

Glaciers melting faster than originally thought: study

4 April 2011, by Deborah Braconnier



(PhysOrg.com) -- A team of scientists from Aberystwyth University, the University of Exeter and Stockholm University, led by Welsh scientist and Professor Neil Glasser, have released a study published in *Nature Geoscience* showing that the glaciers of Patagonia in South America are melting at a much faster rate than originally thought.

Utilizing a new technique for [ice](#) loss calculation, these scientists used the spread of glacier debris and the lines where vegetation starts on the mountainsides to create a series of calculations determining the amount of ice that has melted since the [Little Ice Age](#) ended there 350 years ago.

Calculations show that the some 270 glaciers that cover the area have lost 606 cubic kilometers of ice. This is the first time that a loss of volume has been calculated to include this far back in time. Recent studies of glacial loss have only gone as far back as to when [satellite imaging](#) of the glaciers could be used to calculate loss.

While this study does show that the rate this glacial

melting and its contribution to the sea level rise is increasing, this was not their most alarming discovery. Research shows that the rate of melting from the beginning of the 20th century was slower than previously thought; their research, however, also shows that since 1980, the rate of glacial loss has increased by over 100 times that of the previous 320 year long-term average.

The team points out that the Patagonia [glaciers](#) are located at a latitude in the [southern hemisphere](#) equal to the Alps in the [northern hemisphere](#), and suggest that if the team were to use the same calculations there, they would see a similar pattern of loss rate increase.

By using these new calculations going back over a much longer period, the team of scientists has been able to estimate possible sea level rises for over three centuries.

More information: Global sea-level contribution from the Patagonian Icefields since the Little Ice Age maximum, *Nature Geoscience* (2011) [doi:10.1038/ngeo1122](https://doi.org/10.1038/ngeo1122)

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