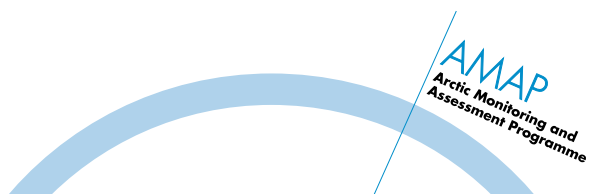


Conference Programme

Arctic Ocean Acidification

**Bergen, Norway
6-8 May, 2013**



ARCTIC COUNCIL

Sunday 5 May, Registration and ice-breaker

Venue: Scandic Bergen City Hotel
Hakonsgaten 2
Bergen

17.00 - 20.00

Registration and ice-breaker at Scandic Bergen City Hotel

Welcome words by: Harald Loeng, Director, Institute of Marine Research

"The Norwegian underwater world"- photographs by World Champion 2009 in underwater photography, Espen Rekdal



Photo: Lisa L. Robbins

Monday 6 May

Venue: Salem Conference Centre
Sigurds gate 6
Bergen

08.00	Registration and hanging up of posters
09.00 - 09.05	Arctic Ocean Acidification - video
09.05 - 09.10	Welcome to the conference by: Trude Drevland, Mayor of Bergen Morten S. Olsen, AMAP Vice Chair, Danish Energy Agency, Ministry of Climate, Energy and Buildings
09.10 - 09.30	Opening by Bård Vegar Solhjell, Norwegian Minister of the Environment
09.30 - 09.40	Welcome words by: Tore Nepstad, Director, Institute of Marine Research Anne Christine Brusendorff, General Secretary, International Council for the Exploration of the Seas Greta Bentzen, Director, Norwegian Institute for Water Research
09.40 - 09.50	Richard Bellerby, Norwegian Institute for Water Research: Arctic Ocean Acidification – introduction and background
	Music
	Session 1 Acidification in the Arctic Ocean – set the scene
10.00 - 10.20	Plankton community responses to ocean acidification: Implications for food webs and biogeochemical cycling Ulf Riebesell, GEOMAR Helmholtz Centre for Ocean Research
10.20 - 10.40	The alpha and omega of ocean acidification – biological impacts on benthic organisms Sam Dupont, University of Gothenburg
10.40 - 11.00	Policy and Ocean Acidification Carol Turley, Plymouth Marine Laboratory
11.00 - 11.30	Comfort break
	Session 2 Chemistry
11.30 - 11.50	Arctic Ocean Acidification: Response to changes to the physical climate and biogeochemical cycling Richard Bellerby, Norwegian Institute for Water Research
11.50 - 12.10	Seasonal cycle of CaCO ₃ saturation state across the entrance to the Barents Sea Toby Tyrrell, University of Southampton
12.10 - 12.30	Ocean acidification trends in the Norwegian Sea Ingunn Skjelvan, Bjerknes Centre for Climate Research
12.30 - 13.30	Lunch
	Session 3 Chemistry
13.30 - 13.55	Changes in observed Arctic Ocean Acidification during the last decades Leif G. Anderson, University of Gothenburg
13.55 - 14.15	Distribution of CaCO ₃ undersaturated waters in the Arctic ocean, from observation and reconstruction Michiyo Yamamoto-Kawai, Tokyo University of Marine Science and Technology

14.15 - 14.35	Ocean Acidification state in Arctic outflow waters in the Fram Strait Melissa Chierici, Institute of Marine Research and the Fram Centre, Tromsø
14.35 - 14.55	On the direction of carbon dioxide fluxes in the Arctic Ocean Vladimir V. Ivanov, Arctic and Antarctic Research Institute, St. Petersburg, Russia
15.00 - 15.30	Comfort break
	Session 4 Chemistry
15.30 - 15.55	Model projections of future Arctic Ocean Acidification. Nadja Steiner, Fisheries and Oceans Canada
15.55 - 16.15	Sea-ice processes and glacier runoff as drivers of inorganic carbon and ocean acidification state in the Arctic Ocean Agneta Fransson, Norwegian Polar Institute
16.35 - 17.30	Poster presentations
17.30 - 17.45	Arctic Ocean Acidification - film presentation
18.00 - 20.00	Reception hosted by the Fram Centre - High North Research Centre for Climate and the Environment



Photo: Jon Fuglestad

Tuesday 7 May

Venue: Salem Conference Centre
Sigurds gate 6
Bergen

Session 5 Biology

09.00 - 09.25	Biological responses to ocean acidification Howard Browman, Institute of Marine Research
09.25 - 09.45	Behavioural strategies predict ocean acidification responses in Arctic copepods Helen S. Findlay, Plymouth Marine Laboratory
09.45 - 10.05	The impact of ocean acidification on the Arctic surface ocean biology Ray Leakey, Scottish Association for Marine Science
10.05 - 10.25	How will ocean acidification affect northern krill? - Experimental investigations Erik Sperfeld, Institute of Marine Research
10.30 - 11.00	Comfort break

Session 6 Biology

11.00 - 11.25	Shoaling calcium carbonate saturation horizons and potential implications for deep sea calcifiers Hrönn Egilsdóttir/Jón Ólafsson; University of Iceland and Marine Research Institute
11.25 - 11.45	The combined effects of ocean acidification, ocean warming and oil spill on the development, feeding and metabolism of the Northern Shrimp (<i>Pandalus borealis</i>) larvae Ingrid C. Taban, IRIS-International Research Institute of Stavanger
11.45 - 12.05	Combined effects of ocean acidification, ocean warming and oil related discharges René Bechmann, IRIS-International Research Institute of Stavanger
12.05 - 12.25	Shift in species composition and abundances of pteropods in the eastern Fram Strait sampled with moored sediment traps at the AWI – HAUSGARTEN (79°/4°E) since the year 2000 Eduard Bauerfeind, Alfred Wegener Institute for Polar and Marine Research
12.30 - 13.30	Lunch

Session 7 Socio-economy and policy

13.30 - 13.50	Potential Economic and Social Impacts of Ocean Acidification on Arctic Fisheries Rashid Sumaila, University of British Columbia
13.50 - 14.10	Preparing for the Challenges of Ocean Acidification in the Pacific-Arctic Region Jeremy T. Mathis, NOAA – Pacific Marine Environmental Lab and University of Alaska
14.10 - 14.30	The socio-economic impacts of ocean acidification on recreational activities in the Arctic Nathalie Hilmi, Centre Scientifique de Monaco and International Atomic Energy Agency
14.30 - 14.50	Questions
15.00 - 15.30	Comfort break

Session 8 Technical aspects

15.30 - 15.45	Autonomous Ocean Acidification Survey Utilizing the Wave Glider Jamie Griffith, Liquid Robotics
15.45 - 16.00	Use of Multiple Autonomous Systems to Improve Arctic Ocean Acidification Data Collection Philip McGillivray, US Coast Guard PACAREA
16.00 - 17.00	APECS panel. Ocean Acidification in the future Arctic: From science to policy – tips for early career scientists. Leif G. Anderson, University of Gothenburg Elizabeth Jewett, National Oceanic and Atmospheric Administration (NOAA) Lars-Otto Reiersen, Arctic Monitoring and Assessment Programme (AMAP) Ulf Riebesell, GEOMAR Helmholtz Centre for Ocean Research Kiel Nadja Steiner, Canadian Centre for Climate Modelling and Analysis
17.00 - 18.00	Poster presentations
19.00	Conference dinner at the hotel



Photo: IRIS

Wednesday 8 May

Venue: Salem Conference Centre
Sigurds gate 6
Bergen

Session 9 Chemistry

09.00 - 09.20	Sensitivity of trace metal biogeochemical cycles to ocean acidification in the Arctic: An assessment of our current state of knowledge Peter Croot, National University of Ireland Galway
09.20 - 09.40	Features of the carbonate system dynamics in the shelf waters of the eastern Laptev Sea Irina I. Pipko, V.I.Ilichev Pacific Oceanological Institute
09.40 - 10.00	Ocean Acidification in Hudson Bay System: Influence of high fluvial input and ice formation Kumiko Azetsu-Scott, Bedford Institute of Oceanography
10.00 - 10.20	Modeling of carbonate system parameters sediment-water fluxes in changeable redox conditions Evgeniy Yakushev, Norwegian Institute for Water Research
10.30 - 11.00	Comfort break

Session 10 Biology

11.00 - 11.20	Environmental challenges of ocean acidification on energy metabolism, buffer capacity and transcriptional responses in Northeast Atlantic mackerel (<i>Scomber scombrus</i> L.) Ernst M. Hevrøy, National Institute of Nutrition and Seafood Research
11.20 - 11.40	Mineralogical properties of marine invertebrates skeletons and their significance in ocean acidification Piotr Kukliński, Institute of Oceanology, Polish Academy of Sciences and Natural History Museum, London
11.40 - 12.00	Past and present water chemistry changes: Planktic foraminifera in the Fram Strait Katarzyna Zamelczyk, University of Tromsø
12.00 - 12.20	Early development of the scallop <i>Pecten maximus</i> L. veligers at increasing CO ₂ -concentration Sissel Andersen, Institute of Marine Research
12.30 - 13.30	Lunch
13.30 - 15.00	Panel discussion. Richard Bellerby, Norwegian Institute for Water Research (NIVA) Peter M. Haugan, Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO) Jón Ólafsson, International Council for the Exploration of the Sea (ICES) Alexey Pavlov, Association of Polar Early Career Scientists (APECS) Moderator: Carol Turley, Plymouth Marine Laboratory
15.00 - 15.15	Closing remarks and end of conference



Photo: Corbis

Poster presentations

Community response to elevated CO₂ concentrations tested in outdoor marine mesocosms

E.M. Foekema, A.C. Sneekes, M. Celussi, and N.H.B.M. Kaag

Long-term dynamics of pH and total alkalinity in the Kara Sea

Alexander Polukhin, Petr Makkaveev

Rapid acidification of the Iceland Sea

Jon Olafsson, Solveig R. Olafsdottir, Alice-Benoit Cattin and Magnus Danielsen

Carbon Chemistry variability within the Iceland Sea

Solveig R. Olafsdottir, Jon Olafsson, Alice-Benoit Cattin and Magnus Danielsen

Studying the surface Arctic ocean acidification state using ships of opportunity

Marit Norli, Evgeniy Yakushev and Kai Sørensen

Changes in the marine carbonate system of western Canadian Arctic: Patterns in a rescued data set

Lisa A. Miller, Robie W. Macdonald, Alfonso Mucci, Michiyo Yamamoto-Kawai, Karina E. Giesbrecht, Fiona McLaughlin, William J. Williams

Study of biodiversity of total microbial community of sediments in Kara Sea shelf, Yenisey Bay and Gydan Bay

Mamaeva E.V., LIN SB RAS, Irkutsk, Russia

Advancing towards an end-to-end model of the impacts of ocean acidification and warming on Arctic Ocean ecosystem services: from effects on individual organisms to stakeholder integration

Stefan Koenigstein, Stefan Goessling-Reisemann

Towards a green oasis in the Arctic Ocean? Trends in phytoplankton biomass and production over the Canadian Arctic Ocean

M. Blais, M. Gosselin and D. Dumont

Ocean Acidification Impacts in the Arctic: Role of the NOAA OA Program

EB Jewett and JT Mathis

Effects of ocean acidification on late winter under-ice bacterial communities in the high Arctic

Findlay H.S., Charvet S., Monier A., Gilbert J.A., Lovejoy C.

Diatom and flagellate responses to increasing pCO₂

Knut Yngve Børsheim

Late Holocene size normalized foraminiferal shell weights from the eastern Norwegian Sea

Carin Andersson, Maria C. Williams, Trond Dokken

Ocean acidification may drive natural selection in marine bivalves

Mikko Vihtakari, Paul E. Renaud, Jon N. Havenhand, Iris E. Hendriks

The pelagic record of ocean acidification

Maria C Williams, Morten Andersen, Carin Andersson, Paul Bown, Daniela N Schmidt

The mathematical model of process migration of the gas bubble accompanied by formation and dissociation of hydrate in the conditions of the world ocean

V. Sh. Shagapov, A.S. Chiglintseva, A.A. Rusinov, B.I. Tazetdinov

Cellular Biomineralization and The Pacific Oyster Genome: Carbonate considerations and Shell Formation

Andrew S. Mount

A coherency between slow oscillations in the marine biota concentration in Bering Sea and the North Pacific SST

Oleg M. Pokrovsky

Global carbon datasets for OA research

Are Olsen, Robert M. Key, Dorothee Bakker, Benjamin Pfeil, Toste Tanhua, Steven Hankin, Siv K. Lauvset, Mario Hoppema, Maciej Telszewski, Masao Ishii, Alexander Kozyr, Christopher Sabine, Reiner Steinfeldt, Emil Jeansson, Sara Jutterström

Arctic climate change and Arctic standard

WU Aina, GAO Zhanke, JIANG Fan

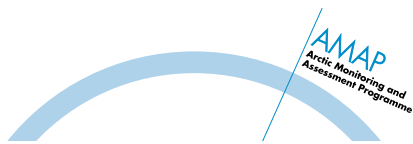
Economic consequences of ocean acidification – estimates for Norway

Isabel Seifert

Comparison of aragonite saturation states, air-sea CO₂ fluxes, and relation to sea-ice cover in different ecosystems in the Canada Basin

Lisa L. Robbins

Conference sponsors and organizers



Aboriginal Affairs and
Northern Development Canada

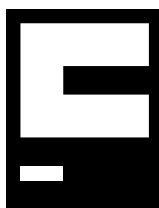


Norwegian Institute for Water Research



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Nordic Council of Ministers



Fram Centre



The Research Council
of Norway



ICES

International Council for
the Exploration of the Sea

CIEM

Conseil International pour
l'Exploration de la Mer



INSTITUTE OF MARINE RESEARCH
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