey
Keywords: habitat, complexity, association, essential fish habitat, scale, fish conservation, ecosystem-based fisheries management

CM code: B:27 Poster

Title: Fine scale ecosystem approaches to measure the abundance and distribution of juvenile Atlantic cod (*Gadus morhua*) in shallow subtidal waters

Authors: Sophie A. M. Elliott, Michael R. Heath, William R. Turrell, and David M. Bailey

Keywords: Atlantic cod, habitat, ecosystem-based fisheries management, abiotic and biotic interactions, stereo-video transects

CM code: B:28 Poster

Title: Ecosystem modelling as a fisheries management tool: the west coast of Scotland example

Authors: Alan R. Baudron, Natalia Serpetti, Sheila J. J. Heymans, and Paul G. Fernandes

Keywords: ecosystem-based fisheries management, ecosystem modelling, Ecopath with Ecosim, good environmental status, management strategies

CM code: B:29 Poster

Title: New policies will require new approaches: the case of the Swedish Norway Lobster (*Nephrops norvegicus*) fisheries in the Kattegat and Skagerrak

Authors: Sara Hornborg, Mats Ulmestrand, Mattias Sköld, Patrik Jonsson, Ole Ritzau Eigaard, Jordan Feekings, J. Rasmus Nielsen, Francois Bastardie, and Johan Lövgren

Keywords: *Nephrops*, discard, fisheries management, trawl fisheries, creels, seafloor impact

CM code: B:30 Poster

Title: Using trophic models to operationalize ecosystem-based fisheries management

Authors: Didier Gascuel, Abdelkrim Bentorcha, and Fabien Moullec

Keywords: fishing impact, food web, good environmental status, ecosystem-based fisheries management, Ecopath with Ecosim, ecotroph

CM code: B:31 Poster

Title: Command-and-control or incentives for individual decision-making? Exploring the effectiveness and efficiency of alternative approaches to implement ecosystem-based fishery management

Authors: Martin F. Quaas, Rudi Voss, and Jörn O. Schmidt

Keywords: ecosystem-based management, population dynamics, bycatch, discards, bio-economic modeling, transferable quotas

CM code: B:32 Poster

Title: A metacommunity perspective on source-sink dynamics and management: the Baltic Sea as a case study

Authors: Martin Lindegren, Ken H. Andersen, Michele Casini, and Stefan Neuenfeldt

Keywords: ecosystem-based management, metacommunity dynamics, spatial connectivity, climate, species interactions, Baltic Sea

CM code: B:33 Poster

Title: A regime based environmental assessment in support of ecosystem-based fisheries management advice for Eastern Baltic cod

Authors: Christian Möllmann, Lena Bergström, Thorsten Blenckner, Michele Casini, Margit Eero, Anna Gårdmark, Hans-Harald Hinrichsen, Magnus Huss, Piotr Margonski, Bärbel Müller-Karulis, Stefan Neuenfeldt, Ivars Putnis, Didzis Ustups, Rüdiger Voss, and Maciej Tomczak

Keywords: Eastern Baltic cod, ecosystem-based management, environmental assessment, indicator approaches, cod recruitment

Theme session C

Ecosystem monitoring in practice (Co-sponsored by PICES)

Conveners: Matthias Schaber (Germany), Sven Gastauer (Australia), Jack Barth (PICES), and Elena Eriksen (Norway)

Friday 25 September, 12:00–16:30, Nørrebros Runddel

Friday 25 September

12:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

12:02 **CM code:** C:15 Poster
Title: A new compact, cost-efficient concept for underwater range-gated imaging: the UTOFIA project
Authors: Iñaki Quincoces, Iñaki Quincoces, Ibon Galparsoro, Juan Bald, Gorka Gabña, Andre W. Visser, Patrizio Mariani, and Sigrun H. Jónasdóttir
Keywords: range-gated imaging, laser, 3D, turbidity, video analysis

12:05 **CM code:** C:16 Poster
Title: How to start ecosystem monitoring from scratch?
Authors: Ingeborg J. de Boois, Donald Clark, David Demer, Elena Eriksen, Lawrence C. Hufnagle, Sven Kupschus, Kelle Moreau, Ana Moreno, Dave Reid, Jens Ulleweit, and Kai Wielan
Keywords: survey design, monitoring, planning, survey objectives, multi-disciplinary, MSFD, ecosystem approach

12:08 **CM code:** C:17 Poster
Title: Integrated understanding of initial conditions of early life stages using integrated ecosystem survey data
Authors: Pierre Petitgas, Martin Huret, Mathieu Doray, Paul Bourriau, and Michel Lunven
Keywords: integrated monitoring, anchovy, spawning, Biscay

CM code: C:18 Poster
Withdrawn

12:11 **CM code:** C:19 Poster
Title: Evaluating methods in larval fish taxonomy: DNA barcoding, morphology and laboratory practices
Authors: Stephanie Borchardt, Matthias Kloppmann, Thomas Knebelsberger, and Marc Hufnagl
Keywords: flatfish larvae, taxonomy, DNA barcoding, morphology, accuracy

12:14 **CM code:** C:20 Poster
Title: Baseline surveys of non-indigenous species in the Baltic Sea ports – Testing and evaluating the HELCOM–OSPAR Port Survey Protocol
Authors: Riikka Puntila, Lena Granhag, Monika Normant, Henn Ojaveer, Solvita Strake, and Maiju Lehtiniemi
Keywords: port survey, non-indigenous species, ballast water management convention, marine strategy framework directive, GES, monitoring

CM code: C:21 Poster
Withdrawn

12:17	Discussion
	Theme: Databases/methods
12:22	<p>CM code: C:02 Oral</p> <p>Title: New light for time series: international collaboration in ship-based ecosystem monitoring</p> <p>Authors: Antonio Bode, Nicholas Bates, James Cloern, Kirsten Isensee, Mike Lomas, Laura Lorenzoni, Aneesh A. Lotliker, Frank Muller-Karger, Todd O'Brien, Anthony Richardson, Andrew Ross, Luis Valdés, and Peter Wiebe</p> <p>Keywords: ecosystem change, global, ocean observation, warming, climate</p>
12:42	<p>CM code: C:05 Oral</p> <p>Title: Collect once, use often: addressing additional policy objectives with existing datasets</p> <p>Authors: Joanna Murray and Paul Whomersley</p> <p>Keywords: non Indigenous species, marine conservation zone, dataset</p>
12:52	<p>CM code: C:07 Oral</p> <p>Title: New tools – old challenges: ecosystem monitoring with high speed towed multi-sensor vehicles</p> <p>Authors: Jens Floeter, Rolf Riethmüller, Ryan North, Marc Hufnagl, Tim Dudeck, Bettina Walter, Dominik Gloe, Klas O. Möller, André Eckhardt, Justus van Beusekom, Axel Temming, and Christian Möllmann</p> <p>Keywords: ecosystem monitoring, spatial scales, time series, natural variability, ROTV</p>
13:02	Lunch break
14:00	<p>CM code: C:08 Oral</p> <p>Title: Making and using predictions of species distributions to improve survey design</p> <p>Author: Mark R. Payne</p> <p>Keywords: environmental niche modelling, species distribution modelling, mackerel, predictions, MEGS</p>
14:10	<p>CM code: C:03 Oral</p> <p>Title: Observing the ocean interior across scales in support of integrated management- report from the ICES Marine Ecosystem Acoustic conference</p> <p>Authors: Nils Olav Handegard, Verena Trenkel, and Tom Weber</p> <p>Keywords: acoustics, technology, processes, ecosystem observations</p>
	Theme: Applications
14:20	<p>CM code: C:12 Oral</p> <p>Title: Complementary acoustic data from fishing and research vessels for enhanced ecosystem understanding</p> <p>Authors: Sascha M. M. Fässler, Pierre Petitgas, and Mathieu Woillez</p> <p>Keywords: acoustic data, survey, fishing vessel, geostatistics</p>
14:30	<p>CM code: C:09 Oral</p> <p>Title: Experience and results of long-term ecosystem monitoring of seismic survey, drilling and oil production in Southeast Baltic Sea</p> <p>Author: Sergey Aleksandrov</p> <p>Keywords: ecosystem monitoring, oil production, seismic surveys, Baltic Sea, pollution</p>

14:40	<p>CM code: C:01 Oral</p> <p>Title: Methodological Challenges of Evaluation of Euphausiids Stocks and Possible Improvements of the Methodology</p> <p>Authors: Andrey V. Dolgov, Elena Eriksen, Emma L. Orlova, Hein Rune Skjoldal, Padmini Dalpadado, and Dmitry V. Prozorkevich</p> <p>Keywords: Barents Sea, euphausiids, research survey, sampling gear, estimation</p>
14:50	<p>CM code: C:14 Oral</p> <p>Title: Occurrence of demersal fishes in relation to near-bottom oxygen levels within the California Current large marine ecosystem</p> <p>Authors: Aimee A. Keller, Lorenzo Cianelli, W. Waldo Wakefield, Victor H. Simon, John A. Barth, and Stephen D. Pierce</p> <p>Keywords: fisheries, oxygen, hypoxia, ecosystem</p>
15:00	<p>CM code: C:13 Oral</p> <p>Title: Unmanned aerial drone and stationary video surveys to estimate reef shark densities in shallow nursery habitats</p> <p>Authors: James P. Kilfoil, Jeremy J. Kiszka, Johann Mourier , Aaron J. Wirsing, Michael R. Heithaus, and Yuying Zhang</p> <p>Keywords: survey methods, ecosystem monitoring, aerial drone, nursery habitat</p>
<p>Theme: Joint monitoring programme</p>	
15:10	<p>CM code: C:10 Oral</p> <p>Title: Ecosystem surveys in developing countries – cooperation, knowledge generation, exchange of methodology and management implementation</p> <p>Authors: Kathrine Michalsen, Tore Strømme, Reidar Toresen, and Jens-Otto Krakstad</p> <p>Keywords: cooperation, knowledge generation, exchange of methodology and management implementation</p>
15:20	<p>CM code: C:06 Oral</p> <p>Title: Making choices: the way forward from single-stock survey to integrated ecosystem survey</p> <p>Authors: Ingeborg J. de Boois, Donald Clark, David Demer, Elena Eriksen, Lawrence C. Hufnagle, Sven Kupschus, Kelle Moreau, Ana Moreno, Dave Reid, Jens Ulleweit, and Kai Wieland</p> <p>Keywords: monitoring, surveys, survey design, multi-disciplinary, MSFD, ecosystem approach</p>
15:30	<p>CM code: C:11 Oral</p> <p>Title: Towards a Joint Monitoring Programme: Strategies for designing surveys for MSFD indicators</p> <p>Authors: Francisco Marco-Rius, Julia Wischnewski, Anne Sell, Holger Haslob, Gert Van Hoey, Henning Reiss, Sven Kupschus, Sophy McCully, and Lisette Enserink</p> <p>Keywords: MSFD, indicators, joint monitoring programme, survey design</p>
15:40	<p>CM code: C:04 Oral</p> <p>Title: Opportunities for Multi-Disciplinary Joint Monitoring: one of the ways to skin a cat</p> <p>Authors: Ingeborg J. de Boois, Ralf van Hal, Samuel Shephard, Silvana Birchenough, <i>et al.</i></p> <p>Keywords: joint monitoring, multi-disciplinary, MSFD, ecosystem approach</p>
15:50	<p>Discussion</p>
16:00	<p>End of Session</p>

Theme session D

New approaches to measure and assess biodiversity

Conveners: W. Nikolaus Probst (Germany), Oscar Bos (the Netherlands), and Simon P. R. Greenstreet (UK)

Monday 21 September, 15:00–18:30, Sankt Hans Torv

Tuesday 22 September, 10:00–11:30, Sankt Hans Torv

Monday 21 September

15:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

15:05 **CM code:** D:02 Oral

Title: Hill's diversity: a general framework to address marine biodiversity management issues

Authors: Gregoire Certain and Benjamin Planque

Keywords: general framework, species diversity, measure, assessment, baseline, vulnerability, alpha and beta diversity

15:20 **CM code:** D:05 Oral

Title: Empirical relationships in species abundance relationships

Author: Heino O. Fock

Keywords: log-series, zero-sum multinomial, deep-sea, shelf sea

15:35 **CM code:** D:08 Oral

Title: Understanding diversity shifts by characterising the community

Authors: Jonatan Fredricson and Mark R. Payne

Keywords: climate change, North Sea, biodiversity, thermal preference, species richness

15:50 **CM code:** D:17 Oral

Title: The use of benthic biodiversity indicators: pros and cons

Authors: Gert Van Hoey, Wendy Bonne, Annelis De Backer, Lisa Devriese, and Kris Hostens

Keywords: benthic indicators, biodiversity, human impact, rambo genetic tools

16:05 **CM code:** D:10 Oral

Title: Quantifying the value of biodiversity lost or preserved in environmental management

Authors: Mirka Laurila-Pant, Annukka Lehikoinen, Laura Uusitalo, and Riikka Venesjärvi

Keywords: biodiversity, ecosystem-based management, decision analysis

16:20 **CM code:** D:04 Oral

Title: Catalogue of marine biodiversity indicators to assess the environmental status – a software and a review of the current indicator set

Authors: Heliana Teixeira, T. Berg, K. Fürhaupter, L. Uusitalo, *et al.*

Keywords: MSFD, non-indigenous species, foodwebs, seafloor integrity, pressures, regional seas

16:35 **CM code:** D:13 Oral

Title: Assessing the transferability of biodiversity models

Authors: K. L. Yates, J. J. Meeuwig, C. Mellin, B. T. Radford, and M. J. Caley

Keywords: biodiversity, distribution modelling, remote sensing, transferability

16:50	CM code: D:18 Oral Title: Mapping biodiversity indicators to balance European policy requirements: a practical perspective Authors: Henrike Rambo and Vanessa Stelzenmüller Keywords: biodiversity indicators, spatial modelling, marine spatial planning, MSFD, demersal finfish
17:05	CM code: D:01 Oral Title: A diversity of food webs in the Barents Sea Authors: Pierre Olivier and Benjamin Planque Keywords: aggregation, connectance, ecosystem, food web topology, network, trophic interactions
17:20	CM code: D:14 Oral Withdrawn
17:35	CM code: D:03 Oral Title: Diversity, distinctness and distribution of krill in the Indian Ocean Authors: Alicia Sutton and Lynnath E. Beckley Keywords: <i>Euphausiid</i> , zoogeography, Indian, species richness, presence/absence, temperature, surface chlorophyll
17:50	CM code: D:16 Oral Title: Time-series analysis of winter zooplankton in the English Channel: biodiversity, size diversity and trophic interaction Authors: Tim Dudeck, Marc Hufnagl, Norbert Rohlf, and Christian Möllmann Keywords: size diversity, zooplankton, normalized biomass size-spectrum, Zooscan, long-term timeseries analysis
18:05	CM code: D:19 Oral Title: Spatial, bathymetrical and size distribution of deep unexpected well preserved Mediterranean gorgonian assemblages (Menorca Channel, Western Mediterranean Sea) Authors: Jordi Grinyó, Andrea Gori, Stefano Ambroso, Ariadna Purroy, Clara Calatayud, Carlos Domínguez-Carrió, Martina Coppari, Claudio Lolocono, Pablo J. López-González, and Josep-Maria Gili Keywords: gorgonian assemblages, demography
18:20	Discussion
18:30	End of day

Tuesday 22 September

10:00	CM code: D:15 Oral Title: Biodiversity hot spots and gradients on a summer transect across the North Sea Authors: Marc Hufnagl, K. Borkenhagen, T. Dudeck, A. Eckardt, J. Floeter, D. Gloe, N. Guse, K. Hänselmann, S. Janßen, K. O. Möller, J. van Beusekom, B. Walter, and C. Möllmann Keywords: biodiversity, zooplankton, fish, birds, mammals, Triaxus, high resolution
10:15	CM code: D:09 Oral Title: Environmental filtering drives functional diversity of fish assemblages in a temperate brackish system Authors: Laurene Pécuchet, A. Törnroos, and M. Lindegren Keywords: traits, demersal fish, Baltic Sea, assembly rule, community, abiotic, functional richness, species richness, functional dissimilarity, biodiversity

10:30	CM code: D:11 Oral Title: The comparison of the approaches to the assessment of biodiversity and water quality in south-eastern part of the Baltic sea Authors: Olga Dmitrieva, A. Semenowa, A. Gusev, L. Rudinskaya, and K. Podgornyj Keywords: Baltic Sea, water quality, phytoplankton, zooplankton, zoobenthos
10:45	CM code: D:12 Oral Title: Anthropogenic impact in estuarine bacterioplankton diversity Authors: Mikel Aguirre, I. Zarraonaindia, David Abad, Aitor Albaina, Nestor Etxebarria, M. S. Goñi-Urriza, and Andone Estonba Keywords: metagenomics, estuary, bacterioplankton, pollution
11:00	CM code: D:06 Oral Title: Assessing biofouling community succession using a metabarcoding approach Authors: Anastasija Zaiko, Xavier Pochon, Kate Schimanski, Grant A. Hopkins, and Susanna A. Wood Keywords: biofouling, metabarcoding, high-throughput sequencing, non-indigenous species
11:15	CM code: D:20 Poster Title: Biodiversity baseline for large marine ecosystems: an example from the Barents Sea Authors: Gregoire Certain and Benjamin Planque Keywords: Barents Sea, fish community, biodiversity, baseline, alpha and beta diversity
	CM code: D:21 Poster Withdrawn
11:17	CM code: D:22 Poster Title: Environmental sequencing and metagenetic analysis of zooplankton diversity: applications for monitoring seasonal and regional variation of the pelagic assemblage of the NW Atlantic continental shelf Authors: Leocadio Blanco-Bercial, Kayla Erikson, David Richardson, and Peter H. Wiebe Keywords: biodiversity, zooplankton, metagenetics
	CM code: D:24 Poster Withdrawn
11:19	CM code: D:07 Poster Title: Taxonomic and functional diversity patterns of fish assemblages in the European Seas Authors: Laurene Pécuchet, M. Hidalgo, M. Lindegren, <i>et al.</i> Keywords: diversity, demersal communities, traits, environmental gradients, Mediterranean Sea, Atlantic Sea
11:21	CM code: D:25 Poster Title: Diversity in the retained and escapee catch of three different trawl cod-end meshes in the E. Mediterranean Authors: Ch. Mytilineou, A. Anastasopoulou, C. Stamouli, S. Kavadas, C.J. Smith, A. Siapatis, and K. Papadopoulou Keywords: species diversity, codend catch, escapees, Eastern Mediterranean
11:23	Discussion
11:30	End of session

Theme session E

Beyond ocean connectivity: embracing advances on early life stages and adult connectivity to assessment and management challenges

Conveners: Manuel Hidalgo (Spain), Claire Paris (USA), and Lisa Kerr (USA)

Tuesday 22 September, 12:00–18:30, Enghave Plads and Kødbyen

Wednesday 23 September, 08:30–13:00, Enghave Plads and Kødbyen

Tuesday 22 September

12:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

Theme: Conceptual – integrative talks

12:05 **CM code:** E:03 Oral
Title: Linking local retention, self-recruitment and persistence in marine metapopulations
Authors: David M. Kaplan, Christophe Lett, Tri Nguyen-Huu, Marion Cuif, and Pablo Saenz-Agudelo
Keywords: local retention, self-recruitment, metapopulation, larval dispersal, connectivity, population persistence, network persistence, self-persistence, lifetime egg production, marine reserve

12:20 **CM code:** E:07 Oral
Title: A conceptual framework for understanding the implications of and potential solutions for mismatches in scale of biological population structure and stock units
Authors: Lisa A. Kerr, Niels T. Hintzen, Steven X. Cadrin, Lotte Worsøe Clausen, Mark Dickey-Collas, Emma M. C. Hatfield, Daniel R. Goethel, Clémentine Harma, Jake Kritzer, Richard D. M. Nash, Alberto G. Murta, and Alexandra Silva
Keywords: biocomplexity, marine populations, stock structure, stock assessment, fisheries management, spatial structure

Theme: Biophysical and IBM

12:35 **CM code:** E:02 Oral
Title: GBR-Larvo: A biophysical larval-fish dispersal model for the Great Barrier Reef based on empirical larval and adult behaviour data
Authors: Jeffrey M. Leis, Luciano B. Mason, and Séverine Choukroun
Keywords: connectivity, behaviour, larval dispersal, orientation, biophysical model

12:50 **CM code:** E:11 Oral
Title: The influence of life history variability on population connectivity: Development and application of a trait-based biophysical model of individuals
Authors: A. B. Neuheimer, J. Wong-Ala, B. S. Powell, and M. Hixon
Keywords: connectivity, life history, biophysical, individual-based model, trait-based model, reef fish

13:05 **Lunch break**

15:00	<p>CM code: E:18 Oral</p> <p>Title: Eddy-induced dispersal of marine organisms in the southeastern Bay of Biscay</p> <p>Authors: Luis Ferrer, Agurtzane Urtizbera, Naroa Aldanondo, Ainhoa Caballero, Anna Rubio, and Unai Cotano</p> <p>Keywords: Bay of Biscay, anchovy, dispersal, eddy, Portuguese man-of-war</p>
15:15	<p>CM code: E:21 Oral</p> <p>Title: Incorporating larval IBM outputs into a spatially explicit statistical catch-at-age stock assessment model: a proof-of-concept approach with Gulf of Mexico red snapper</p> <p>Authors: Daniel Goethel and Mandy Karnauskas</p> <p>Keywords: spatial models, stock assessment, larval IBM, connectivity, bio-physical models, population dynamics, climate impacts</p>
15:30	<p>CM code: E:23 Oral</p> <p>Title: Long-term larval supply from spawning grounds to coastal nursery areas for two flatfish species: consequences of both interspecific discrepancies in larval life history and interannual variability</p> <p>Authors: Marie Savina, Olivier Le Pape, Loic Baulier, and Martin Huret</p> <p>Keywords: larval supply, variability, connectivity, sole, plaice, IBM model</p>
15:45	<p>CM code: E:25 Oral</p> <p>Title: Lagrangian Flow Network: a new tool to evaluate connectivity and understand the structural complexity of marine populations</p> <p>Authors: Vincent Rossi, M. Dubois, E. Ser-Giacomi, P. Monroy, E. Hernandez-Garcia, and C. Lopez</p> <p>Keywords: connectivity, biophysical model, multi-scales</p>
16:00	<p>CM code: E:13 Oral</p> <p>Title: Implications of connectivity processes across established management units: the case of European hake in the Western Mediterranean Sea</p> <p>Authors: Manuel Hidalgo, Vincent Rossi, Francisco Alemany, Riosa Balbín, Enric Massutí, Pedro Monroy, Patricia Reglero, and Enrico Ser-Giacomi</p> <p>Keywords: Mediterranean Sea, demographic connectivity, European hake</p>
16:15	Discussion
16:30	Coffee break
17:00	<p>CM code: E:22 Oral</p> <p>Title: Optimal management of spatial-dynamical natural resource systems: the addition of dispersal controls to traditional metapopulation models</p> <p>Authors: Kailin Kroetz and James N. Sanchirico</p> <p>Keywords: bioeconomics, spatial-dynamics, metapopulation, connectivity, dispersal, optimal</p>
17:15	<p>CM code: E:29 Oral</p> <p>Title: Disentangling life history variation and oceanography in dispersal patterns in Antarctic fish: an integrated biophysical and genetic approach</p> <p>Authors: Gary R. Carvalho, E. F. Young, M. Belchier, L. Hauser, M. P. Meredith, and N. Tyskland</p> <p>Keywords: seascape genetics, population connectivity, dispersal, gene flow, Antarctic fish, life history variation, ice-fish, microsatellites</p>

Theme: Genetic techniques

17:30	CM code: E:05 Oral Title: Genetic structure and effective population size through time: a tale on two coastal marine species with contrasting life-history patterns Authors: Sara M. Francisco and Joana I. Robalo Keywords: population genetics, planktonic larval dispersion, temporal structure, effective population size
17:45	CM code: E:08 Oral Title: Influence of demography and spatial structure of migration on the effective connectivity of sedentary benthic species Authors: Mariana Padron, F. Costantini, L. Bramanti, and K. Guizien Keywords: connectivity, metapopulation, modelling, population genetics, demography
18:00	CM code: E:24 Oral Title: Combining forces: a multidisciplinary approach to unravel population structure in a heavily bycaught deepwater shark Authors: Claudia Junge, Sienna Gray, Matt McMillan, Chris Izzo, Bronwyn Gillanders, Ole Thomas Albert, Wolf Isbert, Timon Brueggemann, Giovanni Romagnoni, and Armelle Jung Keywords: population genomics, RAD seq, <i>Etmopterus spinax</i> , fisheries, chemistry, parasites
18:15	CM code: E:26 Oral Title: The connectivity pattern in the red gorgonian <i>Paramuricea clavata</i> in the Mediterranean Sea and Atlantic Ocean Authors: Joanna Pilczynska, Silvia Cocito, and Henrique Queiroga Keywords: <i>Paramuricea clavata</i> , genetic diversity, connectivity, microsatellite
18:30	End of day

Wednesday 23 September

Theme: Otolith techniques – other biological markers

08:30	CM code: E:14 Oral Title: Spatial linkages in the early life history of northeastern Atlantic herring populations across the north of the British Isles Authors: Richard D. M. Nash, Mark R. Payne, Jon Albretsen, and Audrey J. Geffen Keywords: drift, back-tracking, particle tracking, otoliths, micro-chemistry, herring North Sea, West of Scotland
08:45	CM code: E:15 Oral Title: Closing the life history loop on a fish species with embayment, coastal and oceanic life phases Authors: Gregory Jenkins, Paul Hamer, Jodie Kemp, Julia Kent, and Tony Fowler Keywords: connectivity, dispersal, management, otolith, microchemistry, microstructure, population, biophysical modelling, King George whiting
09:00	CM code: E:04 Oral Title: Migratory herring as a seasonal conveyer of lipids into a resident cod population Authors: Mikael van Deurs, Martin Lindegren, Anders Persson, Charlotte Jacobsen, and Anders Nilsson Keywords: <i>Gadus morhua</i> , <i>Clupea harengus</i> , energy transport, ecosystem connectivity, fatty acids, food quality, stock recruitment

Theme: Spatial and temporal dynamics

09:15 **CM code:** E:01 Oral
Title: Footprints in the sand: a persistent spatial impression of fishing in a mobile groundfish assemblage
Authors: Francisco de Castro, Samuel Shephard, Sarah B. M. Kraak, David G. Reid, and Keith D. Farnsworth
Keywords: Celtic Sea, demersal fish, length-selective fishing, length-structure, migration, movement, population structure

09:30 **CM code:** E:09 Oral
Title: How can a commercial fish (Atlantic halibut) be certified as sustainable in Canada yet considered a “species of concern” just across the border in the USA?
Authors: Nancy L. Shackell, Kenneth T. Frank, and Janet A. Nye
Keywords: transboundary resource, Atlantic halibut, connectivity, stock structure, overfishing, habitat modelling

09:45 **CM code:** E:12 Oral
Title: Demographically disconnected subpopulations in lesser sandeel (*Ammodytes marinus*) as basis of a high resolution spatial management system
Authors: Tore Johannessen and Espen Johnsen
Keywords: sandeel, the North Sea, fishery management, connectivity, larval drift, homing

10:00 **Coffee break**

10:30 **CM code:** E:19 Oral
Title: A multidisciplinary approach to address marine fish recruitment dynamics
Authors: Elizabeth Wallace, Aaron D. Shultz, and Christopher R. Haak
Keywords: marine fisheries, genetic connectivity, dispersal, oceanographic modeling, recruitment

Theme: Tagging related studies

10:45 **CM code:** E:10 Oral
Title: Implications of Atlantic cod seasonal movements and population connectivity for fishery management and stock assessment in the Gulf of Maine
Authors: Douglas Zemeckis, Micah Dean, William Hoffman, Chang Liu, Geoffrey Cowles, David Martins, Lisa Kerr, Michael P. Armstrong, and Steven X. Cadrin
Keywords: acoustic telemetry, Atlantic cod, conventional tagging, data storage tags, metapopulation, population connectivity

11:00 **CM code:** E:27 Oral
Title: Movements, migrations and space use of fish in the North Sea in relation to offshore wind farms
Authors: Julian Metcalfe, Serena Wright, Martin Pedersen, David Sims, and David Righton
Keywords: cod, plaice, thornback ray, electronic tag

11:15 **CM code:** E:28 Oral
Title: Migrations and habitat used of porbeagle sharks in the northeast Atlantic
Authors: David Righton, Serena Wright, Victoria Bendall, Stuart Hetherington, Ryan Saunders, Clive Trueman, Katy Quacke, Maurice Clarke, Edward Farrell, Gerard Biais, Bernard Seret, Yann Coupeau, Steve Campana, and Jim Ellis
Keywords: geolocation, satellite tags, ocean, shelf

Posters

- 11:30** **CM code:** E:30 Poster
Title: Discrimination of mixing Atlantic herring (*Clupea harengus*) populations during spawning based on otolith growth at the larval stage
Authors: Florian Eggers, Åse Husebø, Jane Godiksen, and Aril Slotte
Keywords: Atlantic herring, otolith growth, population dynamics, early life history, larvae
- 11:35** **CM code:** E:06 Poster
Title: Juvenile river herring habitat use and marine emigration trends: comparing populations
Authors: Sara M. Turner and Karin E. Limburg
Keywords: migration, anadromy, habitat use, otolith chemistry, early life history
- 11:40** **CM code:** E:20 Poster
Title: Implications of stage dependent behaviour variations and flood tide transport on the distribution, connectivity and onshore transport success of the brown shrimp
Authors: Stephanie Borchardt, Axel Temming, Thomas Pohlmann, Maarten Boersma, Frank Janssen, and Marc Hufnagl
Keywords: *Crangon crangon*, zoea stages, selective tidal stream transport, connectivity, behaviour
- 11:45** **Discussion**
- 13:00** **End of session**
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Theme session F

Small-scale fisheries under data limited scenarios

Conveners: Cristina Pita (Portugal), José Pascual (Spain), and Sebastian Villasante (Spain)

Thursday 24 September, 10:30–18:30, Sankt Hans Torv

Thursday 24 September

10:30 **Opening and introduction**

Appointment of rapporteur

Presentation of papers

10:35 **CM code:** F:14 Oral

Title: How to facilitate data collection in small-scale fisheries? The case of La Restinga, El Hierro (Canary Islands, Spain)

Authors: José Pascual-Fernández and Carmelo Dorta-Morales

Keywords: small-scale fisheries, data collection, governance, software, small-scale fishing unit strategies

10:50 **CM code:** F:03 Oral

Title: Coastal community CPUE standardization in the Galician small-scale fishery (southeastern Atlantic shelf) from 1999 to 2013 using on board observer

Authors: Jaime Otero, Alexandre Alonso-Fernández, Rafael Bañón Díaz, José Manuel Campelos Álvarez, and Fernando Quintero Fernández

Keywords: finfishes, invertebrates, small-scale fisheries, CPUE standardization, GLMs, model selection, NE Atlantic

11:05 **CM code:** F:04 Oral

Title: Monitoring fishing effort of a data-limited artisanal fishery. The case of common octopus small-scale fleet operating in the Galician coast (southeastern Atlantic shelf)

Authors: Rafael Bañón, Jaime Otero, Alexandre Alonso-Fernández, José Manuel Campelos Álvarez, and Fernando Quintero Fernández

Keywords: fishing effort, small-scale fisheries, biomass, *Octopus vulgaris*, NE Atlantic

11:20 **CM code:** F:05 Oral

Title: Development of a probability-based sampling design for landings of Scottish shellfish

Authors: Tanja Miethe, Alastair Pout, and Liz Clarke

Keywords: brown crab, crustacean, *Nephrops*, port, probability

11:35 **CM code:** F:09 Oral

Title: Diversity and efficiency indices of small-scale fisheries in the Western Mediterranean (Minorca's Channel, Balearic Islands)

Authors: Sandra Mallol and Raquel Goñi

Keywords: small-scale fisheries, métiers, diversity, efficiency, Western Mediterranean

11:50 **CM code:** F:11 Oral

Title: Analysis of the small-scale fleet's coverage under different biological sampling strategies: from the DCR stock-based sampling to the concurrent DCF métier-based sampling in the Northern Spanish coastal gillnets fleet

Authors: Jose Rodriguez Gutierrez, Eva Velasco, and Jose Castro Pampillon

Keywords: data collection, small-scale fisheries, concurrent sampling

12:05	<p>CM code: F:10 Oral</p> <p>Title: Assessment of small-scale data-limited Arctic charr fisheries using productivity-susceptibility, and landscape models coupled with local community monitoring</p> <p>Authors: Ross Tallman, Marie-Julie Roux, and Zoya Martin</p> <p>Keywords: data-limited, Arctic charr, productivity</p>
12:20	<p>CM code: F:15 Oral</p> <p>Title: From species to function: Using the tool of biological traits analysis to detect the effects of small-scale fisheries on the functioning of fish assemblages</p> <p>Authors: Martha Koutsidi and Evangelos Tzanatos</p> <p>Keywords: biological traits analysis, ecological functions, small-scale fisheries, coastal ecosystems</p>
12:35	<p>CM code: F:13 Oral</p> <p>Title: The small-scale trap fishery for <i>Plesionika narval</i> (Decapoda, Pandalidae) in the eastern Mediterranean Sea: bio-economics and challenges for management</p> <p>Authors: Paris Vasilakopoulos, Christos D. Maravelias, Kostas Kapisir, Aikaterini Anastasopoulou, Chris Smith, and Stefanos Kalogirou</p> <p>Keywords: CPUE, dodecanese, management plan, socio-economics, sustainability</p>
12:50	<p>CM code: F:12 Oral</p> <p>Title: BATEGIN: A user friendly GIS tool for the spatial management of the Basque small-scale fleet</p> <p>Authors: Estanis Mugerza, Arantza Murillas-Maza, Iñaki Quincoces, Estibaliz Diaz, and Luis Arregi</p> <p>Keywords: small-scale fisheries coastal impact, geospatial data collection, management tools conservation measures, fleet interactions</p>
13:00	<p>Lunch break</p>
15:00	<p>CM code: F:02 Oral</p> <p>Title: Short- and long-term impacts of a large marine protected area on artisanal fisheries in the Northwestern Mediterranean</p> <p>Authors: Sandra Mallol and Raquel Goñi</p> <p>Keywords: artisanal fisheries, marine protected area, fishing effort, spatial distribution, western Mediterranean</p>
15:15	<p>CM code: F:07 Oral</p> <p>Title: Management tools for small-scale fisheries in Europe: a review</p> <p>Authors: C. Pita, E. Selig, K. Kleisner, G. Macho, J. Santiago, P. Pita, S. Rivero Rodriguez, J. Rodriguez, J. Isusi de Rivero, P. Lopes, and S. Villasante</p> <p>Keywords: artisanal fisheries, traditional fisheries, fisheries management measures, tool, Europe, governance</p>
15:30	<p>CM code: F:21 Oral</p> <p>Title: Integrated decision support tools to inform small-scale fisheries management</p> <p>Authors: Michaela Clemence, Erica Cunningham, Rod Fujita, Kendra Karr, Catherine Longo, Jake Kritzer, Jennifer Macy Humberstone, Gavin McDonald, Kaia Joye Moyer, Janelle Mueller, Rodrigo Oyanedel, Sarah Poon, Salvador Rodriguez van Dyck, Keith Shattenkirk, Katherine Siegel, and Amy Tourgee</p> <p>Keywords: data-limited fisheries assessment, small-scale fisheries management tools, adaptive fisheries management, marine reserves, user rights, Fish Forever, tradeoff analysis, community-based management</p>

15:45	<p>CM code: F:08 Oral</p> <p>Title: Sustainability of small-scale fisheries: How can we estimate it?</p> <p>Authors: Rosana Ourens and Larry Crowder</p> <p>Keywords: small-scale fisheries, indicators, sustainability, fisheries assessment, review</p>
16:00	<p>CM code: F:22 Oral</p> <p>Title: Assessing SSF social and economic performance in an MPA with limited data</p> <p>Author: Leyre Goti</p> <p>Keywords: SSF, data poor, MPA, social and economic impact</p>
16:15	<p>CM code: F:20 Oral</p> <p>Title: Integrating fishers knowledge in data-limited fisheries assessment: a case study using productivity-susceptibility analysis (PSA) of small-scale Arctic charr fisheries in Canada's Arctic</p> <p>Authors: Marie-Julie Roux, Ross F. Tallman, and Zoya A. Martin</p> <p>Keywords: data-poor, small-scale fisheries, PSA assessment, Arctic, fishers knowledge</p>
16:30	<p>Coffee break</p>
17:00	<p>CM code: F:31 Oral</p> <p>Title: Clam fisheries as a poverty trap</p> <p>Authors: L. M. Rocha, P. F. M. Lopes, A. Begossi, J. J. Roper, and S. Villasante</p> <p>Keywords: co-management, <i>Anomalocardia brasiliiana</i>, social-ecological sustainability, small-scale fisheries</p>
17:15	<p>CM code: F:18 Oral</p> <p>Title: Untangling the tentacles: fisher perceptions on the octopus fishery management in the Algarve</p> <p>Authors: M.O. Rangel, C. Pita, M.M. Oliveira, M.H. Guimarães, C. Sonderblohm, A Antunes, A. Barreto, P. Monteiro, F. Oliveira, L. Pereira, J.M.S Gonçalves and K. Erzini.</p> <p>Keywords: octopus, small-scale fishery, fisher associations, management measures, management, Portugal, Algarve</p>
17:30	<p>CM code: F:19 Oral</p> <p>Title: Enhance our understanding of small-scale fisheries with the geolocation of fishing vessels: the case of the French kelp fishery off Brittany</p> <p>Authors: Mathieu Woillez, Martial Laurans, Emilie Leblond, and Patrick Berthou</p> <p>Keywords: small-scale fishery, geolocalisation, fishing vessels, Hidden Markov Models</p>
17:45	<p>CM code: F:16 Poster</p> <p>Title: The landing obligation in European small-scale fisheries</p> <p>Authors: Sebastian Villasante, Cesar Guimeráns, Joao Rodriguez, Manel Antelo, Susana Rivero Rodríguez, Jose Alberto de Santiago, Cristina Pita, Graham Pierce, Lee Hastie, Jose Maria Da Rocha, Marta Coll, Dorleta Garcia, and Rashid Sumaila</p> <p>Keywords: discards, Common Fisheries Policy, landing obligation, small-scale fisheries, Europe</p>
17:47	<p>CM code: F:06 Poster</p> <p>Title: Small-scale fisheries targeting cephalopods in Europe: socioeconomic importance and management</p> <p>Authors: C. Pita, A. Adamidou, P. Belcari, J. M. Bellido, D. Cuccu, M. García Tasende, A. Gonzalez, A. Guerra, E. Lefkaditou, S. Maguire, J. Pereira, J. P. Robin, B. Roel, D. Turnbull, S. Villasante, and G. J. Pierce</p> <p>Keywords: cuttlefish, octopus, squid, governance, France, Greece, Italy, Portugal, Spain, United Kingdom</p>

17:49	<p>CM code: F:01 Poster</p> <p>Title: Coastal fisheries in Europe are not what they were: ecological, social and economic changes</p> <p>Authors: Josep Lloret and Karim Erzini</p> <p>Keywords: artisanal fisheries, biological impacts, socioeconomic challenges</p>
17:51	<p>CM code: F:24 Poster</p> <p>Title: Integrating data and fisheries management in small-scale fisheries in the Shetland Isles</p> <p>Authors: Beth Mouat and Amos Barkai</p> <p>Keywords: inshore fisheries, data led fisheries management, spatial data, Olrac Dynamic Data Manager, marine spatial planning</p>
17:53	<p>CM code: F:25 Poster</p> <p>Title: Towards an ecosystem based fisheries management in Norway, including small-scale and data-limited fisheries – practical tools for keeping track of relevant issues and prioritizing management efforts</p> <p>Authors: Peter Gullestad, Anne Marie Abotnes, Gunnstein Bakke, Mette Skern-Mauritzen, Kjell Nedreaas, and Guldborg Sjøvik</p> <p>Keywords: small-scale, data-limited, practical ecosystem based management tool, indicators</p>
17:55	<p>CM code: F:26 Poster</p> <p>Title: Women’s invisible work in small-scale fisheries</p> <p>Authors: Yesmina Mascarell Rocher and Paloma Herrera Racionero</p> <p>Keywords: gender, feminism, co-governance, inequity, sexual division of labor</p>
17:57	<p>CM code: F:27 Poster</p> <p>Title: Life history traits determine the shape and response to environmental conditions of a coastal community targeted by a small-scale fishery</p> <p>Authors: Alexandre Alonso-Fernández, Jaime Otero, Rafael Bañón Díaz, José Manuel Campelos Álvarez, and Fernando Quintero Fernández</p> <p>Keywords: finfishes, small-scale fisheries, life traits, temperature, NE Atlantic</p>
17:59	<p>CM code: F:28 Poster</p> <p>Title: Eliciting expert judgments to inform the depletion prior in data-poor stock assessment</p> <p>Authors: Anna Chrysafi, Jason Cope, and Andre Punt</p> <p>Keywords: data-poor, expert judgment, stock assessment</p>
	<p>CM code: F:29 Poster</p> <p>Withdrawn</p>
18:01	<p>CM code: F:30 Poster</p> <p>Title: Mixed demersal/deep-water hook and line small-scale fishery from the Azores (ICES Xa2)</p> <p>Authors: Mário Rui Pinho, Ana Novoa-Pabon, Priscila Silva, Helena Krug, and João Gil Pereira</p> <p>Keywords: small-scale, hook and line, deep-water, Azores, seamounts, ICES Xa2</p>
18:03	<p>CM code: F:32 Poster</p> <p>Title: A spatial multivariate approach to understand what controls fish assemblages in small-scale fisheries</p> <p>Authors: M. G. Pennino, M. J. F. Thomé-Souza, A. R. Carvalho, P. F. M. Lopes, L. C. S. Fontes, and C. Parente</p> <p>Keywords: fish assemblage, fishing effort, multivariate analysis, multi-species</p>

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- 18:05** **CM code:** F:33 Poster
Title: Temporal variability of landings composition in the Conil artisanal fishery (SW Spain): octopus collapse, subsidies and climate
Authors: Rafael González-Quirós, Alfonso J. Silva-García, Beatriz Lado, Laura Prieto, José Luis Muñoz, Nicolás Fernández, and Javier Ruiz
Keywords: small-scale fisheries, octopus, landings, temporal patterns, subsidies, climate
- 18:07** **CM code:** F:34 Poster
Title: Challenges in minimizing illegal, unreported and unregulated fishing (IUU) of small-scale fisheries sector in Thailand
Authors: Wichin Suebpala, Thamasak Yeemin, Makamas Sutthacheep, and Ratana Chuenpagdee
Keywords: IUU fishing, small-scale fisheries, Thailand
- 18:09** **CM code:** F:35 Poster
Title: The situation of small-scale fisheries management in Turkey: Evaluation of approaches regulations and researches
Authors: Didem Gokturk and Tomris Deniz
Keywords: small-scale fisheries, management, Turkey
- 18:11** **CM code:** F:36 Poster
Title: MPA effects on the management of fish stocks could be questionable in some cases due to their localized geographic scale: the Mediterranean Sea as an example
Authors: Ninon Mavraki, Michalis Georgiadis, and Evangelos Tzanatos
Keywords: marine protected areas, conservation, small-scale fisheries
- 18:13** **CM code:** F:37 Poster
Title: Using the dynamic dependency of sampling design on the hierarchical structure of fisheries heterogeneity to develop a roadmap for the optimization of small-scale fisheries sampling schemes
Authors: Alexis Lazaris, Constantin Koutsikopoulos, and Evangelos Tzanatos
Keywords: optimal sampling design, multi-stage sampling, small-scale fisheries
- 18:15** **CM code:** F:38 Poster
Title: Early assessment with management purposes of the multi-species, multi-gear and data-poor complex fisheries
Authors: J.G. Ramírez, J. Lleonart, G. Puentes, and J. Salat
Keywords: gear competition, multi-species, management
- 18:17** **CM code:** F:39 Poster
Title: Bringing together the knowledge of small-scale fishers and the scientific knowledge for length-based management purposes in data-limited fisheries
Authors: Luis Manjarres-Martinez, Jairo Altamar López, Luis Orlando Duarte, Lina Saavedra, and Felix Cuello
Keywords: local ecological knowledge, data-limited fisheries, management, Colombian Caribbean, simple indicators
- 18:19** **CM code:** F:40 Poster
Title: Colombian small-scale marine fishers' knowledge as a fundamental management tool in data limited context
Authors: Lina M. Saavedra-Diaz, Andrew A. Rosenberg, and Robert Pomeroy
Keywords: fisher's knowledge, fishery management tool, small-scale fisheries

18:21	CM code: F:41 Poster Title: Estimating uncertainty in data-limited stock assessments Authors: Alexandros Kokkalis, Uffe Høgsbro Thygesen, Anders Nielsen, and Ken Haste Andersen Keywords: size-structure, single-species, data-limited, stock status
18:23	CM code: F:42 Poster Title: The path-dependence and European fisheries management Authors: Fernando Gonzalez Laxe, Manel Antelo, and Sebastian Villasante Keywords: path dependence, fisheries management, EU fisheries policy
18:25	CM code: F:43 Poster Title: New practices to improve the conservation status of the benthic communities in small-scale fisheries Authors: David Díaz, Anabel Muñoz, Carlos Dominguez-Carrió, Jordi Grinyó, Stefano Ambroso, Laura Oliver, Sandra Mallo, Victor Gutiérrez, Raquel Goñi, and Josep-Maria Gili Keywords: artisanal fishery, conservation, benthic communities, bycatch
18:30	End of session

Theme session G

Managing marine ecosystem services in a changing climate

(Co-sponsored by PICES)

Conveners: Sebastian Villasante (Spain), Manuel Barange (UK), and Keith Criddle (PICES)

Tuesday 22 September, 10:00–16:30, Hovedbanen

Tuesday 22 September

10:00 **Opening and introduction**

Appointment of rapporteur

Presentation of papers

10:00 **CM code:** G:02 Oral

Title: Priorities and challenges in marine ecosystem services research

Authors: Susana Rivero and Sebastian Villasante

Keywords: ecosystem services, marine resource management, decision-making, priority research questions, research agenda

10:30 **CM code:** G:09 Oral

Title: Will climate change impacts outweigh marine ecosystem protections: actions being taken in the United States to protect ecological services?

Authors: Robert J. Brock and Catherine Marzin

Keywords: climate change, ecological services, action items, marine protected areas

10:45 **CM code:** G:13 Oral

Withdrawn

11:00 **CM code:** G:04 Oral

Title: Can species transformation provisions help multi-species fisheries management systems adapt to an uncertain future?

Authors: Pamela J. Woods, Dan S. Holland, and André Punt

Keywords: catch-quota balancing mechanisms, multispecies fisheries, fisher behaviour, individual quota, discards

11:15 **CM code:** G:05 Oral

Title: An analysis of climate change impacts and adaptive strategies in the Gulf of Thailand

Authors: Thamasak Yeemin, Wichin Suebpala, Makamas Sutthacheep, and Watchara Samsuvan

Keywords: climate change, coral bleaching, management, sea level rise, vulnerability

11:30 **CM code:** G:06 Oral

Title: Climate change and UK fisheries – perceptions of risk and possible adaptation options

Authors: John K. Pinnegar and Paul Buckley

Keywords: fishing industry, climate change, perception, adaptation

11:45 **CM code:** G:11 Oral

Title: The gender dimension of climate change in European small-scale fisheries: the case of intertidal shellfish gathering by women in Galicia (NW Spain)

Authors: Sebastian Villasante, Jose Pascual, Gonzalo Macho, Cristina Pita, Beatriz Nieto, Graham Pierce, Jose Alberto de Santiago, Susana Rivero Rodriguez, Priscila Lopes, and Katia Frangoudes

Keywords: women, adaptive capacity, global change, small-scale fisheries, Europe, Galicia (Northwest of Spain)

12:00	<p>CM code: G:07 Oral</p> <p>Title: Multidisciplinary research tools and methodologies for projecting the impacts of climate change on Bering Sea commercial fish and fisheries</p> <p>Authors: Anne B. Hollowed, Albert Hermann, and Kirstin Holsman</p> <p>Keywords: climate change, fisheries management, Bering Sea</p>
12:15	<p>CM code: G:15 Oral</p> <p>Title: Evidence for trophic amplification and attenuation of climate change impacts on groundfish species productivity in the Bering Sea, AK</p> <p>Authors: Kirstin K. Holsman, A. Hollowed, K. Aydin, J. Ianelli, A. Punt, and A. Hermann</p> <p>Keywords: climate change, multi-species models, environmental covariates, stock assessment, ROMS, food-web, predation, fisheries</p>
12:30	<p>CM code: G:14 Oral</p> <p>Withdrawn</p>
13:00	Lunch break
15:00	<p>CM code: G:16 Oral</p> <p>Title: The role of climate change on historical and future distributions of marine fish assemblages on the US Northeast Shelf</p> <p>Authors: Kristin M. Kleisner, Michael J. Fogarty, Sally McGee, Analie Barnett, Paula Fratantoni, Jennifer Greene, Jon Hare, Sean Lucey, Chris McGuire, Jay Odell, Malin Pinsky, Vincent Saba, Laurel Smith, and Katie Weaver</p> <p>Keywords: climate velocity, species shifts, species assemblages</p>
15:15	<p>CM code: G:03 Oral</p> <p>Title: Climate effects on biodiversity, abundance and distribution in the Benguela: A synthesis of the NansClim project</p> <p>Authors: Erling Kåre Stenevik and Harald Loeng</p> <p>Keywords: Benguela current, climate variability</p>
15:30	<p>CM code: G:08 Oral</p> <p>Title: Climate change and harmful algal blooms in the Curonian Lagoon of the Baltic Sea</p> <p>Authors: Sergei Aleksandrov and Julia Gorbunova</p> <p>Keywords: climate change, eutrophication, lagoon, algal blooms, the Baltic Sea</p>
15:45	<p>CM code: G:10 Oral</p> <p>Title: Possible effects of submarine groundwater discharge on fish species diversity and production in coastal areas</p> <p>Authors: Jun Shoji and Masaki Hata</p> <p>Keywords: submarine groundwater, coastal ecosystems, fishery production, species diversity</p>
16:00	<p>CM code: G:12 Oral</p> <p>Title: Using hermit crabs to assess the indirect effects of climate change in a Brazilian subtropical bay</p> <p>Authors: Daniel Gorman and Alexander Turra</p> <p>Keywords: hermit crabs, predation risk, nutrients, sediments, stable isotopes, habitat restoration</p>
16:15	Discussion
16:30	End of session

Theme session H

Ocean acidification: Understanding chemical, biological, and biochemical responses in marine ecosystems (Co-sponsored by PICES)

Conveners: Silvana Birchenough (UK), Pamela Walsham (UK),
Klaas Kaag (the Netherlands), and Tsuneo Ono (PICES)

Thursday 24 September, 10:00–16:30, Enghave Plads and Kødbyen

Thursday 24 September

10:00	Opening and introduction Appointment of rapporteur Presentation of papers
10:05	CM code: H:06 Oral Title: Seasonal cycles and interannual variability in total alkalinity, dissolved inorganic carbon and coccolithophore diversity at a Scottish inshore monitoring site Authors: Pamela Walsham, Pablo Diaz, Eileen Bresnan, Lynda Webster, and Sue Hartman Keywords: total alkalinity, dissolved inorganic carbon, coccolithophores, monitoring
10:20	CM code: H:13 Title: Ocean acidification in shelf seas: impact of large-scale forcing and local dynamics Authors: Rocío Castaño-Primo, Corinna Schrum, Ute Daewel, and Helmuth Thomas Keywords: biogeochemical model, ocean acidification, North Sea, Baltic Sea
10:35	CM code: H:04 Title: Evidence of fast adaption to ocean acidification in a pelagic copepod Authors: Peter Thor, Pierre De Wit, and Sam Dupont Keywords: adaptation, pelagic copepods, fecundity, metabolism, transcriptomics, selection
10:50	CM code: H:02 Title: Copepod response to ocean acidification in a low nutrient-low chlorophyll environment in the NW Mediterranean Sea Authors: S. Zervoudaki, F. Gazeau, T. Moutsopoulos, M. Protopapa, S. Marro, and E. Krasakopoulou Keywords: ocean acidification, copepod production, grazing, composition, Mediterranean Sea
11:05	CM code: H:03 Oral Title: Trade-offs between adaptive and non-adaptive phenotypic plasticity in an acidifying ocean: a common garden reciprocal transplant experiment with a calcifying polychaete population from a shallow CO ₂ vent system Authors: Noelle M. Lucey, Piero Calosi, Maurizio Florio, Lucia DeMarchi, Simon Rundle, Maria Cristina Gambi, and Chiara Lombardi Keywords: ocean acidification, Annelida, heritability, plasticity, phenotypic variation, common garden, directional adaptation
11:20	CM code: H:20 Oral Title: What will be the challenges for commercial species under ocean acidification conditions? Authors: Silvana Birchenough, John, K. Pinnegar, Matthew B. Sanders, and Jeo Lee Keywords: ocean acidification, commercial species, developments, CO ₂

11:35	<p>CM code: H:01 Oral</p> <p>Title: Effects of ocean acidification in relation to diel cycles of seawater pCO₂ on early development of ezo abalone <i>Haliotis discus hannai</i></p> <p>Authors: Hideki Takami, Toshihiro Onitsuka, Ryo Kimura, Tsuneo Ono, and Yukihiro Nojiri</p> <p>Keywords: diurnal fluctuations, larval development, mortality, reduced pH, saturation state, Gastropoda</p>
11:50	<p>CM code: H:09 Oral</p> <p>Title: Effects of pCO₂ stress on gene expression and biomineralization of developing larvae of the Pacific oyster <i>Crassostrea gigas</i></p> <p>Authors: Pierre De Wit, Evan Durland, Alexander Ventura, George Waldbusser, and Chris Langdon</p> <p>Keywords: Crassostrea, ocean acidification, aragonite, biomineralization, gene expression, RNA-Seq</p>
12:05	<p>CM code: H:10 Oral</p> <p>Title: Effects of end-of-the-century ocean acidification on Atlantic cod larvae of different populations in terms of survival, growth and recruitment to the fished stocks</p> <p>Authors: Martina H. Stiasny, Michael Sswat, Felix H. Mittermayer, Rüdiger Voss, Fredrik Jutfelt, Melissa Chierici, Velmurugu Puvanendran, Atle Mortensen, Thorsten B.H. Reusch and Catriona Clemmesen</p> <p>Keywords: ocean acidification, cod larvae, survival, growth, recruitment, modelling</p>
12:20	<p>CM code: H:14 Poster</p> <p>Title: Effect of eutrophication on pH in the lagoon of the Baltic Sea</p> <p>Author: Sergey Aleksandrov</p> <p>Keywords: coastal lagoons, Baltic Sea, pH, eutrophication, climatic changes</p> <p>CM code: H:15 Poster</p> <p>Withdrawn</p>
12:23	<p>CM code: H:16 Poster</p> <p>Title: Can pelagic gastropods be used to assess the impacts of ocean acidification in the North Sea?</p> <p>Authors: Pablo Leon Dias, Eileen Bresnan, Kathryn Cook, Pam Walsham, Miep Helfrich, and Kevin Mackenzie</p> <p>Keywords: plankton, ocean acidification, gastropods, North Sea, "Impact Assessment"</p>
12:26	<p>CM code: H:17 Poster</p> <p>Title: Diurnal variation of pH in Oshoro Bay, Hokkaido, Japan – A monitoring study assessing and projecting impacts of ocean acidification on coastal ecosystem</p> <p>Authors: Shintaro Takao and Masahiko Fujii</p> <p>Keywords: subarctic region, ocean acidification, coastal ecosystem, diurnal variation</p>
12:29	<p>CM code: H:18 Poster</p> <p>Title: Changes in ocean chemistry during the late Miocene</p> <p>Authors: Nefeli Kafousia, V. Karakitsios, G. Kontakiotis, K. Agiadi, and M. De Rafelis</p> <p>Keywords: Messinian salinity crisis, oxygen isotopes, extreme environment</p>
12:32	<p>CM code: H:19 Poster</p> <p>Title: Evaluating the effects of ocean acidification on sand-smelt larvae: a case study addressing swimming ability and biochemical biomarkers</p> <p>Authors: Cátia Sofia Esteves, S. Novais, S. Mendes, A. F. Lopes, A. P. Oliveira, M. Lemos, E. J. Gonçalves, and A. M. Faria</p> <p>Keywords: ocean acidification, early life stages, Ucrit; oxidative stress, sand-smelt</p>
12:35	<p>Discussion</p>

13:00	Lunch break
15:00	Introduction
15:05	<p>CM code: H:11 Oral</p> <p>Title: Disruption of behavioural lateralization and shoaling cohesion on sand smelt (<i>Atherina presbyter</i>) larvae under ocean acidification</p> <p>Authors: Ana Lopes, P. L. Munday, M. Pimentel, R. Rosa, E. J. Gonçalves, and A. M. Faria</p> <p>Keywords: ocean acidification, gabazine, GABA-A receptor, lateralization, shoaling, sand smelt</p>
15:20	<p>CM code: H:12 Oral</p> <p>Title: CO₂-induced ocean acidification increases risk of predation in coastal temperate fish larvae</p> <p>Authors: Ana Margarida Faria, A. F. Lopes, A. P. Oliveira, P. Munday, and E. J. Gonçalves</p> <p>Keywords: ocean acidification, temperate fish larvae, predation risk, odours, scototaxis</p>
15:35	<p>CM code: H:05 Oral</p> <p>Title: Economic impacts of ocean acidification on shellfish fisheries and aquaculture in the United Kingdom</p> <p>Authors: John K. Pinnegar, Jeo Lee, and Silvana Birchenough</p> <p>Keywords: acidification, pH, mollusc, shellfish, crustacean, economic</p>
15:50	<p>CM code: H:07 Oral</p> <p>Title: Applying organized skepticism to ocean acidification research, or some marine organisms will do just fine in a high CO₂ world</p> <p>Author: Howard I. Browman</p> <p>Keywords: ocean acidification, Calanus, herring; cod, larvae; early life history, acute effects, toxicity, evolution, resistance, adaptation</p>
16:05	Panel discussion
16:30	End of session

Theme session I

A holistic ecosystem approach for marine management and conservation:
Opportunities through the application of genetic and genomic approaches

Conveners: Jann Th. Martinsohn (JRC), Dorte Bekkevold (Denmark),
and Filip Volckaert (Belgium)

Monday 21 September, 15:00–18:30, Hovedbanen

Monday 21 September

15:00	Opening and introduction Appointment of rapporteur Presentation of papers
15:05	CM code: I:11 Oral Title: From genes to ecosystems: opportunities and constraints in the application of genomics to fisheries management Author: Gary R. Carvalho Keywords: fisheries genetics, genomics, genetic management, conservation genetics, second generation sequencing, resilience, adaptive diversity
15:25	CM code: I:03 Oral Title: Using genetic methods to make seafood products more sustainable Author: Friederike Ziegler Keywords: genetic supply, chain, seafood, LCA, traceability
15:45	Questions
15:50	CM code: I:04 Oral Title: Into the wild: the impact of European sea bass farm escapees on natural populations Authors: Ilaria Coscia, Jasmien Hillen, Rob Ogden, Adrian Carr, Gregory Maes the AquaTrace Consortium, and Filip Volckaert Keywords: ddRAD, <i>Dicentrarchus labrax</i> , genomics, sea bass, SNP, traceability
16:00	CM code: I:08 Oral Title: Use of molecular markers for monitoring the genetic effects of hatchery-based stock enhancement and for tracking hatchery-born individuals in the great scallop (<i>Pecten maximus</i>) Authors: Grégory Charrier, Romain Morvezen, Elodie Borcier, Nolwen le Duff, Jean Laroche, and Pierre Boudry Keywords: great scallop, <i>Pecten maximus</i> , genetic diversity, stock enhancement, hatchery, genetic monitoring, molecular marker-based pedigrees
16:10	CM code: I:05 Oral Title: Genomic traceability of the larval and juvenile stages of sole: the case of the Belgian nursery Authors: Sophie Delerue-Ricard, Léo Barbut, Ilaria Coscia, Geneviève Lacroix, Andreas Vanden Bavière, Johan Robbens, and Filip A. M. Volckaert Keywords: connectivity, population structure, early-life stages, <i>Solea solea</i> , North Sea
16:20	Discussion

16:30	<p>CM code: I:01 Oral</p> <p>Title: Genome-wide SNP analysis reveals a genetic basis for sea-age variation in Atlantic salmon: implications for conservation and management</p> <p>Authors: Craig Primmer, Susan E. Johnston, Tutku Aykanat, Panu Orell, Victoria L. Pritchard, Matthew P. Kent, Sigbjørn Lien, Eero Niemelä, and Jaakko Erkinaro</p> <p>Keywords: conservation genomics, life history evolution, population management, fisheries, angling, tourism</p>
16:40	<p>CM code: I:10 Oral</p> <p>Title: The history of cod in Greenland: a major fishery collapse explained by archived DNA</p> <p>Authors: Einar Eg Nielsen, Sara Bonanomi, Loïc Pellissier, Nina Overgaard Therkildsen, Rasmus Berg Hedeholm, Anja Retzel, Steffen Malskær Olsen, Anders Nielsen, Christophe Pampoulie, Jakob Hemmer-Hansen, Mary Susanne Wisz, and Peter GrønkJær</p> <p>Keywords: genetics, genomics, DNA, fisheries management, mixed stocks, climate, archived otoliths</p>
16:50	<p>CM code: I:02 Oral</p> <p>Title: Genetic structures and divergent loci in the natural populations of walleye pollock, <i>Theragra chalcogramma</i></p> <p>Authors: Nadiatul Hafiza Hassan, Ayako Suda, Yoshihisa Suyama, Yu Matsuki, and Masakado Kawata</p> <p>Keywords: walleye pollock, SNP, adaptive loci, genotyping by sequencing</p>
17:00	<p>CM code: I:07 Oral</p> <p>Title: Genome-wide SNPs reveal divergence within the <i>S. mentella</i> complex</p> <p>Authors: Atal Saha, Matthew Kent, Lorenz Hauser, Benjamin Planque, Jon-Ivar Westgaard, Steve Cadrin, and Torild Johansen</p> <p>Keywords: oceanic, morph types, redfish, next generation sequencing, local adaptation</p>
17:10	<p>CM code: I:06 Oral</p> <p>Title: Regulation of coastal fisheries in a MP fjord based on genetic monitoring; a success story?</p> <p>Authors: Torild Johansen, Jon Ivar Westgaard, Bjørghild Seliussen, Kjell Nedreaas, Geir Dahle, and Asgeir Aglen</p> <p>Keywords: units, stock, population genetic, Pan1</p>
17:20	<p>CM code: I:12 Oral</p> <p>Title: Managing population mixing; genetics supported stock splitting in Atlantic cod</p> <p>Authors: Jakob Hemmer-Hansen, Karin Hüsey, Bastian Huwer, Henrik Mosegaard, and Margit Eero</p> <p>Keywords: genetics, genomics, fisheries management, individual assignment, population mixing</p>
17:30	<p>CM code: I:09 Oral</p> <p>Title: Population structure and genetic management unit delineation in the Atlantic bluefin tuna using a genotyping-by-sequencing approach</p> <p>Authors: Gregory Neils Puncher, Alessia Cariani, Gregory E. Maes, Jeroen Van Houdt, Koen Herten, Aitor Albaina, Rita Cannas, Naiara Rodríguez-Ezpeleta, Haritz Arrizabalaga, and Fausto Tinti</p> <p>Keywords: SNPs, Atlantic bluefin tuna, population structure, genotyping-by-sequencing</p>
17:40	<p>CM code: I:23 Oral</p> <p>Title: Genetic Stock Identification improves management of Pacific salmon through novel migratory insights</p> <p>Authors: Morten T. Limborg, Christopher Habicht, Timothy T. Baker, and James E. Seeb</p> <p>Keywords: GSI, sockeye salmon, real-time management, migratory patterns</p>

	CM code: I:14 Poster Withdrawn
17:50	CM code: I:15 Poster Title: New transcriptome-derived SNPs unravel the genetic structure and effective population size of the European anchovy (<i>Engraulis encrasicolus</i> , L) in the Bay of Biscay Authors: Iratxe Montes, Iratxe Zarraonaindia, Mikel Iriondo, Carmen Manzano, W. Stewart Grant, Gary R. Carvalho, Unai Cotano, Maria Santos, Darrell Conklin, Xabier Irigoien, and Andone Estonba Keywords: adaptation, natural selection, salinity, inshore, offshore, conservation, bottleneck, fishery collapse, overfishing
17:55	CM code: I:18 Poster Title: Depth-associated genetic structure within redfish (<i>Sebastes mentella</i>) across the North Atlantic: one broad region, two depth strata, two incipient species? Authors: Alexandra E. Valentin, Christoph Stransky, Don Power, and Jean-Marie Sévigny Keywords: redfish, genetics, shape, archived otoliths, depth
18:00	CM code: I:16 Poster Title: Bridging the gap between fisheries genetics and management Authors: Ingrid Spies, Andre E. Punt, and Paul Spencer Keywords: fisheries management, genetics
18:05	CM code: I:20 Poster Title: Atlantic mackerel: determining the origins of the feeding migrations and applications to management Authors: Sarah J. Helyar, Guðmundur Óskarsson, Guðbjörg Ólafsdóttir, Kristinn Ólafsson, Sigurlaug Skírnisdóttir, Jan Arge Jacobsen, Hóraldur Joensen, Geir Dahle, Aril Slotte, Teunis Jansen, Helle Siegstad, Anna Kristin Daníelsdóttir, Páll Guðmundsson, Sindri Sigurðsson, Anfinn Olsen, Martin Castonguay, Kiersten Curti, Brendan O'Hea, Jacques Massé, and Christophe Pampoulie Keywords: mackerel, genetics, population structure, fisheries management, pelagic
18:10	CM code: I:21 Poster Title: Comparative population genomics of two highly mobile whaler shark species caught in commercial and recreational fisheries Authors: Claudia Junge, Stephen C. Donnellan, Charlie Huveneers, Corey Bradshaw, Alexis Simon, and Bronwyn Gillanders Keywords: population genomics, RAD seq, whaler sharks, gene-flow, fisheries
18:15	Discussion
18:30	End of session

Theme session J

CIA on the loose - workshop

Conveners: Jesper H. Andersen (Denmark), Laura Uusitalo (Finland), and Jan Tjalling van der Wal (the Netherlands)

Friday 25 September, 14:00-16:00, Enghave Plads and Kødbyen

Friday 25 September

14:00 **Opening and introduction**
Appointment of rapporteur
Presentation of contributions

Keynote presentation

CM code: J:01 Poster

Title: The effects of a mucilaginous bloom on rocky shore macroalgal assemblages exposed to multiple stressors

Authors: Sarah Caronni, Maria Anna Delaria, Giovanni Macri, Augusto Navone, Anna Occhipinti-Ambrogi, Pieraugusto Panzalis, and Giulia Ceccherelli

Keywords: macroalgal assemblages, *Chrysophaeum taylorii*, mucilage, multiple stressors

CM code: J:02 Poster

Title: What can we learn from project-level CIA that can be applied to MSFD?

Author: Gareth E. L. Johnson, Rachel Crabtree, Ian Reach, and Phil Latto

Keywords: Cumulative Impact Assessment, Environmental Impact Assessment, Marine Strategy Framework Directive, marine pressures, benthic habitat

CM code: J:03 Poster

Title: Assessing cumulative pressures on protected marine benthic features

Authors: Rachel J. Shucksmith, Christina Kelly, and Richard L. Shelmerdine

Keywords: cumulative, benthic, predictive modelling, marine spatial planning

CM code: J:04 Poster

Title: A comparative assessment of CIA approaches – steps towards a conceptual framework

Authors: Thomas Backhaus and Adrian Judd

Keywords: synergism, antagonism, additivity, Good Environmental Status (GES), uncertainty assessment

16:00 **End of session**

Theme session L

Science-industry partnerships: The value of cooperative research in fisheries and marine management

Conveners: Clara Ulrich (Denmark), John Manderson (USA), Mike Fitzpatrick (Ireland), and Richard Robins (USA)

Tuesday 22 September, 11:30–18:30, Sankt Hans Torv

Wednesday 23 September, 08:30–13:00, Sankt Hans Torv

Tuesday 22 September

11:30 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

Theme: Generic reviews of ISP across Europe and North America

11:35 **CM code:** L:22 Oral
Title: Experience of industry–science partnership in the Canadian Fisheries Research Network
Authors: Robert L. Stephenson, Susan Thompson, Daniel Duplisea, *et al.*
Keywords: industry, academia, government stakeholders, training, sharing, student, best practice

11:45 **CM code:** L:10 Oral
Title: Advantages of placing cooperative research at the foundation of ecosystem based assessment and management
Authors: John Manderson, Chris Roebuck, and John Hoey
Keywords: cooperative research, industry partnerships, ecosystem assessment and management

11:55 **CM code:** L:11 Oral
Title: Experiments in the heart of the transition zone: Practice, pitfalls and potential
Authors: Steven Mackinson and Petter Holm
Keywords: stakeholder, ecosystem approach, co-management, co-creation, governance, participatory research, decision-making, responsible research and innovation

12:05 **Questions**

Theme: ISP for better knowledge and management of single species

12:10 **CM code:** L:01 Oral
Title: Participatory research serving the management of an inshore fishery for edible crab
Authors: Paul Hart, Emma Pearson, Ewan Hunter, Alan Steer, Kevin Arscott, and Sarah Clark
Keywords: edible crab, Devon, participatory research, inshore, fisher, scientist

12:20 **CM code:** L:08 Oral
Title: Cooperative research addresses key questions to facilitate improved management of the English Channel scallop fishery
Authors: Claire L. Szostek, Lee G. Murray, Natalie Hold, Ewen Bell, and Michel J. Kaiser
Keywords: scallop dredging, habitat impacts, population structure, bycatch, industry–science partnerships, fisheries management

12:30 **CM code:** L:02 Oral
Title: Science in support of industry-led initiatives in inshore fishery management in Orkney
Authors: Michael C. Bell, Kate R. Johnson, Kate Rydzkowski, Matthew Coleman, Stewart Crichton, and Fiona Matheson
Keywords: inshore fishery management, shellfish, fishery monitoring, vessel monitoring systems, marine spatial planning, marine renewable energy

12:40 **CM code:** L:27 Oral
Title: Mutual interests of science and industry in data collected during fishery and processing of edible crabs (*Cancer pagurus*)
Authors: Snorre Bakke, Astrid Woll, Guldborg Sjøvik, and Jens Petter Wold
Keywords: edible crab, *Cancer pagurus*, near-infrared, reference fleet, industry and scientist cooperation

12:50 **Questions**

13:00 **Lunch break**

15:00 **CM code:** L:12 Oral
Title: Utilizing collaborative science–industry partnerships to estimate the post-release mortality rate of haddock discarded in the Gulf of Maine recreational fishery
Authors: Douglas Zemeckis, Connor Capizzano, Emily Jones, Micah Dean, William Hoffman, Nicholas Buchan, Steven X. Cadrin, and John Mandelman
Keywords: acoustic telemetry, cooperative research, Gulf of Maine, haddock, post-release mortality, recreational fishing

15:10 **CM code:** L:26 Oral
Title: Collaborative Cod Spawning Research in the Gulf of Maine
Authors: Christopher H. McGuire, Douglas R. Zemeckis, William S. Hoffman, Micah J. Dean, Frank Mirarchi, Steven X. Cadrin, and Sofie M. Van Parijs
Keywords: cooperative research, cod, acoustic telemetry, passive acoustics, spawning behavior

15:20 **CM code:** L:15 Oral
Title: Science–industry surveys: Building a bridge between stock assessment and fishermen’s knowledge
Authors: Karin J. van der Reijden, Jan Jaap Poos, and Ruben Verkempynck
Keywords: cooperative research, science-stakeholder collaboration, demersal fisheries, total allowable catch, data-limited species

15:30 **Questions**

Theme: ISP for ecosystem-based fisheries management

15:40 **CM code:** L:07 Oral
Title: Utilizing fishermen's local ecological knowledge to evaluate survival from barotrauma for bycatch species of low abundance
Authors: Jocelyn Runnebaum and Yong Chen
Keywords: cooperative research, bycatch survival, groundfish, commercial fisheries

15:50	<p>CM code: L:04 Oral</p> <p>Title: Integrating knowledge among fishermen and scientists for the conservation of marine protected species in Portugal: developments of the project LIFE + MarPro</p> <p>Authors: Ana Marçalo, Diana Feijó, Marisa Ferreira, Alexandra Silva, José Vingada, and Catarina Eira</p> <p>Keywords: cetacean and marine birds-fishery interactions, fisher's knowledge, fishers–scientists collaboration, mitigation</p>
16:00	<p>CM code: L:06 Oral</p> <p>Title: ISSF Skipper Workshops: The process of finding and adopting better practices in bycatch mitigation with the help of tuna purse seine fishers</p> <p>Authors: Jefferson Murua, Gala Moreno, and Víctor Restrepo</p> <p>Keywords: Skippers Workshops, by-catch mitigation, tuna, FADs, participatory approach, fishers</p>
16:10	<p>CM code: L:13 Oral</p> <p>Title: Co-management in practice: role of an industry-management-science partnership in implementing ecosystem-base management in the South Australian Sardine Fishery</p> <p>Authors: Tim Ward, Paul Watson, and Brad Milic</p> <p>Keywords: sardine, dolphins, co-management, ecosystem-based management</p>
16:20	Questions
16:30	Coffee break
17:00	<p>CM code: L:35 Poster</p> <p>Title: Using habitat association models, ocean forecasts, and cooperative research to avoid river herring incidental catches</p> <p>Authors: Sara M. Turner, John P. Manderson, David E. Richardson, John Hoey, and Jonathan A. Hare</p> <p>Keywords: incidental catch avoidance, generalized additive models, distribution models, habitat associations</p>
17:02	<p>CM code: L:38 Poster</p> <p>Title: Science–Industry Partnership in a high-risk, high-potential biotechnology project: Developing a vaccine to sterilize farmed salmon</p> <p>Authors: Dorothy J. Dankel, Harald Sveier, Nina Santi, and Anna Wargelius</p> <p>Keywords: science–industry, CRISPR-Cas9, aquaculture, salmon, vaccine, ethics, social aspects</p>
17:04	<p>CM code: L:32 Poster</p> <p>Title: Difficulties in integrating aquaculture and local fishing on fisheries co-management. The case of Spanish Mediterranean</p> <p>Authors: Rodrigo Martínez-Novó, Luis Miret-Pastor, Emmánuel Lizcano, and Paloma Herrera-Racionero</p> <p>Keywords: marine aquaculture, local fishing, co-management, sustainability</p>
17:06	<p>CM code: L:17 Oral</p> <p>Title: Co-operative research in fisheries in support of the Maritime Spatial Planning</p> <p>Authors: Robert Aps, Mihhail Fetissov, and Madli Kopti</p> <p>Keywords: Baltic Sea, fisheries, maritime spatial planning, Bow-tie analysis, environmental risk management</p>

17:16	<p>CM code: L:23 Oral</p> <p>Title: Science–industry partnerships: The value of cooperative research in fisheries and marine management</p> <p>Authors: Thomas Catchpole, Bob van Marlen, Sebastian Uhlmann, Ruben Theunynck, Peter Randall, Hans Nilsson, Sonia Mehault, Dorothee Kopp, Inger Wilms, Karin van der Reijden, Pieke Molenaar, Niels Madsen, Caroline Methling, and Mike Breen</p> <p>Keywords: survival, discards, landing obligation, partnership, exemption</p>
17:26	<p>Questions</p>
<p>Theme: Fisheries management and participatory modelling</p>	
17:40	<p>CM code: L:20 Oral</p> <p>Title: Larger mesh-sizes in the North Sea brown shrimp (<i>Crangon crangon</i>) fishery: A win-win situation for the fishermen and the ecosystem</p> <p>Authors: Claudia C. Günther, Marc Hufnagl, Sebastian Schulz, Juan Santos, Jörg Berkenhagen, Bente Limmer, Tom Neudecker, Daniel Stepputtis, and Axel Temming</p> <p>Keywords: brown shrimp, selectivity, mesh-size, yield-per-model, North Sea</p>
17:50	<p>CM code: L:09 Oral</p> <p>Title: The development and testing of an indicator framework for analyzing the distribution of community benefits in Atlantic Canadian fisheries</p> <p>Authors: Daniel Mombourquette, Anthony Charles, and Robert Stephenson</p> <p>Keywords: collaboration, fisheries, evaluation</p>
18:00	<p>CM code: L:05 Oral</p> <p>Title: A participatory approach to parameterising a fisheries behavioural model</p> <p>Authors: Jennifer Shepperson, Lee Murray, Steven Mackinson, Ewen Bell, and Michel Kaiser</p> <p>Keywords: fisher behaviour, participatory modelling, conjoint analysis, questionnaire, patch choice</p>
18:10	<p>CM code: L:03 Oral</p> <p>Title: Insights from behavioural economics for fisheries management</p> <p>Authors: Sarah B. M. Kraak, Ciaran Kelly, Chris Anderson, Dorothy Dankel, Matteo Galizzi, Mark Gibson, Diogo Gonçalves, Katell Hamon, Paul Hart, Jean-Jacques Maguire, Jeroen Nieboer, Ingrid van Putten, Andrew Reeson, Dave Reid, Andries Richter, and Alessandro Tavoni</p> <p>Keywords: behavioural economics, predictably irrational, nudge, human behaviour, altruistic preferences</p>
18:20	<p>Questions</p>
18:30	<p>End of day</p>

Wednesday 23 September

Theme: Mixed fisheries and landings obligation

- 08:30** **CM code:** L:24 Oral
Title: Collaborative approaches to optimize harvest within bycatch constraints in the New England multispecies fishery
Authors: Catherine E. O’Keefe, Steven X. Cadrin, Richie Canastra, and Mark Phillips
Keywords: bycatch, cooperative research, multispecies fishery
- 08:40** **CM code:** L:25 Oral
Title: DAMARA: showcasing a decision support tool for mixed fisheries in the Celtic Sea
Authors: David Goldsborough, Norman Graham, Coilin Minto, Paul Dolder, and Simon Mardle
Keywords: mix fisheries, Decision Support Tool, Celtic Sea, science–industry partnership, fisheries, cooperative research, scenarios, management, information
- 08:50** **CM code:** L:28 Oral
Title: Can scientists provide relevant information on species distribution to help fishermen defining strategies to avoid unwanted catches?
Author: Youen Vermard
Keywords: fishing strategies, avoid unwanted catches, species distribution
- 09:00** **CM code:** L:34 Poster
Title: Evolving the ecosystem approach in European fisheries. What can policy moves for a stronger involvement of stakeholders in fisheries research and governance learn from experience in New Zealand?
Authors: Steven Mackinson and David Middleton
Keywords: stakeholder, ecosystem approach, co-management, governance, participatory research, decision-making
- 09:02** **CM code:** L:37 Poster
Title: Joined-Up Thinking from Joined-Up Data
Authors: David Currie, Jeremy Gault, and Ciaran Kelly
Keywords: data management, data integration, fisheries reporting
- 09:04** **CM code:** L:41 Poster
Title: Knowing the past to improve the future: Estimating historical fishing catches to improve fisheries management in the western Mediterranean Sea
Authors: Marta Carreras, Marta Coll, Antoni Quetglas, Raquel Goñi, Xavier Pastor, Maria José Cornax, Magdalena Iglesias, Enric Massutí, Pere Oliver, Ricardo Aguilar, Andrea Au, Kyrstn Zyllich, and Daniel Pauly
Keywords: catch reconstruction, fishers’ collaboration, stock assessment
- 09:06** **Questions**
- 09:15** **CM code:** L:16 Oral
Title: Relaxing technical regulations under the Landing Obligations – effects on the discard ratio
Authors: Lars O. Mortensen, Hans Jakob Olesen, Søren Qvist Eliassen, Josefine Egekvist, Anna Rindorf, and Clara Ulrich
Keywords: free gear modification, results-based management, discard reduction
- 09:22** **CM code:** L:14 Oral
Title: Experiences of how fishers grab opportunities in (more) free regulation of gear
Authors: Søren Q. Eliassen, Lars O. Mortensen, and Clara Ulrich
Keywords: free gear modification, tools for selectivity assessment, competencies
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09:30	<p>CM code: L:21 Oral</p> <p>Title: Vision of French fishers about the European Union regulation on Landing Obligation (LO): which ecological and economical impacts and which strategies to cope?</p> <p>Authors: Katia Frangoudes, Kévin Leleu, Marie-Joëlle Rochet, and Verena Trenkel</p> <p>Keywords: French fishers, vision, discards, impacts</p>
09:40	<p>CM code: L:33 Poster</p> <p>Title: The Risk Assessment for Sourcing Seafood (RASS): A web-based tool for facilitating responsible sourcing in the seafood supply chain</p> <p>Authors: Alex Caveen, Tom Pickerell, William Lart, and David Parker</p> <p>Keywords: fisheries risk assessment, seafood industry, knowledge transfer, environmental impact</p>
09:42	<p>CM code: L:36 Poster</p> <p>Title: Fully Documented Fisheries – Is Remote Electronic Monitoring the future tool in fisheries control?</p> <p>Authors: Kristian Schreiber Plet-Hansen, Clara Ulrich, Hans Jakob Olesen, Lars Olof Mortensen, and Heiðrikur Bergsson</p> <p>Keywords: FDF, fisheries, management, REM, monitoring, fisheries policy</p>
09:44	<p>CM code: L:42 Poster</p> <p>Title: Industry science: unlocking the real potential of industry data, curiosity and knowledge</p> <p>Authors: M. A. Pastoors, C. R. Sparrevohn, J. Batsleer, and W. van Broekhoven</p> <p>Keywords: industry–science partnership, data, knowledge, information, skippers, trust, feedback, responsibility, credibility, engagement, learning</p>
09:46	Questions
10:00	Coffee break
Theme: Social and institutional considerations	
10:30	<p>CM code: L:30 Oral</p> <p>Title: Reflections on a stakeholder-centered approach to fisheries management</p> <p>Authors: Renee Reilly, Michael Jones, Lisa Peterson, and John Syslo</p> <p>Keywords: stakeholder, management, conflict-resolution</p>
10:40	<p>CM code: L:19 Oral</p> <p>Title: A review of programs established to encourage industry-led approaches to selective gear development</p> <p>Authors: Jordan Feekings, Barry O’Neil, Ludvig Krag, and Clara Ulrich</p> <p>Keywords: fishing gear development, industry-led approaches</p>
10:50	<p>CM code: L:18 Oral</p> <p>Title: Who holds it together? Fishermen’s associations as bridging organisations in science–industry collaborations</p> <p>Authors: Kari Stange, Jan van Tatenhove, and Judith van Leeuwen</p> <p>Keywords: knowledge exchange, science–industry partnerships, fisheries management</p>
11:00	<p>CM code: L:31 Oral</p> <p>Title: How the sausage is made: When science–industry partnerships lead to decreased trust of scientific assessment</p> <p>Author: Steven Gray</p> <p>Keywords: cooperative research, trust, assessment, cultural consensus, economic change, ecosystem change, perception</p>

11:10	CM code: L:29 Oral Title: Tomorrow never dies: performing a ‘premortem’ on Belgian industry–fisheries science partnerships Authors: Sebastian Uhlmann, Ruben Theunynck, Arne Kinds, and Kim Sys Keywords: beam-trawl fishery, co-operative research, North Sea, premortem decision-making
11:20	Questions
11:30	Final debate and panel discussion
13:00	End of session

Theme session M

Social, economic, and ecological impact assessment across marine sectors?

Conveners: J. Rasmus Nielsen (Denmark), Jörn Schmidt (Germany),

Eric Thunberg (USA), and Dan Holland (USA)

Tuesday 22 September, 12:00–18:30, Nørrebro Runddel

Wednesday 23 September, 08:30–10:00, Nørrebro Runddel

Tuesday 22 September

12:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

12:15 **CM code:** M:02 Oral

Title: Evaluating scenarios to reduce the bottom impact of the Belgian beam trawler fleet: a bottom-up approach of the Belgian fisheries

Authors: Klaas Sys, Jef van Meensel, Jeroen Buysse, and Hans Polet

Keywords: fisheries management, agent-based modelling, pulse trawling, fishermen behaviour

12:30 **CM code:** M:03 Oral

Title: Causes and consequences of technical, biological and spatial interactions in fisheries management modelled from the individual distribution of fishing effort

Authors: Francois Bastardie, J. Rasmus Nielsen, and Morten Vinther

Keywords: displaced fishing effort, Decision Choice Modelling, ecological-economic evaluation, marine space, Maritime Spatial Planning (MSP), scenario evaluation, technical and species interactions

12:45 **Lunch break**

15:00 **CM code:** M:05 Oral

Title: Integrating biological components into a spatially explicit, complex economic model for fisheries management evaluations: The North Sea saithe fishery as a case study

Authors: Sarah Simons, Alexander Kempf, Ralf Döring, Katell Hamon, Heleen Bartelings, and Axel Temming

Keywords: bioeconomic modeling, fisheries management evaluation, population dynamics, fleet dynamics

15:15 **CM code:** M:08 Oral

Title: Multiple management objectives within a mixed prawn fishery: which win-win-win situations?

Authors: Sophie Gourguet, Olivier Thébaud, Sarah Jennings, Rich Little, Cathy Dichmont, Sean Pascoe, Roy Deng, and Luc Doyen

Keywords: bio-economic modelling, co-viability analyses, sustainability, multiple management objectives, uncertainty

15:30	<p>CM code: M:10 Oral</p> <p>Title: Evaluation of integrated ecological-economic models – review and challenges for Implementation</p> <p>Authors: J.R. Nielsen, J.O. Schmidt, E. Thunberg E, D. Holland, F. Bastardie, E. Bethke, R. Buckworth, J.M. Da Rocha, R. Deng, C. Dichmont, R. Doering, H. Frost, E.A. Fulton, D. Garcia, D. Gascuel, S Gourguet, R.A. Groeneveld, J. Guillen, K. Hamon, A. Hoff, J. Horbowy, L.R. Jonsen, R. Little, J. Lleonart, C. Macher, S. Mahevas, F. Maynou, A. Palacz, R. Prellezo, A. Punt, S. Simons, O. Thébaud, C. Ulrich C and S. Waldo S.</p> <p>Keywords: ecological–economic models; comparative evaluation; Marine Cross Sector Spatial Planning; fisheries management advice, use, acceptance and implementation; communication, flexibility and complexity; performance, scales and risks</p>
15:45	<p>CM code: M:11 Oral</p> <p>Title: Modelling catch quota management in a multi-species fishery</p> <p>Authors: Olivier Thébaud, Pierre Lelong, Sophie Gourguet, Luc Doyen, Rich Little, Tony Smith, and Sean Pascoe</p> <p>Keywords: individual transferable quotas, bio-economic modelling, mixed fishery</p>
16:00	<p>CM code: M:12 Oral</p> <p>Title: An integrated end-to-end modelling framework for testing ecosystem-wide effects of human-induced pressures in the Baltic Sea</p> <p>Authors: A. P. Palacz, J. R. Nielsen, A. Christensen, A. Hoff, H. S. Frost, B. Hasler, H. Gislason, M. Maar, F. Bastardie, K. Geitner, L. Ravn-Jonsen, B. Hutniczak, and B. Fulton</p> <p>Keywords: end-2-end, Baltic Sea, eutrophication, model linking, ATLANTIS, cross-sector assessment</p>
16:15	<p>CM code: M:13 Oral</p> <p>Title: Exploring population-specific management for North Sea cod meta-population</p> <p>Authors: Giovanni Romagnoni, Florian Diekert, Marko Lindroos, and Anne Maria Eikeset</p> <p>Keywords: spatial management, meta-population, climate, stock-recruitment, Atlantic cod</p>
16:30	Coffee break
17:00	<p>CM code: M:17 Oral</p> <p>Title: Evaluating the likely impact of the North Sea Multi-Annual Plan (NS MAP) on employment: Methods and limitations</p> <p>Authors: Alyne Delaney, Steven Holmes, Joint Research Council (JRC), Ernesto Jardim (JRC), and Arina Motova (JRC)</p> <p>Keywords: employment, data integration, mixed methods, impact assessment, multi-annual plans, landing obligation</p>
17:15	<p>CM code: M:01 Oral</p> <p>Title: Is the catch quota management mechanism attractive to fishers?? A preliminary analysis of the Danish 2011 CQM trail project</p> <p>Authors: Mbach Ruth Msomphora and Margrethe Aanesen</p> <p>Keywords: Catch quota management (CQM), landing quota, incentive compatibility, participation constrain, principal agent model, total allowable catch (TAC), fisher</p>
17:30	<p>CM code: M:06 Oral</p> <p>Title: Integrated ecological–economic valuation of ecosystem services to support spatial planning and sustainable governance of coastal and marine ecosystems</p> <p>Authors: Rute Pinto, R. Brouwer, J. Patrício, C. Marta-Pedroso, A. Baeta, T. Domingos, and J. C. Marques</p> <p>Keywords: Integrated Catchment and Coastal Zone Management (IC CZM), ecosystem services, contingent valuation, scope, scale, willingness to pay</p>

17:45	CM code: M:15 Oral Title: Looking beyond fisheries restrictions: the recreation benefits of no-take zones in the Azores Authors: Nuno Leite, Eva Giacomello, Frederico Cardigos, Ricardo Serrão Santos, and Adriana Ressurreição Keywords: marine protected areas, no-take zones, cultural ecosystem services, recreation benefits, Azores
18:00	CM code: M:09 Oral Title: Handling change: development of an interdisciplinary tool to triage human response to marine resource crises Authors: Alida Bundy, R. I. Perry, P. Guillotreau, R. Chuenpagdee, E. Allison, O. Defeo, B. Glaeser, M. Isaacs, Y. Li, and other authors of case studies Keywords: IMBER-ADApT, typology, marine resource crisis, governance response, triage
18:15	CM code: M:14 Oral Title: VALDUVIS: a new way of assessing the sustainability of fishing activities Authors: Arne Kinds, Kim Sys, Laura Schotte, Koen Mondelaers, and Hans Polet Keywords: fisheries, indicators, integrated sustainability assessment, electronic logbook, monitoring, fisheries improvement program, incentives
18:30	End of day

Wednesday 23 September

08:30	Opening
08:40	CM code: M:16 Oral Title: The value of marine ecotourism in the open sea: the Azores case-study Author: Adriana Isabel Marques da Ressurreicao Keywords: spatially resolved valuations, ecosystem services, marine-based tourism, Azores
08:55	CM Code: M:07 Oral Title: Integrating biological components into a spatially explicit, complex economic model for fisheries management evaluations: The North Sea saithe fishery as a case study Authors: Sarah Simons, Alexander Kempf, Ralf Döring, Katell Hamon, Heleen Bartelings, and Axel Temming Keywords: bioeconomic modelling, fisheries management evaluation, population dynamics, fleet dynamics
09:10	CM code: M:18 Poster Title: Seeing the forest and the trees: Application of hierarchy theory to integrated ecosystem assessment Author: M. Robin Anderson Keywords: hierarchy theory, integrated ecosystem assessment, spatial scale temporal scale
09:15	CM code: M:19 Poster Title: The fisheries management trough fishing effort – should this alternative be withdrawn? Author: Remigius Sakas, Antanas Kontautas, and Tomas Zolubas Keywords: ecological approach, uncertainty, fishing gear, fishing space
09:20	CM code: M:04 Poster Title: Visualising impacts and trade-offs in EU Fisheries using BEMEF Authors: Griffin Carpenter and Aniol Esteban Keywords: bio-economic model, socio-economic indicators, MSY, trade-off analysis
09:25	Discussion
10:00	End of session

Theme session N

Seafloor habitat mapping: from observation to management

Conveners: Frank-Detlef Bockelmann (Germany), Pål Buhl-Mortensen (Norway), Ibon Galparsoro (Spain), and Steven Degraer (Belgium)

Thursday 24 September, 12:00–18:30, Nørrebros Runddel

Friday 25 September, 09:00–12:00, Nørrebros Runddel

Thursday 24 September

12:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

12:15 **CM code: N:01 Oral**

Title: Developing a best practice for accuracy assessment in benthic habitat mapping

Authors: Peter Mitchell, Markus Diesing, David Stephens, and Anna-Leena Downie

Keywords: benthic habitat mapping, map accuracy, error reporting, spatial distribution of error

12:30 **CM code: N:10 Oral**

Title: Understanding the effect of scale and resolution on predictive habitat maps

Authors: Richard L. Shelmerdine and Rachel J. Shucksmith

Keywords: species distribution models, habitat modelling, data resolution, spatial scale

12:45 **CM code: N:15 Oral**

Title: Remote sensing classification of sea floor habitats in the German Wadden Sea

Authors: K. Stelzer, K. Eskildsen, W. Adolph, M. Gade, S. Melchionna, G. Müller, and L. Kemme

Keywords: Wadden Sea, sea floor, habitats, remote sensing, classification, environmental legislation

13:00 **Lunch break**

15:00 **CM code: N:16 Oral**

Title: Bioclastic sediments as proxy for cold water coral mounds – applications for ecosystem based management

Authors: Terje Thorsnes, P. Buhl-Mortensen, L. R. Bjarnadóttir, V. Bellec, and M. Dolan

Keywords: bioclastic sediments, biogenic mounds, cold water coral reefs, multibeam bathymetry, ecosystem based management

15:15 **CM code: N:12 Oral**

Title: Monitoring impacts of large-scale wave energy removal: baseline characterisation of the benthic community

Authors: Andrew Want, Michael C. Bell, and Jon C. Side

Keywords: wave energy, benthic habitat monitoring

CM code: N:25 Poster

Withdrawn

CM code: N:26 Poster

Withdrawn

15:36	<p>CM code: N:28 Poster</p> <p>Title: Marine environmental monitoring of deep water sediments using a new Video Assisted Multi Sampler (VAMS)</p> <p>Authors: Bjørn Serigstad, Tor Magne Ensrud, Magne Norvald Olsen, and Frode Korneliussen</p> <p>Keywords: marine habitat mapping, environmental monitoring, sediment sampling, VAMS</p>
15:39	<p>CM code: N:24 Poster</p> <p>Title: Extracting shallow bathymetry from very high resolution satellite spectral bands and a machine learning algorithm</p> <p>Authors: Antoine Collin and James Hench</p> <p>Keywords: coastal, bathymetry mapping, satellite, machine learner</p>
15:42	<p>CM code: N:27 Poster</p> <p>Title: Field identification guide to marine benthic invertebrates in West Greenland</p> <p>Authors: Helle Jørgensbye and Nanette Hammeken Arboe</p> <p>Keywords: benthic invertebrates, Greenland, field guide</p>
15:45	<p>CM code: N:11 Oral</p> <p>Title: Distribution models of temperate rocky Reef Habitat-Forming Species On The Continental Shelf In Eastern Australia: Setting The Baseline To Monitor And Predict Future Changes</p> <p>Authors: Martin P. Marzloff, Neville Barrett, Neil Holbrook, Eric C. J. Oliver, Lainey James, and Craig R. Johnson</p> <p>Keywords: habitat-forming species, distribution modelling, ecosystem monitoring, indicator species, Autonomous Underwater Vehicle</p>
16:00	<p>CM code: N:05 Oral</p> <p>Title: Mapping hydrographic provinces for benthic ecosystem management: A case study in the Barents Sea using a regional-scale ocean circulation model</p> <p>Authors: Myriam Lacharité, Lis Lindal Jorgensen, Anna Metaxas, Vidar Lien, and Hein Rune Skjoldal</p> <p>Keywords: benthos, habitat mapping, hydrography, ocean circulation model, Barents Sea</p>
16:15	<p>CM code: N:07 Oral</p> <p>Title: Mapping major benthic macrofaunal communities for the whole Baltic Sea</p> <p>Authors: Mayya Gogina, Michael L. Zettler, Henrik Nygård, Mats Blomqvist, Darius Daunys, Alf Bernhard Josefson, Jonne Kotta, Alexey Maximov, Jan Warzocha, and Vadim Yermakov</p> <p>Keywords: benthos distribution, Baltic Sea, mapping</p>
16:30	<p>Coffee break</p>
	<p>CM code: N:19 Oral</p> <p>Withdrawn</p>
17:00	<p>CM code: N:22 Oral</p> <p>Title: Habitat mapping as a tool for conservation and sustainable use of marine resources: Some perspectives from the MAREANO Programme, Norway</p> <p>Authors: Lene Buhl-Mortensen, Pål Buhl-Mortensen, Margaret F. J. Dolan, and Genoveva Gonzalez-Mirelis</p> <p>Keywords: habitat mapping, management tools, MAREANO, communities, biotopes</p>
17:15	<p>CM code: N:02 Oral</p> <p>Title: Observation and assessment of North Sea habitats – experience from the NOAH project</p> <p>Authors: Frank-Detlef Bockelmann, Kay-Christian Emeis, and Ulrike Kleeberg</p> <p>Keywords: habitat mapping, seabed status, baseline data, assessment, North Sea</p>

17:30	<p>CM code: N:08 Oral</p> <p>Title: The EMODnet Seabed Habitats initiative and examples of application of the EUSeaMap broad-scale seabed habitat maps</p> <p>Authors: Eleonora Manca and Mickaël Vasquez</p> <p>Keywords: EMODnet, EUSeaMap, habitat mapping, seabed, EUNIS</p>
17:45	<p>CM code: N:23 Oral</p> <p>Title: Predictive mapping of the main benthic assemblages of the continental shelf and submarine canyon of Cap de Creus (NW Mediterranean): Implications for conservation and management</p> <p>Authors: Carlos Dominguez-Carrió, Josep-Maria Gili, Katleen Roberts, Mikel Zabala, Claudio Lo Iacono, Susana Requena, Claude Estournel, Andrea Gori, Stefano Ambroso, Jordi Grinyó, Thomas Duhaut, Guillem Corbera, and Maria Martins</p> <p>Keywords: mapping, community assemblages, submarine canyon, ROV</p>
18:00	<p>CM code: N:03 Oral</p> <p>Title: Predictive Mapping of Benthic Communities and Species for the German North Sea</p> <p>Authors: Roland Pesch, Bastian Schuchardt, Carmen-Pia Günther, Tim Bildstein, Dario Fiorentino, Kathrin Heinicke, and Dieter Boedeker</p> <p>Keywords: biotope mapping, benthic species, predictive models, random forests</p>
18:15	Discussion
18:30	End of day

Friday 25 September

09:00	<p>CM code: N:04 Oral</p> <p>Title: Predictive habitat modeling of Cold Water Coral Distribution in Mediterranean Canyon, from observation to management</p> <p>Authors: Annaelle Bargain, I. Pairaud, F. Foglini, and M. C. Fabri</p> <p>Keywords: cold water coral, Habitat Suitability Model, anthropogenic pressures, Mediterranean canyons</p>
09:15	<p>CM code: N:09 Oral</p> <p>Title: Predictive substratum modelling for juvenile gadoid distribution and abundance</p> <p>Authors: Sophie Elliott, Alessandro D. Sabatino, William R. Turrell, Michael R. Heath, and David M. Bailey</p> <p>Keywords: habitat mapping, spatial predictive modelling, generalised additive models (GAM), juvenile gadoid, species distribution, spatial management</p>
09:30	<p>CM code: N:14 Oral</p> <p>Title: Modeling spatio-temporal distribution of American lobster (<i>Homarus americanus</i>) in the Gulf of Maine</p> <p>Authors: Kisei Tanaka, Jui-Han Chang, and Yong Chen</p> <p>Keywords: American lobster, <i>Homarus americanus</i>, Generalized Additive Model, species distribution modelling, Gulf of Maine</p>
09:45	<p>CM code: N:20 Oral</p> <p>Title: Modelling the distribution of cold water corals of Norway and Iceland</p> <p>Authors: Julian Mariano Burgos, Genoveva Gonzalez-Mirelis, Pål Buhl-Mortensen, and Steinunn Hilma Ólafsdóttir</p> <p>Keywords: cold-water corals, habitat suitability modelling, <i>Lophelia pertusa</i>, <i>Primnoa resedaformis</i></p>

10:00	<p>CM code: N:21 Oral</p> <p>Title: Classification and distribution modelling of deep-water biotopes and habitats – a foundation for offshore marine spatial management</p> <p>Authors: Pål Buhl-Mortensen, Genoveva Gonzalez Mirelis, and Margaret Dolan</p> <p>Keywords: habitat, mapping, biotopes, modeling, management, deep-sea</p>
10:15	<p>CM code: N:18 Oral</p> <p>Title: Habitat Models and Maps to Support North Pacific Groundfish Fisheries Management</p> <p>Authors: Jodi L. Pirtle, S. Kalei Shotwell, and Chris N. Rooper</p> <p>Keywords: habitat mapping, predictive models, fisheries management, North Pacific, groundfish</p>
10:30	Coffee break
11:00	<p>CM code: N:17 Oral</p> <p>Title: Using a science–industry partnership to identify herring <i>Clupea harengus</i> spawning locations in the North Sea</p> <p>Authors: M. A. Pastoors, L. A. W. Clausen, M. Russell, I. Reach, A. Wiseman, V. Ohms, C. R. Sparrevohn, Harry Strehlow, Dorothy J. Dankel, and David Goldsborough</p> <p>Keywords: herring, <i>Clupea harengus</i>, North Sea, spawning area, science–industry partnership, fisheries, aggregate dredging, gravel beds, geography, data, knowledge, information</p>
11:15	<p>CM code: N:13 Oral</p> <p>Title: MSC’s risk-based tool for assessing habitat impacts</p> <p>Author: Jodi Bostrom</p> <p>Keywords: MSC, benthic habitats, habitat impacts, certification requirements</p>
11:30	<p>CM code: N:06 Oral</p> <p>Title: Effectiveness of a coral conservation area in the Gulf of Maine: distribution along the boundaries and changes in abundance of two deep-water octocoral species over 13 years</p> <p>Authors: Swaantje Bennecke and Anna Metaxas</p> <p>Keywords: deep-water coral, <i>Primnoa</i>, <i>Paragorgia</i>, distribution, abundance, size, monitoring, conservation</p>
11:45	Discussion
12:00	End of session

Theme session 0

Marine spatial planning and fisheries:

A stock-take on approaches, examples, and future needs

Conveners: Erik Olsen (Norway) and Vanessa Stelzenmüller (Germany)

Friday 25 September, 09:00–16:00, Sankt Hans Torv

Friday 25 September

09:00 **Opening and introduction**

Appointment of rapporteur

Presentation of papers

09:15 **CM code: O:01 Oral**

Title: Integration of fisheries in marine spatial planning: *Quo vadis?*

Authors: Holger Janßen, Heleen Bartelings, Francois Bastardie, Margit Eero, Raphaël Girardin, Katell G. Hamon, Hans-Harald Hinrichsen, Paul Marchal, J. Rasmus Nielsen, Olivier Le Pape, Torsten Schulze, Sarah Simons, Lorna R. Teal, Alex Tidd, and Youen Vermard

Keywords: fisheries, marine space, maritime spatial planning, MSP, marine governance, EBM

09:30 **CM code: O:02 Oral**

Title: Multidisciplinary mapping of fish habitats in the Sound, Denmark for maritime spatial planning

Authors: Thomas Kirk Sørensen, Josefine Egekvist, Frank I. Hansen, Elliot J. Brown, Henrik Carl, Peter R. Møller, Grete E. Dinesen, Morten Vinther, and Josianne Støttrup

Keywords: fish habitat mapping, maritime spatial planning, ecosystem-based management

09:45 **CM code: O:03 Oral**

Title: Co-location of passive gear fisheries in offshore wind farms: Fairy-tale or future marine spatial planning approach?

Authors: V. Stelzenmüller, R. Diekmann, F. Bastardie, T. Schulze, J. Berkenhagen, M. Kloppmann, B. Pogoda, B. Buck, and G. Kraus

Keywords: fishing effort displacement, gillnet fishery, pots, logbook data, spatial overlap, stakeholder consultation, mapping, mitigation, VMS data

10:00 **CM code: O:04 Oral**

Title: Using high-resolution species distribution modelling to produce reproduction habitat maps of coastal fish to support marine spatial planning

Authors: Meri Kallasvuori, Jarno Vanhatalo, and Lari Veneranta

Keywords: Baltic Sea, coastal zone, essential fish habitats, Gaussian processes

10:15 **CM code: O:05 Oral**

Title: Addressing ecological–economic effects of marine spatial plans from displacing the bottom fishing pressure

Authors: Pascal Thoya, Francois Bastardie, Grete E. Dinesen, Jørgen L. S. Hansen, and J. Rasmus Nielsen

Keywords: agent-based models, benthic fauna, displaced fishing effort, ecological–economic evaluation, marine space, scenario evaluation

10:30 **Coffee break**

11:00	<p>CM code: O:06 Oral</p> <p>Title: Effects of spatial management on ecosystem and fisheries simulated using the Northeast US Atlantis ecosystem model</p> <p>Authors: E. Olsen, G. Fay, S. Gaichas, R. Gamble, S. Lucey, and J. S. Link</p> <p>Keywords: fisheries, spatial closures, spatial management, ecosystem model, Atlantis, Northeast US, renewable energy</p>
11:15	<p>CM code: O:08 Oral</p> <p>Title: Innovation in the approach to integrating fisheries with MSP in Scotland</p> <p>Authors: Kate Johnson, Mike Bell, Sandy Kerr, Kate Rydzkowski, and Matthew Coleman</p> <p>Keywords: marine spatial planning, fisheries management, integration, innovation, lessons</p>
11:30	<p>CM code: O:09 Oral</p> <p>Title: Integration of fisheries into the process of Maritime Spatial Planning – environmental risk management of planning solutions</p> <p>Authors: Madli Kopti and Robert Aps</p> <p>Keywords: Baltic Sea, fisheries, maritime spatial planning, Bow-tie analysis, environmental risk management</p>
11:45	<p>CM code: O:10 Oral</p> <p>Title: Assessing the potential of developing MSP in the Philippines</p> <p>Author: Daphnie S. Galvez</p> <p>Keywords: marine spatial planning, archipelagic countries, stakeholder participation, local knowledge, local perceptions, conceptual mapping, GIS</p>
12:00	<p>CM code: O:11 Oral</p> <p>Title: Ecosystem service trade-off assessment to support marine spatial planning</p> <p>Authors: Antje Gimpel, Vanessa Stelzenmüller, Rudi Voss, Jens Floeter, Bela H. Buck, and Axel Temming</p> <p>Keywords: ecosystem services, geographic information system (GIS), German EEZ, marine spatial planning (MSP), trade-off analysis</p>
12:15	<p>CM code: O:12 Oral</p> <p>Title: Multi-model projection of spatial planning and climate conflicts in the Northeast Atlantic</p> <p>Authors: Ana M Queiros, Friedermann Keyl, Klaus Huebert, Marie Maar, Willem Stolte, Susan Kay, Jose Fernandes, Miranda Jones, Paul Marchal, Paul Somerfield, Katel Hammon, Youen Vermad, Melanie Austen, and Myron Peck</p> <p>Keywords: climate change, EC, ecosystem model, spatial planning</p>
12:30	<p>CM code: O:13 Oral</p> <p>Title: Something is moving at sea: fisheries measures as part of the Belgian marine spatial plan</p> <p>Authors: Ellen Pecceu, Bart Vanelslander, Sofie Vandendriessche, Gert Van Hoey, Els Torreele, Hans Polet, and Kris Hostens</p> <p>Keywords: marine spatial planning, VMS, fisheries management measures, governance</p>
12:45	<p>CM code: O:14 Oral</p> <p>Title: Stakeholder participation: lessons learned</p> <p>Authors: Wouter van Broekhoven and Willem Visser</p> <p>Keywords: stakeholder, stakeholder participation, Dogger Bank, marine spatial planning</p>
13:00	<p>Lunch break</p>

14:00	<p>CM code: O:15 Oral</p> <p>Title: Bringing the ecosystem services concept into marine management decisions</p> <p>Authors: Jacqueline F. Tweddle, Anja Byg, Ian Davies, Kate Irvine, Andronikos Kafas, Jasper Kenter, Alison MacDonald, Rory O'Hara Murray, Tavis Potts, Anne-Michelle Slater, Kirsty Wright, and Beth E. Scott</p> <p>Keywords: ecosystem services, decision-making, marine management, marine spatial planning</p>
14:15	<p>CM code: O:17 Poster</p> <p>Title: Maritime spatial planning and the Baltic Sea commercial trawl fisheries: the Estonian case</p> <p>Authors: Mihhail Fetissov and Robert Aps</p> <p>Keywords: Baltic Sea, trawl fisheries, electronic log-book data, fishing fleet behaviour, maritime spatial planning</p>
14:20	<p>CM code: O:19 Poster</p> <p>Title: Multi-industry marine spatial planning: assessing trade-offs and co-location opportunities with fishing, conservation and offshore renewable energy</p> <p>Authors: K. L. Yates, D. S. Schoeman, and C. J. Klein</p> <p>Keywords: marine spatial planning, biodiversity conservation, fisheries management, offshore energy, trade-offs</p>
14:25	<p>CM code: O:20 Poster</p> <p>Title: Gadoids and the North Sea regime shift: a spatial-temporal approach</p> <p>Author: Friedemann Keyl</p> <p>Keywords: spatial distribution, local abundance, regime shift, cod, hake, whiting, Norway pout</p>
14:30	<p>CM code: O:21 Poster</p> <p>Title: Facing the challenge of Arctic fisheries management within a context of spatially differentiated ecological–economic externalities</p> <p>Authors: Brooks A. Kaiser, Linda M. Fernandez, Jan H. Sundet, and Melina Kourantidou</p> <p>Keywords: Arctic fisheries, non-native species, management</p>
14:35	<p>CM code: O:22 Poster</p> <p>Title: Spatial distribution of fishing activity from the southern Portugal purse-seine fleet based on Automatic Identification System (AIS) data</p> <p>Authors: Pedro Monteiro, Luis Bentes, Frederico Oliveira, Frederic Zabel, and Jorge M. S. Gonçalves</p> <p>Keywords: Automatic Identification System (AIS), purse seine, fishing ground, marine spatial planning, ecosystem-based management</p>
14:40	<p>CM code: O:23 Poster</p> <p>Title: AquaSpace project: Ecosystem approach to making space for aquaculture</p> <p>Authors: Ibon Galparsoro, Pepe Aguilar-Manjarrez, Anne Ansnes Hageberg, Cedric Bacher, Øivind Bergh, Suzanne Bricker, Joao G. Ferreira, Jeremy Gault, Jon Grant, Matt Gubbins, Béla Halasi-Kovács, John Icely, Ioannis Karakassis, Éva Kerepeczki, Hui Liu, Nuria Marba, and Ana Martins Sequ</p> <p>Keywords: ecosystem management, maritime spatial planning, environmental impacts of aquaculture</p>
14:45	Discussion
16:00	End of session

Theme session P

How to hit an uncertain, moving target: achieving Good Environmental Status under the Marine Strategy Framework Directive

Conveners: Graham Pierce (UK), Mark Tasker (UK), and Antonina dos Santos (Portugal)

Wednesday 23 September, 10:30–13:00, Nørrebros Runddel

Thursday 24 September, 10:00–12:00, Nørrebros Runddel

Wednesday 23 September

10:30 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

Theme: Biodiversity and habitats

10:40 **CM code: P:06 Oral**
Title: Time series analysis to assess base-line conditions and environmental status in relation to plankton-based indicators: Case study for the North Atlantic Spanish Demarcation
Authors: Enrique Nogueira, Rafael González-Quirós, Lucie Buttay, and Ana Miranda
Keywords: time series analysis, plankton-based indicators, surveillance indicators, regime shift, environmentally driven variability

10:50 **CM code: P:18 Oral**
Title: Benthos habitat quality assessment for the North Sea: joint GES assessments require a coordinated monitoring
Authors: Gert Van Hoey, Marco Francisco, Julia Wischnewski, Steven Degraer, and Kris Hostens
Keywords: benthic habitats, indicators, joint monitoring

11:00 **CM code: P:01 Oral**
Title: Challenges for developing pelagic indicators and setting meaningful targets in a climate of ecological change
Author: Abigail McQuatters-Gollop
Keywords: plankton, indicators, MSFD, policy

11:10 **CM code: P:07 Oral**
Title: Cetacean monitoring program in Macaronesia – contributing to the MSFD goals
Authors: A. M. Correia, G. J. Pierce, M. Rosso, and I. Sousa-Pinto
Keywords: cetaceans, Macaronesia, monitoring, distribution, abundance, habitat

11:20 **Discussion**

Theme: The other descriptors

11:35 **CM code: P:17 Oral**
Title: A cross-regional comparison of non-indigenous species indicators: problems and opportunities for a common assessment
Authors: Paula Chainho and other WGITMO members
Keywords: non-indigenous species, indicators, MSFD, ecoregions

11:45	<p>CM code: P:14 Oral</p> <p>Title: The large fish indicator is responsive to trawling pressure, and to reductions thereof</p> <p>Authors: Georg H. Engelhard, Christopher P. Lynam, Bernardo García-Carreras, Paul J. Dolder, and Steven Mackinson</p> <p>Keywords: fishing effort, fleet reduction scheme, Good Environmental Status (GES), large fish indicator (LFI), Marine Strategy Framework Directive (MSFD), trawling impacts</p>
11:55	<p>CM code: P:19 Oral</p> <p>Title: English Channel Loliginid squid stocks and MSFD descriptors: surplus production models used to estimate stock status and biomass and the role of squid resources in the trophic network</p> <p>Authors: Franck Malhomme, Zoé Porcher, Georges Safi and Jean-Paul Robin</p> <p>Keywords: <i>Loligo forbesii</i>, <i>Loligo vulgaris</i>, biomass dynamic model, English Channel, carrying capacity, trophic level, isotopic signatures</p>
12:05	<p>CM code: P:10 Oral</p> <p>Title: Evaluating MSFD food-web indicators under environmental gradients, non-linear interactions and threshold dynamics</p> <p>Authors: Martina Kadin, Ingo Fetzer, Thorsten Blenckner, and Saskia A. Otto</p> <p>Keywords: Baltic Sea, indicator, gradients, thresholds, trade-offs, food-webs, D4</p>
12:15	<p>CM code: P:11 Oral</p> <p>Title: Deconstructing time series of sea surface chlorophyll to implement fundamental surveillance indicators of the pelagic food web</p> <p>Authors: Rafael González-Quirós, Enrique Nogueira, Maite Louzao, and Alexander Gershunov</p> <p>Keywords: foodweb, chlorophyll, satellite, Empirical Orthogonal Functions</p>
12:25	<p>CM code: P:16 Oral</p> <p>Title: Using trophic models to define target values of indicators of the good environmental status of marine food webs</p> <p>Authors: Pierre Bourdaud, Didier Gascuel, Abdelkrim Bentorcha, and Anik Brind'Amour</p> <p>Keywords: Good Environmental Status, trophic indicators, target values, ecosystem-based management, Ecopath with Ecosim, EcoTroph</p>
12:35	<p>CM code: P:15 Oral</p> <p>Title: Scaling up trawling impacts on benthic communities: How fine-scale investigations help evaluating large-scale effects</p> <p>Authors: Rabea Diekmann, Hermann Neumann, Ingrid Kröncke, Vanessa Stelzenmüller, Heino Fock, and Gerd Kraus</p> <p>Keywords: MSFD, D6, seafloor integrity, benthos, bottom trawling, VMS</p>
12:45	Discussion
13:00	End of day

Thursday 24 September

10:00 **Opening and welcome back**

Theme: The other descriptors (continued)

10:02 **CM code:** P:12 Oral

Title: Towards Good Environmental Status for underwater noise

Authors: Nathan D. Merchant, Kate L. Brookes, Anthony W. J. Bicknell, Brendan J. Godley, and Matthew J. Witt

Keywords: noise, Good Environmental Status, MSFD, underwater noise, ambient noise

Theme: Implementation and assessment

10:12 **CM code:** P:13 Oral

Title: Marine mammals and good environmental status: science, policy and society; challenges and opportunities

Authors: M. Begoña Santos and Graham J. Pierce

Keywords: MSFD, cetaceans, GES, OSPAR, Spain

10:22 **CM code:** P:02 Oral

Title: A heuristic approach to sustainability assessments under the Marine Strategy Framework Directive

Authors: Heino O. Fock and Gerd Kraus

Keywords: Bayesian models, ecosystem health, multi criteria decision making, environmental assessments

10:32 **CM code:** P:04 Oral

Title: Surveillance indicators and their use in implementation of the Marine Strategy Framework Directive

Authors: Samuel Shephard, Simon P. R. Greenstreet, Gerjan J. Piet, Anna Rindorf, and Mark Dickey-Collas

Keywords: operational indicators, indicator-based management frameworks, policy reaction, management response, good environmental status, assessment and reporting

10:42 **Discussion**

Theme: Future directions and opportunities

10:55 **CM code:** P:09 Oral

Title: The use of biochronologies for baseline environmental monitoring

Author: Paul Butler

Keywords: biochronology, sclerochronology, baseline, ecosystem

11:05 **CM code:** P:08 Oral

Title: Can we obtain MSFD indicators from cetacean strandings data?

Authors: G. Pierce, F. L. Read, A. Brownlow, N. Davison, M. ten Doeschate, N. Anderson, M. Skinner, M. B. Santos, A. Llavona, C. Saavedra, S. Murphy, P. Jepson, R. Deaville, and V. Ridoux

Keywords: conservation, monitoring, mortality, contaminants, life history, pathology

11:15	<p>CM code: P:03 Oral</p> <p>Title: DNA metabarcoding as a novel technique for assessing good environmental status by measuring benthic biodiversity</p> <p>Authors: Eva Aylagas, Ángel Borja, and Naiara Rodríguez-Ezpeleta</p> <p>Keywords: genomic techniques, DNA-metabarcoding, cost-effective monitoring, benthic biodiversity, GES assessment</p>
11:25	<p>CM code: P:22 Oral</p> <p>Title: The pathology of strandings data: Methods to improve the ecological value of the strandings record as a monitoring tool</p> <p>Authors: Mariel ten Doeschate, Andrew Brownlow, Nick Davison, Rob Deaville, Paul Jepson, Graham Pierce, Fiona Read, and Paul Thompson</p> <p>Keywords: harbour porpoise, <i>Phocoena phocoena</i>, Scotland, monitoring, population indicators, cause of death</p>
11:35	Discussion and summing up
12:00	End of session

Posters

<p>CM code: P:20 Poster</p> <p>Title: Time will tell: A visual exploration of MSY under CFP and MSFD</p> <p>Authors: Cristina Ribeiro and Maurizio Gibin</p> <p>Keywords: MSFD, CFP, MSY, fishing stock, safe biological limits</p>
<p>CM code: P:21 Poster</p> <p>Title: Evaluating stable isotopic signals in bivalve <i>Pinna nobilis</i> under different human pressures</p> <p>Authors: Carme Alomar, Maite Vázquez-Luis, Kika Magraner, Laura Lozano, and Salud Deudero</p> <p>Keywords: Mediterranean Sea, filter feeder, boating, Marine Protected Areas, SIAR, nutrient loads</p>
<p>CM code: P:23 Poster</p> <p>Title: Water quality and pollution of South-eastern Baltic Sea and transboundary Curonian and Vistula Lagoons</p> <p>Authors: Sergey Aleksandrov, Ilya Malfanov, and Julia Gorbunova</p> <p>Keywords: Baltic Sea, lagoons, water quality, eutrophication, pollution</p>
<p>CM code: P:24 Poster</p> <p>Title: Validating metabarcoding as a tool for eukaryotic plankton monitoring in estuaries</p> <p>Authors: David Abad, Mikel Aguirre, Aitor Albaina, Aitor Laza, Ibón Uriarte, and Andone Estonba</p> <p>Keywords: metabarcoding, 18S rDNA, plankton, estuaries</p>
<p>CM code: P:25 Poster</p> <p>Withdrawn</p>

Theme session Q

From genes to ecosystems: spatial heterogeneity and temporal dynamics of the Baltic Sea (Co-sponsored by BONUS)

Conveners: Karin Hüsey (Denmark), Jan Dierking (Germany), and Linda Laikre (Sweden)

Thursday 24 September, 10:30–18:30, Hovedbanen

Thursday 24 September

10:30 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

10:32 **Keynote talk**
BONUS for better understanding biological diversity in the Baltic Sea
Andris Andrusaitis

10:42 **Introduction to the BONUS projects: BAMBI, INSPIRE, and BIO-C3**
Jan Dierking, Linda Laikre, and Karin Hüsey

Theme: Spatio-temporal dynamics

10:50 **CM code:** Q:03 Oral
Title: Spatial and temporal variability of mesozooplankton in the Baltic Sea
Authors: Riina Klais, Maiju Lehtiniemi, Marilyn Kalas, Gunta Rubene, Anna Semenova, Piotr Margonski, Anda Ikauniece, Mart Simm, Arno Pöllumäe, and Henn Ojaveer
Keywords: long-term time-series, functional groups, spatial and temporal dynamics, climate, bioinvasion

11:03 **CM code:** Q:13 Oral
Title: Modelling the spatio-temporal dynamics of cod and flounder in the Baltic Sea using bottom trawl surveys data
Authors: Alessandro Orio and Michele Casini
Keywords: Baltic Sea, cod, flounder, spatial modelling, trawl surveys, population dynamics, species distribution

11:16 **CM code:** Q:11 Oral
Title: Net displacement and time at large: Adult migrations probably do not contribute to whole Baltic scale redistribution of cod (*Gadus morhua* L.)
Authors: Stefan Neuenfeldt and Christian Möllmann
Keywords: Baltic Sea, cod, migrations, re-distribution

11:29 **CM code:** Q:01 Oral
Title: Stock mixing of eastern and western Baltic cod in SD 24
Authors: Karin Hüsey, Henrik Mosegaard, Christoffer Moesgaard Albertsen, Jakob Hemmer-Hansen, and Margit Eero
Keywords: Baltic cod, stock discrimination, migration, otolith shape analysis

11:42 **CM code:** Q:09 Oral
Title: Predicting spatial and temporal use of coastal habitats by Atlantic cod using foraging theory
Authors: Anders Persson, Peter Ljungberg, and P. Anders Nilsson
Keywords: Atlantic cod, foraging, coastal habitat, behavioural decisions, spatial scale

11:55	<p>CM code: Q:14 Oral</p> <p>Title: Biology, abundance and feeding ecology of the round goby (<i>Neogobius melanostomus</i>) in the eastern German Baltic</p> <p>Authors: Christina Henseler, Christiane Bock, Paul Kotterba, Helmut Winkler, and Daniel Oesterwind</p> <p>Keywords: Round goby, feeding ecology, habitat, abundance</p>
Theme: Functional diversity	
12:08	<p>CM code: Q:10 Oral</p> <p>Title: Long-term functional trends in Baltic Sea coastal macrofauna and fish</p> <p>Authors: A. Törnroos, J. Olsson, A. Gårdmark, L. Pécuchet, M. Blomqvist, M. Lindegren, and E. Bonsdorff</p> <p>Keywords: functional diversity, temporal variability, Baltic Sea, benthic macrofauna, fish, environmental drivers</p>
Theme: Early life stage dynamics	
12:21	<p>CM code: Q:06 Oral</p> <p>Title: Spawning areas of eastern Baltic cod revisited: Using hydrodynamic modeling to identify hotspots</p> <p>Authors: Andreas Lehmann, Hans-Harald Hinrichsen, and Katharina Höflich</p> <p>Keywords: Baltic Sea, hydrodynamic modeling, Baltic cod, spawning areas</p>
12:34	<p>CM code: Q:20 Oral</p> <p>Title: Processes controlling recruitment in Baltic cod</p> <p>Authors: Friedrich W. Köster, Bastian Huwer, Hans-Harald Hinrichsen, Viola Neumann, Andrej Makarchouk, Margit Eero, Karin Hüsey, and Maris Plikshs</p> <p>Keywords: eastern Baltic cod, recruitment, environmental drivers, species interactions</p>
12:47	<p>CM code: Q:16 Oral</p> <p>Title: Changes in spatio-temporal distribution of eggs and larvae of sprat (<i>Sprattus sprattus</i>) in the Gotland Basin (Baltic Sea) in 2004–2014</p> <p>Authors: Andrei Makarchouk and Timo Arula</p> <p>Keywords: sprat, Baltic Sea, eggs, larvae, horizontal distribution</p>
13:00	Lunch break
15:00	<p>CM code: Q:05 Oral</p> <p>Title: Loops of near-shore habitat use by early herring (<i>Clupea harengus</i>) life stages in the Western Baltic Sea</p> <p>Authors: Patrick Polte, Paul Kotterba, Julia Heiler, Sarah Beyer, Dorothee Moll, and Lena v. Nordheim</p> <p>Keywords: Atlantic herring, <i>Clupea harengus</i>, ichthyoplankton, Baltic Sea</p>
Theme: Genetic diversity	
15:13	<p>CM code: Q:02 Oral</p> <p>Title: Spring- and autumn-spawning herring in the Gulf of Riga: intraspecific biodiversity across small local scales</p> <p>Authors: Dorte Bekkevold, Riho Gross, Timo Arula, and Henn Ojaveer</p> <p>Keywords: <i>Clupea harengus</i>, biodiversity, genetic population structure, Baltic Sea, spawning time</p>

15:26	<p>CM code: Q:15 Oral</p> <p>Title: The philopatric Baltic Sea pike shows weak genetic substructuring with patterns of long distance gene flow</p> <p>Authors: Lovisa Wennerström, Nils Ryman, Jens Olsson, and Linda Laikre</p> <p>Keywords: population genetic structure, dispersal</p>
15:39	<p>CM code: Q:21 Oral</p> <p>Title: Environmental factors modulate relationships between genetic diversity and fitness-related parameters in the Baltic amphipod, <i>Monoporeia affinis</i></p> <p>Authors: A. M. L. Karlson, V. Ketmaier, P. Guban, S. Girra, M. Löf, L. Wennström, B. Sundelin, L. Laikre, and E. Gorokhova</p> <p>Keywords: genetic diversity, fitness, Baltic Sea, amphipod, environmental stress</p>
Theme: Biological responses to anthropogenic drivers	
15:52	<p>CM code: Q:22 Oral</p> <p>Title: Oxygen minimum zone induced rapid temporal fluctuations of Eastern Baltic cod genetic diversity</p> <p>Authors: Jan Dierking, Burkhard von Dewitz, Laura Elsbernd, Hendrik Schulz, Seraina Bracamonte, Karin Hüsey, Jakob Hemmer-Hansen, Uwe Krumme, Rainer Oeberst, Hans-Harald Hinrichsen, and Thorsten Reusch</p> <p>Keywords: oxygen minimum zone, genetic diversity, Eastern Baltic cod, reproduction, long-term data series</p>
16:05	<p>CM code: Q:17 Oral</p> <p>Title: Adaptive capacity to climate change of Baltic Sea copepods</p> <p>Authors: Konrad Karlsson and Monika Winder</p> <p>Keywords: adaptation, zooplankton, genetic, temperature, salinity</p>
16:18	<p>CM code: Q:07 Oral</p> <p>Title: Has human-induced eutrophication promoted fish production in the Baltic Sea?</p> <p>Authors: Margit Eero, Helén Andersson, Elin Almroth Rosell, and Brian R. MacKenzie</p> <p>Keywords: eutrophication, fish production, Baltic Sea</p>
16:30	Coffee break
17:00	<p>CM code: Q:04 Oral</p> <p>Title: Biogeographic changes in fish diversity driven by changes in climate and exploitation</p> <p>Authors: Karoline Minna Bryndum, Asbjørn Christiansen, Jun She, Katherine Richardson, and Brian R. MacKenzie</p> <p>Keywords: climate change, biodiversity, fish communities, exploitation, sea bottom temperature</p>
17:13	<p>CM code: Q:23 Oral</p> <p>Title: Effect of mollusc invasion and climate change on long-term changes of eutrophication and primary production in the lagoons of the Baltic Sea</p> <p>Authors: Sergey Aleksandrov, Julia Gorbunova, and Lilia Rudinskaya</p> <p>Keywords: Baltic Sea, lagoons, eutrophication, primary production, mollusc invasion, climate change</p>

Theme 6: Biodiversity and management

- 17:26** **CM code:** Q:08 Oral
Title: Baltic Sea genetic biodiversity: current knowledge and how it can be used in conservation management
Authors: E. Jansson, L. Wennerström, and L. Laikre
Keywords: Aichi target 13, marine genetics/genomics, practical management
- 17:39** **CM code:** Q:19 Oral
Title: Microbial genetic indicators of Baltic Sea environmental status: the BLUEPRINT project
Authors: Deniz Bombar, Anders Andersson, Åke Hagström, Christoph Humborg, Klaus Jürgens, Veljo Kisand, Matthias Labrenz, Mathias Middelboe, Jarone Pinhassi, Kaarina Sivonen, and Lasse Riemann
Keywords: metagenomics, metatranscriptomics, Baltic Sea, biogeochemistry, modeling, Blueprint
- 17:52** **CM code:** Q:12 Oral
Title: Using expert knowledge for food web modelling – a Baltic fuzzy logic experiment
Authors: Phil S. Levin and Christian Möllmann
Keywords: Baltic Sea, ecosystem-based management, ecosystem functioning, expert knowledge, food web modelling, fuzzy cognitive mapping
- 18:05** **1-minute poster presentations**
- CM code:** Q:24 Poster
Title: Molluscan communities in a low-saline estuarine transitional environment of the southern Baltic Sea
Authors: Dmitry Philippenko and Elena Naumenko
Keywords: Baltic Sea, estuaries, molluscs, salinity
- CM code:** Q:25 Poster
Title: Factors affecting the abundance of spring spawning herring (*Clupea harengus membras*) larvae in the Gulf of Riga
Authors: Timo Arula, Tiit Raid, Mart Simm, and Henn Ojaveer
Keywords: coastal area, larval herring, water temperature, prey, temporal overlap, Baltic Sea
- CM code:** Q:26 Poster
Title: Female ovarian abnormalities and reproductive failure of autumn spawning herring (*Clupea harengus membras*) in the Baltic Sea
Authors: Henn Ojaveer, Jonna Tomkiewicz, Timo Arula, and Riina Klais
Keywords: spawning aggregations, reproductive disturbance, ovarian histology, hydroclimate, Gulf of Riga
- CM code:** Q:27 Poster
Title: Salinity tolerance and correlated physiology of the invasive round goby *Neogobius melanostomus*
Authors: Jane Behrens, Emil Flindt, and Mikael van Deurs
Keywords: round goby, physiology, salinity tolerance, invasive species, Baltic Sea
- CM code:** Q:28 Poster
Title: Abundance and composition of zooplankton communities in the continuum of the Nemunas river, Curonian Lagoon, and Baltic Sea
Authors: Evelina Grinienė, Monika Juodeikytė, and Jūratė Lesutienė
Keywords: Baltic Sea, microzooplankton, salinity gradient
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CM code: Q:29 Poster

Title: Small-scale heterogeneity of zooplankton patches in the Baltic Sea

Author: K. Hänselmann, J. P. Herrmann, K. O. Möller, R. Brachvogel, and A. Temming

Keywords: Baltic, spatial heterogeneity, zooplankton, prey patches, sprat, VPR

CM code: Q:30 Poster

Title: Genetic variation in the physiological performance of *Fucus vesiculosus*: Does the genotype matter?

Author: Eva Rothäusler, Joakim Sjöroos, and Veijo Jormalainen

Keywords: Baltic Sea, *Fucus vesiculosus*, genetic variation, photosynthesis, osmotic stress

CM code: Q:31 Poster

Title: Assessing the ocean health of the Baltic Sea

Authors: Thorsten Blenckner, L. Viktorsson, M. Schewenius, T. Elwing, J. Rockström, and B. Halpern

Keywords: ecosystem assessment, resilience, spatial dynamics

CM code: Q:32 Poster

Title: Changes in fish communities in the coastal area of Baltic Sea and Gulf of Riga during last decade

Authors: Laura Briekmane, Didzis Ustups, and Maris Plikshs

Keywords: fish communities, temporal changes, Baltic Sea, coastal zone

CM code: Q:33 Poster

Title: Small-scale distribution of Baltic sprat: Statistical properties of school height, length and biomass imply school formation and species interaction mechanisms

Authors: Stefan Neuenfeldt, Dominik Gloes, Klas Ove Möller, and Christian Möllmann

Keywords: Baltic, sprat, schooling, small scale distribution

CM code: Q:34 Poster

Title: Round Goby: A story of invasion success in the Baltic

Authors: Helmut Winkler, Paul Kotterba, and Daniel Oesterwind

Keywords: round goby, invasion, occurrence, Baltic

CM code: Q:35 Poster

Title: Spatial and temporal distribution of flounder ecotypes in the Baltic Sea

Authors: Ann-Britt Florin, Anders Nissling, and Isa Wallin

Keywords: flounder stock, spawning types, demersal eggs, assessment units, habitat utilization, sympatric populations

CM code: Q:36 Poster

Title: Temperature effects on growth of spring and summer cohorts and implications for survival in young sprat (*Sprattus sprattus* L.) of the Western Baltic Sea

Authors: Claudia C. Günther, Jens-Peter Hermann, Marc Hufnagl, and Axel Temming

Keywords: sprat, recruitment, growth, simulation model

CM code: Q:37 Poster

Title: Fecundity regulation, maturation progression and spawning fidelity in relation to size, condition and age of Baltic herring (*Clupea harengus* L.)

Authors: Rikke Hagstrøm Bucholtz, Jens Randel Nyengaard, Johnnie Bremholm Andersen, and Jonna Tomkiewicz

Keywords: stereology, somatic lipid content, atresia, skipped spawning, otolith analysis

CM code: Q:38 Poster

Title: Predicting future shifts in herring spawning habitat in the North Sea

Authors: Stavroula Tsoukali, Asbjørn Christensen, Tian Tian, André W. Visser, and Brian R. MacKenzie

Keywords: climate change, habitat modelling, herring, spawning season, North Sea, survival, future projections

18:20 **Summing up**

18:30 **End of session**

Theme session R

Causes and consequences of hypoxia

Conveners: Karin E. Limburg (USA), Valerio Bartolino (Sweden), and Benjamin Walther (USA)

Thursday 24 September, 17:00–18:30, Enghave Plads and Kødbyen

Friday 25 September, 09:00–13:00, Enghave Plads and Kødbyen

Friday 25 September, 14:30–15:30, Spisehuset

Thursday 24 September

17:00 **Opening and introduction**
Appointment of rapporteur
Presentation of papers

Theme: Drivers of hypoxia

17:01 **Invited speaker**
CM code: R:03 Oral
Title: Climate change and coastal hypoxia
Authors: Nancy N. Rabalais and R. Eugene Turner
Keywords: climate, nutrients, hypoxia, runoff, stratification

17:20 **Invited speaker**
CM code: R:15 Oral
Title: Understanding and predicting hypoxia over the continental margin in the northern California Current
Authors: John A. Barth, Francis Chan, Stephen D. Pierce, Katherine A. Adams, R. Kipp Shearman, and Anatoli Y. Erofeev
Keywords: hypoxia, upwelling, coastal ocean

17:40 **CM code:** R:14 Oral
Title: The Gulf of St. Lawrence biogeochemical model: a tool to study the evolution of hypoxic conditions and habitat changes
Authors: Diane Lavoie, Michel Starr, Joël Chassé, Denis Gilbert, Denis Chabot, and Nicolas Lambert
Keywords: numerical modelling, hypoxia, habitat change

17:52 **CM code:** R:04 Oral
Title: Scientific knowledge of physical causes and ecological consequences of hypoxia in an enclosed bay as a basis for regional management planning
Authors: Hideaki Nakata, Hirokazu Suzaki, Sangdeok Chung, and Hitoshi Yamaguchi
Keywords: hypoxia, density-driven current, fish community, restoration plan

18:04 **CM code:** R:06 Oral
Title: Fisheries, low oxygen, and climate change: integrating physiological data with model projections
Authors: Bryony Townhill, Julian D. Metcalfe, David A. Righton, Steven D. Simpson, and John K. Pinnegar
Keywords: oxygen, hypoxia, fisheries, climate change

18:16	CM code: R:20 Oral Title: Drivers and consequences of altered seasonal patterns of hypoxia in Chesapeake Bay, USA Authors: Jeremy M. Testa, W. Michael Kemp, and Elizabeth North Keywords: hypoxia, eutrophication, numerical model
18:28	Two-minute wrap up
18:30	End of day

Friday 25 September

Theme: Baltic hypoxia – causes and consequences

09:00	Invited speaker CM code: R:05 Oral Title: The diversity of hypoxia manifestations in the Baltic Sea region Authors: Jacob Carstensen and Daniel J. Conley Keywords: biogeochemistry, climate change, eutrophication, nutrient management, trends
09:20	Invited speaker CM code: R:02 Oral Title: Causes and consequences of the Baltic Sea hypoxia: the vicious circle revisited with models Author: Oleg P. Savchuk Keywords: Baltic Sea hypoxia, biogeochemical effects, eutrophication and fishery, modeling
09:40	CM code: R:21 Oral Title: Dead zones relate to the body condition of the Baltic Sea cod Authors: Michele Casini, Filip Käll, Martin Hansson, and Joakim Hjelm Keywords: demersal fish, body growth, hypoxia and anoxia, density-dependence, prey availability
09:52	CM code: R:12 Oral Title: Evidence for hypoxia-induced changes in eastern Baltic cod: possible mechanisms and consequences Authors: Uwe Krumme, Rainer Oeberst, Martina Bleil, and Christopher Zimmermann Keywords: hypoxia, eastern Baltic cod, hydrography, metabolism
10:04	CM code: R:11 Oral Title: Eastern Baltic cod reproduction – driven by hydrography or eutrophication? Authors: Bärbel Müller-Karulis, Maciej Tomczack, Hans-Harald Hinrichsen, Bo Gustafsson, Christoph Humborg, and Maris Plikshs Keywords: Baltic cod, early life stage survival, eutrophication, hypoxia
10:16	CM code: R:22 Poster Title: Tracking sublethal effects of hypoxia exposure on fishes with otolith chemistry: a trans-basin comparison Authors: Benjamin D. Walther, Karin E. Limburg, Zunli Lu, George Jackman, John Mohan, Yvonne Walther, Anders Nissling, Peter Weber, Axel Schmitt, and Melvin Samson Keywords: hypoxia, otolith, redox-sensitive, manganese, sublethal effects

10:20	<p>CM code: R:23 Poster Title: A bioenergetics- and biogeochemistry-based model of Mn uptake in fish otoliths Authors: Karin E. Limburg, Melvin A. Samson, and Benjamin D. Walther Keywords: hypoxia, otolith microchemistry, manganese, coupled bioenergetics-biogeochemistry model</p>
10:24	Discussion
10:30	Coffee break
Theme: Physiological effects of hypoxia	
11:00	<p>Invited speaker CM code: R:13 Oral Title: The functional basis of fish responses to dissolved oxygen Authors: Guy Claireaux and Denis Chabot Keywords: hypoxia, fish, energetics</p>
11:20	<p>Invited speaker CM code: R:08 Oral Title: Digesting in hypoxia: impact on gastric evacuation rate and postprandial metabolism (SDA) of Atlantic cod, <i>Gadus morhua</i> Authors: Denis Chabot, Jane Behrens, and Niels Andersen Keywords: chronic hypoxia, gastric evacuation, SDA, growth rate</p>
11:40	<p>CM code: R:10 Oral Title: Effects of hypoxia on fish: a metabolic approach Authors: Kayla L. Gilmore, Zoe A. Doubleday, and Bronwyn M. Gillanders Keywords: hypoxia, fish, Australia, physiology, oxygen consumption</p>
Theme: Biotic consequences of hypoxia	
11:52	<p>Invited speaker CM code: R:09 Oral Title: Modeling the population-level effects of hypoxia on a coastal fish: implications of a spatially-explicit individual-based model Authors: Kenneth A. Rose, Sean Creekmore, Peter Thomas, J. Kevin Craig, Rachael Miller-Neilan, Md. Saydur Rahman, Lixia Wang, and Dubravko Justic Keywords: hypoxia, fish, model, individual-based, population, Gulf of Mexico, dead zone</p>
12:12	<p>Invited speaker CM code: R:19 Oral Title: Viewing hypoxia across scales of space and time Authors: Denise Breitburg, Virginia Clark, Lisa Levin, Karin Limburg, Seth Miller, Andrew Keppel, and Timothy Targett Keywords: hypoxia, eutrophication, fish, fisheries, acidification</p>
12:32	<p>CM code: R:17 Oral Title: Coupling ecosystems exposure to nitrogen and species sensitivity to hypoxia: modelling marine eutrophication in LCIA Authors: Nuno Cosme, Marja Koski, and Michael Z. Hauschild Keywords: exposure factor, effect factor, nitrogen, impacts modelling, marine eutrophication, life cycle impact assessment</p>

12:44	<p>CM code: R:26 Poster</p> <p>Title: From species sensitivity to hypoxia to effect factors modelling in life cycle impact assessment (LCIA)</p> <p>Authors: Nuno Cosme and Michael Z. Hauschild</p> <p>Keywords: dissolved oxygen, sensitivity, hypoxia, effect factor, marine eutrophication, life cycle impact assessment</p>
12:48	Discussion
13:00	Lunch break
14:30	<p>CM code: R:07 Oral</p> <p>Title: Zooplankton distribution in a hypoxic eddy in the eastern tropical North Atlantic – an “open ocean dead zone”?</p> <p>Authors: Helena Hauss, Svenja Christiansen, Rainer Kiko, Miryan Edvam Lima, Elizandro Rodriguez, Florian Schütte, Damian Grundle, Johannes Karstensen, Carolin Löscher, Arne Körtzinger, and Björn Fiedler</p> <p>Keywords: ADCP, Underwater Vision Profiler (UVP5), oxygen minimum zone, copepods</p>
14:42	<p>CM code: R:18 Oral</p> <p>Title: Foodweb structure and small pelagic fish interactions in hypoxic conditions</p> <p>Authors: N. Nikolioudakis, T. M. Tsagaraki, M. M. Pirounaki, M. Giannoulaki, A. Machias, and S. Somarakis</p> <p>Keywords: forage fish, anchovy, sardine, Mediterranean</p>
14:54	<p>CM code: R:24 Poster</p> <p>Title: From nitrogen enrichment to oxygen depletion: a mechanistic model of coastal marine ecosystems response</p> <p>Authors: Nuno Cosme, Marja Koski, and Michael Z. Hauschild</p> <p>Keywords: biological processes, oxygen consumption, coastal ecosystems, exposure factor, marine eutrophication, life cycle impact assessment</p>
14:57	<p>CM code: R:25 Poster</p> <p>Title: Foodweb structure of mesopelagic communities in high and low oxygen environments in the eastern tropical north Atlantic as identified by stable isotope analysis</p> <p>Authors: Stephanie Czudaj, H. J. T. Hoving, U. Piatkowski, and H. Fock</p> <p>Keywords: mesopelagic communities, trophic interactions, hypoxia, tropical Atlantic, stable isotope analysis</p>
15:00	<p>Casting a HypoxiNet</p> <p>Discussion on the formation of a network for aquatic scientists interested in hypoxia</p>
15:30	End of session

Theme session S

Basin-scale dynamics at lower trophic levels in the North Atlantic

Conveners: Astthor Gislason (Iceland), Claudia Castellani (UK), and Peter Wiebe (USA)

Tuesday 22 September, 17:00–18:30, Hovedbanen

Wednesday 23 September, 08:30–13:00, Hovedbanen

Tuesday 22 September

Opening and introduction
Appointment of rapporteur
Presentation of papers

17:00 **CM code:** S:05 Oral

Title: Patterns of microzooplankton grazing preferences in contrasting biogeochemical provinces of the temperate and sub-tropical Atlantic Ocean

Authors: R. B. Rivkin and M. S. Hale

Keywords: bacteria, biogeochemical cycles, grazing preference, microzooplankton, phytoplankton

17:15 **CM code:** S:01 Oral

Title: Structure and functioning of plankton communities in the Kara Sea in summer period

Authors: Andrey V. Dolgov, Irina P. Prokopchuk, Valentina N. Nesterova, Olga S. Tyukina, Anna S. Orlova, and Aleksander N. Benzik

Keywords: Kara Sea, phytoplankton, zooplankton, copepods, euphausiids

17:30 **CM code:** S:07 Oral

Title: Bottom-up effects on zooplankton biomass persist from spring to summer

Author: Kristina Öie Kvile

Keywords: bottom-up, climate, zooplankton, spring bloom, transport

17:45 **CM code:** S:18 Oral

Title: Seasonal variation in population dynamics of *Calanus finmarchicus* in the south western Norwegian Sea

Authors: Inga Kristiansen, Eilif Gaard, Hjálmar Hátún, and Sigrún Jónasdóttir

Keywords: *Calanus finmarchicus*, seasonal vertical migration, egg production, ingestion, growth, south-western Norwegian Sea, Atlantic water, east Icelandic Water

18:00 **CM code:** S:03 Oral

Title: A North Atlantic basins comparison of diversity, abundance and vertical distribution of mesozooplankton in relation to hydrography and primary production

Authors: Espen Strand, Thor Klevjer, Tor Knutsen, Cabell Davis, Melissa Patrician, and Webjørn Melle

Keywords: North Atlantic basins, mesozooplankton, hydrography, primary production, distribution, high resolution optical data, comparative basins-scale study

18:15 **CM code:** S:11 Oral

Title: Zooplankton and micronekton vertical distribution and diel vertical migration behaviour in the Northern North Atlantic Ocean

Authors: Thor Klevjer, Eirik Norheim, Dag Aksnes, Espen Strand, Tor Knutsen, Webjørn Melle, and Peter Wiebe

Keywords: vertical distribution, optical properties, DVM, low trophic level, mesozooplankton, macrozooplankton, micronekton

18:30 **End of day**

Wednesday 23 September

- 08:30** **CM code:** S:16 Oral
Title: Small-scale distribution of plankton and marine snow in the North Atlantic
Authors: K. O. Möller, M. St. John, B. Christiansen, and C. Möllmann
Keywords: marine snow, zooplankton, North Atlantic, Video Plankton Recorder (VPR), *Calanus finmarchicus*
- 08:45** **CM code:** S:10 Oral
Title: Trophic flow within the microbial and mesozooplankton foodweb in the North Atlantic: processes indicated by analyses of stable isotopes and biovolume spectra
Authors: Sünnje L. Basedow, Nuwan L. da Silva, and Antonio Bode
Keywords: trophic flow, microbial food web, mesozooplankton, North Atlantic
- 09:00** **CM code:** S:19 Oral
Title: Ecology of krill in Icelandic waters
Authors: Teresa Silva, Astthor Gislason, Gudrun Marteinsdóttir, and Olafur S. Astthorsson
Keywords: krill, ecology, distribution
- 09:15** **CM code:** S:14 Oral
Title: A direct estimate of *Calanus finmarchicus* biomass in the Norwegian Sea
Authors: Solfrid Sætre Hjøllo, Morten D. Skogen, Cecilie Hansen, and Espen Bagøien
Keywords: zooplankton, biomass, production, IBM, validation, sampling strategy
- 09:30** **Discussion**
- 10:00** **Coffee break**
- 10:30** **CM code:** S:13 Oral
Title: Habitat modelling of key copepods species in the Northwest Atlantic using depth-integrated data to model past and future changes in distribution and productivity
Authors: S. Albouy-Boyer, S. Plourde, P. Pepin, C. Lehoux, C. Johnson, P. S. Galbraith, D. Hebert, D. Lavoie, J. Chassé, D. Brickman, G. Lazin, and C. Lafleur
Keywords: *Calanus*, *Paracalanus*, general additive mixed models (GAMMs), habitat, Continuous Plankton Recorder (CPR), hindcast and forecasted simulations, global ocean warming
- 10:45** **CM code:** S:17 Oral
Title: On the propagation of the climate change signal through the lower trophic level of the North Atlantic ecosystem and its implications to ecosystem function and habitat
Authors: Momme Butenschön, Andrew Yool, Thomas R. Anderson, and J. Icarus Allen
Keywords: North Atlantic, ecosystem, biogeography, amplification
- 11:00** **CM code:** S:08 Oral
Title: Dynamics and exploitation of crustacean stocks in the European seas over the past 25 years
Authors: Paris Vasilakopoulos and Christos D. Maravelias
Keywords: Common Fisheries Policy (CFP), dynamic factor analysis (DFA), meta-analysis, *Nephrops norvegicus*, trophic cascades

11:15	<p>CM code: S:06 Oral</p> <p>Title: Controlling factors in fish early life history and how they combine to influence trophic links across the North Atlantic Ocean</p> <p>Authors: Anna B. Neuheimer, Mark R. Payne, and Brian R. MacKenzie</p> <p>Keywords: zooplankton, fish, trophic links, early life history, spawning, phenology, North Atlantic, cod</p>
11:30	<p>CM code: S:15 Oral</p> <p>Title: Functional responses of North Atlantic fish eggs to increasing temperature</p> <p>Authors: Stavroula Tsoukali, André W. Visser, and Brian R. MacKenzie</p> <p>Keywords: climate change, degree-days, development time, fish eggs, global warming, North Atlantic, survival, temperature effects</p>
11:45	<p>CM code: S:02 Oral</p> <p>Title: Can we understand and predict the distributional shifts of pelagic fish?</p> <p>Author: Mark R. Payne</p> <p>Keywords: mackerel, herring, blue whiting, predictions, distributional shifts</p>
12:00	<p>CM code: S:12 Oral</p> <p>Title: Environmental determinates of blue whiting (<i>Micromesistius poutassou</i>) spawning distribution</p> <p>Authors: Anna K. Miesner and Mark R. Payne</p> <p>Keywords: environmental niche model, blue whiting, sub-polar gyre</p>
12:15	<p>CM code: S:04 Oral</p> <p>Title: A three area model for blue whiting in the northeast Atlantic: impacts of climate change and estimates of zooplankton consumption</p> <p>Authors: John K. Pinnegar, Robert Thorp, Stuart Reeve, and Verena M. Trenkel</p> <p>Keywords: gadget, model, growth, recruitment, zooplankton, EuroBasin</p>
12:30	<p>One-slide poster overview – 1 to 2 minutes per poster</p> <p>CM code: S:21 Poster</p> <p>Title: Exploring the hydrography of Boreal/Arctic domains of North Atlantic seas: results from the 2013 BASIN cruise</p> <p>Authors: Ken Drinkwater, Svein Sundby, and Webjørn Melle</p> <p>Keywords: North Atlantic, Norwegian Sea, Icelandic Sea, Irminger Sea, Labrador Sea, fluorescence, oxygen</p> <p>CM code: S:22 Poster</p> <p>Title: Patterns in macrozooplankton and micronekton biomass distribution across four north Atlantic Ocean basins</p> <p>Authors: Thor Klevjer, Espen Strand, Tor Knutsen, Webjørn Melle, and Peter Wiebe</p> <p>Keywords: biomass, mid-trophic levels, North Atlantic, acoustic, trawl, micronekton, macroplankton</p> <p>CM code: S:25 Poster</p> <p>Title: Vertical Distribution And Lipid Status Of Three Calanus Species In Franz Josef Land In August 2013</p> <p>Authors: D. M. Martynova, S. A. Murzina, and A. V. Dolgov</p> <p>Keywords: zooplankton, copepods, <i>Calanus</i>, Franz Josef Land, lipids</p>

CM code: S:28 Poster

Title: Strong effects of variations in physical environmental conditions and zooplankton dynamics on body size and recruitment of Atlantic herring stocks in the Gulf of St. Lawrence, Canada

Authors: Stéphane Plourde, Peter S. Galbraith, François Grégoire, Caroline Lehoux, and Martin Castonguay

Keywords: Gulf of St. Lawrence, physical environmental conditions, zooplankton dynamics, Atlantic herring, size-at-age, recruitment

CM code: S:29 Poster

Title: Zooplankton distribution in Iberian Atlantic waters and its relationship to small pelagic fish spatial patterns

Authors: Maria Manuel Angélico, Raquel Marques, Elisabete Henriques, Vítor Marques, and Luís Sobrinho-Gonçalves

Keywords: zooplankton distribution, image analysis, pelagic fish, trophic relations

CM code: S:27 Poster

Title: Long-term changes in primary production of the North Sea and its trophic effects

Authors: Elisa Capuzzo, Christopher P. Lynam, David Stephens, Jon Barry, Tiago Silva, Rodney M. Forster, Georg H. Engelhard, and Steven Mackinson

Keywords: primary production, food-web model, Ecopath, Ecosim, EwE, long-term changes

CM code: S:26 Poster

Title: Trophic interactions of mackerel (*Scomber scombrus*) and herring (*Clupea harengus*) on the Icelandic shelf – a study of diet using stable nitrogen and carbon isotopes

Authors: Cecilia E. K. Kvaavik, Guðmundur J. Óskarsson, Jonathan Grabowski, Sarah Helyar, and Guðrún Marteinsdóttir

Keywords: stable isotopes, stomach content, consumption estimates, zooplankton, mackerel (*Scomber scombrus*), herring (*Clupea harengus*)

CM code: S:24 Poster

Title: Predator–prey synergism – a novel perspective in ecology

Author: Tore Johannessen

Keywords: antagonism, synergism, predator-prey, recruitment, bifurcations, plankton, climate change

12:45 **Discussion**

13:00 **End of session**

Theme session T

Practical application of Genetic Stock Identification for the conservation, management, and restoration of diadromous fish species

Conveners: Dennis Ensing (UK) and Philip McGinnity (Ireland)

Friday 25 September, 09:00–16:00, Hovedbanen

Friday 25 September

09:00	Opening and introduction Appointment of rapporteur Presentation of papers
09:15	CM code: T:13 Oral Title: Microsatellite population genetics and juvenile Skeena sockeye migration Authors: Allen S. Gottesfeld, Charmaine Carr-Harris, Janvier Doire, and Steve Cox-Rogers Keywords: sockeye salmon, <i>Oncorhynchus</i> , smolt ecology, Skeena River, juvenile migration, anadromy
09:30	CM code: T:05 Oral Title: Phenological diversity of salmon smolt migration timing within a large watershed: implication for match-mismatch dynamics Authors: Charmaine Carr-Harris, Jonathan Moore, and Allen Gottesfeld Keywords: sockeye salmon, DNA, phenology, zooplankton, climate change
09:45	CM code: T:12 Oral Title: Spatial segregation of ocean migrating Atlantic salmon Authors: David Righton, Auden Rikardsen, Richard Hedger, Cedar Chittenden, Jan Davidsen, Finn Okland, Tor Naesje, Patrick Gargan, Eva Thorstad, Elina Halttunen, Kim Aarestrup, and R. Scott McKinley Keywords: satellite tags, fronts
10:00	CM code: T:09 Oral Title: Genetic provenance of adults returning to an impoundment – who’s the daddy? Authors: Jamie Coughlan, Brian Clarke, Eileen Dillane, Oisín Naughton, Niall O’Maoileidigh, Paulo Prodohl, Tom O’Brien, Denis Doherty, Noel Greally, Tom Cross, and Phil McGinnity Keywords: salmon, restoration ecology, GSI
10:15	CM code: T:10 Oral Title: Insights into coastal migration of Atlantic salmon through the integration of satellite tagging and genetic assignments using SNP markers Authors: John Gilbey, Jason Godfrey, Eef Cauwelier, John Armstrong, and Stuart Middlemas Keywords: salmon, GSI, satellite tagging, assignment
10:30	Coffee break
11:00	CM code: T:08 Oral Title: A multi-stock model for coastal salmon fisheries in the Baltic Sea Authors: Rebecca E. Whitlock, Stefan Palm, Johan Dannewitz, and Johan Östergren Keywords: genetic stock identification, Baltic salmon, stock-specific management, uncertainty

11:15	<p>CM code: T:14 Oral</p> <p>Title: Use of genetics to develop stock-specific migration models for Barents Sea salmon</p> <p>Authors: Martin-A. Svenning, Morten Falkegård, Per Fauchald, Nigel Yoccoz, Eero Niemelä, Juha-Pekka Vähä, Vidar Wennevik and Sergei Prusov.</p> <p>Keywords: Atlantic salmon, Barents Sea, mixed-stock fishery, genetics, migration models</p> <p>CM code: T:15 Oral</p> <p>Withdrawn</p>
11:30	<p>CM code: T:16 Oral</p> <p>Title: Developments in analyzing the mixed-stock freshwater fishery on the Atlantic salmon populations of the large River Teno/Tana</p> <p>Authors: Jaakko Erkinaro, Juha-Pekka Vähä, Morten Falkegård, Jorma Kuusela, Panu Orell, Maija Länsman, and Eero Niemelä</p> <p>Keywords: mixed-stock fishery, genetic stock identification, Atlantic salmon, management</p>
11:45	<p>CM code: T:17 Oral</p> <p>Title: Novel insights acquired by genetic stock identification (GSI) of the biology and phylo-geography of sea trout in the Irish Sea</p> <p>Authors: Paulo Prodohl, Alice Antoniocomi, Caroline Bradley, Jens Carlsson, Gary Carvalho, Jamie Coughlan, Mary Cross, Tom Cross, John Coyne, Carys-Ann Davies, Eileen Dillane, Paddy Gargan, Graeme Harris Jim Henderson, Richard Kennedy, Paddy Boylan, Philip McGinnity, Nigel Milner, Willie Roche, Martin Taylor and Niklas Tysklind.</p> <p>Keywords: sea trout, <i>Salmo trutta</i>, migration, Irish Sea, phylo-geography, genetic stock identification</p>
12:00	<p>CM code: T:04 Oral</p> <p>Title: Using genetic data to elucidate sea trout movements in southern British waters</p> <p>Authors: R. Andrew King, Bruce Stockley, and Jamie R. Stevens</p> <p>Keywords: sea trout, migration, assignment, microsatellite genotyping</p>
12:15	<p>CM code: T:01 Oral</p> <p>Title: Long-term and seasonal genetic differentiation in wild and enhanced stocks of sea trout (<i>Salmo trutta m. trutta</i> L.) from the Vistula River, in the southern Baltic</p> <p>Authors: Anna Wąs and Rafał Bernaś</p> <p>Keywords: temporal genetic structure, sea trout, microsatellites, Vistula River</p>
12:30	<p>CM code: T:03 Oral</p> <p>Title: Investigating the natal origins of anadromous trout entering the River Tamar, southwest England</p> <p>Authors: R. Andrew King, Paul Elsmere, Rob Hillman, and Jamie R. Stevens</p> <p>Keywords: anadromous, <i>Salmo salar</i>, mixed stock, microsatellite, AARC</p>
12:45	Discussion
13:00	Lunch break
14:00	<p>CM code: T:11 Oral</p> <p>Title: Genetic structure and diversity in <i>Alosa alosa</i> and <i>A. fallax</i>: Implications for conservation</p> <p>Authors: Steven Sabatino, Rui Faria and Paulo B. Alexandrino</p> <p>Keywords: <i>Alosa</i>, microsatellites, conservation, diversity, population structure</p>

14:15	<p>CM code: T:18 Poster</p> <p>Title: Microsatellite DNA polymorphism in whitefish (<i>Coregonus lavaretus</i>) in the Southern Baltic</p> <p>Authors: Anna Wąs, Wojciech Pelczarski, Tomasz Hesse, and Kęstas Plauška</p> <p>Keywords: spatial genetic structure, white fish, microsatellites, Southern Baltic Sea</p>
14:20	<p>Panel discussion</p> <p>The application of Genetic Stock Identification techniques in the management of diadromous fish stocks and the future of Genetic Stock Identification</p> <p>Niall O'Maoileidigh and Johan Dannewitz</p>
16:00	End of Session