

A GENERAL INFORMATION

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in cases of new glacier entries related to available fluctuation data; for glaciers already existing in the FoG database, POLITICAL UNIT (A1), WGMS ID (A2) and GLACIER NAME (A3) are to be used in data sheets B to F.

A1 POLITICAL UNIT *[alphabetic code; 2 digits]*

Name of country or territory in which glacier is located (for 2 digit abbreviations, see ISO 3166 country code, available at www.iso.org).

Political unit is part of WGI key (positions 1 and 2).

Political unit is part of FoG and MBB key (positions 1 and 2).

A2 WGMS ID *[numeric code; 5 digits]*

5 digit key identifying glacier in the WGMS data base.

For new glacier entries, this key is assigned by the WGMS.

A3 GLACIER NAME *[alpha-numeric code; up to 30 digits]*

The name of the glacier, written in CAPITAL letters.

Format: max. 30 column positions.

If necessary, the name can be abbreviated; in this case, please give the full name under "A16 REMARKS".

A4 HYDROLOGICAL CATCHMENT AREA *[alpha-numeric code; 5 digits]*

Part of WGI key: Position 3 denotes the continent. Positions 4 to 7 denote the drainage basin; cf. Müller (1978).

A5 FREE POSITION *[alpha-numeric code; 2 digits]*

Part of WGI number: Positions 8 and 9 are freely chosen identification numbers; cf. Müller (1978).

A6 LOCAL CODE *[alpha-numeric code; 3 digits]*

Part of WGI number: Positions 10 to 12; cf. Müller (1978).

A7 LOCAL PSFG *[alpha-numeric code; 5 digits]*

The local PSFG number is part of FoG and MBB key (positions 3 to 7).

It consists of 4 or, as an exception, 5 numerical digits. Empty spaces should be filled with the digit 0.

The PSFG key is to be assigned by the National Correspondents of the WGMS according to existing national glacier inventories or similar glacier numerations.

A8 GEOGRAPHICAL LOCATION (GENERAL) *[alpha-numeric code; up to 30 digits]*

Refers to a large geographical entity (e.g. a large mountain range or large political subdivision) which gives a rough idea of the location of the glacier, without requiring the use of a map or an atlas.

Examples: Western Alps, Southern Norway, Polar Ural, Tien Shan, Himalayas.

A9 GEOGRAPHICAL LOCATION (SPECIFIC) *[alpha-numeric code; up to 30 digits]*

Refers to a more specific geographical location (e.g. mountain group, drainage basin), which can be found easily on a small scale map of the country concerned.

Examples: Rhone Basin, Jotunheimen

A10 LATITUDE *[decimal degree North or South; up to 6 digits]*

The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may lie outside the glacier.

Latitude should be given in decimal degrees, positive values indicating the northern hemisphere and negative values indicating the southern hemisphere.

Latitude should be given to a maximum precision of 4 decimal places.

A11 LONGITUDE [*decimal degree East or West; up to 7 digits*]

The geographical coordinates should refer to a point in the upper ablation area; for small glaciers, this point may lie outside the glacier.

Longitude should be given in decimal degrees, positive values indicating east of zero meridian and negative values indicating west of zero meridian.

Longitude should be given to a maximum precision of 4 decimal places.

A12 CODE [*numeric code; 3 digits*]

Classification should be given in coded form, according to "Perennial Ice and Snow Masses" (Technical papers in hydrology, UNESCO/IAHS, 1970). The following information should be given:

- Primary Classification Digit 1
- Form Digit 2
- Frontal Characteristics Digit 3

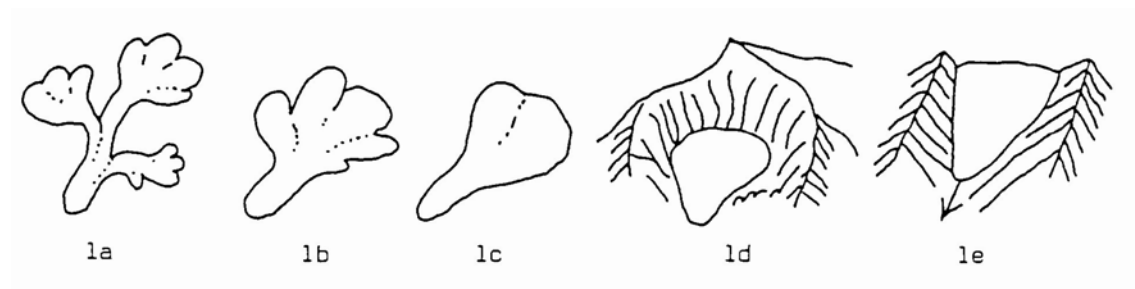
A12a PRIMARY CLASSIFICATION - Digit 1

0	Miscellaneous	Any type not listed below (please explain)
1	Continental ice sheet	Inundates areas of continental size
2	Icefield	Ice masses of sheet or blanket type of a thickness that is insufficient to obscure the subsurface topography
3	Ice cap	Dome-shaped ice masses with radial flow
4	Outlet glacier	Drains an ice sheet, icefield or ice cap, usually of valley glacier form; the catchment area may not be easily defined
5	Valley glacier	Flows down a valley; the catchment area is well defined
6	Mountain glacier	Cirque, niche or crater type, hanging glacier; includes ice aprons and groups of small units
7	Glacieret and snowfield	Small ice masses of indefinite shape in hollows, river beds and on protected slopes, which has developed from snow drifting, avalanhcng, and/or particularly heavy accumulation in certain years; usually no marked flow pattern is visible; in existence for at least two consecutive years.
8	Ice shelf	Floating ice sheet of considerable thickness attached to a coast nourished by a glacier(s); snow accumulation on its surface or bottom freezing
9	Rock glacier	Lava-stream-like debris mass containing ice in several possible forms and moving slowly downslope

Note: The parent glacier concept (cf. A15 PARENT GLACIER) can be used for the classification of complex glacier systems (e.g., ice cap or icefield with outlet glaciers) or of disintegrating/coalescing glaciers over time.

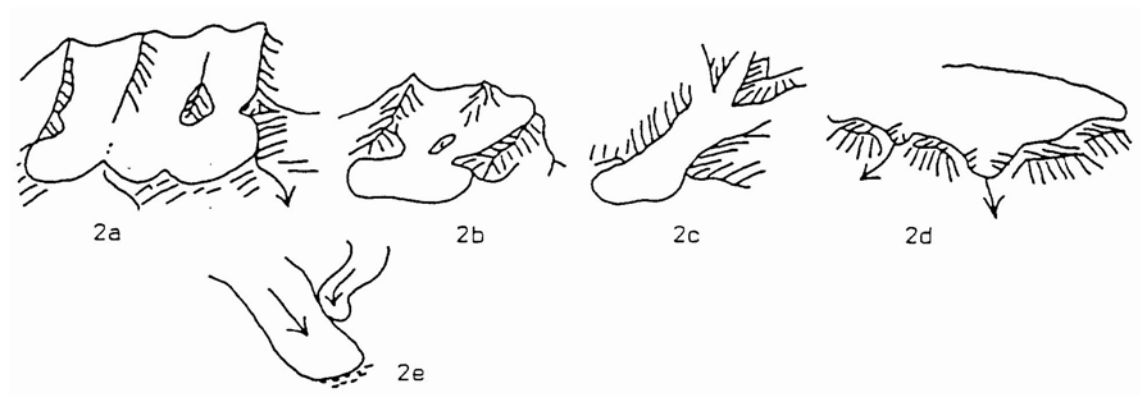
A12b FORM – Digit 2

0	Miscellaneous	Any type not listed below (please explain)
1	Compound basins	Two or more individual valley glaciers issuing from tributary valleys and coalescing (Fig. 1a)
2	Compound basin	Two or more individual accumulation basins feeding one glacier system (Fig. 1b)
3	Simple basin	Single accumulation area (Fig. 1c)
4	Cirque	Occupies a separate, rounded, steep-walled recess which it has formed on a mountain side (Fig. 1d)
5	Niche	Small glacier in a V-shaped gully or depression on a mountain slope (Fig. 1e); generally more common than genetically further-developed cirque glacier.
6	Crater	Occurring in extinct or dormant volcanic craters
7	Ice apron	Irregular, usually thin ice mass which adheres to mountain slope or ridge
8	Group	A number of similar ice masses occurring in close proximity and too small to be assessed individually
9	Remnant	Inactive, usually small ice masses left by a receding glacier



A12c FRONTAL CHARACTERISTICS – Digit 3

- | | | |
|---|---|---|
| 0 | Miscellaneous | Any type not listed below (please explain) |
| 1 | Piedmont | Icefield formed on a lowland area by lateral expansion of one or coalescence of several glaciers (Fig. 2a, 2b) |
| 2 | Expanded foot | Lobe or fan formed where the lower portion of the glacier leaves the confining wall of a valley and extends on to a less restricted and more level surface (Fig. 2c) |
| 3 | Lobed | Part of an ice sheet or ice cap, disqualified as an outlet glacier (Fig. 2d) |
| 4 | Calving | Terminus of a glacier sufficiently extending into sea or lake water to produce icebergs; includes- for this inventory- dry land ice calving which would be recognisable from the “lowest glacier elevation” |
| 5 | Coalescing, non-contributing (Fig. 2e) | |
| 6 | Irregular, mainly clean ice (mountain or valley glaciers) | |
| 7 | Irregular, debris-covered (mountain or valley glaciers) | |
| 8 | Single lobe, mainly clean ice (mountain or valley glaciers) | |
| 9 | Single lobe, debris-covered (mountain or valley glaciers) | |



A13 EXPOSITION OF ACCUMULATION AREA [cardinal point; up to 2 digits]

The main orientation of the accumulation area using the 8 cardinal points (8-point compass).

A14 EXPOSITION OF ABLATION AREA [cardinal point; up to 2 digits]

The main orientation of the ablation area using the 8 cardinal points (8-point compass).

A15 PARENT GLACIER [numeric code; 5 digits]

Links separated glacier parts with (former) parent glacier, using WGMS ID (see “A2 WGMS ID”).

A16 REMARKS [alpha-numeric]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

B STATE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report length and elevation range of glaciers with available fluctuation data.

B1 POLITICAL UNIT [*alphabetic code; 2 digits*]

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

B2 WGMS ID [*numeric code; 5 digits*]

5 digit key identifying glacier in the WGMS data base (cf. "A2 WGMS ID").

B3 GLACIER NAME [*alpha-numeric code; up to 30 digits*]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

B4 YEAR [*year*]

Year of present survey.

B5 MAXIMUM ELEVATION OF GLACIER [*m a.s.l.*]

Altitude of the highest point of the glacier.

B6 MEDIAN ELEVATION OF GLACIER [*m a.s.l.*]

Altitude of the contour line which halves the area of the glacier.

B7 MINIMUM ELEVATION OF GLACIER [*m a.s.l.*]

Altitude of the lowest point of the glacier.

B8 ELEVATION ACCURACY [*m*]

Estimated maximum error of reported elevations.

B9 LENGTH [*km*]

Maximum length of glacier measured along the most important flowline (in horizontal projection).

B10 LENGTH ACCURACY [*km*]

Estimated maximum error, in length.

B11 SURVEY DATE [*date*]

Date of present survey.

For each survey, please indicate the complete date (day, month, year).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "B15 REMARKS"

B12 SURVEY METHOD [*alphabetic code; 1 digit*]

The survey method should be given using the following alphabetic code:

A = Aerial photography

B = Terrestrial photogrammetry

C = Geodetic ground survey (theodolite, tape, etc.)

D = Combination of A, B or C (please explain under "B15 REMARKS")

E = Other methods (please explain under "B15 REMARKS")

B13 INVESTIGATOR [*alpha-numeric*]

Name(s) of the person(s) or agency doing the field work and/or the name(s) of the person(s) or agency processing the data.

B14 SPONSORING AGENCY *[alpha-numeric]*

Full name, abbreviation and address of the agency where the data are held.

B15 REMARKS *[alpha-numeric]*

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

C FRONT VARIATION

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier length change data.

C1 POLITICAL UNIT [*alphabetic code; 2 digits*]

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

C2 WGMS ID [*numeric code; 5 digits*]

5 digit key identifying glacier in the WGMS data base (cf. "A2 WGMS ID").

C3 GLACIER NAME [*alpha-numeric code; up to 30 digits*]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

C4 YEAR [*year*]

Year of present survey.

C5 FRONT VARIATION [*m*]

Variation in the position of the glacier front (in horizontal projection) between the previous and present survey.

Positive values: advance

Negative values: retreat

C6 FRONT VARIATION ACCURACY [*m*]

Estimated maximum error for front variation.

C7 QUALITATIVE VARIATION [*alphabetic code; 2 digits*]

If no quantitative data are available for a particular year, but qualitative data are available, then the front variation should be denoted using the following symbols. They should be positioned in the far left of the data field.

+X : Glacier in advance

-X : Glacier in retreat

ST : Glacier stationary

SN : Glacier front covered by snow making survey impossible.

Qualitative variations will be understood with reference to the previous survey data, whether this data is qualitative or quantitative.

C8 SURVEY DATE [*date*]

Date of present survey

For each survey, please indicate the complete date (day, month, year).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "C13 REMARKS"

C9 SURVEY METHOD [*alphabetic code; 1 digit*]

The survey method should be given using the following alphabetic code:

A = Aerial photography

B = Terrestrial photogrammetry

C = Geodetic ground survey (theodolite, tape etc.)

D = Combination of a, b or c (please explain under "C13 REMARKS")

E = Other methods (please explain under "C13 REMARKS")

C10 REFERENCE DATE *[date]*

Date of previous survey

For each survey, please indicate the complete date (day, month, year).

Missing data : For unknown day or month, put "01" in the corresponding position(s) and make a corresponding note under "C13 REMARKS"

C11 INVESTIGATOR *[alpha-numeric]*

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

C12 SPONSORING AGENCY *[alpha-numeric]*

Full name, abbreviation and address of the agency where the data are held.

C13 REMARKS *[alpha-numeric]*

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

D CHANGE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report changes in thickness, area and volume from geodetic surveys and/or area data of glaciers with available fluctuation data.

D1 POLITICAL UNIT [*alphabetic code; 2 digits*]

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

D2. WGMS ID [*numeric code; 5 digits*]

5 digit key identifying glacier in the WGMS data base (cf. "A2 WGMS ID").

D3 GLACIER NAME [*alpha-numeric code; up to 30 digits*]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

D4 YEAR [*year*]

Year of present survey.

D5 LOWER BOUNDARY [*m a.s.l.*]

Lower boundary of altitude interval.

If refers to entire glacier, then lower bound = 9999.

D6 UPPER BOUNDARY [*m a.s.l.*]

Upper boundary of altitude interval

If refers to entire glacier, then upper bound = 9999.

D7 AREA SURVEY YEAR [*km²*]

Glacier area of each altitude interval (in horizontal projection) in the survey YEAR.

D8 AREA CHANGE [*1000 m²*]

Area change for each altitude interval.

D9 AREA CHANGE ACCURACY [*1000 m²*]

Estimated maximum error for area change.

D10 THICKNESS CHANGE [*mm*]

Thickness change for each altitude interval.

D11 THICKNESS CHANGE ACCURACY [*mm*]

Estimated maximum error for thickness change.

D12 VOLUME CHANGE [*1000 m³*]

Volume change for each altitude interval.

D13 VOLUME CHANGE ACCURACY [*1000 m³*]

Estimated maximum error for volume change.

D14 SURVEY DATE [*date*]

Date of present survey

For each survey, please indicate the complete date (day, month, year).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "D19 REMARKS"

D15 SURVEY METHOD [*alphabetic code; 1 digit*]

The survey method should be given using the following alphabetic code:

A = Aerial photography

B = Terrestrial photogrammetry

C = Geodetic ground survey (theodolite, tape etc.)

D = Combination of a, b or c (please explain under "D19 REMARKS")

E = Other methods (e.g., LIDAR, RADAR, map comparison; please explain and add at least one reference under "D19 REMARKS")

D16 REFERENCE DATE [*date*]

Date of previous survey.

For each survey, please indicate the complete date (day, month, year).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "D19 REMARKS"

D17 INVESTIGATOR [*alpha-numeric*]

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

D18 SPONSORING AGENCY [*alpha-numeric*]

Full name, abbreviation and address of the agency where the data are held.

D19 REMARKS [*alpha-numeric*]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

E MASS BALANCE OVERVIEW

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier mass balance data.

E1 POLITICAL UNIT *[alphabetic code; 2 digits]*

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

E2 WGMS ID *[numeric code; 5 digits]*

5 digit key identifying glacier in the WGMS database (cf. "A2 WGMS ID").

E3 GLACIER NAME *[alpha-numeric code; up to 30 digits]*

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

E4 YEAR *[year]*

Year of present survey.

E5 TIME MEASUREMENT SYSTEM *[alphabetic code; 3 digits]*

The time measurement system should be given using the following 3 digit alphabetic code:

STR = stratigraphic system

FXD = fixed data system

COM = combined system

OTH = other (please explain under "E22 REMARKS")

E6 BEGINNING OF SURVEY PERIOD *[date]*

Date on which survey period began.

For each survey, please give the complete date (day, month, year).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "E22 REMARKS"

E7 END OF WINTER SEASON *[date]*

Date of end of winter season (day, month, year, if known).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "E22 REMARKS"

E8 END OF SURVEY PERIOD *[date]*

Date on which survey period ended.

For each survey, please give the complete date (day, month, year).

Missing data: For unknown day or month, put "01" in the corresponding position(s) and make a note under "E22 REMARKS"

E9a ELA PREFIX *[alphabetic code, 1 digit]*

Prefix denoting if the equilibrium line was below (" $<$ ") or above (" $>$ ") the minimum or maximum elevation of the glacier, respectively. Leave this field empty if the mean altitude of the equilibrium line was within the glacier elevation range.

E9b EQUILIBRIUM LINE ALTITUDE *[m a.s.l.]*

Mean altitude (averaged over the glacier) of the end-of-mass-balance-year equilibrium line (ELA).

Give glacier minimum or maximum elevation if the ELA was below or above the elevation range of the glacier, respectively.

E10 ELA ACCURACY *[m]*

Estimated maximum error of ELA.

E11 MINIMUM NUMBER OF MEAS. SITES USED IN ACCUMULATION AREA *[numeric]*

The minimum number of different sites at which measurements were taken in the accumulation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once.

E12 MAXIMUM NUMBER OF MEAS. SITES USED IN ACCUMULATION AREA *[numeric]*

The maximum number of different sites at which measurements were taken in the accumulation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once.

E13 MINIMUM NUMBER OF MEAS. SITES USED IN ABLATION AREA *[numeric]*

The minimum number of different sites at which measurements were taken in the ablation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once.

E14 MAXIMUM NUMBER OF MEAS. SITES USED IN ABLATION AREA *[numeric]*

The maximum number of different sites at which measurements were taken in the ablation area. Repeat measurements may be taken for one site, in order to obtain an average value for that site, but the site is still only counted once.

E15 ACCUMULATION AREA *[km²]*

Accumulation area in horizontal projection.

E16 ACCUMULATION AREA ACCURACY *[km²]*

Estimated maximum error for accumulation area.

E17 ABLATION AREA *[km²]*

Ablation area in horizontal projection.

E18 ABLATION AREA ACCURACY *[km²]*

Estimated maximum error for ablation area.

E19 ACCUMULATION AREA RATIO *[%]*

Accumulation area divided by the total area, multiplied by 100. Given in percent.

E20 INVESTIGATOR *[alpha-numeric]*

Name(s) of the person(s) or agency doing the fieldwork and/or the name(s) of the person(s) or agency processing the data.

E21 SPONSORING AGENCY *[alpha-numeric]*

Full name, abbreviation and address of the agency where the data are held.

E22 REMARKS *[alpha-numeric]*

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

EE MASS BALANCE

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report glacier mass balance data with values related to the data given in data sheet E.

EE1 POLITICAL UNIT [*alphabetic code; 2 digits*]

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

EE2 WGMS ID [*numeric code; 5 digits*]

5 digit key identifying glacier in the WGMS database (cf. "A2 WGMS ID").

EE3 GLACIER NAME [*alpha-numeric code; up to 30 digits*]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

EE4 YEAR [*year*]

Year of present survey.

EE5 LOWER BOUNDARY OF ALTITUDE INTERVAL [*m a.s.l.*]

If refers to entire glacier, then lower bound = 9999.

EE6 UPPER BOUNDARY OF ALTITUDE INTERVAL [*m a.s.l.*]

If refers to entire glacier, then lower bound = 9999.

EE7 ALTITUDE INTERVAL AREA [*km²*]

Area of each altitude interval (in horizontal projection).

EE8 SPECIFIC WINTER BALANCE [*mm w.e.*]

Specific means the total value divided by the total glacier area under investigation. Specific winter balance equals the net winter balance divided by the total area of the glacier.

EE9 SPECIFIC WINTER BALANCE ACCURACY [*mm w.e.*]

Estimated maximum error for specific winter balance.

EE10 SPECIFIC SUMMER BALANCE [*mm w.e.*]

Specific means the total value divided by the total glacier area, in this case, it is the net summer balance divided by the total area of the glacier.

EE11 SPECIFIC SUMMER BALANCE ACCURACY [*mm w.e.*]

Estimated maximum error for specific winter balance.

EE12 SPECIFIC NET BALANCE [*mm w.e.*]

Net balance of glacier divided by the area of the glacier.

EE13 SPECIFIC NET BALANCE ACCURACY [*mm w.e.*]

Estimated maximum error for specific net balance.

EE14 REMARKS [*alpha-numeric*]

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

EEE MASS BALANCE POINT

NOTES ON THE COMPLETION OF THE DATA SHEET

This data sheet should be completed in order to report point mass balance data with values related to the data given in data sheets E and EE.

EEE1 POLITICAL UNIT [*alphabetic code; 2 digits*]

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

EEE2 WGMS ID [*numeric code; 5 digits*]

5 digit key identifying glacier in the WGMS database (cf. "A2 WGMS ID").

EEE3 GLACIER NAME [*alpha-numeric code; up to 30 digits*]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

EEE4 YEAR [*year*]

Year of present survey.

EEE5 POINT ID [*alpha-numeric; 4 digits*]

4 digit key indentifying the stake or pit.

EEE6 POINT LATITUDE [*decimal degree North or South; up to 6 digits*]

Latitude of stake or pit given in decimal degrees, positive values indicating the northern hemisphere and negative values indicating the southern hemisphere.

Latitude should be given to a maximum precision of 4 decimal places.

EEE7 POINT LONGITUDE [*decimal degree East or West; up to 7 digits*]

Longitude of stake or pit given in decimal degrees, positive values indicating east of zero meridian and negative values indicating west of zero meridian.

Longitude should be given to a maximum precision of 4 decimal places.

EEE8 POINT ELEVATION [*m a.s.l.*]

Elevation above sea level of stake or pit.

EEE9 POINT MASS BALANCE [*mm w.e.*]

Net mass balance at stake or pit.

EEE10 REMARKS [*alpha-numeric*]

Any important information or comments not included above, such as measured or estimated density of snow/firn/ice, may be given here.

F SPECIAL EVENT

NOTES ON COMPLETION OF THE DATA SHEET

This data sheet should be completed in cases of extraordinary events, especially concerning glacier hazards and dramatic changes in glaciers.

F1 POLITICAL UNIT [*alphabetic code; 2 digits*]

Name of country or territory in which glacier is located (cf. "A1 POLITICAL UNIT").

F2 WGMS ID [*numeric code; 5 digits*]

5 digit key identifying glacier in the WGMS database (cf. "A2 WGMS ID").

F3 GLACIER NAME [*alpha-numeric code; up to 30 digits*]

The name of the glacier, written in CAPITAL letters. Use the same spelling as in "A3 GLACIER NAME".

F4 EVENT DATE [*date*]

Date of event.

For events lasting for several days, please indicate the date of the main event, and describe the sequence of the event under "F6 EVENT DESCRIPTION."

F5 EVENT TYPE [*binary code; 6 digits*]

Indicate the involved event type(s) using 1 = event type involved and 0 = event type not involved for the following event types:

F5a GLACIER SURGE

F5b CALVING INSTABILITY

F5c GLACIER FLOOD (including debris flow, mudflow)

F5d ICE AVALANCHE

F5e TECTONIC EVENT (earthquake, volcanic eruption)

F5f OTHER

F6 EVENT DESCRIPTION [*alpha-numeric*]

Please give quantitative information wherever possible, for example:

- Glacier surge: Date and location of onset, duration, flow or advance velocities, discharge anomalies and periodicity;

- Calving instability: Rate of retreat, iceberg discharge, ice flow velocity and water depth at calving front;

- Glacier flood (including debris flow, mudflow): Outburst volume, outburst mechanism, peak discharge, sediment load, reach and propagation velocity of flood wave or front of debris flow / mudflow;

- Ice avalanche: Volume released, runout distance, overall slope (ratio of vertical drop height to horizontal travel distance) of avalanche path;

- Tectonic event: Volumes, runout distances and overall slopes (ratio of vertical drop height to horizontal travel distance) of rockslides on glacier surfaces, amount of geothermal melting in craters, etc.

F7 DATA SOURCE *[alpha-numeric]*

Please indicate at least one reference or source which could help the reader to locate more detailed information, or give the name(s) of contact person(s) who would be able to supply additional information.

F8 REMARKS *[alpha-numeric]*

Any important information or comments not included above may be given here. Comments about the accuracy of the numerical data may be made, including quantitative comments. Only significant decimals should be given.

The amount and/or kind of possible destruction, particular technical measures taken against glacier hazards, or special studies carried out in connection with the event may be given.