

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

The accelerated mass loss of the Greenland Ice Sheet occurs at its margins, where marine terminated outlet glaciers interact with warming ocean waters. The synchronous retreat and acceleration of these glaciers point to the common climatic forcing at ice sheet's 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; 3) to bring together the relevant communities. The WG holds regular teleconferences and has met several times over the past year to pursue these goals.

The first two objectives were addressed in a white paper 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. CLIVAR Working Group on Greenland Ice Sheet-Ocean Interactions (GRISO), Report 2012-2, U.S. CLIVAR Project Office, Washington, DC 20006, 22 pp. available at http://grisowg.files.wordpress.com/2012/05/greenlandiceocean_whitepaper_publicshed1.pdf). A BAMS article that summarizes major points of the white paper will appear in the August issue.

The third objective was addressed at the recent international workshop organized by the GRISO WG under sponsorship of the US Clivar Program. The workshop "Understanding the Response of Greenland's Marine Terminating Glaciers to Oceanic and Atmospheric Forcing: Challenges to improving observations, process understanding and modeling" took place at Wylie Inn & Conference Center, Beverly, MA on June 4-7, 2013. There were 89 participants including 32 early career scientists. The workshop format included scientific presentations as well as formal and informal discussions. One of the workshop outcomes is a proposed research strategy. A document describing this strategy and a report summarizing major outcomes of the workshop are in preparation.