



Changing Arctic Ocean



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Federal Ministry of Education and Research



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www.changing-arctic-ocean.ac.uk

www.fona.de/de/arktis-im-wandel

@NERC_CAO

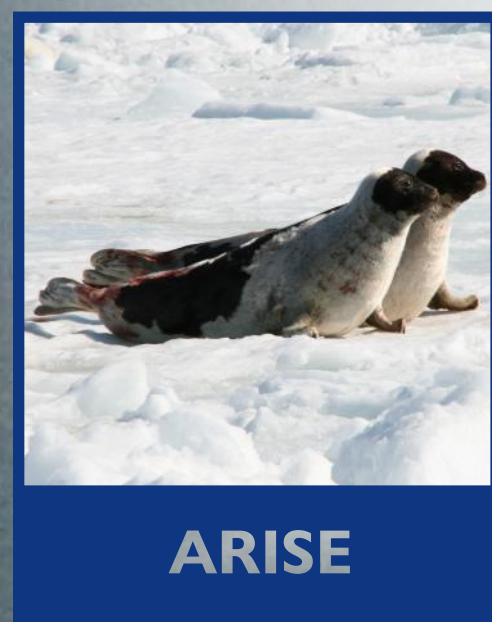
These changes affect biological processes at every level and in ways that are not yet understood. The programme focuses on quantifying the impacts of climate change on the biology, biogeochemistry and ecosystems of the Arctic Ocean.

The Arctic is the fastest changing environment on the planet



Prof Finlo Cottier
Scottish Association for Marine Science, UK

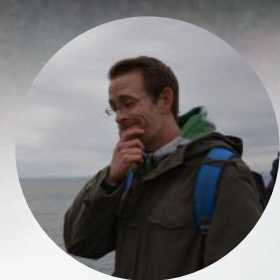
How does seasonal sea ice control Arctic productivity?



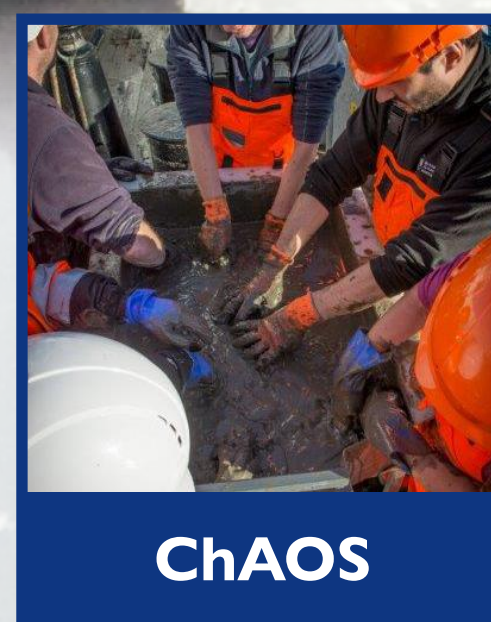
Prof Claire Mahaffey
University of Liverpool, UK

Are food webs sensitive to Arctic change? How will they respond to future change?

Dr Christian März
University of Leeds, UK



How do changes in the surface ocean affect seafloor processes? Will carbon sequestration change?

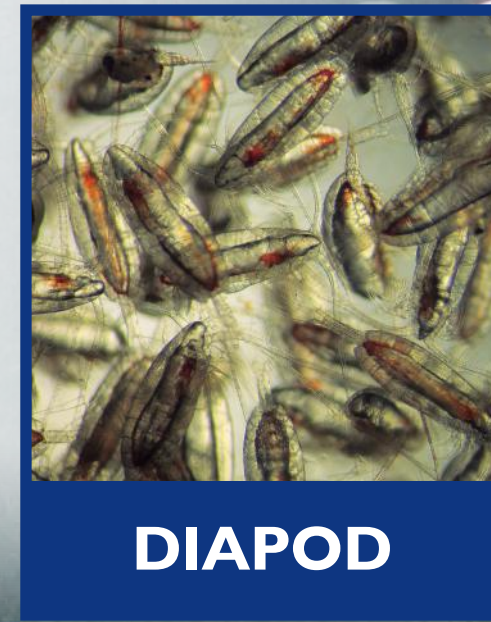


ChAOS

Prof David Pond
University of Stirling, UK



How does Arctic change affect *Calanus*, a key Arctic food source?



DIAPOD



Dr Yevgeny Aksenov
National Oceanography Centre, UK



Dr Benjamin Rabe
Alfred Wegener Institute, DE

How does the exchange of Atlantic and Pacific waters impact Arctic marine ecosystems?



APEAR



Dr Paul Mann
Northumbria University, UK



Dr Jens Strauss
Alfred Wegener Institute, DE

How will the Arctic Ocean respond to freshwater and ancient carbon delivery from land?



CACOON

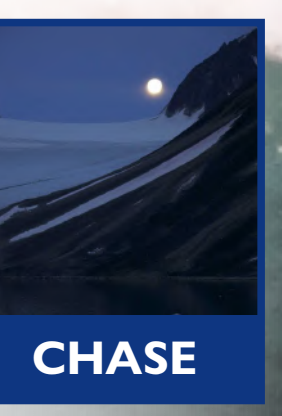


Dr Kim Last
SAMS, UK



Prof Bettina Mayer
Alfred Wegener Institute, DE

What is the role of the biological clock in a changing Arctic Ocean?



CHASE



Prof Nick Polunin
Newcastle University, UK



Dr Hauke Flores
Alfred Wegener Institute, DE

How do key Arctic fish species respond to declining sea ice and warming?



Coldfish



Prof Martyn Tranter
University of Bristol, UK



Dr Marcel Nicolaus
Alfred Wegener Institute, DE

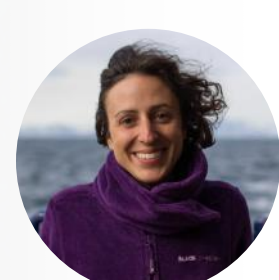
How do sea ice diatoms respond to environmental variability and climate change?



Diatom-ARCTIC

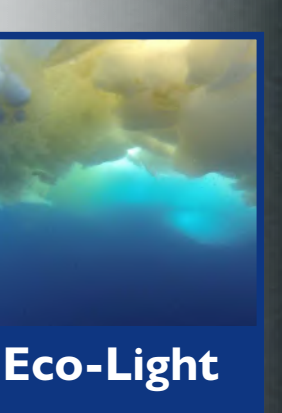


Dr Jeremy Wilkinson
British Antarctic Survey, UK



Dr Giulia Castellani
Alfred Wegener Institute, DE

What is the influence of changing sea ice and snow conditions on Arctic Ocean ecosystems?



Eco-Light



Dr Crispin Halsall
University of Lancaster, UK



Dr Kirstin Dähnke
Helmholtz-Zentrum Geesthacht, DE

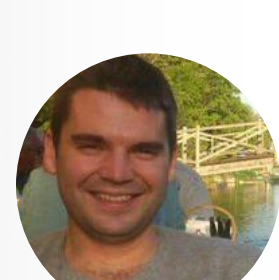
How do pollutants and plastic debris affect the base of the Arctic foodweb?



EISPAC



Dr Norman Ratcliffe
British Antarctic Survey, UK



Dr Patrick Roberts
Max Planck Institute, DE

How does climate change affect competition and species distribution in Arctic and temperate seabirds?



LOMVA



Dr Michael Cunliffe
Marine Biological Association, UK



Prof Anja Engel
GEOMAR, DE

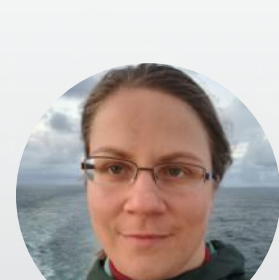
How do seasonal and climate-driven changes impact Arctic pelagic microbial ecosystems?



Micro-ARC



Prof Mike Heath
University of Strathclyde, UK



Dr Ute Daewel
Helmholtz-Zentrum Geesthacht, DE

How will climate change affect potential fishery yields from the Atlantic Arctic?



MiMeMo



Dr Yueng-Djern Lenn
Bangor University, UK



Dr Markus Janout
Alfred Wegener Institute, DE

How do changes in circulation affect nutrients and productivity in Arctic surface waters?



PEANUTS



Dr Andrew Rees
Plymouth Marine Laboratory, UK



Prof Hermann Bange
GEOMAR, DE

How will Arctic warming, sea ice retreat and acidification affect production of climate-active gases?



PETRA

16 PROJECTS

The programme has 4 large, NERC-funded projects that started in February 2017. A further 12 projects joined in July 2018, co-funded by NERC and the BMBF.

£20 MILLION

Investment in Arctic Ocean research funding

32 PROJECT PARTNERS

In the UK and Germany

DATA SHARING

Through BODC and Pangaea

KEY FINDINGS

To be published by the programme in an impact summary, describing projections of change in Arctic ecosystem services