Changing Arctic Ocean

End of Programme Science Meeting

Tuesday 30th November 2021

0900 to 1730 (UK time)

Zoom Online Meeting - details will be sent to all who have registered for this event

Changing Arctic Ocean

SPONSORED BY THE

Federal Ministry of Education and Research

UKRI Natural Environment Research Council

Programme

0900 - 0915: Welcome and Introductions:
Professor David Thomas, Chair of the Programme Advisory Group, University of Helsinki
Henry Burgess, Head, NERC Arctic Office

SESSION 1: Nutrient cycles: CHAIR - Dr Ruth Airs, Plymouth Marine Laboratory

0915 - 0930: The Changing Arctic Ocean Seafloor (ChAOS): How changing sea ice conditions impact biological communities, biogeochemical processes and ecosystems
Dr Sian Henley (Edinburgh University), Dr Jasmin Godbold (Southampton University), Dr Terri Souster (formerly BAS, now University of Tromsoe), Felipe Sales de Freitas (University of Bristol), and Christian Maerz (Leeds University).

0930 - 0945: How will changing freshwater export and terrestrial permafrost thaw influence the Arctic Ocean? (CACOON)
Dr Juri Palmtag, Northumbria University

0945 - 1000: Pathways and emissions of climate-relevant trace gases in a changing Arctic Ocean (PETRA)
Professor Dr Hermann Bange and Hanna Campen, GEOMAR Helmholtz Centre for Ocean Research Kiel

1000 - 1020: Q&A and Panel Discussion

1020 - 1030: BREAK

SESSION 2: Food webs: CHAIR - Dr Lydia Gustavs, Projektträger Jülich

1030 - 1045: Arctic productivity in the seasonal ice zone (Arctic PRIZE)
Professor Finlo Cottier, Scottish Association for Marine Science, Dr Marie Porter, Scottish Association for Marine Science and Stacey Connan-McGinty, University of Strathclyde

1045 - 1100: Can we detect changes in Arctic ecosystems? (ARISE)
ARISE Team

1100 -1115: Ecosystem approach to harvesting in the Arctic: walking the tightrope between exploitation and conservation in the Barents Sea (MiMeMo)
Professor Mike Heath, University of Strathclyde

1115 - 1135: Q&A and Panel Discussion

1135 - 1145: BREAK

SESSION 3: Pollutants and Light: CHAIR - Dr Gaëlle Veyssière, British Antarctic Survey

1145 - 1200: Effects of ice stressors and pollutants on the Arctic marine cryosphere (EISPAC)
Professor Crispin Halsall, Lancaster University

1200 - 1215: Chronobiology of changing Arctic Sea Ecosystems (CHASE)
Dr Laura Payton, Alfred Wegener Institute, Dr Jennifer Freer, British Antarctic Survey and Dr Kim Last, Scottish Association for Marine Science

1215 - 1230: Ecosystem functions controlled by sea ice and light in a changing Arctic (Eco-Light)
Dr Giulia Castellani, Alfred Wegener Institute

1230 - 1250: Q&A and Panel Discussion

1250 - 1400: LUNCH and POSTERS

SESSION 4: Part 1 - Primary Production: CHAIR - Anabel von Jackowski, GEOMAR

1400 - 1415: Diatom Autecological Responses with Changes To Ice Cover (Diatom-ARCTIC)
Dr Karley Campbell, The Arctic University of Norway

1415 - 1430: Understanding the links between pelagic microbial ecosystems and organic matter cycling in the changing Arctic (µARC)
Dr Birthe Zäncker, Marine Biological Association

SESSION 4: Part 2 - Secondary Production and above: CHAIR - Flo Atherden (University of Southampton)

1430 - 1445: Mechanistic understanding of the role of diatoms in the success of the Arctic Calanus complex and implications for a warmer Arctic (DIAPOD)
Dr Jennifer Freer, British Antarctic Survey

1445 - 1500: Potential benefits and risks of borealisation for fish stocks and ecosystems in a changing Arctic Ocean (Coldfish)
Dr Kim Vane, Alfred Wegener Institute and Dr Matthew Cobain (Newcastle University)

1500 -1515: Linking Oceanography and Multi-specific, spatially-Variable Interactions of seabirds and their prey in the Arctic (LOMVIA)
Dr Anne Sophie Bonnet Lebrun, British Antarctic Survey

1515 - 1545: Q&A and Panel Discussion

1545 - 1630: BREAK and POSTERS

SESSION 5: Circulation: CHAIR - Dr Stefanie Rynders, National Oceanography Centre

1630 - 1645: Advective Pathways of nutrients and key Ecological substances in the ARctic (APEAR)
Dr Yevgeny Aksenov, National Oceanography Centre and Dr Benjamin Rabe, Alfred Wegener Institute

1645 - 1700: Primary productivity driven by escalating Arctic nutrient fluxes? (PEANUTS)
Dr Kirstin Schulz, Alfred Wegener Institute

1700 -1730: Panel discussion and final thoughts

1730: CLOSE

Posters

Poster sessions are divided into two sessions:

Session 1: 1250 - 1400 - ***Posters 1 to 12***
Session 2: 1545 - 1630 - ***Posters 13 to 23***

Each poster presenter will be allocated a virtual breakout room which will open at the start of each poster session:

- *Once the Breakout Rooms are open, you can select the Breakout Rooms button at the bottom of your screen.*
- *Click 'Join' next to the name of the presenter you wish to visit.*
- *If you are presenting a poster please join the room with your name and be ready to share your screen to present your virtual poster (ppt slide/pdf).*
- *You can change the room you are in at any time by clicking on the Breakout Rooms button.*

POSTER SESSION 1:

Poster 1: Arctic connections between sea ice, ocean dynamics and biogeochemistry in the UK Earth System Model (UK ESM1): present climate and future scenarios
Yevgeny Aksenov, National Oceanography Centre

Poster 2: Autonomous profiler reveals light intensity triggering the seasonal migration of Arctic zooplankton
Hauke Flores, Alfred Wegener Institute

Poster 3: Changing Arctic Ocean
Henry Burgess/Nicola Munro, NERC Arctic Office

Poster 4: Changing Arctic Ocean Data Management
Robyn Owen, British Oceanography Data Centre

Poster 5: Do microbial substrate regimes in the Fram Strait differ between summer and fall?
Anabel von Jackowski, GEOMAR Helmholz Centre for Ocean Research Kiel

Poster 6: Variability of surface transport pathways and how they affect basin-wide connectivity and nutrients
Chris Wilson, National Oceanography Centre

Poster 7: High Exposure of Perfluoroalkyl Substances (PFASs) in Two Free-living Guillemot Species in the Subarctic and Arctic
Rui Shen, Helmholtz-Zentrum Hereon

Poster 8: High-resolution bathymetry models for the Lena Delta and Kolyma Gulf coastal zones
Jens Strauss, Alfred Wegener Institute

Poster 9: Light transmission and attenuation through varying Arctic sea-ice during late spring and summer
Gaëlle Veyssière, British Antarctic Survey

Poster 10: Lower trophic level ecosystem response to change in higher trophic level production: A modelling study in the North Atlantic/Arctic Ocean
Ute Daewel, Helmholtz-Zentrum Hereon

Poster 11: Modeling ecosystem responses to changes in under-ice light field
Giulia Castellani, Alfred Wegener Institute

Poster 12: Modelling impacts of riverine terrestrial organic matter on the lower trophic levels of an Arctic shelf ecosystem
Michael Bedington, Plymouth Marine Laboratory

POSTER SESSION 2:

Poster 13: Net heterotrophy in high arctic first-year and multi-year spring sea ice
Karley Campbell, The Arctic University of Norway

Poster 14: New Unified Arctic Ocean hydrography and biogeochemical data base: Identifying pathways of nutrients
Myriel Vredenborg, Alfred Wegener Institute

Poster 15: Nitrogen and stable isotope inventories in the Lena Delta
Tina Sanders, Helmholtz-Zentrum Hereon

Poster 16: Nitrous Oxide and Methane Distributions During the 2021 Synoptic Arctic Survey
Ian Brown, Plymouth Marine Laboratory

Poster 17: Quantifying seafloor dynamics of organic matter in the Barents Sea shelf sediments
Felipe Sales de Freitas, University of Bristol

Poster 18: Spatio-temporal variability of the primary and secondary production in the Barents Sea: from a 1D to a 3D modelling approach
Déborah Benkort, Helmholtz-Zentrum Hereon

Poster 19: Synthetic Shelf Sediment Maps for the Greenland Sea and Barents Sea
Jack Laverick, University of Strathclyde

Poster 20: The permafrost thaw fingerprint: particulate organic carbon from the Lena river to the Laptev Sea
Olga Ogneva, Alfred Wegener Institute

Poster 21: Emerging shift in shelf-deep ocean interactions in the changing Arctic Ocean
Yevgeny Aksenov, National Oceanography Centre

Poster 22: What factors affect the biosynthesis of sea ice algal lipids and trophic markers?: insights from an multi-biomarker approach.
Martin Graeve, Alfred Wegener Institute

Poster 23: Understanding the fate of microplastics in sea ice

Hollie Ball, Lancaster University

Attendees

Ruth Airs, Plymouth Marine Laboratory
Yevgeny Aksenov, National Oceanography Centre
Sandra Arndt, ULB
Flo Atherden, National Oceanography Centre
Hermann Bange, GEOMAR Helmholtz Centre for Ocean Research Kiel, Kiel, Germany
Michael Bedington, Plymouth Marine Laboratory
Déborah Benkort, Helmholtz Zentrum Hereon
Anne-Sophie Bonnet-Lebrun, CNRS
Ian Brown, Plymouth Marine Laboratory
Henry Burgess, Natural Environment Research Council Arctic Office
Emma Burns, University of Manchester
Karley Campbell, Arctic Marine System Ecology, Department of Arctic and Marine Biology
Hanna Campen, GEOMAR Helmholtz Centre for Ocean research Kiel
Giulia Castellani, Alfred Wegener Institute
Ivan Cautain, Scottish Association for Marine Science
Matthew Cobain, Coldfish Project
Stacey Connan-McGinty, University of Strathclyde
Kathryn Cook, National Oceanography Centre
Finlo Cottier, Scottish Association for Marine Science/UiT
Michael Cunliffe, Marine Biological Association & University of Plymouth
Ute Daewel, Helmholtz-Zentrum Hereon
Anja Engel, GEOMAR Helmholtz Centre for Ocean Research Kiel
Ben Fisher, University of Edinburgh
Hauke Flores, Alfred Wegener Institute
Jennifer Freer, British Antarctic Survey
Raja Ganeshram, University of Edinburgh
Lennart Gerke ,GEOMAR Kiel, Helmholtz Centre for Ocean Research
Jasmin Godbold, University of Southampton
Martin Graeve, Alfred Wegener Institute
Laura Grange, Bangor University
Lydia Gustavs, PtJ
Crispin Halsall, Lancaster University
Isabelle Hann, Plymouth University/Plymouth Marine Laboratory
Naomi Heap, The Open University
Michael Heath, University of Strathclyde
Katharine Hendry, University of Bristol
Sian Henley, University of Edinburgh
Phoebe Hudson, University of Edinburgh
Markus Janout, Alfred-Wegener-Institute
Rachel Jeffreys, University of Liverpool
Jan Kaiser, University of East Anglia
Michael Karcher, OASys
Vassilis Kitidis, Plymouth Marine Laboratory
Vanessa Lampe, GEOMAR
Jack Landy, University of Bristol
Thomas Larsen, MPG-SHH

Kim Last, Scottish Association for Marine Science
Jack Laverick, University of Strathclyde
Yueng Lenn, Bangor University, Wales
Nicola Lewis, Natural Environment Research Council
Pennie Lindeque, Plymouth Marine Laboratory
Christian Maerz, University of Leeds
Daniel Mayor, National Oceanography Centre
Nicola Munro, Natural Environment Research Council Arctic Office
Bhavani Narayanaswamy, SAMS
Marcel Nicolaus, AWI
Louisa Norman, University of Liverpool
Eva-Maria Nöthig, AWI Bremerhaven, Germany
Olga Ogneva, Alfred Wegener Institute
Robyn Owen, BODC, National Oceanography Centre
Stuart Painter, National Oceanography Centre
Juri Palmtag, Ex-Northumbria University
Laura Payton, University of Oldenburg
Marie Porter, Scottish Association for Marine Science
Benjamin Rabe, Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung
Stefanie Rynders, National Oceanography Centre
Felipe Sales de Freitas, University of Bristol
Tina Sanders, Helmholtz-Zentrum Hereon
Katrin Schmidt, University of Plymouth
Kirstin Schulz, The University of Texas at Austin
Rui Shen, Helmholtz-Zentrum Hereon
Terri Souster, UIT
Douglas Speirs, University of Strathclyde
Colin Stedmon, Technical University of Denmark
Rowena Stern, Marine Biological Association
Mark Stevenson, Durham University/Newcastle University
Jens Strauss, Alfred Wegener Institute
Jessica Surma, Natural Environment Research Council
Karen Tait, Plymouth Marine Laboratory
Geraint Tarling, British Antarctic Survey
David Thomas, University of Helsinki
Kim Vane, Alfred Wegener Institute for Polar and Marine Sciences
Gaëlle Veyssière, British Antarctic Survey
Anabel von Jackowski, GEOMAR Helmholz Centre for Ocean Research Kiel
Myriel Vredenborg, Alfred Wegener Institute Helmholtz Center for Polar and Marine Research
Ben Ward, University of Southampton
Michael Webb, Natural Environment Research Council
Jeremy Wilkinson, British Antarctic Survey
Chris Wilson, National Oceanography Centre
Zhiyong Xie, Helmholtz-Zentrum Hereon
Birthe Zaencker, Marine Biological Association