

Program

19 June, Sunday

1800 Icebreaker, *Institute of Marine Research, Nordnesgaten 50*

20 June, Monday

0900 Opening

0915 **Keynote:** *Skern-Mauritzen, Mette:* Taming the monster: how to harness the complexity of Integrated Ecosystem Assessments

Theme Session 1: Ocean climate and physical environment in the North Atlantic and their linkages to changing marine ecosystem

Chairs: Agnieszka Beszczynska-Möller, Sam Jones and Kjell Arne Mork

1000 **Keynote:** *Larsen, Karin Margretha H:* North Atlantic Ocean climate in the recent decade

1045 Coffee/Tea

1105 *Galbraith, Peter S:* The Gulf of St. Lawrence, Canada, undergoing warming conditions in the last decade

1120 *Dale, Alizée, Douglas W.R. Wallace and Marion Gehlen:* Contribution of physical nutrient supply to interannual nutrient variability in the Labrador Sea

1135 *Lavin, Alicia, Carmen Rodríguez, Amaia Villoria, Elena Tel, Cesar Gonzalez-Pola and Raquel Somavilla:* Data archaeology enlarge the Santander Standard Section

1150 *Fontán, Almudena, Marina Chifflet, Guillem Chust, Ángel Borja, Ganix Esnaola, Luis Ferrer, Javier Franco, Joana Larreta, Lide Lejonagoitia, Marta Revilla, J. Germán Rodríguez, Jon Sáenz, Yolanda Sagarmina, Unai Cotano, Guillermo Boyra, María Santos and Víctor Valencia:* Variability in main physical processes controlling nutrient fluxes and its potential impact on phytoplankton biomass during the 2010-2019 decade: southeastern Bay of Biscay (Northeast Atlantic)

1205 *González-Pola, César, Somavilla, R., Ibañez, L., Graña, R., Vilorio, A., Álvarez, M., Rodríguez, C. and Lavín, A:* Recovery of conventional behaviour of the eastern north Atlantic intergyre region in the 2010s after a transient flow reversal

1220 *Hebert, Dave, Chantelle Layton and Cyr, Frédéric:* Changing Hydrographic Conditions on the Scotian Shelf and Gulf of Maine over the Last Several Decades

1235 Lunch

1330 *Daly, Eoghan, Glenn Nolan, Alan Berry, Janina V. Büscher, Rachel Cave, Levke Caesar, Margot Cronin, Sheena Fennell, Kieran Lyons, Aedín McAleer, Gerard McCarthy, Evin McGovern, Triona McGrath, Garvan O'Donnell, Robert Thomas,*

- Louise Vaughan, Martin White and Caroline Cusack*: Decadal to seasonal scale water column variability in the Rockall Trough from model-enhanced transect timeseries
- 1345** *Hansen, Bogi, Sissal V. Erenbjerg, Sólvá K. Eliassen, Karin M. H. Larsen and Hjálmar Hátún*: Competing effects of tidal mixing and air-sea heat flux on the primary production of the Faroe Shelf
- 1400** *Jónsson, Steingrímur and Sólveig Rósa Ólafsdóttir*: Decadal variability in the ocean around Iceland in an era of anthropogenic climate change
- 1415** *Smedsrud, Lars, H., A. Brakstad, E. Madonna, M. Muilwijk, S. K. Lauvset, C. Spensberger, A. Born, T. Eldevik, H. Drange, E. Jeansson, C. Li, A. Olsen, Ø. Skagseth, D. A. Slater, F. Straneo, K. Våge and M. Árthun.*: Nordic Seas Heat Loss, Atlantic Inflow, and Arctic Sea Ice cover over the last century
- 1430** *Gjelstrup, Caroline, V.B. and Mikael K. Sejv*: Warm meets fresh: Thinning of Polar water layer and shoaling of Atlantic water on the Northeast Greenland shelf
- 1445** *Skagseth, Øystein and Cecilie Broms*: Variability in Atlantic and Arctic waters in the Norwegian Basin and ecosystem implication
- 1500** *Ingvaldsen, Randi B., Karen M. Assmann, Raul Primicerio, Maria Fossheim and Igor V. Polyakov*: Physical manifestations and ecological implications of Arctic Atlantification
- 1515** *Jones, Elizabeth and Melissa Chierici*: Ocean acidification variability in the Atlantic and Arctic influenced Norwegian waters
- 1530** **Coffee/Tea**
- 1600** *Gimenez, Jose L., Maarten Boersma and Karen H. Wiltshire*: Marine Heatwaves: The new normal? A multiple baseline approach
- 1615** *Wiltshire, Karen H*: Ecologically relevant scales of temperature in the North Sea
- 1630** *Trifonova, Neda I. and Beth Scott*: Indicators for whole ecosystem responses to separate climate from anthropogenic change in coastal seas
- 1645.** *Howard Browman*: ICES publication special issue

Theme Session 2: Decadal change and trends in North Atlantic/sub-Arctic plankton and their ecosystems

Chairs: Eileen Bresnan, Luis Valdés, Todd O'Brien

- 1700** **Keynote:** *Bode, Antonio*: Plankton in the new millennium: synchronic multidecadal trends and regime shifts
- 1745** **Break**

1800 – 2000 Poster Session A

21 June, Tuesday

- 0830** *O'Brien, Todd D and member of ICES WGZE*: Changes and trends in North Atlantic plankton: A time-series-based overview from the ICES zooplankton and phytoplankton ecology working groups

- 0845** *Guignard, Maité, S., Maarten Boersma and Karen W Wiltshire*: Shifting ecological niches of phytoplankton and zooplankton under environmental change
- 0900** *Balkoni, Areti and Karen H. Wiltshire*: What drives phytoplankton bloom dynamics at Helgoland Roads?
- 0915** *Clarke, Dave, T. Yamanaka, C. Cusack and J. Kelly*: Regional changes in harmful algal events in the North Atlantic area from 2010 – 2019
- 0930** *Leitao, Emma, Catherine E. Brennan, Wendy C. Gentleman, Frédéric Maps and Catherine L. Johnson*: Environmental variability shapes copepod life history: What we learn from optimizing a *C. finmarchicus* population model in the northwest Atlantic
- 0945** *Kristiansen, Inga, Hjálmar Hátún, Sólvá K. Eliassen and Jan Arge Jacobsen*: Spatial variability of the feeding conditions for the Norwegian spring spawning herring in May
- 1000** *Broms, Cecilie, Knut Yngve Børsheim, Øystein Skagseth, Kjell Rong Utne, Szymon Surma, Morten D. Skogen, Mimi E. Lam, Hildur Pétursdóttir, Webjørn Melle, Inga Kristiansen, Kjell Gundersen, Tony J. Pitcher, Lisa Anne Libungan, Øyvind Fiksen and Anna Ólafsdóttir*: Effects of bottom-up and top-down processes on lower trophic levels in the Norwegian and adjacent seas during the last decade

1015 Coffee/Tea

- 1045** *Karlson, Bengt, Marie Johansen, Maria Karlberg, Ann-Turi Skjevik*: Long term changes in the diversity and biogeography of phytoplankton communities in the Skagerrak-Kattegat, NE Atlantic
- 1100** *Szeligowska, Marlena, Emilia Trudnowska, Rafał Boehnke and Katarzyna Błachowiak-Samołyk*: Inter-annual variability in particles and zooplankton in the warming Arctic fjord
- 1115** *Holland, Matthew M. and Abigail McQuatters-Gollop*: Decadal variability in the response of plankton lifeforms and taxa to environmental drivers
- 1130** *da Silva, Edson F.F. François Counillon, Julien Brajard and Anton Korosov*: Twenty-one years of phytoplankton bloom phenology in the Barents, Norwegian and North seas
- 1145** *Skjoldal, Hein R*: Size-fractioned zooplankton biomass in the Barents Sea ecosystem: changes during four decades of warming and four capelin collapses (1980-2020)
- 1200** *Vad, Johanne, Puerta P., Head E, Kenchington T and Kenchington E*: Temporal trends in zooplankton community composition and life stage abundances on the Scotian Slope during 1999-2019
- 1215** *Deschamps, Margot, Boersma M., Meunier C. and Di Pane J.*: Evidence of major shift in the copepod functional community of the southern North Sea in the late 80s: environmental factors and potential repercussions on the food web

1230 Lunch

- 1330** *Di Pane, Julien, Karen H Wiltshire, Matthew J McLean, Maarten Boersma and Cédric L Meunier*: Environmentally induced functional shift in phytoplankton communities and its consequences for ecosystem functioning
- 1345** *Marques, Raquel, Saskia A. Otto, Julien Di Pane, Maarten Boersma, Ingrid Kröncke, Cédric Meunier, Christian Möllmann, Hermann Neumann, Karen Wiltshire and Jasmin Renz*: Long-term shifts in taxonomic and functional biodiversity of the meso-/macrozooplankton community in the Southern North Sea, mediated by environmental and anthropogenic changes

Theme Session 4: Expanding horizons: assessing decadal changes and incorporating Social-Ecological Systems in the North Atlantic

Chairs: Caroline Cusack and Silvana Birchenough

1400 Keynote: *Charles, Anthony:* Understanding and incorporating human dimensions of marine social-ecological systems

1445 Coffee/Tea + Poster session B

1545 *Beckensteiner, Jennifer and Anthony Charles:* Adaptations of a fishery socio-ecological system in the face of large-scale changes: Learning about opportunities and barriers from the Bay of Biscay's anchovy fishery

1600 *Liu, Xiaozhi:* Shifting stocks and the consequences of non-adaptive transboundary fisheries agreements

1615 *Quillet, Etienne and Steve Plante:* Influence of the social representations on actors' adaptation strategies of the redfish (*Sebastes* spp.) fishery in the face of social ecological changes in the Gulf of St. Lawrence (Canada)

1630 *Lam, Mimi E. Holly A. Perryman, Szymon Surma and Tony J. Pitcher:* Inserting Values in Ecosystem-based Fisheries Management

1645 *Buttay, Lucie, Hiroko Solvang and Benjamin Planque:* Combining social and ecological time series to describe long-term dynamics of the Norwegian Sea ecoregion

1700 Early career networking activities

1800 Adjourn

1900 Symposium Dinner at the Aquarium of Bergen, Nordnesbakken 4

22 June, Wednesday

Theme Session 3: Trends and drivers of decadal variability in fish and invertebrates

Chairs: Kathy Mills, Sigrid Lehuta and Tara Marshall

0830 Keynote: *Hollowed, Anne B:* Scientific advancements in the study of the impacts of climate change and decadal variability on marine ecosystems and options for future management of living marine resources

0915 *Planque, Benjamin, Aurélien Favreau, Bérengère Husson, Erik Mousing, Cecilie Hansen, Cecilie Broms, Ulf Lindstrøm and Elliot Sivel:* Reconstructing trophic interactions in the Norwegian Sea pelagic food-web over multiple decades

- 0930** *Merillet, Laurene, Morten Skogen, Frode Vikebø and Lis Lindal Jørgensen*: Fish communities of subarctic fjords show early signals facing climate change compared to benthic communities: the example of the Porsangerfjord, Norway
- 0945** *Silvar-Viladomiu, Paula, Cólín Minto, Colm Lordan, Deirdre Brophy, Rich Bell, Jeremy Collie and David G. Reid*: Stochastic modelling of fish recruitment productivity in the Celtic Seas Ecoregion
- 1000** *Mills, Katherine E., Lisa A. Kerr and Janet A. Nye*: Emergence of climate change effects on Northeast U.S. fish populations and communities
- 1015** *Fisher, Jonathan and Monica Sokolowski*: A decade of marine fish distributional changes fuel novel exploratory fisheries and ecosystem changes in the Northwest Atlantic and eastern Canadian Arctic.

1030 Coffee/Tea

- 1050** *Holt, Rebecca E. and Joël M. Durant*: Predator-prey interactions in response to changing prey abundance: The case of Barents Sea cod (*Gadus morhua*) and capelin (*Mallotus villosus*)
- 1105** *Vad, Johanne, Puerta P., Kenchington T., Head E. and Kenchington E*: Temporal trends in demersal fish and invertebrate abundances on the Scotian Slope during 1999-2019
- 1120** *Polo, Julia, Laurene Pecuchet, Manuel Hidalgo, Raul Primicerio, Marta Sainz-Bariain, Antonio Punzón and Lucía López-López*: Disentangling the effects of fishing and climate in benthic-demersal communities by assessing their vulnerability
- 1135** *Buyse, Jolien, Kris Hostens, Steven Degraer and Annelies De Backer*: Long-term series demonstrate small-scale differences in trends within fish assemblages explained by climate variability
- 1150** *Vollset, Knut W. Kurt Urdal, Kjell Utne, Eva B. Thorstad, Harald Sægvog, Astrid Raunsgard, Øystein Skagseth, Robert J. Lennox, Gunnel M. Østborg, Ola Ugedal, Arne J. Jensen, Geir H. Bolstad and Peder Fiske*: Evidence of an ecological regime shift in the North-east Atlantic revealed from the unprecedented reduction in marine growth of Atlantic salmon
- 1205** *Olafsdottir, Anna H., Sólva K. Eliassen, Isidora Katara, Chibuzor Nnanatu, Afra Egan, Cecilie Broms, Andrew Campbell, Hjálmar Hátún, Solfrid S. Hjøllo, Sondre Hølleland, Jan Arge Jacobsen, Teunis Jansen, Erik A. Mousing, Nikolaos Nikoloudakis, Leif Nøttestad, Thassya dos Santos Schmidt, Warsha Singh, Aril Slotte and Kai Wieland*: Location of the arctic front east of Iceland during summer impacts mackerel migration into Icelandic waters

1220 Lunch

- 1315** *Frank, Kenneth T., Brian Petrie and William C. Leggett*: Temporal evolution of critical traits, trophic interactions and their relationship to cod stock collapse and recovery
- 1330** *dos Santos Schmidt, Thassya C. Aril Slotte, Anna H. Olafsdottir, Leif Nøttestad, Teunis Jansen, Jan Arge Jacobsen, Eydna í Homrum, Sólva K. Eliassen, Leon Smith, Sigurvin Bjarnason, Susan M. Lusseau, Kotaro Ono, Sondre Hølleland, Anders Thorsen, Olav S. Kjesbu*: Atlantic mackerel (*Scomber scombrus*) migrates farther north to spawn under the current warm climate scenario
- 1345** *Homrum, Eydnaí, Guðmundur J. Óskarsson, Kotaro Ono, Sondre Hølleland, and Aril Slotte*: Large-scale changes in the spatiotemporal distribution of Norwegian spring spawning herring (*Clupea harengus*) following warming and freshening of the Norwegian Sea: Effects on body growth, somatic condition and gonad development

- 1400** *Utne, Kjell R. Øystein Skagseth, Eva Thorstad and Vidar Wennevik: Northeast-Atlantic salmon post-smolt – geographic variation in marine feeding and the effect a changing ecosystem*
- 1415** *Peñas-Torramilans, Raquel, Bruno Castelle, Raquel Outeiral, Txetxu Santiago, Pablo Seoane, Elsa Vázquez and Nicolás Weidberg: Study of wave trends along the Galician coast and evaluation of their potential impact on the quality of the stalked barnacle, *Pollicipes pollicipes**
- 1430** *Henriksen, Ole, Anna Rindorf, Henrik Mosegaard, Mark R. Payne and Mikael van Deurs: Get up early: Revealing behavioural responses of sandeel to ocean warming using commercial catch data*
- 1445** **Summary of sessions and closing remarks**
- 1515** **Adjourn**
- 1515** **Coffee/Tea**