

Working Group on Greenland Ice Sheet-Ocean interactions (GRISO)

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The contribution of Greenland's glaciers to sea level rise significantly increased during the past two decades due, to a large extent, to the synchronous retreat of marine terminating glaciers. The timing of the glacier retreat coincided with a period of oceanic and atmospheric warming suggesting that increased ice mass loss was driven by climatic forcing at ice sheet margins. The GRISO WG was created to foster interaction between the diverse communities interested in this problem to advance our understanding and ability to project future Greenland ice sheet changes. Specific goals are:

- 1) to summarize the state of knowledge and identify gaps in understanding the physical processes governing ice/ocean interaction;
- 2) to propose strategies to address these problems; and
- 3) to bring together the relevant communities.

The WG holds regular teleconferences and has met two times over the past year and half to pursue these goals.

The first two objectives were addressed in a white paper just published by the WG (U.S. CLIVAR Project Office, 2012; Understanding the dynamic response of Greenland's marine terminating glaciers to oceanic and atmospheric forcing: A whitepaper by the U.S. Working Group on Greenland Ice Sheet-Ocean Interactions (GRISO), Report 2012-2, U.S. CLIVAR Project Office, Washington, DC 20006, 22pp. available at http://grisowg.files.wordpress.com/2012/05/greenlandiceocean_whitepaper_publicshed1.pdf). A BAMS article that summarizes much of the white paper will be submitted this summer. The GRISO WG is in the process of organizing a workshop on ice/ocean interaction in Greenland. The aim of this workshop is to bring together the multidisciplinary international community working on glacier/ocean interactions and climate variability associated with Greenland mass changes.

In addition, the WG is actively working on providing recommendations for the Interagency Arctic Research Policy Committee (IARPC). Specifically, the WG has suggested adding an initiative focusing on the increased mass loss of Arctic glaciers, its causes and connections to ocean and atmospheric variability, and implications for sea-level change.