Figure S1. Figure showing the use of Sentinel-2 image for tracing fjord walls (denoted by black lines), arbitrary upstream boundary (denoted by blue line), and terminus positions from 2013–2023 at Sermeq Kujalleq N2.
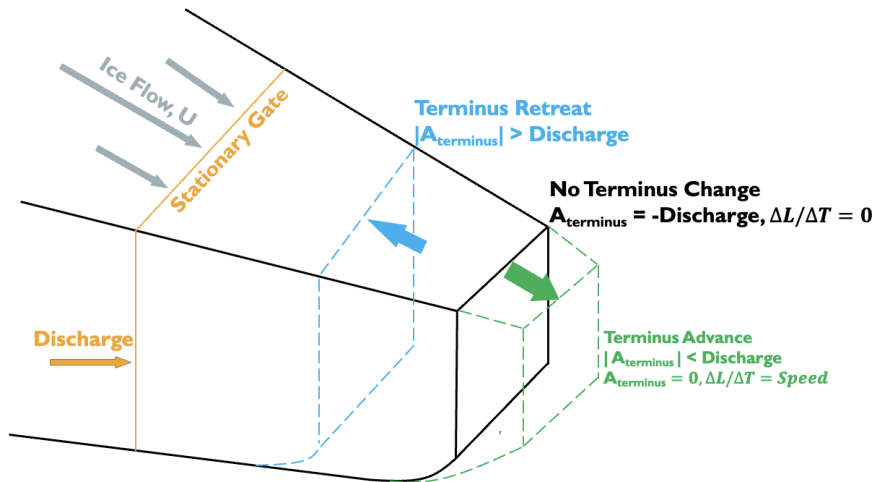
Figure S2. Schematic sketch showing glacier terminus ablation. Schematic sketch showing glacier terminus ablation. The green terminus position shows glacier advance, blue shows glacier retreat and solid black shows no change in terminus. Solid orange line shows a stationary gate used to calculate ice discharge. Here, $\Delta M/\Delta t$ is change in terminus over time, $A_{terminus}$ is terminus ablation and U is the velocity.
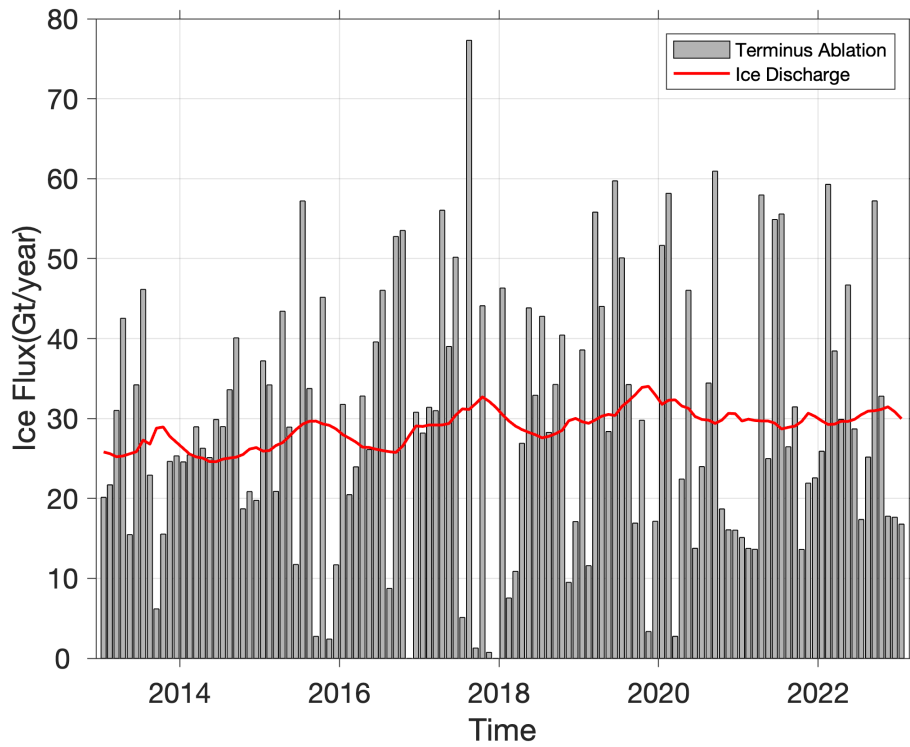
Figure S3. Time series for terminus ablation and discharge in gigatons per year for Helheim Gletsjer (SE) during 2013–2023.
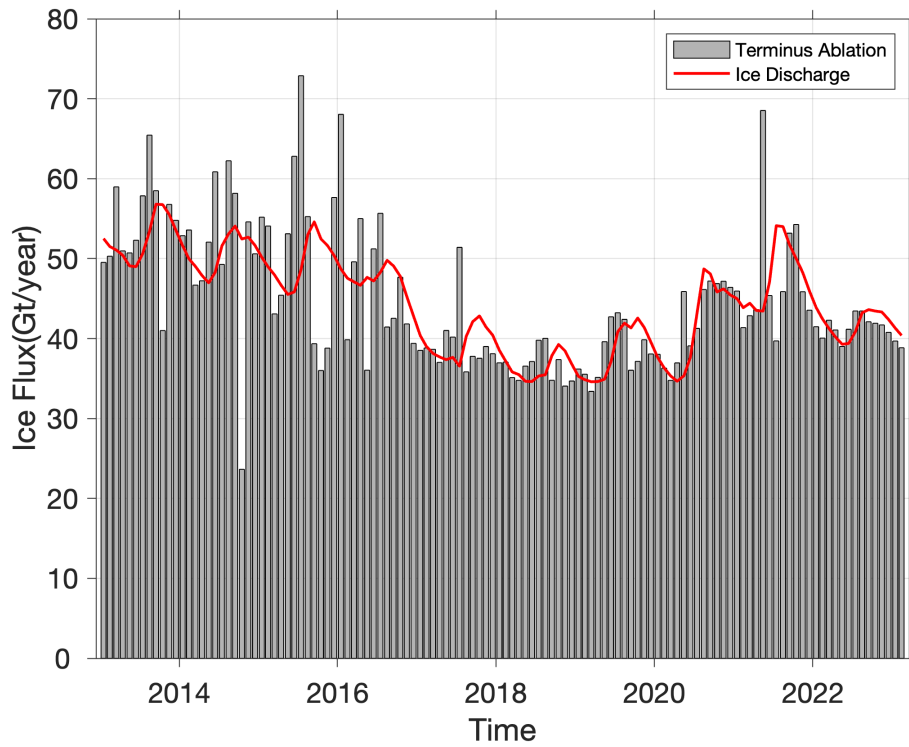
Figure S4. Time series for terminus ablation and discharge in gigatons per year for Sermeq Kujalleq (CW) during 2013–2023.
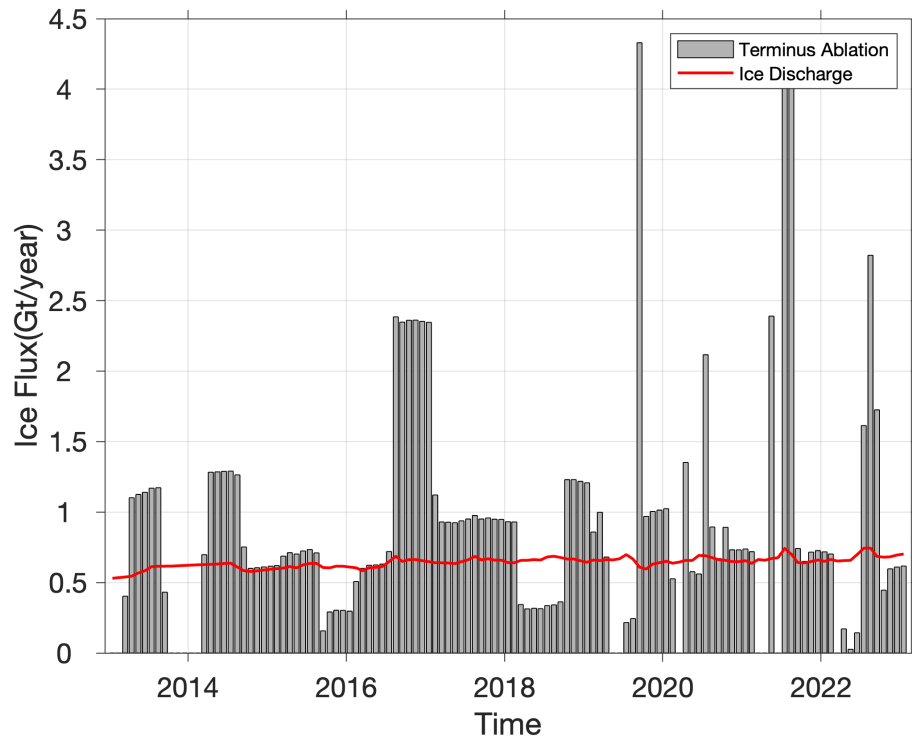
Figure S5. Time series for terminus ablation and discharge in gigatons per year for Yngvar Nielsen Gletsjer (NW) during 2013–2023.
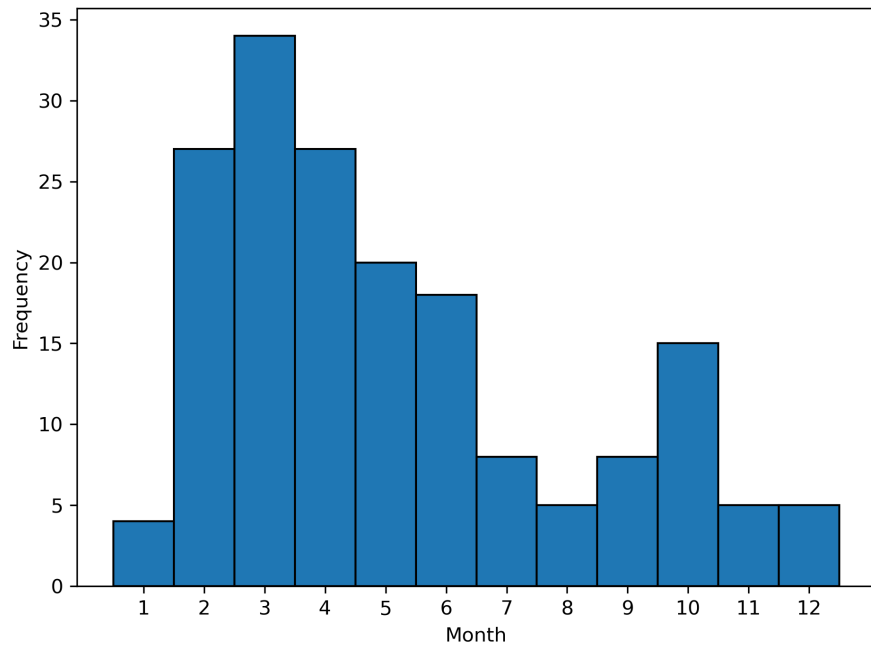
Figure S6. Histogram for the months having negative ablation values.

Table S1. Uncertainties for discharge and terminus ablation in Gt/yr

Glacier	Avg Dis	Avg Term Abl	Avg Dis Err	Avg NMC Err	Avg TA Err	region
Akullersuup Sermia	0.5194	0.5173	0.0014	0.0234	0.0235	SW
Apuseerajik	3.4889	4.2570	0.0095	0.0242	0.0260	SE
Apusiigajik	1.6161	1.6127	0.0044	0.0235	0.0239	SE
Bernstorff	5.0581	5.0792	0.0109	0.0233	0.0257	SE
Christian IV Gletsjer	3.8438	3.8324	0.0104	0.0239	0.0261	CE
Daugaard-Jensen Gletsjer	9.3719	9.4063	0.0257	0.0237	0.0349	CE
Dietrichson Gletsjer	1.1081	1.1788	0.0030	0.0240	0.0242	NW
Eqip Sermia	1.1478	1.1595	0.0031	0.0236	0.0238	CW
Frederiksborg Gletsjer	0.2306	0.2310	0.0006	0.0228	0.0228	CE
Graulv	4.7313	4.7220	0.0120	0.0230	0.0259	SE
Heimdal	1.4329	1.4324	0.0039	0.0229	0.0232	SE
Helheim Gletsjer	28.8648	29.3312	0.0791	0.0267	0.0835	SE
Ikissuup Sermersua	0.7277	0.8495	0.0014	0.0230	0.0230	NW
Illullip Sermia	4.9344	4.9035	0.0135	0.0224	0.0261	NW
Innaqqissorsuup Oqquani Sermeq	2.4643	2.5771	0.0068	0.0215	0.0225	NW
Issuusarsuit Sermiat	1.4272	1.7714	0.0039	0.0214	0.0218	NW
Kangerluarsuup Sermia	0.1342	0.1497	0.0004	0.0202	0.0202	NW
Kangerlussuaq Gletsjer	27.5417	28.5761	0.0751	0.0212	0.0780	CE
Kangerlussuup Sermia	1.7731	1.7593	0.0049	0.0212	0.0217	CW
Kangiata Nunaata Sermia	4.8169	4.8136	0.0132	0.0183	0.0226	SW
Kangilernata Sermia	1.0399	1.0783	0.0028	0.0182	0.0184	CW
Naajarsuit Sermiat	1.0912	1.0879	0.0030	0.0181	0.0184	NW
Nansen Gletsjer	7.7480	9.3539	0.0213	0.0238	0.0319	NW
Narsap Sermia	2.6690	2.7616	0.0073	0.0175	0.0189	SW
Nordenskiold Gletsjer	7.7480	7.9078	0.0213	0.0198	0.0291	NW
Perlerfiup Sermia	0.7185	0.9040	0.0020	0.0176	0.0178	CW
Qaqujaarsuup Sermia	1.6702	1.7042	0.0046	0.0173	0.0179	NW
Qeqertaarsuusarsuup Sermia	3.5742	4.2393	0.0098	0.0176	0.0202	NW
Qeqertarsuup Sermia	0.7080	0.7099	0.0019	0.0178	0.0179	NW
Qeqertat Timaanni Sermeq	1.4773	1.6649	0.0041	0.0181	0.0185	NW
Rimfaxe	1.6919	1.6895	0.0046	0.0171	0.0178	SE
Rink Gletsjer N	1.0324	1.0985	0.0028	0.0182	0.0184	NW
Saqqarliup Sermia	0.2482	0.3216	0.0007	0.0178	0.0178	CW
Sermeq Avanarleq	1.8760	1.8853	0.0037	0.0190	0.0194	NW
Sermeq Avannarleq	2.2239	2.2355	0.0061	0.0189	0.0198	CW
Sermeq Avannarleq N	0.1681	0.2193	0.0005	0.0168	0.0168	CW
Sermeq Kujalleq	44.4774	44.7986	0.1225	0.0383	0.1284	CW
Sermeq Kujalleq N1	7.4821	7.4678	0.0205	0.0277	0.0345	CW
Sermeq Kujalleq N2	9.0449	9.0461	0.0248	0.0257	0.0357	CW
Sermeq Kujalleq N3	1.9616	1.9619	0.0050	0.0257	0.0261	NW
Sermeq Silarleq	4.5756	4.8751	0.0125	0.0258	0.0287	CW
Sermersuaq	3.1741	5.0638	0.0087	0.0279	0.0292	NW
Sermilik	0.5730	0.5734	0.0016	0.0235	0.0235	CW
Sverdrup Gletsjer	5.1312	7.0744	0.0141	0.0264	0.0300	NW
Tuttulikassaap Sermia	7.6236	7.7135	0.0210	0.0260	0.0334	NW
Tuttulipaluup Sermia	0.4525	0.5076	0.0012	0.0244	0.0244	NW
Ullip Sermia	0.9268	1.0405	0.0026	0.0240	0.0242	NW
Yngvar Nielsen Gletsjer	0.6420	0.8780	0.0018	0.0240	0.0241	NW
Zachariae Isstrom	15.1848	17.7933	0.0419	0.0262	0.0494	NE

Avg Dis = average discharge, Avg Term Abl = average terminus ablation, Avg Dis Err = average discharge error, Avg NMC Err = average near terminus mass error, Avg TA Err = average terminus ablation error. All of the values are in Gt/yr with values averaged across the entire decade.