

Greenland ice-melt map gets the cold shoulder

Polar researchers mobilize to clear up atlas's icesheet error.

Lucas Laursen

Glaciologists and climatologists are racing to correct an error in the latest edition of *The Times Comprehensive Atlas of the World*, which they say overstates the extent of ice loss in Greenland over the past 12 years.

The 13th edition of the atlas was released on 15 September. The map's publisher, London-based HarperCollins, said in a press release that it had "had to erase 15% of Greenland's once permanent ice cover" since the previous edition in 1999. But researchers, who contend that the number is not backed up by scientific evidence, are worried that the error will undermine their credibility.

Last year, some of the same researchers noted that a 2007 report by the Intergovernmental Panel on Climate Change (IPCC) contained a similarly unsubstantiated claim about Himalayan glaciers, which cast doubt on other statements about climate change (See '[Glacier estimate is on thin ice](#)').

"The scientific community wants to stop this story spreading and then being retracted and scientists being blamed," says Ian Willis, a glaciologist at the Scott Polar Research Institute in Cambridge, UK.

Scientists posting on the Cryolist, a e-mail list for glaciologists and polar-ice-cap researchers, were quick to criticize the atlas's claims — some with great emphasis. "THIS IS NOT WHAT IS HAPPENING. THIS IS NOT SCIENCE. THIS IS NOT WHAT SCIENTISTS ARE SAYING," wrote Jeffrey Kargel, a hydrologist at the University of Arizona in Tucson.

Official condemnation of the map followed. On 16 September, the Danish Meteorological Institute in Copenhagen, which studies Greenland's weather and climate, posted a statement on its website saying that there is no scientific evidence for the claim.

Frosty feedback

Willis and his colleagues wrote a letter to UK newspapers *The Times* and *The Sunday Times*, which do not publish the atlas, saying that "a sizable portion of the area mapped as ice-free in the Atlas is clearly still ice-covered". They provided a satellite image of Greenland, taken last month,



Map of Greenland from the 13th edition of *The Times Atlas of the World* (left) and a mosaic of MODIS satellite images of the same area acquired on the 14th and 15th August 2011 (right).

Times Atlas (L) Modis/Toby Benham (R)

to illustrate their point.

The researchers also offered an estimate that the Greenland Ice Sheet might have lost about 0.1% of its volume in the past 12 years. Glaciologists typically calculate loss of ice volume rather than of land area, because it helps them to predict resultant changes in sea level.

"Of course a cartographer is interested in area," says Willis, but he adds that he does not know of any estimates of the Greenland Ice Sheet's land area that have been published in peer-reviewed journals.

HarperCollins did not reply to a request for comment from *Nature*, but posted a brief statement on its website saying that its information came from "the much respected and widely-cited National Snow and Ice Data Center" (NSDIC) in Boulder, Colorado.

Researchers speculated on the Cryolist that the error came from a misinterpretation of a 1999 map of the Greenland Ice Sheet; cartographers might have defined the edge of the glacier using a contour line that in fact showed where the thickness of the ice fell below 500 metres. That would leave out significant portions of remaining ice.

The centre also released a statement of its own, saying, "The Times Atlas have made their own interpretation of the data, independent of advice from NSIDC."

Volker Rath, a geophysicist at the Complutense University of Madrid, welcomed the researchers' intervention. He told *Nature* that climate scientists had learned from the public reaction to the IPCC mistake that "even small errors will be enlarged by the public, so you have to jump on it early and as openly as possible".

Rath says that although researchers may not all agree on the best way to phrase a correction, it is important to act quickly to ensure that the accurate information reaches the public. The scientists on the Cryolist, he says, "are doing what they are supposed to do".

UPDATED: *On 22 September, publisher HarperCollins said it was reviewing the Atlas' depiction of ice in Greenland, and would work with scientists to produce a new map reflecting the latest data.*

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