

Scientists expect increased melting of mountain glaciers

January 20 2006

Sea level rise due to increased melting of mountain glaciers and polar ice caps will be much lower in the 21st Century than previously estimated. However, decay of mountain glaciers in due to global warming will be much more rapid than previously thought. These are the major results of a study conducted in cooperation with the Alfred-Wegener-Institute for Polar and Marine Research, which is published in the scientific magazine *Nature*.

Up to now scientists expected sea level rises of about 40 centimetres due to global climate change. Melting of polar ice caps and mountain glaciers contributes about a quarter, the rest is the result of expansion of ocean waters because of increased water temperature. The present study combines projections of future climate from global climate models to our models of glacier mass balance and volume. For the first time, scientists model the ice caps and the mountain glaciers separately.

“Our paper predicts a relatively low sea level rise from glaciers and icecaps, compared with earlier work, but the local effect of accelerated glacier melt is going to be very important”, says Dr Sarah Raper.

“Indeed, it may already be increasing catastrophic damage in the form of glacier lake outbursts in high mountain regions like Nepal”.

“Projections of sea level rise in the 21st Century must be based on models informed by observations”, says Dr Roger Braithwaite. “We certainly need more data on glaciers. Neither the USA nor Canada has completed a national glacier inventory, so we had to model around the

gaps in the data. We should at least get reliable information on the larger glaciers”.

Source: Alfred Wegener Institut fuer Polar und Meeresforschung

Citation: Scientists expect increased melting of mountain glaciers (2006, January 20) retrieved 1 May 2024 from <https://phys.org/news/2006-01-scientists-mountain-glaciers.html>

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