

Auxiliary Material:

Distributed ice thickness and volume of all glaciers around the globe

Matthias Huss¹ and Daniel Farinotti^{2,*}

¹Department of Geosciences, University of Fribourg, CH-1700 Fribourg, Switzerland

²Laboratory of Hydraulics, Hydrology and Glaciology (VAW),ETH Zurich, CH-8092 Zurich, Switzerland

*now at: GFZ German Research Centre for Geosciences, Section 5.4, Hydrology, D-14473 Potsdam, Germany

1. Auxiliary Figure

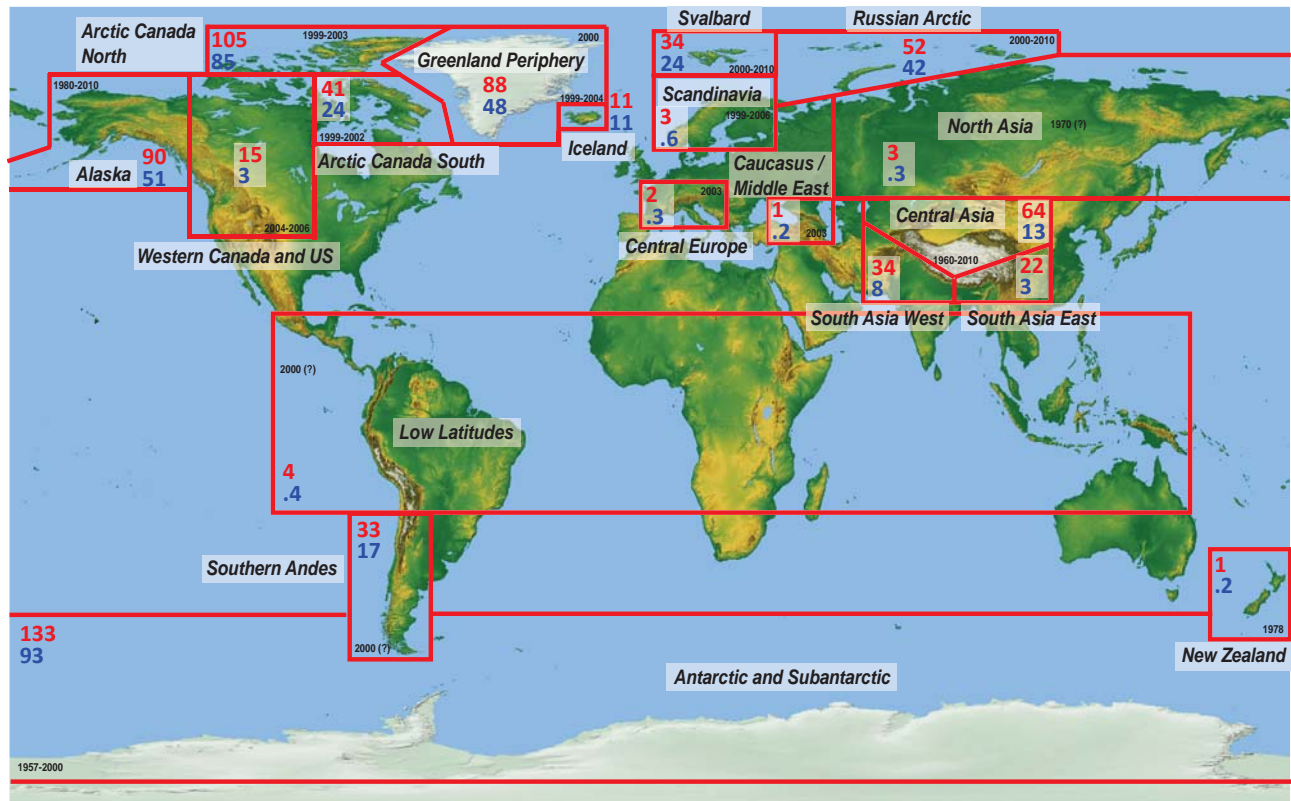


Figure S 1: Regions of the Randolph Glacier Inventory. Red numbers refer to regional glacier area (in 1000 km²), and blue numbers to calculated ice volume (in mm sea-level equivalent). For each region, the approximate range of dates of the imagery used to map RGI glacier outlines is given according to Arendt et al. (2012). Question marks indicate uncertain dates.

2. Auxiliary Tables

Table S 1: Glaciers with ice thickness data used in this study. h_{avg} is the mean glacier thickness provided by previous studies. The column h_{p} indicates the availability of point measurements of ice thickness (e.g. GPR profiles). References for all thickness data are given.

Region	Glacier	h_{avg}	h_{p}	Reference
Alaska	McCall	82	x	Pattyn et al., 2009
Alaska	Malaspina		x	Conway et al., 2009
Alaska	Bering		x	Conway et al., 2009
Alaska	Taku		x	Nolan et al., 1995
Alaska	Columbia	277		Brown et al., 1986
Alaska	Gulkana		x	March, 2000
Alaska	Kahiltna		x	Campbell et al., 2012
Alaska	Variegated		x	Bindschadler et al., 1977
Antarctic and Subantarctic	Johnsons	97	x	Navarro et al., 2009
Antarctic and Subantarctic	Hurd	89	x	Navarro et al., 2009
Antarctic and Subantarctic	Lange Glacier		x	Rueckamp and Blindow, 2011
Antarctic and Subantarctic	Usher Glacier		x	Rueckamp and Blindow, 2011
Arctic Canada North	Laika Ice Cap		x	Huss et al., 2008
Arctic Canada North	Devon Ice Cap - Sverdrup Glacier		x	Hyndman, 1965
Arctic Canada North	Meighen Ice Cap		x	Koerner, 1974
Arctic Canada South	Barnes Ice Cap	335		Hooke, 1976
Caucasus and Middle East	Lexyr		x	Popovnin, 1999
Caucasus and Middle East	Djankuat		x	Aleynikov et al., 2001
Central Asia	Shenqi Peak		x	Li et al., 2012
Central Asia	Urumqi No 1	55	x	Li et al., 2012
Central Asia	Qiyi		x	Li et al., 2012
Central Asia	Shiyi		x	Li et al., 2012
Central Asia	Sigong He No4	28	x	Li et al., 2012
Central Asia	Bayi	54		Wang and Pu, 2009
Central Asia	Gurenhekou	37		Ma et al., 2008
Central Asia	Shnitnikov	44		Macheret et al., 1988
Central Asia	Korzhun	67		Macheret et al., 1988
Central Asia	Ayusaj	45		Macheret et al., 1988
Central Asia	No 183	49		Macheret et al., 1988
Central Asia	No 214	52		Macheret et al., 1988
Central Asia	No 252	43		Macheret et al., 1988
Central Asia	No 259	47		Macheret et al., 1988
Central Asia	Kaskabulak	52		Macheret et al., 1988
Central Asia	Heyerdahl	54		Macheret et al., 1988
Central Asia	MGG	36		Macheret et al., 1988
Central Asia	Ekspeditsii	39		Macheret et al., 1988
Central Asia	Rodin	32		Macheret et al., 1988
Central Asia	Gl. 3	40		Macheret et al., 1988
Central Asia	Gl. 4	37		Macheret et al., 1988
Central Asia	Gl. 5	59		Macheret et al., 1988
Central Asia	Kartajgan	58		Macheret et al., 1988
Central Asia	Azhar	51		Macheret et al., 1988
Central Asia	Shumskyj	58		Macheret et al., 1988

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Region	Glacier	h_{avg}	h_p	Reference
Central Asia	Muravlev	61		Macheret et al., 1988
Central Asia	Kavrajskyj I	49		Macheret et al., 1988
Central Asia	Krasovskyj II	49		Macheret et al., 1988
Central Asia	S Branch	30		Su et al., 1984
Central Asia	Tulasu	88		Su et al., 1984
Central Asia	Keqikaerbaxi	170		Su et al., 1984
Central Asia	Qiongtelian	227		Su et al., 1984
Central Asia	Muzhaerte	210		Su et al., 1984
Central Asia	Urumqi He Source No.2	46		Su et al., 1984
Central Asia	Urumqi He Source No.3	35		Su et al., 1984
Central Asia	Urumqi He Source No.4	33		Su et al., 1984
Central Asia	Urumqi He Source No.6	38		Su et al., 1984
Central Asia	Gun	77		Su et al., 1984
Central Asia	No.1	50		Su et al., 1984
Central Asia	No.3	50		Su et al., 1984
Central Asia	No.4	76		Su et al., 1984
Central Asia	No.5	67		Su et al., 1984
Central Asia	Tuyuksu		x	Makarevich, 1962
Central Europe	Grosser Aletsch Gletscher	173	x	Farinotti et al., 2009b
Central Europe	Gornergletscher	94	x	Sugiyama et al., 2008
Central Europe	Fieschergletscher VS	103	x	Unpublished data, VAW-ETHZ (2011)
Central Europe	Unteraargletscher	157	x	Bauder et al., 2003
Central Europe	Vadret da Morteratsch	75	x	Zekollari et al., 2012
Central Europe	Glacier de Corbassiere	75	x	Gabbi et al., 2012
Central Europe	Rhonegletscher	111	x	Farinotti et al., 2009a
Central Europe	Findelengletscher	99	x	Farinotti et al., 2009b
Central Europe	Glacier d’Otemma	67	x	Gabbi et al., 2012
Central Europe	Allalingletscher	65	x	Farinotti et al., 2009b
Central Europe	Glacier de la Plaine Morte	97	x	Voinesco, 2012
Central Europe	Glacier du Brenay	43	x	Gabbi et al., 2012
Central Europe	Griesgletscher	66	x	Farinotti et al., 2009b
Central Europe	Glacier du Mont Durand	43	x	Gabbi et al., 2012
Central Europe	Glacier du Gietro	82	x	Farinotti et al., 2009b
Central Europe	Schwarzberggletscher	58	x	Farinotti et al., 2009b
Central Europe	Haut Glacier d’Arolla	51	x	Hubbard et al., 1998
Central Europe	Glacier de Tsanfleuron	72	x	Unpublished data, University of Fribourg (2010)
Central Europe	Ghiacciaio del Basodino		x	Farinotti et al., 2009b
Central Europe	Sardonagletscher	19	x	Unpublished data, University of Fribourg (2011)
Central Europe	Glatschiu dil Segnas	24	x	Unpublished data, University of Fribourg (2011)
Central Europe	Blau Schnee	14	x	Unpublished data, University of Fribourg (2011)
Central Europe	Glacier du Sex Rouge	40	x	Unpublished data, University of Fribourg (2012)
Central Europe	Pizolgletscher	17	x	Huss, 2010
Central Europe	Hochalmkees	52		Fischer et al., 2007
Central Europe	Gepatschferner	88		Span et al., 2005
Central Europe	Hintereisferner	59		Span et al., 2005

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Region	Glacier	h_{avg}	h_{p}	Reference
Central Europe	Kesselwandferner	71		Span et al., 2005
Central Europe	Pasterzenkees	67		Aric and Brueckel, 2001
Central Europe	Schlatenkees	46		Aric and Brueckel, 2001
Central Europe	Schmiedingerkees	26		Aric and Brueckel, 2001
Central Europe	Untersulzbachkees	74		Aric and Brueckel, 2001
Central Europe	Obersulzbachkees	47		Aric and Brueckel, 2001
Central Europe	Daunkogelferner	34		Aric and Brueckel, 2001
Central Europe	Sulztalferner	48		Aric and Brueckel, 2001
Central Europe	Vernagtferner	61		Aric and Brueckel, 2001
Central Europe	Hallstaettergletscher	34		Aric and Brueckel, 2001
Central Europe	Gosaugletscher	32		Aric and Brueckel, 2001
Central Europe	Schaufelferner	31		Aric and Brueckel, 2001
Central Europe	Wurtenkees E	13	x	Binder et al., 2009
Central Europe	Wurtenkees W	40	x	Binder et al., 2009
Central Europe	Goldbergkees	42	x	Binder et al., 2009
Central Europe	Kleinflieskees	53	x	Binder et al., 2009
Central Europe	Argentiere		x	Vincent et al., 2009
Central Europe	Mer de Glace		x	Berthier and Vincent, 2012
Greenland Periphery	Mittivakkat	115	x	Knudson and Hasholt, 1999
Iceland	Hofsjokull	215	x	Bjornsson, 1986
Iceland	Skeidararjokull		x	Bjornsson, 2003
Low Latitudes	Quelccaya		x	Salzmann et al., 2012
New Zealand	Tasman		x	Radell, 1995
New Zealand	Dart		x	Radell, 1995
North Asia	No 8	44		Nikitin et al., 2000a
North Asia	No 15	43		Nikitin et al., 2000a
North Asia	No 18	48		Nikitin et al., 2000a
North Asia	No 104	38		Nikitin et al., 2000b
North Asia	No 105	52		Nikitin et al., 2000b
North Asia	No 106	47		Nikitin et al., 2000b
North Asia	No 108	54		Nikitin et al., 2000b
North Asia	No 109	53		Nikitin et al., 2000b
North Asia	No 119	32		Nikitin et al., 2000b
North Asia	Stupenchatyj	47		Nikitin et al., 2000b
North Asia	Universitetskij	48		Nikitin et al., 2000b
North Asia	No 124	49		Nikitin et al., 2000b
North Asia	No 125	35		Nikitin et al., 2000b
North Asia	No 127	48		Nikitin et al., 2000b
North Asia	Bol'shoj Abyl-Oyuk (C)	58		Nikitin et al., 2000b
North Asia	No 138	44		Nikitin et al., 2000a
North Asia	No 171	56		Nikitin et al., 2000a
North Asia	No 173	60		Nikitin et al., 2000a
North Asia	No 174	50		Nikitin et al., 2000a
North Asia	No 175	50		Nikitin et al., 2000a
North Asia	No 177 (L)	64		Nikitin et al., 2000a
North Asia	No 178	57		Nikitin et al., 2000a
North Asia	No 189	48		Nikitin et al., 2000a
North Asia	No 190	51		Nikitin et al., 2000a
North Asia	No 219	55		Nikitin et al., 2000a
North Asia	No 220	53		Nikitin et al., 2000a
North Asia	No 221	47		Nikitin et al., 2000a

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Region	Glacier	h_{avg}	h_p	Reference
North Asia	No 223	62		Nikitin et al., 2000a
North Asia	No 242	50		Nikitin et al., 2000a
North Asia	Stager	54		Nikitin et al., 2000a
North Asia	No 31	52		Nikitin et al., 2000a
North Asia	No 42	46		Nikitin et al., 2000a
North Asia	Yadrintseva	53		Nikitin et al., 2000a
North Asia	No 54	42		Nikitin et al., 2000a
North Asia	No 55	58		Nikitin et al., 2000a
North Asia	No 56	44		Nikitin et al., 2000a
North Asia	Udachnyj	63		Nikitin et al., 2000a
North Asia	Sofijskij (E)	65		Nikitin et al., 2000a
North Asia	Sofijskij (C)	82		Nikitin et al., 2000a
North Asia	Otdel’nyj	61		Nikitin et al., 2000a
North Asia	Nekrasova	38		Nikitin et al., 2000a
North Asia	Bol’shoj Taldurin	58		Nikitin et al., 2000a
North Asia	Malyj Taldurin	49		Nikitin et al., 2000a
North Asia	Pravyj Mukhroyuk	48		Nikitin et al., 2000a
North Asia	Levyj Mukhroyuk	53		Nikitin et al., 2000a
North Asia	No 112	62		Nikitin et al., 2000b
North Asia	Dzhelo	68		Nikitin et al., 2000a
North Asia	Kupol	37		Nikitin et al., 2000b
North Asia	Tete	70		Nikitin et al., 2000b
North Asia	No 123	74		Nikitin et al., 2000b
North Asia	Vodopadnyj	55		Nikitin et al., 2000a
North Asia	Malyj Aktru	86		Nikitin et al., 2000a
North Asia	Kar Malogo Aktru	69		Nikitin et al., 2000a
North Asia	Pravyj Aktru	56		Nikitin et al., 2000a
North Asia	Levyj Aktru	90		Nikitin et al., 2000a
North Asia	Yan-Karasu	40		Nikitin et al., 2000a
North Asia	Malyj Korumdu	39		Nikitin et al., 2000a
North Asia	No 134	40		Nikitin et al., 2000a
North Asia	Kurkurek	58		Nikitin et al., 2000a
North Asia	Pravyj Maashej	44		Nikitin et al., 2000a
North Asia	Levyj Maashej	43		Nikitin et al., 2000a
North Asia	Karakabak	36		Nikitin et al., 2000a
Russian Arctic	Brusilov Ice Cap	176		Macheret et al., 1999
Russian Arctic	Wilczek Land Ice Cap	187		Macheret et al., 1999
Russian Arctic	Graham Bell I Ice Cap	209		Macheret et al., 1999
Russian Arctic	Lunnyj Ice Cap	144		Macheret et al., 1999
Russian Arctic	Kropotkin Ice Cap	121		Macheret et al., 1999
Russian Arctic	Hall I Ice Cap	148		Macheret et al., 1999
Russian Arctic	La Ronciere I Ice Cap	174		Macheret et al., 1999
Russian Arctic	Rudolf I Ice Cap	137		Macheret et al., 1999
Russian Arctic	Eva Liv I Ice Cap	157		Macheret et al., 1999
Russian Arctic	Rainer I Ice Cap	144		Macheret et al., 1999
Russian Arctic	Frieden I Ice Cap	94		Macheret et al., 1999
Russian Arctic	Hohenlohe I Ice Cap	50		Macheret et al., 1999
Russian Arctic	Akademii Nauk Ice Cap	392	x	Dowdeswell et al., 2002
Russian Arctic	Otdel’nyj Ice Cap	105	x	Dowdeswell et al., 2002
Scandinavia	Storglaciaren	99	x	Bjornsson, 1981
Scandinavia	Isfallsglaciaren	72		Bjornsson, 1981

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Region	Glacier	h_{avg}	h_{p}	Reference
Scandinavia	Rabotsglaciaren	84		Bjornsson, 1981
Scandinavia	Marmaglaciaren		x	Holmlund et al., 1996
Scandinavia	Parteglaciaren		x	Klingbjer, 2004
Scandinavia	Svartisen (Engabreen)	205	x	Kennett et al., 1993
Scandinavia	Hardangerjokulen		x	Giesen and Oerlemans, 2010
Scandinavia	Storbreen	115		Andreassen et al., 2006
South Asia East	Kangwure	26	x	Ma et al., 2010
South Asia East	Dokriani Glacier	29	x	Gergan et al., 1999
South Asia East	Khumbu Glacier		x	Gades et al., 2000
South Asia East	Glacier No. 12		x	Zhen et al., 2011
South Asia West	Chhota Shigri Glacier		x	Azam et al., 2012
Southern Andes	Nef / Colonia Glacier (Northern Patagonian Ice Field)		x	Blindow et al., 2011
Southern Andes	Tyndall Glacier (Southern Patagonian Ice Field)		x	Araos et al., 2007
Southern Andes	Juncal Norte Glacier		x	Rivera and Casassa, 2010
Southern Andes	Glaciar Esmeralda		x	Rivera and Casassa, 2010
Svalbard	Midre Lovenbreen	64	x	Rippin et al., 2003
Svalbard	Tellbreen	50	x	Bællum and Benn, 2011
Svalbard	Antoniabreen	176	x	Zhuravlev, 1985
Svalbard	Bertilbreen	73	x	Zhuravlev, 1981
Svalbard	Bogerbreen	67		Zhuravlev, 1981
Svalbard	Austre Broggerbreen	62		Zhuravlev, 1981
Svalbard	Vestre Broggerbreen	43		Zhuravlev, 1981
Svalbard	Comfortlessbreen	175	x	Zhuravlev, 1985
Svalbard	Cookbreen	196		Zhuravlev, 1985
Svalbard	Dahlfonna	88	x	Zhuravlev, 1981
Svalbard	Erdmannbreen	126	x	Zhuravlev, 1981
Svalbard	Hessbreen	64	x	Zhuravlev, 1981
Svalbard	Kantbreen	150		Zhuravlev, 1981
Svalbard	Osbornebreen	156	x	Zhuravlev, 1985
Svalbard	Recherchebreen	293		Zhuravlev, 1981
Svalbard	Uversbreen	178	x	Zhuravlev, 1985
Svalbard	Vestre Torellbreen	273		Zhuravlev, 1981
Svalbard	Veteranenbreen	218	x	Zhuravlev, 1985
Svalbard	Voringbreen	62		Zhuravlev, 1981
Svalbard	Werenskioldbreen	123	x	Zhuravlev, 1985
Svalbard	Foxfonna	65		Zhuravlev, 1985
Svalbard	Asgardsfonna	210		Zhuravlev, 1985
Svalbard	Austfonna	318		Dowdeswell et al., 1985
Svalbard	Vestfonna	282		Petterson et al., 2011
Svalbard	Aldegondabreen	73	x	Navarro et al., 2005
Svalbard	Austre Lovenbreen		x	Saintenoy et al., 2011
Svalbard	Negribreen		x	Kotlyakov and Macheret, 1987
Svalbard	Kongsvegan		x	Kotlyakov and Macheret, 1987
Svalbard	Kongsbreen		x	Kotlyakov and Macheret, 1987
Svalbard	Nathorstbreen		x	Kotlyakov and Macheret, 1987
Svalbard	Hansbreen		x	Kotlyakov and Macheret, 1987
Western Canada and US	Carbon	90		Driedger and Kennard, 1986
Western Canada and US	Emmons	60		Driedger and Kennard, 1986
Western Canada and US	Nisqually	48		Driedger and Kennard, 1986

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Region	Glacier	h_{avg}	h_p	Reference
Western Canada and US	Russell	26		Driedger and Kennard, 1986
Western Canada and US	Tahoma	52		Driedger and Kennard, 1986
Western Canada and US	Wilson	38		Driedger and Kennard, 1986
Western Canada and US	Winthrop	57		Driedger and Kennard, 1986
Western Canada and US	Coalman	14		Driedger and Kennard, 1986
Western Canada and US	Newton Clark	20		Driedger and Kennard, 1986
Western Canada and US	Sandy	21		Driedger and Kennard, 1986
Western Canada and US	ZigZag	22		Driedger and Kennard, 1986
Western Canada and US	Collier	19		Driedger and Kennard, 1986
Western Canada and US	Hayden	26		Driedger and Kennard, 1986
Western Canada and US	Lost Creek	21		Driedger and Kennard, 1986
Western Canada and US	Prouty	17		Driedger and Kennard, 1986
Western Canada and US	Whitney	20		Driedger and Kennard, 1986
Western Canada and US	Dinwoody	55		Driedger and Kennard, 1986
Western Canada and US	Grinnell	64		Driedger and Kennard, 1986
Western Canada and US	Maclure	17		Driedger and Kennard, 1986
Western Canada and US	South Cascade	99		Driedger and Kennard, 1986
Western Canada and US	Washmawapta		x	Dow et al., 2011
Western Canada and US	Sperry	32	x	Brown et al., 2010

Table S 2: Parameters used in the calculation of ice volume and thickness distribution. For parameters depending on glacier location (e.g. continentality, englacial temperature), a range of values is given. * calculated for each glacier individually during the model run.

Symbol	Parameter	Value	unit
$\tilde{db}/dz_{abl,0}$	Apparent mass balance gradient, ablation area ($S > S_{crit}$)	5.5×10^{-3}	m w.e. m^{-1}
$\tilde{db}/dz_{acc,0}$	Apparent mass balance gradient, accumulation area ($S > S_{crit}$)	3.0×10^{-3}	m w.e. m^{-1}
$f_{\tilde{db}/dz}$	Proportionality factor $\tilde{db}/dz_{acc} : \tilde{db}/dz_{abl}$	0.55	-
$\tilde{db}/dz_{abl,min}$	Minimum apparent mass balance gradient, ablation area ($S < 0.05 \text{ km}^2$)	0.5×10^{-3}	m w.e. m^{-1}
b_{max}	Maximum accumulation rate	[0.75-5]	m w.e. a^{-1}
S_{crit}	Critical area for apparent mass balance gradient reduction	25	km^2
f_{cont}	Continentality factor	2400	m
f_{sl}	Fraction of motion due to sliding	[0-0.55]	-
c_1	Constant of sliding parameterization	0.2	-
c_2	Constant of sliding parameterization	0.1	-
c_3	Constant of sliding parameterization	4.0	-
ΔELA_{calv}	ELA reduction allowing calving flux	[30-250]	m
	Antarctic and Subantarctic	250	m
	Arctic Canada N, Greenland	100	m
	Alaska, Russian Arctic, Svalbard	75	m
	Arctic Canada S, Iceland	30	m
$A_f(T)$	Rate factor of flow law (temperate glacier)	0.075	$\text{bar}^{-3} \text{ a}^{-1}$
n	Exponent of flow law	3	-
$\Delta T_{ice-air}$	Difference between englacial temperature and air temperature (at ELA)	7	deg C
$f_{A(T)}$	Factor determining temperature dependence of A_f	7	deg C
α_{cutoff}	Minimum local slope (gridcells)	6	deg
dz	Width of elevation bands	10	m
ρ	Ice density	900	kg m^{-3}
α	Local surface slope	*	deg
$\bar{\alpha}$	Mean slope in elevation band	*	deg
w	Glacier width of elevation band	*	m
C	Continentality	*	-
q	Ice flux normalized with glacier width	*	$\text{m}^2 \text{ a}^{-1}$
F_s	Shape factor	*	-
τ	Basal shear stress	*	bar

Table S 3: Regionally separated sources of uncertainty in the calculation of global glacier volume. $\sigma_{p,1}$ - $\sigma_{p,5}$ are regional ice volume sensitivities (in %) given by the ranges of uncertainty in five influential parameters (see Table 1 and Table AM2). σ_M is the total relative uncertainty in calculated regional ice volume arising from the uncertainty estimated for individual parameters. σ_{DEM} is the volume uncertainty depending on the SRTM/ASTER DEM accuracy, and σ_{RGI} refers to the bulk uncertainties in the ice volume calculation due to imperfections in the RGI shapes. σ_V is the total uncertainty in estimated regional ice volume. All numbers are given in %.

Region	$\sigma_{p,1}$ ($\tilde{db}/dz_{abl,0}$)	$\sigma_{p,2}$ (S_{crit})	$\sigma_{p,3}$ (f_{sl})	$\sigma_{p,4}$ ($A_f(T)$)	$\sigma_{p,5}$ (ΔELA_{calv})	σ_M	σ_{DEM}	σ_{RGI}	σ_V
Alaska	± 3.9	± 0.6	± 0.2	± 4.4	± 1.0	± 6.0	± 3.0	± 3.0	± 7.4
Antarctic and Subant.	± 4.0	± 0.1	± 1.5	± 4.2	± 1.2	± 6.1	± 20.0	± 8.0	± 22.4
Arctic Canada North	± 4.4	± 0.3	± 2.9	± 4.4	± 1.9	± 7.1	± 10.0	± 6.0	± 13.7
Arctic Canada South	± 5.5	± 1.4	± 2.2	± 4.4	± 0.2	± 7.5	± 8.0	± 3.0	± 11.4
Caucasus and M. East	± 4.0	± 7.6	± 0.4	± 4.4	± 0.0	± 9.7	± 1.0	± 5.0	± 10.9
Central Asia	± 4.5	± 2.1	± 2.6	± 4.3	± 0.0	± 7.1	± 1.0	± 7.0	± 10.0
Central Europe	± 4.2	± 6.8	± 0.0	± 4.4	± 0.0	± 9.1	± 1.0	± 1.0	± 9.2
Greenland Periphery	± 4.8	± 0.3	± 2.4	± 4.3	± 3.3	± 7.6	± 10.0	± 6.0	± 13.9
Iceland	± 5.4	± 0.0	± 0.3	± 4.3	± 2.0	± 7.2	± 3.0	± 3.0	± 8.3
Low Latitudes	± 3.8	± 8.5	± 3.4	± 4.3	± 0.0	± 10.8	± 2.0	± 4.0	± 11.7
New Zealand	± 4.3	± 2.9	± 0.3	± 4.4	± 0.0	± 6.8	± 1.0	± 4.0	± 7.9
North Asia	± 4.0	± 5.6	± 2.1	± 4.4	± 0.0	± 8.5	± 2.0	± 7.0	± 11.2
Russian Arctic	± 5.3	± 0.1	± 1.8	± 4.3	± 3.6	± 7.9	± 10.0	± 3.0	± 13.1
Scandinavia	± 5.0	± 2.2	± 0.8	± 4.3	± 0.0	± 7.0	± 2.0	± 2.0	± 7.5
South Asia East	± 3.9	± 5.1	± 2.6	± 4.4	± 0.0	± 8.2	± 1.0	± 4.0	± 9.1
South Asia West	± 4.0	± 3.0	± 2.8	± 4.5	± 0.0	± 7.3	± 1.0	± 5.0	± 8.9
Southern Andes	± 3.4	± 0.9	± 0.1	± 4.4	± 0.0	± 5.6	± 1.0	± 5.0	± 7.6
Svalbard	± 5.4	± 0.4	± 2.4	± 4.3	± 3.4	± 8.1	± 4.0	± 3.0	± 9.5
W. Canada and US	± 4.5	± 4.8	± 0.9	± 4.4	± 0.0	± 7.9	± 1.0	± 2.0	± 8.2

3. Auxiliary References

References

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