



## **Modelling Greenland icebergs**

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The Atlantic Meridional Overturning Circulation (AMOC) is well known for carrying heat from low to high latitudes, moderating local temperatures. Numerical studies have examined the AMOC's variability under the influence of freshwater input to subduction and deep convections sites. However, an important source of freshwater has often been overlooked or misrepresented: icebergs. While liquid runoff decreases the ocean salinity near the coast, icebergs are a gradual and remote source of freshwater – a difference that affects sea ice cover, temperature, and salinity distribution in ocean models. Icebergs originated from the Greenland ice sheet, in particular, can affect the subduction process in Labrador Sea by decreasing surface water density. Our study aims to evaluate the distribution of icebergs originated from Greenland and their contribution to freshwater input in the North Atlantic. To do that, we use an interactive iceberg module coupled with the Nucleus for European Modelling of the Ocean (NEMO v3.4), which will calve icebergs from Greenland according to rates established by Bamber et al. (2012). Details on the distribution and trajectory of icebergs within the model may also be of use for understanding potential navigation threats, as shipping increases in northern waters.