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# Global Glacier Changes: facts and figures

This publication is about the world's surface ice on land outside the two polar ice sheets. It provides a sound and well illustrated review on the basis of available data, the global distribution of glaciers and ice caps, and their changes since maximum extents of the so-called Little Ice Age. The publication also provides the background knowledge needed to understand the compiled glacier observations in view of the ongoing climate change. It presents the latest state of knowledge on glacier changes in view of the available data sets and the scientific literature, and discusses the challenges of the 21st century for the monitoring of glaciers and ice caps.

The publication was prepared in a joint project of the United Nations Environment Programme (UNEP) and the World Glacier Monitoring Service (WGMS). It was written by the officers of the WGMS and reviewed by scientists from around the world with expertise in the research and monitoring of glaciers and ice caps.

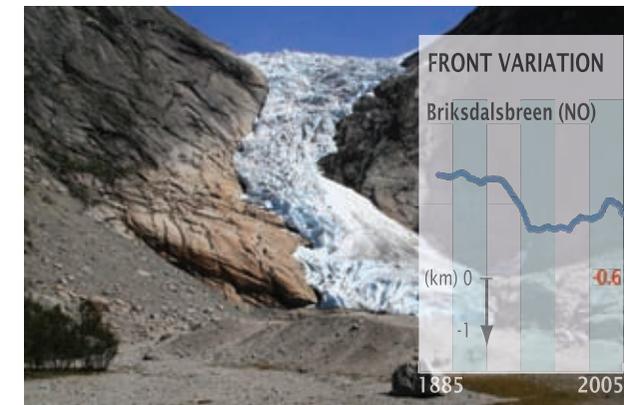
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The **World Glacier Monitoring Service (WGMS)** compiles, analyses, and publishes standardised information on the distribution and ongoing changes in the world's glaciers and ice caps. The WGMS works under the auspices of ICSU (FAGS), IUGG (IACS), UNEP, UNESCO, and WMO and maintains a collaborative network of local investigators and national correspondents in all countries involved in glacier monitoring.

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The front cover shows:

- an ASTER satellite image (62 x 61 km) of glaciers in Dobbin Bay on eastern Ellesmere Island, Canadian Arctic, 31 July 2000;
- Briksdalsbreen, an outlet glacier of Jostedalbreen, Norway, in a photo comparison of the years 1995 and 2007 (Source: S. Winkler, University of Würzburg, Germany); and
- the length change curve of Briksdalsbreen, Norway (Source: WGMS).

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The views expressed in this paper are those of the authors and do not necessarily reflect views of the UNEP and partner organisations or their member countries. The designations used and the presentations do not imply the expression of any opinion on the part of the participating organisations concerning the legal status of any country, territory, city or area under its authority, or the delineation of its frontiers and boundaries.

UNEP promotes environmentally sound practices globally and in its own activities. This publication is printed on paper from sustainable forests including recycled fibre. The paper is chlorine free, and the inks vegetable-based. Our distribution policy aims to reduce UNEP's carbon footprint.

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This publication is available online from: <http://www.grid.unep.ch/glaciers/>

The back cover shows Oberaar Glacier in Switzerland during a field campaign end of June 2003. Source: M. Zemp, University of Zurich, Switzerland.