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THE ROYAL SWEDISH ACADEMY OF SCIENCES

The Ocean in a +2°C world

-An analytical perspective

Date: 22 February 2018 (full day)
Venue: The Beijer Hall, The Royal Swedish Academy of Sciences,
Lilla Frescativägen 4A, Stockholm
Host: The Environmental Committee of the Royal Swedish Academy of Sciences



Global warming is a great challenge for humankind. Most countries have therefore signed an agreement to reduce carbon dioxide emissions in order to keep and the average atmospheric temperature increase from ever reaching 2 °C, preferentially staying below 1.5 °C. Less discussed is that the ocean warming accounts for more than 90% of the total energy stored from global warming from 1971 to 2010 (IPCC AR5). This large change will continue in the future as long as the concentrations of greenhouse gases continue to increase. The atmospheric temperature will most likely continue to rise, but what will the effects in the ocean be? Temperature fronts will change as will the vertical ocean stratification with likely impacts on ocean currents. These and other changes related to an ocean warming will affect the ecosystem, including carbon fluxes within the ocean and exchange with the atmosphere.

In this symposium we will address the potential evolution of the ocean in warming climate. We will learn from the geological past as well as from the present knowledge in oceanography, carbon- and ecosystem sciences and numerical modelling.

Lectures by:

- Gerald Dickens, Rice University, USA
- Stephanie Dutkiewicz, Massachusetts Institute of Technology, USA
- Christoph Heinze, University of Bergen, Norway
- Sverker Jagers, University of Gothenburg, Sweden
- Larry Mayer, University of New Hampshire, USA
- Peter Schlosser, Columbia University, USA
- Kristina M. Gjerde, IUCN Global Marine and Polar Programme

The symposium is free of charge and open to the public but registration is required for all participants. Limited number of seats. For more information and registration please visit www.kva.se/ocean. A complete programme will be available in December 2017.

This symposium is funded by Bolin Centre for Climate Research and Baltic Sea Centre at Stockholm University, Centre for Collective Action Research (CeCAR) at University of Gothenburg and the Royal Swedish Academy of Sciences.