

Submission of Glacier Fluctuation Data to the World Glacier Monitoring Service

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Observation Period 2011/12

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General Guidelines

What is it all about?

The World Glacier Monitoring Service (WGMS) continuously publishes internationally collected and standardised data on changes in glaciers throughout the world. The compiled data is published at 5-yearly intervals in the 'Fluctuations of Glaciers' (FoG) which include detailed information on the observed glaciers, variations in the position of glacier fronts, mass balance results, changes in area, volume and thickness, as well as addenda from earlier years. Furthermore, the publication includes index measurements and annexed maps as well as information on special events such as cases concerning glacier hazards and dramatic changes. The WGMS call-for-data is sent out one year after the end of the measurement period on the Northern Hemisphere (i.e., September 30), which allows the investigators to analyse and publish their own data before it is made readily available to the scientific community and the public. To speed up and facilitate the access to glacier fluctuation information, preliminary mass balance data is published annually on the website of the WGMS and biennially in the 'Glacier Mass Balance Bulletin' (GMBB).

General guidelines and scope of the two publications

In the FoG all glacier observations are published that fall within the five year measurement period (e.g., 2010–2015 for the upcoming FoG Vol. XI) and are processed according to the data standards of the WGMS, as described below. The bi-annual GMBB reports on glacier mass balance values measured with the direct glaciological method. The bulletin consists of two parts – basic information in which glaciers are included with three or more calculated specific net balances, covering both hydrological years (e.g., 2011/12 and 2012/13 for the GMBB No. 13 to be published in 2015), and a detailed part with information from selected glaciers in various mountain ranges and with long measurement series (at least 6 years of observations). The time period known as the hydrological year is defined by the end of the year, i.e., in the Northern Hemisphere the hydrological year of 2011/12 starts October 1st, 2011 and ends September 30th, 2012. In the Southern Hemisphere the hydrological year of 2012 starts April 1st, 2011 and ends March 31st, 2012. In each country the data collection is to be organised by the National Correspondent of the WGMS according to this '**General Guidelines**' and the '**Notes on the Completion of the Data Sheets**' and using the '**Digital Data Submission Form**'.

How to submit the data?

For the submission of glacier fluctuation data to the WGMS, the **Digital Data Submission Form** is recommended to be used. The excel-based form is organised in worksheets A–F, with corresponding attributes descriptions in the **Notes on the Completion of the Data Sheets** (see links below). If you prefer to submit your data in any other format (e.g., csv, ascii), please make sure to meet the data scheme, field names and units as described in these latter notes on the completion of the data sheets.

For the observation period 2011/12, as well as addenda from earlier years, the following information is to be submitted:

- Standardised data on glacier fluctuations and corresponding meta-data, including estimates on maximum error of the reported values (cf. data sheets A–E).
- Information on special events, especially concerning glacier hazards and dramatic changes in glaciers (cf. data sheet F - SPECIAL EVENT).
- Full contact information on principal investigators, sponsoring agencies, and sources of data, as well as of the national correspondent

Based on the compiled data and information from this call-for-data, we will publish the GMBB No. 13 (2012-2013) and later on the FoG 2010–2015 (Vol. XI).

For a publication of the glacier data in the basic information part of the GMBB No. 13 (2012–2013) – which will be published in 2015 – the glacier mass balance data (annual balance, ELA and AAR values) from direct glaciological measurements (independent of meteorological or hydrological observations) are mandatory. For the publication in the part with detailed information the values of balance as a function of altitude is needed as well as the following additional material:

- Black and white scanned **photograph** (at least 600 dpi, no PDF) showing the entire glacier, referenced by author and date of photograph (more recent and/or better photographs than the already published ones are welcome).
- Short **text** commenting on the general characteristics of the glacier and on the reported balance years; the text should include information on the current glacier extent and size, inter-/extrapolation methods, available geodetic surveys, mean annual air temperature and annual precipitation at ELA, remaining ice thickness, etc.
- **Three digital maps** of around A4 size showing the outlines of the glacier, the scale, the direction to the north and a) topography and observation network, b) annual balance distribution for the two observation years.
- **Point mass balance measurements** at stakes and pits that were used to calculate the glacier mass balance (cf. data sheet EEE - MASS BALANCE POINT).

The last issues of the FoG and GMBB might serve you as an example during the data preparation (for web-links see below).

For the submission of other glacier data, such as reconstruction of glacier fluctuation series, new glacier inventories, or large collections of overview and repeat photographs of glaciers, please follow the links and instructions on the website of the Global Terrestrial Network for Glaciers (GTN-G; for web-link see below).

DEADLINES FOR DATA SUBMISSION:

Please submit full details on glacier fluctuation data for the observation period of 2011/12 and addenda from earlier years as soon as possible but no later than by **1st of December 2013!!!**

Questions & support

For any further questions or need for support, the WGMS staff is willing to assist you!

Links

This General Guidelines: http://www.wgms.ch/downloads/WGMS_GuidelinesforDataSubmission.pdf

Digital Data Submission Form: http://www.wgms.ch/downloads/WGMS_DataSubmissionForm.xls

Notes on the Completion of the Data Sheets: http://www.wgms.ch/downloads/WGMS_AttributeDescription.pdf

List of National Correspondents of WGMS: <http://www.wgms.ch/nc.html>

Last issues of the FoG: <http://www.wgms.ch/fog.html>

Last issues of the GMBB: <http://www.wgms.ch/gmbb.html>

Links and instructions for the submission of other glacier data types: http://www.gtn-g.org/data_submission.html