

# Theme session F

## Management objectives, trade-offs and strategies in a changing ocean

Conveners: Jamie Tam (Canada), Lisa Kerr (USA), Robert Thorpe (UK)

Tuesday 10 September 2019, 13:30-15:30, Room H2

Tuesday 10 September 2019, 16:00-18:00, Room H2

Thursday 12 September 2019, 13:00-15:00, Room H2

### Tuesday 10 September 2019

13:30	<b>Introduction to Theme session F</b>
13:35	<b>CM Code:</b> F:158 <b>Title:</b> Exploring parameter uncertainty and production in sub-Arctic and Arctic ecosystems <b>Authors:</b> Jamie C. Tam, Alida Bundy, Torstein Pedersen, Nina Mikkelsen <b>Keywords:</b> mass-balance models, Arctic ecosystems, uncertainty <b>Presentation type:</b> Oral
13:45	<b>CM Code:</b> F:373 <b>Title:</b> Combining ecosystem models to define multi-species reference points <b>Authors:</b> Michael Spence, Hayley J. Bannister, Robert B. Thorpe, Nicola J. Walker <b>Keywords:</b> Multi-model ensemble, Uncertainty, Multi-species MSY, Ecosystem models <b>Presentation type:</b> Oral
13:55	<b>CM Code:</b> F:57 <b>Title:</b> Are data-limited methods sustainable approaches? Management strategy evaluation of data-limited methods with a data-rich stock <b>Authors:</b> Ming Sun, Yunzhou Li, Yiping Ren, Yong Chen <b>Keywords:</b> Data-limited methods, Management Procedure, Management Strategy Evaluation, Sustainability <b>Presentation type:</b> Oral
14:05	<b>CM Code:</b> F:487 <b>Title:</b> Tradeoffs and uncertainty in herring fisheries management: insights from management strategy evaluation and ecosystem modelling <b>Authors:</b> Szymon Surma <b>Keywords:</b> management strategy evaluation, MSE, ecosystem-based fisheries management, EBFM, ecosystem modelling, Ecopath with Ecosim, tradeoffs, forage fish, Pacific herring, Clupea pallasii, northeast Pacific, Canada <b>Presentation type:</b> Oral
14:15	<b>CM Code:</b> F:435 <b>Title:</b> Progress towards evaluating fisheries management strategies with ecosystem modelling tools <b>Authors:</b> Holly Perryman, Hansen, Cecilie; Howell, Daniel; Goto, Daisuke; Olsen, Erik <b>Keywords:</b> management strategy evaluation, management procedure, ecosystem models, ecosystem based management <b>Presentation type:</b> Oral
14:25	<b>CM Code:</b> F:545 <b>Title:</b> Aligning science and policy in the Humboldt Current to achieve climate-ready fisheries management <b>Authors:</b> Kristin M. Kleisner, Merrick Burden, Erica Cunningham, Mauricio Galvez, Renato Guevara, Dimitri Gutierrez, Jaime Letelier, Carlos Montenegro, Miguel Niquen, Vincent Saba, Jorge Tam <b>Keywords:</b> climate-adaptive management, science-policy interface, ecosystem based fishery management <b>Presentation type:</b> Oral
14:35	<b>CM Code:</b> F:20 <b>Title:</b> Maximum Economic Yield Fishery Management In The Face Of Global Warming - WITHDRAWN <b>Authors:</b> Bassirou Diop, Nicolas Sanz, El hadji Mama Guene, Yves Duplan, Fabian Blanchard, Jean Christophe Pereau, Luc Doyen <b>Keywords:</b> MEY, Climate Change, Global Warming <b>Presentation type:</b> Oral
14:45	<b>CM Code:</b> F:609 <b>Title:</b> Integrating climate change vulnerability indices on a scale relevant to fishery managers <b>Authors:</b> Nancy L. Shackell, , Blair J. W. Greenan, Kiyomi French, Phil Greyson, Andrew Cogswell, David Brickman, Zeliang Wang, Vincent S. Saba <b>Keywords:</b> Climate change, lobster, thermal habitat, coastal vulnerability, harbour infrastructure, climate projections, fishery management <b>Presentation type:</b> Oral
14:55	<b>CM Code:</b> F:516 <b>Title:</b> The potential of EU fisheries to contribute to sustainable food and nutrition security <b>Authors:</b> Friederike Ziegler, Louisa Borthwick, Marta Angela Bianchi, Sara Hornborg, Ollie Van Hal, Hannah H.E. Van Zanten <b>Keywords:</b> EU, Fisheries, Food, Management, MSY, Nutrition <b>Presentation type:</b> Oral
15:05	<b>CM Code:</b> F:365 <b>Title:</b> The global rise of crustaceans: shelling out more for seafood? <b>Authors:</b> Robert Boenish, Jake Kritzer, Kristin Kleisner, Robert Steneck, Jose Ingles, Wenbin Zhu, Frederick Schram, Douglas Rader, William Cheung, Karl Michael-Werner, Yongjun Tian, John Mimikakis <b>Keywords:</b> global fisheries, crustaceans, climate change, management, resilience, ecosystem <b>Presentation type:</b> Oral

15:15	<p><b>CM Code:</b> F:480  <b>Title:</b> Predicting the effect of fishing on indicators of good environmental status in the North Sea: an ensemble modelling approach.  <b>Authors:</b> Christopher A. Griffiths, Christopher Lynam, Hayley Bannister, James Waggitt, Robert Thorpe, Michael Spence  <b>Keywords:</b> ecosystem modelling, indicators, ensemble, fishing scenarios, 1986-2050, fisheries management  <b>Presentation type:</b> Oral</p>
15:25	Discussion
15:35	Break
16:05	<p><b>CM Code:</b> F:216  <b>Title:</b> A modular framework for the generic application of fisheries management strategy evaluation.  <b>Authors:</b> Ernesto Jardim, Finlay Scott, Paris Vasilakopoulos, Cecilia Pinto, Alessandro Mannini, Christoph Konrad, Iago Mosqueira  <b>Keywords:</b> Fisheries Library in R (FLR), harvest control rules, multi-annual plans, uncertainty, MSE, a4a  <b>Presentation type:</b> Oral</p>
16:15	<p><b>CM Code:</b> F:627  <b>Title:</b> Rebuilding plan for western Baltic herring. Can we use simple MSE-type forecasts?  <b>Authors:</b> Vanessa Trijoulet, Casper W. Berg, Claus R. Sparrevohn, Anders Nielsen, Henrik Mosegaard  <b>Keywords:</b> MSE forecast, rebuilding plan, western Baltic herring  <b>Presentation type:</b> Oral</p>
16:25	<p><b>CM Code:</b> F:334  <b>Title:</b> Evaluating the performance of management strategies for Northeast US groundfish fisheries in a changing climate  <b>Authors:</b> Samuel Truesdell, Lisa Kerr, Steven Cadrin, Jonathan Cummings, Gavin Fay, Sarah Gaichas, Andrew Pershing  <b>Keywords:</b> management strategy evaluation, biological reference points, stock assessment  <b>Presentation type:</b> Oral</p>
16:35	<p><b>CM Code:</b> F:635  <b>Title:</b> The challenges for ICES raised by conducting full MSEs for some jointly-managed stocks in the North Sea  <b>Authors:</b> De Oliveira, J.A.A., Fischer, S.H., Berges, B., Cole, H.S., Devine, J.A., Goto, D., Hintzen, N.T., Miethe, T., Mosqueira, I., Umar, I., Walker, N.D., Jardim, E.  <b>Keywords:</b> management strategy evaluation, parallelised computing, reference points, operating models, harvest control rules, management trade-offs  <b>Presentation type:</b> Oral</p>
16:45	<p><b>CM Code:</b> F:175  <b>Title:</b> Spaced out: Investigating the impact of spatial structure and movement under climate change using management strategy evaluation  <b>Authors:</b> Nis Sand Jacobsen, Kristin Marshall, Aaron Berger, Ian Taylor  <b>Keywords:</b> management strategy evaluation, Pacific hake, stock assessment uncertainty, spatial distribution, climate change  <b>Presentation type:</b> Oral</p>
16:55	Discussion
17:05	<p><b>CM Code:</b> F:578  <b>Title:</b> Eliciting values and negotiating trade-offs in participatory management strategy evaluation  <b>Authors:</b> Mimi E. Lam, Tony J. Pitcher  <b>Keywords:</b> management strategy evaluation, values, trade-offs, negotiation, participatory, stakeholders, governance, ethics  <b>Presentation type:</b> Oral</p>
17:15	<p><b>CM Code:</b> F:231  <b>Title:</b> Forage fish fisheries management requires a tailored approach to balance tradeoffs  <b>Authors:</b> Margaret C. Siple, Timothy E. Essington, Éva E. Plagányi  <b>Keywords:</b> ecosystem-based fisheries management, management strategy evaluation, population dynamics, small pelagics  <b>Presentation type:</b> Oral</p>
17:25	<p><b>CM Code:</b> F:397  <b>Title:</b> Conflicting goals and best strategies for reaching Good Environmental Status in the Baltic Sea  <b>Authors:</b> Kristina Heidrich, Christian Möllmann, Saskia Otto  <b>Keywords:</b> Ecosystem-based management, Good Environmental Status, indicator-based approach, decision-support tool, Bayesian Believe Networks, changepoint detection  <b>Presentation type:</b> Oral</p>
17:35	<p><b>CM Code:</b> F:519  <b>Title:</b> Managing conflicts and synergies of use-use interactions  <b>Authors:</b> Ida Maria Bonnevie, Henning Sten Hansen, Lise Schrøder  <b>Keywords:</b> use-use interactions, synergies, conflicts, trade-offs, expert-based ranking  <b>Presentation type:</b> Oral</p>
17:45	<p><b>CM Code:</b> F:188  <b>Title:</b> Assessment of alternative management procedures for the US recreational summer flounder fishery  <b>Authors:</b> Jason E. McNamee, Amanda R. Hart, Gavin Fay, Kiley J. Dancy  <b>Keywords:</b> Management Strategy Evaluation, climate change, recreational fisheries, tradeoffs, management objectives  <b>Presentation type:</b> Oral</p>
17:55	Discussion

18:05	End of day
<b>Thursday 12 September 2019</b>	
13:00	Introduction to Theme session F
13:10	<p><b>CM Code:</b> F:333</p> <p><b>Title:</b> Addressing the impact of climate change on “choke” species issues in a multispecies fishery</p> <p><b>Authors:</b> Lisa Kerr, Sam Truesdell, Gavin Fay, Jonathan Cummings, Ashley Weston, Steven X. Cadrin, Sarah Gaichas, Min-Yang Lee, Anna Birkenbach, Andrew Pershing</p> <p><b>Keywords:</b> management strategy evaluation, climate change, multispecies fishery</p> <p><b>Presentation type:</b> Oral</p>
13:20	<p><b>CM Code:</b> F:505</p> <p><b>Title:</b> Building climate readiness into two different fishery systems</p> <p><b>Authors:</b> Merrick J. Burden, Kristin Kleisner, Alice Thomas-Smith, Kendra Karr, Larry Epstein, Erica Cunningham, Willow Battista, Rod Fujita</p> <p><b>Keywords:</b> climate-ready fishery management, governance, ecosystem-based fishery management</p> <p><b>Presentation type:</b> Oral</p>
13:30	<p><b>CM Code:</b> F:517</p> <p><b>Title:</b> Floundering in the face of climate change: Can we successfully manage our recreational fisheries without all the facts?</p> <p><b>Authors:</b> Amanda R. Hart, Gavin Fay, Jason McNamee, Kiley J. Dancy</p> <p><b>Keywords:</b> Management Strategy Evaluation, climate change, recreational fisheries</p> <p><b>Presentation type:</b> Oral</p>
13:40	Discussion
13:50	Break
14:00	<p><b>CM Code:</b> F:368</p> <p><b>Title:</b> Avoiding the curse of circularity: building a multi-species model from the ground up</p> <p><b>Authors:</b> Michael. A. Spence, Robert B. Thorpe, Paul G. Blackwell, Finlay Scott, Richard Southwell, Julia L. Blanchard</p> <p><b>Keywords:</b> Multi-species model, Uncertainty quantification, State-space models, Ecosystem models, Bayesian statistics</p> <p><b>Presentation type:</b> Poster</p>
14:03	<p><b>CM Code:</b> F:507</p> <p><b>Title:</b> Use of management strategy evaluation to inform in fisheries management in a changing climate</p> <p><b>Authors:</b> Jonathan W. Cummings, Amanda Hart, Gavin Fay</p> <p><b>Keywords:</b> climate change, management strategy evaluation, documentation, review, structured decision making, best practice</p> <p><b>Presentation type:</b> Poster</p>
14:06	<p><b>CM Code:</b> F:42</p> <p><b>Title:</b> Interactions in a fishery socio-ecological system revealed by a Bayesian Belief Network approach</p> <p><b>Authors:</b> Silvia de Juan, Andres Ospina-Alvarez Montserrat Demestre Francesc Maynou</p> <p><b>Keywords:</b> benthic communities; trawl fisheries; catch composition; by-catch; fishing effort; fisheries profits; fisheries management</p> <p><b>Presentation type:</b> Poster</p>
14:09	<p><b>CM Code:</b> F:307</p> <p><b>Title:</b> What are process errors in population dynamic models and how do they relate to time-varying parameters?</p> <p><b>Authors:</b> Paula Silvar Viladomiu, C��il��n Minto, Deirdre Brophy, David G. Reid</p> <p><b>Keywords:</b> population dynamics model, process uncertainty, trophic interactions</p> <p><b>Presentation type:</b> Poster</p>
14:12	<p><b>CM Code:</b> F:356</p> <p><b>Title:</b> Recruitment predictions we can make, and their significance under changing climate</p> <p><b>Authors:</b> Julie M. Gross, Philip Sadler, John M. Hoenig</p> <p><b>Keywords:</b> lethal conditions, year class strength, uncertainty, risk, sufficient conditions, necessary conditions, river flow</p> <p><b>Presentation type:</b> Poster</p>
14:15	<p><b>CM Code:</b> F:607</p> <p><b>Title:</b> Models for adaptive management in the face of climate change</p> <p><b>Authors:</b> Richard J. Bell, Jay Odell</p> <p><b>Keywords:</b> climate change, adaptive management, real-time monitoring</p> <p><b>Presentation type:</b> Poster</p>
14:18	<p><b>CM Code:</b> F:381</p> <p><b>Title:</b> Challenges and opportunities of ecosystem services integration into marine spatial planning: examples from case studies in the Baltic Sea</p> <p><b>Authors:</b> Solvita Strake, von Thenen M., Luhtala H., Schiele K., Hansen H. S.</p> <p><b>Keywords:</b> ecosystem services, marine spatial planning, Baltic Sea case studies</p> <p><b>Presentation type:</b> Poster</p>
14:21	<p><b>CM Code:</b> F:621</p> <p><b>Title:</b> Risk avoidance—MSE collaboration for Bering Sea Tanner crab</p> <p><b>Authors:</b> Madison Shipley, William Stockhausen, Ben Daly, Andr�� Punt</p> <p><b>Keywords:</b> management strategy evaluation, trade-offs, collaboration, Eastern Bering Sea, Chionoecetes bairdi</p> <p><b>Presentation type:</b> Poster</p>

14:24	<b>CM Code:</b> F:357 <b>Title:</b> Ecologically Sustainable Exploitation Rates – a multispecies approach for fisheries management <b>Authors:</b> Torbjörn Säterberg, Michele Casini, Anna Gårdmark <b>Keywords:</b> Multispecies exploitation, Multispecies objective, Reference points, Stock assessment, Viability modeling <b>Presentation type:</b> Poster
14:27	Group discussion
15:00	End of Session