

Executive summary

WGICA held its second meeting at the Alaska Fisheries Science Center/NOAA in Seattle, 19–21 April 2017. Twenty-three persons from four countries (Canada, Japan, Norway, United States of America) attended the meeting. WGICA has prepared overview descriptions of key ecosystem features, and agreed an approach for producing an Integrated Ecosystem Assessment (IEA) for the Central Arctic Ocean (CAO). The geographical focus for WGICA is the basins of the CAO including the surrounding slopes. Processes and features on the surrounding shelves will be included to the extent that they are relevant and essential to understand what goes on in the basins. The two gateways for inflow of Atlantic water through the Fram Strait and the Barents Sea and Pacific water through the Chukchi Sea are given special attention.

The outline of the IEA for the CAO includes a basic description of the CAO ecosystem and assessment of (potential) impacts and vulnerabilities with regards to shipping, fisheries, and climate change. The ecosystem description will include topics such as climate and oceanography, sea ice biota, fish, marine mammals, and birds for both central basin areas as well as the Atlantic and Pacific gateway zones. A 'Key features' section provides a current synopsis of the ecosystem description (included as Annex 2). Elements of the IEA will include:

- A review of the scientific literature on the level of primary production by phytoplankton and ice algae (initial draft included as annex 3).
- A summary of knowledge of fish and fish stocks in the CAO, including new information from acoustic records from research ice-breakers.
- An overview of marine mammal and seabird abundance, distribution, habitat use, and ecology.
- A climate impact assessment based on a review of knowledge of changes in the CAO ecosystem that have taken place during the period of the 'Great melt' in the recent decades after the 1980s.
- A vulnerability assessment to shipping with information on sensitivity and potential vulnerability of species and their ice habitats to oil spills, noise and visual disturbance from ships.