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The Greater Caucasus Glacier Inventory (Russia, Georgia and Azerbaijan)

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Table S1. The Greater Caucasus glacier number and area change in 1960–1986, 1986–2014 and 1960–2014 by individual river basins.

Main river basin	Tributary river basin	USSR Catalogue 1967–1978		Topographic maps 1960		Landsat 5, 1985–1987		Landsat 8, 2013–2016 and ASTER 2014		Area change		
		Number	Area km^2	Number	Area km^2	Number	Area km^2	Number	Area km^2	1960–1986 % yr^{-1}	1986–2014 % yr^{-1}	1960–2014 % yr^{-1}
Mzimta		7	1.7	13	2.4±0.2	13	2.3±0.2	13	1.9±0.2	-0.16	-0.62	-0.38
Kuban	Belaya	29	7.6	39	7.6±0.4	45	8.3±0.6	50	6.6±0.4	+0.35	-0.73	-0.24
	Malaya Laba	27	9.4	39	11.2±0.6	45	8.4±0.6	39	7.5±0.6	-0.96	-0.38	-0.61
	Bolshaya Laba	21	5.8	30	7.1±0.4	30	6.7±0.4	29	4.5±0.2	-0.21	-1.17	-0.67
	Bolshoy Zelenchuk	56	30.7	58	32.4±1.6	65	33.8±1.8	74	25.6±1.6	+0.16	-0.86	-0.38
	Maliy Zelenchuk	28	26.3	37	30.3±1.2	41	29.8±1.0	46	24.6±1.2	-0.06	-0.67	-0.34
	Teberda	85	61.0	99	63.6±2.8	103	62.1±2.6	100	53.7±2.6	-0.09	-0.48	-0.28
	Daut	16	5.5	19	7.2±0.4	22	6.1±0.4	24	4.8±0.4	-0.58	-0.76	-0.61
	Uchkulan	58	20.8	64	27.3±1.4	65	22.7±1.4	71	19.2±1.4	-0.64	-0.55	-0.54
	Ullukam	88	52.9	107	65.2±3.2	105	51.0±2.6	95	42.5±2.2	-0.83	-0.59	-0.64
Malka		10	56.5	10	64.0±1.0	11	57.5±0.8	12	52.2±0.8	-0.39	-0.32	-0.34
Baksan		156	132.7	170	187.0±7.0	162	169.8±6.4	156	146.3±6.0	-0.35	-0.49	-0.40
Chegem	Bashil-Auzusu	28	26.9	39	34.6±1.4	31	30.1±1.2	30	25.3±1.0	-0.50	-0.56	-0.49
	Gara-Auzusu	28	28.0	21	30.1±1.0	19	29.3±1.2	17	24.7±1.0	-0.10	-0.56	-0.33
	Bulungu	9	3.2	8	6.6±0.2	10	4.0±0.2	9	2.9±0.2	-1.51	-0.98	-1.03
Cherek	Cherek-Bezingskiy	85	76.3	48	82.4±2.8	40	81.1±2.6	48	73.8±2.6	-0.06	-0.32	-0.19
	Cherek-Balkarskiy	80	107.0	78	115.0±3.8	79	113.0±3.8	86	96.8±3.6	-0.06	-0.51	-0.29
	Psigansy	17	15.0	13	15.2±0.6	12	15.6±0.6	13	12.8±0.6	+0.10	-0.64	-0.29
Urukh	Khanzidon	13	4.7	14	8.5±0.4	15	8.4±0.4	12	6.3±0.4	-0.04	-0.89	-0.47
	Biliagikom	5	2.0	6	2.5±0.1	4	2.1±0.2	5	1.0±0.1	-0.61	-1.87	-1.11
	Urukh headwaters	34	23.0	35	31.1±1.2	33	30.3±1.4	35	25.3±1.2	-0.09	-0.58	-0.34
	Karaugom	27	39.6	21	48.4±1.4	23	45.7±1.4	31	41.7±1.4	-0.21	-0.31	-0.25
	Aigamuga	26	13.4	14	24.0±1.0	17	17.4±0.6	20	14.7±0.8	-1.05	-0.55	-0.71
Ardon	Tseyadon	29	15.0	22	21.4±0.8	18	19.2±0.6	20	16.8±0.6	-0.39	-0.44	-0.39
	Sidan	1	0.05	1	0.08±0.01	1	0.07±0.01	1	0.03±0.04	-0.48	-2.04	-1.15

	Vilsa	3	0.6	6	1.1±0.1	5	1.0±0.2	5	0.9±0.08	-0.34	-0.35	-0.33
	Adaikom	5	4.7	9	7.0±0.4	8	5.4±0.2	7	4.6±0.2	-0.87	-0.52	-0.63
	Mamikhdon	14	4.2	18	6.1±0.4	15	4.9±0.4	15	3.7±0.2	-0.75	-0.87	-0.72
	Nar	11	2.9	28	6.5±0.4	15	3.2±0.2	11	1.6±0.08	-1.95	-1.78	-1.39
	Gilvan	1	0.2	3	0.3±0.04	1	0.05±0.08	0	0	-3.20	0	0
	Kasaidon	2	0.19	2	0.5±0.06	2	0.3±0.04	2	0.2±0.02	-1.53	-1.19	-1.11
	Labagkomdon	1	0.04	1	0.1±0.016	1	0.1±0.016	1	0.06±0.008	0.00	-1.42	-0.07
	Baddon	7	3.5	6	4.3±0.2	8	3.5±0.6	8	2.6±0.2	-0.71	-0.91	-0.73
	Arkhondon	5	4.1	5	4.2±0.2	4	4.0±0.6	4	3.5±0.2	-0.18	-0.44	-0.30
Fiagdon		31	12.3	33	12.6±0.8	29	8.8±0.6	28	6.2±0.6	-1.15	-1.05	-0.94
Gizeldon		27	34.6	32	33.8±1.2	30	31.0±1.2	25	25.2±1.0	-0.31	-0.66	-0.47
Tergi (Terek) headwaters		133	74.8	133	71.5±3.2	116	55.6±2.8	94	43.4±3.4	-0.85	-0.78	-0.72
Sunja right tributaries	Assa	10	3.8	19	5.9±0.4	17	4.0±0.4	10	2.1±0.2	-1.23	-1.69	-1.19
	Arghuni	24	6.0	32	9.6±0.6	25	7.3±0.4	20	5.2±0.4	-0.92	-1.02	-0.84
	Sharo Argun	34	17.6	37	24.6±2.4	36	21.1±1.0	32	15.7±0.8	-0.54	-0.91	-0.66
Sulak	Andiyskoye Koysu	47	21.2	66	26.2±1.6	56	18.6±1.2	36	11.8±0.6	-1.11	-1.30	-1.01
	Avarskoye Koysu	88	23.5	105	28.0±1.8	86	18.4±1.4	34	5.9±0.4	-1.31	-2.42	-1.46
Samur		20	9.0	70	15.5±1.0	56	11.3±1.0	21	2.8±0.2	-1.04	-2.68	-1.51
Agrichai	Shinchai	0	0	2	0.1±0.016	1	0.04±0.006	1	0.03±0.004	-2.30	-0.89	-1.29
Kusarchai		8	3.2	24	6.0±0.4	17	4.6±0.2	15	0.8±0.1	-0.89	-2.95	-2.13
Bzipi		16	7.8	26	9.5±0.5	23	6.7±0.6	19	3.2±0.4	-1.13	-1.86	-1.22
Kelasuri		3	1.5	3	1.4±0.1	2	1.2±0.06	2	0.9±0.06	-0.54	-0.89	-0.66
Kodori		141	60.0	179	65.1±3.6	179	61.0±3.8	161	42.2±2.8	-0.24	-1.10	-0.65
Enguri		250	288.3	317	324.7±12.4	306	285.8±11.2	289	225.3±9.2	-0.46	-0.75	-0.56
Khobistkali		7	1.6	20	1.2±0.2	13	0.9±0.08	11	0.6±0.08	-0.96	-1.19	-0.92
Rioni		124	62.9	141	78.3±3.8	134	65.5±4.2	120	50.9±2.6	-0.62	-0.79	-0.64
Liakhvi		22	6.6	19	4.5±0.2	14	2.6±0.2	12	2.0±0.2	-1.62	-0.82	-1.02
Aragvi		5	1.6	8	1.1±0.1	1	0.5±0.08	1	0.3±0.04	-2.09	-1.42	-1.34
Total, Greater Caucasus		**2002**	**1421.78**	**2349**	**1674.9±70.4**	**2209**	**1482.1±64.4**	**2020**	**1193.2±54.0**	**-0.44**	**-0.69**	**-0.53**

Table S2. The Greater Caucasus glacier number and area change in 1960–1986, 1986–2014 and 1960–2014 by countries.

Countries	Topographic maps 1960		Landsat 5, 1985–1987		Landsat 8, 2013–2016 and ASTER 2014		Decrease 1960–1986 % yr^{-1}	Decrease 1986–2014 % yr^{-1}	Decrease 1960–2014 % yr^{-1}
	Number	Area km^2	Number	Area km^2	Number	Area km^2			
Russia	1417	1099.1±44.2	1367	992.4±41.4	1275	822.2±35.8	0.37	0.61	0.46
Georgia	899	568.5±25.0	817	484.0±22.4	725	369.8±17.4	0.57	0.84	0.64
Azerbaijan	33	7.3±0.6	25	5.7±0.6	20	1.2±0.2	0.84	2.81	1.54

Table S3. Elbrus glacier number and area change in 1960–1986, 1986–2014 and 1960–2014. All glaciers are shown in Fig. S1.

Elbrus glaciers			Topographic maps 1960	Landsat 5, 06/08/1986	Landsat 8, 03/08/2014/	Area change		
#	Name	WGI ID	Area km^2	Area km^2	Area km^2	1960–1986 % yr^{-1}	1986–2014 % yr^{-1}	1960–2014 % yr^{-1}
1	Ulluchiran	SU4G08005001	12.87±0.26	13.12±0.16	12.68±0.18	+0.07	-0.11	-0.02
2	Karachaul	SU4G08005002	6.20±0.16	6.22±0.12	5.96±0.14	+0.01	-0.14	-0.07
3	Ullukol	SU4G08005003	6.42±0.16	5.81±0.12	5.45±0.12	-0.36	-0.22	-0.28
4	565a	SU4G08005004	0.97±0.04	0.54±0.04	0.13±0.02	-1.70	-2.71	-1.60
5	Mikelchiran	SU4G08005005	7.74±0.12	7.09±0.12	6.84±0.12	-0.32	-0.12	-0.21
6	Dzhikiugankez	SU4G08005006	28.41±0.24	24.0±0.3	20.68±0.32	-0.59	-0.53	-0.50
7	Irikchat	SU4G08005018	1.56±0.02	1.29±0.06	1.09±0.04	-0.66	-0.55	-0.55
8	Irik	SU4G08005020	12.56±0.28	11.46±0.22	10.95±0.22	-0.33	-0.15	-0.23
9	Terskol	SU4G08005026	9.83±0.32	9.78±0.16	9.45±0.14	-0.01	-0.12	-0.07
10	Garabashi	SU4G08005027	3.13±0.08	2.75±0.08	2.45±0.1	-0.46	-0.38	-0.40
11	Maliy Azau	SU4G08005028	10.08±0.16	10.03±0.14	9.41±0.18	-0.01	-0.22	-0.12
12	Bolshoy Azau	SU4G08005029	21.26±0.34	20.47±0.32	18.20±0.36	-0.14	-0.39	-0.26
13	311	SU4H08004311	0.57±0.04	0.51±0.04	0.37±0.02	-0.40	-0.98	-0.64
14	312	SU4H08004312	0.25±0.02	0.33±0.02	0.26±0.02	+1.23	-0.75	-0.07
15	Ullukam	SU4H08004313	0.56±0.04	0.72±0.04	0.67±0.04	+1.09	-0.24	-0.36
16	313	SU4H08004313	1.08±0.06	0.98±0.06	0.98±0.06	-0.35	0	-0.17
17	317	SU4H08004317	0.74±0.02	0.76±0.04	0.76±0.04	+0.10	0	+0.05
18	Unnamed*	Unknown	0.65±0.04	0.59±0.02	0.52±0.04	-0.35	-0.42	-0.37
19	Kyukyurtlyu	SU4H08004318	5.69±0.2	5.61±0.12	5.54±0.14	-0.05	-0.04	-0.04
20	319	SU4H08004319	1.54±0.06	0.98±0.06	0.94±0.04	-1.39	-0.14	-0.72
21	Bityuktyube	SU4H08004320	2.40±0.1	1.74±0.08	1.65±0.06	-1.05	-0.18	-0.57
22	321	SU4H08004321	0.38±0.04	0.21±0.02	0.08±0.012	-1.72	-2.21	-1.46
Total			**134.89±2.84**	**124.99±2.74**	**115.06±2.68**	**-0.28**	**-0.28**	**-0.27**

* Omitted in WGI database

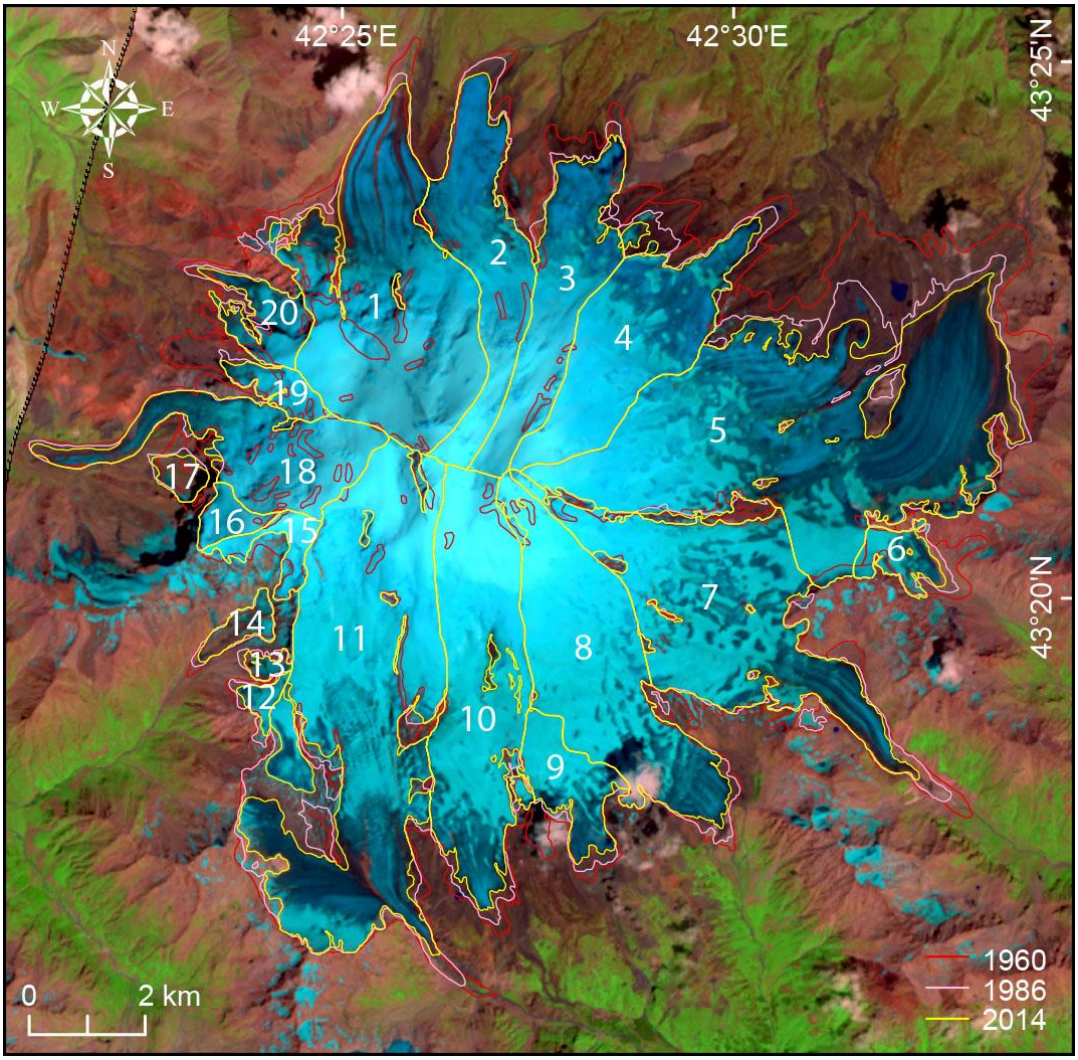

Figure S1. Changes in glacierized area of Elbrus between 1960, 1986 and 2014.
See Table S3 for the change statistics of individual glaciers. The 03 August 2014 Landsat 8 image is used as background.

Table S4. Kazbegi-Jimara massif glacier number and area change in 1960–1986, 1986–2014 and 1960–2014. All glaciers are shown in Fig. S2.

Kazbegi-Jimara massif glaciers			Topographic maps 1960	Landsat 5, 06/08/1986	Landsat 8, 28/08/14/	Area change		
#	Name	WGI ID	Area km^2	Area km^2	Area km^2	1960–1986 % yr^{-1}	1986–2014 % yr^{-1}	1960–2014 % yr^{-1}
1	Mydagrabyn	SU4G08010031	9.98±0.22	9.73±0.24	8.16±0.24	-0.09	-0.57	-0.33
2	Unnamed*	Unknown	-	-	0.16±0.02	0	0	0
3	Kolka	SU4G08010039	5.06±0.7	4.28±0.48	2.51±0.44	-0.59	-1.47	-0.91
4	Unnamed	Unknown	-	-	0.75±0.04	0	0	0
5	Unnamed	SU4G08010040	0.79±0.06	0.73±0.04	0.50±0.04	-0.29	-1.12	-0.68
6	Maili	SU4G08010041	7.29±0.14	6.75±0.14	6.57±0.12	-0.28	-0.09	-0.18
7	Unnamed	Unknown	-	-	0.05±0.008	0	0	0
8	Unnamed	SU4G08010042	-	0.67±0.04	0.44±0.02	0	-1.22	0
9	Chachi	SU4G08011046	2.61±0.06	2.57±0.08	1.85±0.08	-0.05	-1.00	-0.53
10	Unnamed	Unknown	-	-	0.08±0.012	0	0	0
11	Unnamed	SU4G08011047	0.86±0.06	0.52±0.04	0.12±0.02	-1.52	-2.74	-1.59
12	Unnamed	Unknown	-	-	0.05±0.008	0	0	0
13	Devdoraki	SU4G08011048	7.19±0.2	6.96±0.2	4.40±0.12	-0.12	-1.31	-0.71
14	Unnamed	Unknown	-	-	1.78±0.08	0	0	0
15	Abano	SU4G08011049	1.96±0.08	1.49±0.08	1.33±0.1	-0.92	-0.38	-0.60
16	Unnamed	Unknown	-	-	0.03±0.004	0	0	0
17	Unnamed	Unknown	0.58±0.04	0.34±0.04	0.1±0.004	-1.59	-2.52	-1.53
18	Gergeti	SU4G08011052	6.82±0.18	6.26±0.2	5.77±0.18	-0.31	-0.27	-0.28
19	None	SU4G08011056	0.49±0.04	0.39±0.02	0.36±0.02	-0.78	-0.27	-0.49
20	Denkara	SU4G08011057	1.33±0.04	0.93±0.04	0.31±0.02	-1.15	-2.38	-1.42
21	Unnamed	Unknown	0.49±0.04	0.06±0.01	0.03±0.004	-3.37	-1.78	-1.73
22	Unnamed	SU4G08011058	0.89±0.06	0.63±0.04	0.53±0.04	-1.12	-0.56	-0.74
23	Unnamed	SU4G08011059	1.12±0.04	0.98±0.06	0.75±0.06	-0.48	-0.83	-0.61
24	Mna	SU4G08011060	3.25±0.1	2.89±0.12	2.59±0.12	-0.42	-0.37	-0.37
25	Unnamed	SU4G08011061	1.57±0.04	1.30±0.06	1.44±0.04	-0.66	+0.38	-0.15
26	Suatisi Eastern	SU4G08011062	10.84±0.2	9.87±0.24	8.89±0.18	-0.34	-0.35	-0.33
27	Unnamed	Unknown	-	-	0.08±0.012	0	0	0
28	Suatisi Central	SU4G08011063	2.62±0.1	2.32±0.08	2.07±0.08	-0.44	-0.38	-0.39
29	Unnamed	Unknown	-	0.29±0.04	0.23±0.02	0	-0.73	0
30	Suatisi Western	SU4G08011064	2.49±0.08	2.16±0.08	1.55±0.06	-0.51	-1.00	-0.70
31	Unnamed	Unknown	-	-	0.12±0.02	0	0	0
32	Unnamed	Unknown	-	-	0.18±0.02	0	0	0
Total			**68.23±2.42**	**62.12±2.72**	**53.78±2.48**	**-0.34**	**-0.47**	**-0.39**

* Omitted in WGI database

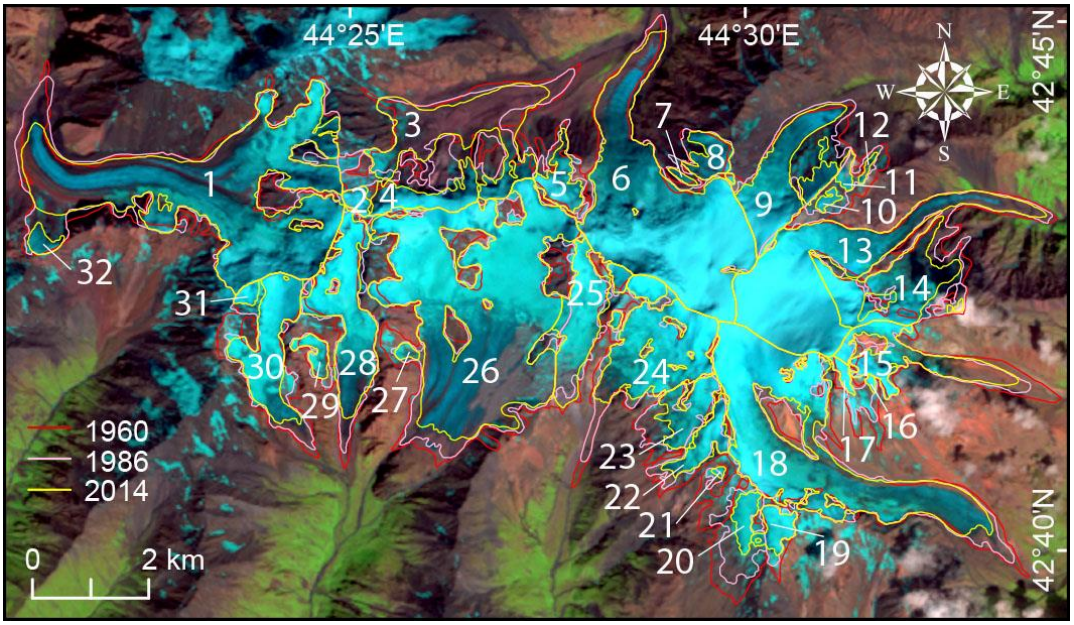

Figure S2. Changes in glacierized area of Kazbegi-Jimara massifs between 1960, 1986 and 2014.
See Table S4 for the change statistics of individual glaciers. The 28 August 2014 Landsat 8 image is used as background.

Table S5. Cumulative glacier area and number change for seven size classes in the Greater Caucasus in 1960, 1986 and 2014.

Size class (km^2)	Area			Number		
	1960	**1986**	**2014**	**1960**	**1986**	**2014**
0.01-0.05	14.95	12.26	16.21	431	364	516
0.05-0.1	33.70	38.00	28.43	427	502	388
0.1-0.5	219.18	194.42	154.09	918	839	695
0.5-1.0	173.27	153.38	127.00	241	209	175
1.0-5.0	555.28	514.46	415.29	275	246	204
5.0-10.0	242.12	208.08	210.29	35	29	29
>10.0	436.28	361.68	241.72	22	20	13

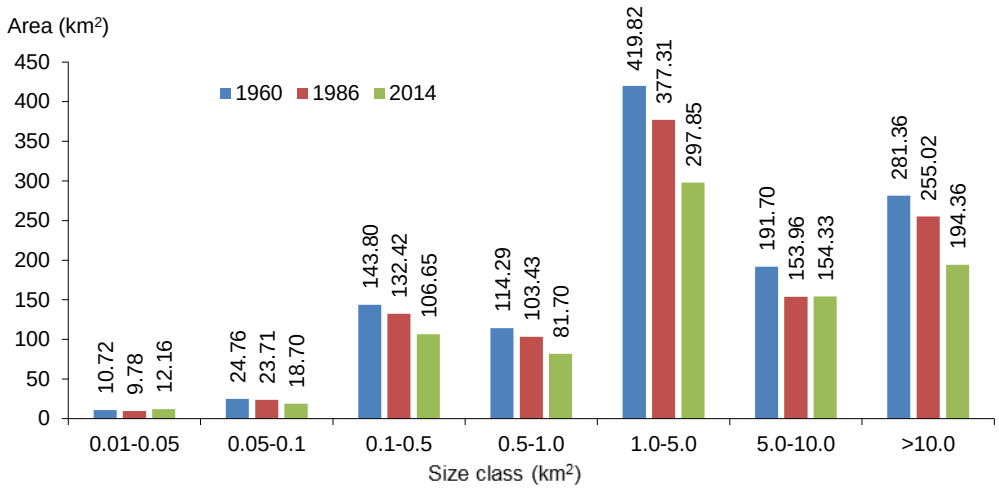

Figure S3. Cumulative glacier area values for seven size classes in 1960, 1986 and 2014 for the northern Greater Caucasus.

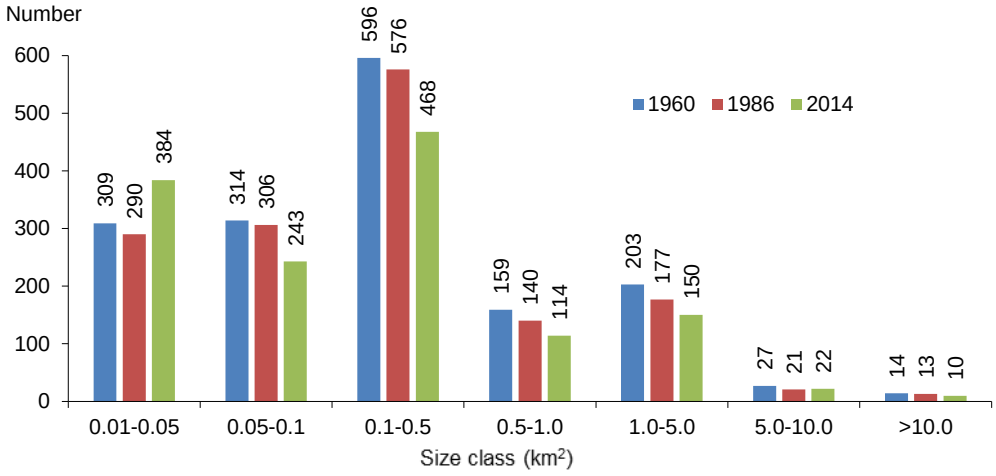

Figure S4. Cumulative glacier number values for seven size classes in 1960, 1986 and 2014 for the northern Greater Caucasus.

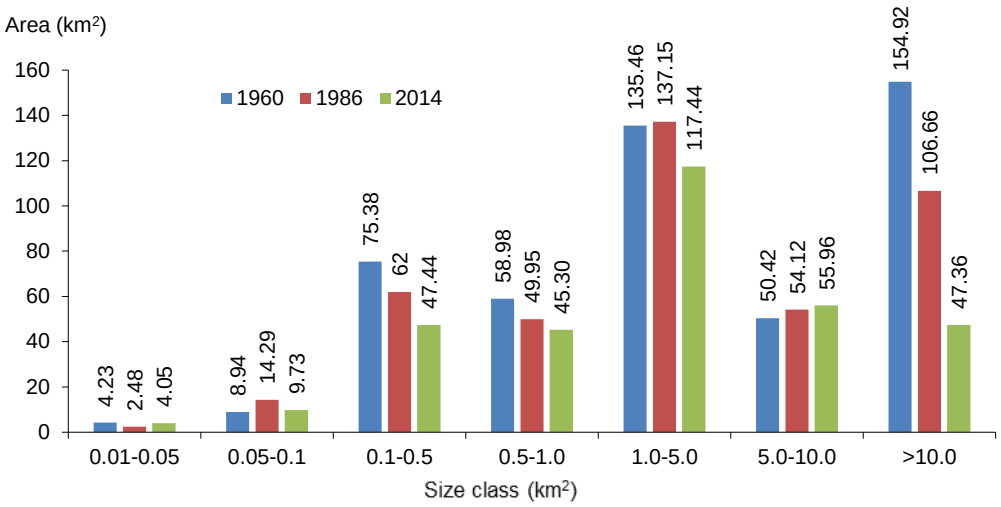

Figure S5. Cumulative glacier area values for seven size classes in 1960, 1986 and 2014 for the southern Greater Caucasus.

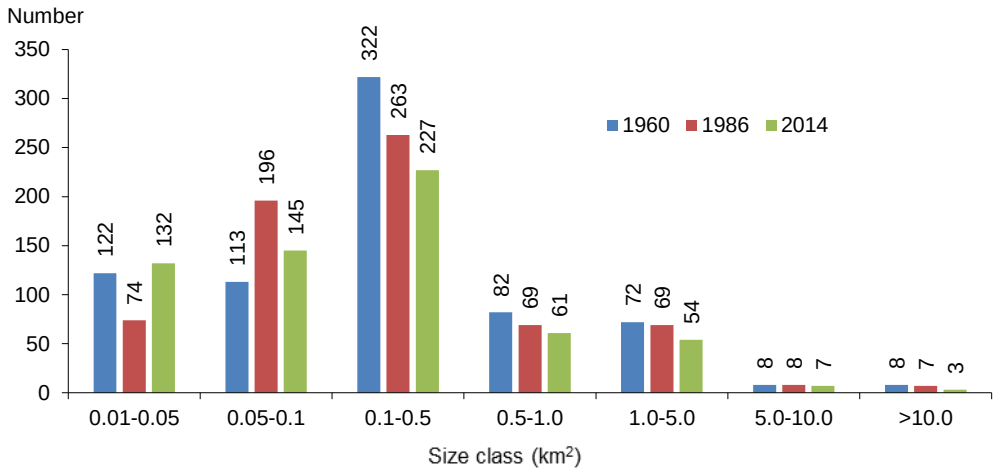

Figure S6. Cumulative glacier number values for seven size classes in 1960, 1986 and 2014 for the southern Greater Caucasus.

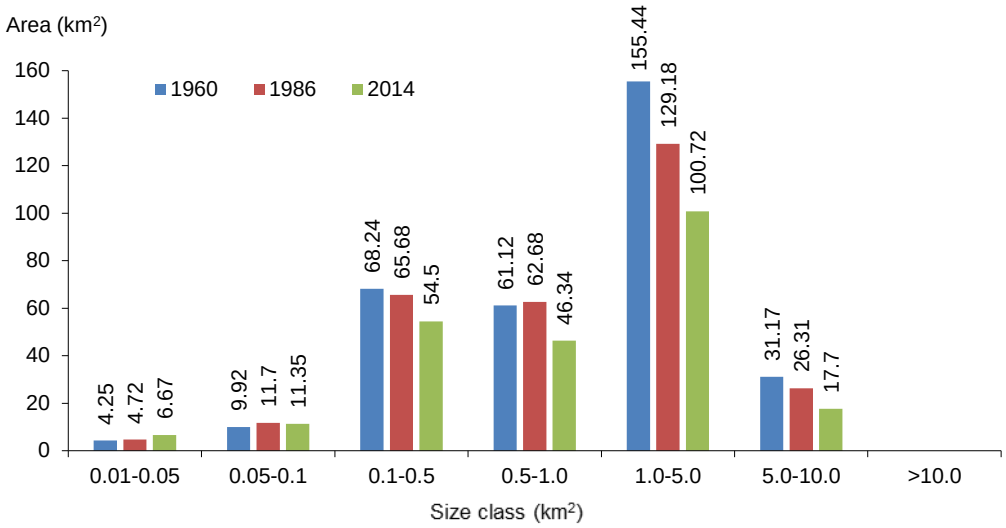

Figure S7. Cumulative glacier area values for seven size classes in 1960, 1986 and 2014 for the western Greater Caucasus.

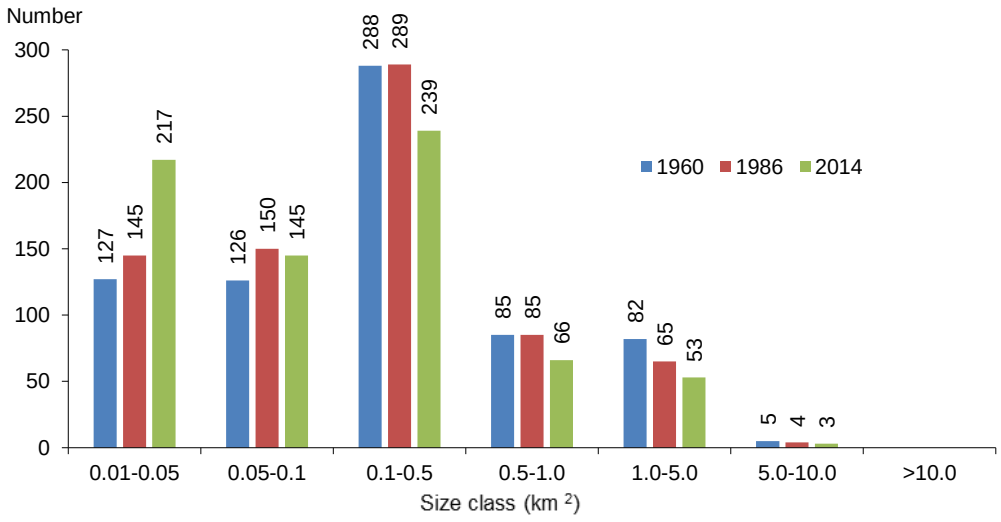

Figure S8. Cumulative glacier number values for seven size classes in 1960, 1986 and 2014 for the western Greater Caucasus.

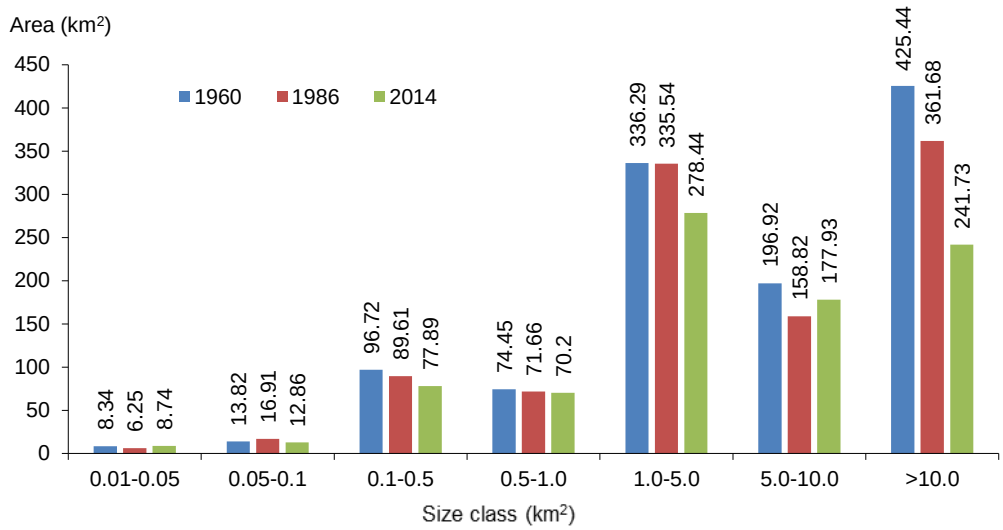

Figure S9. Cumulative glacier area values for seven size classes in 1960, 1986 and 2014 for the central Greater Caucasus.

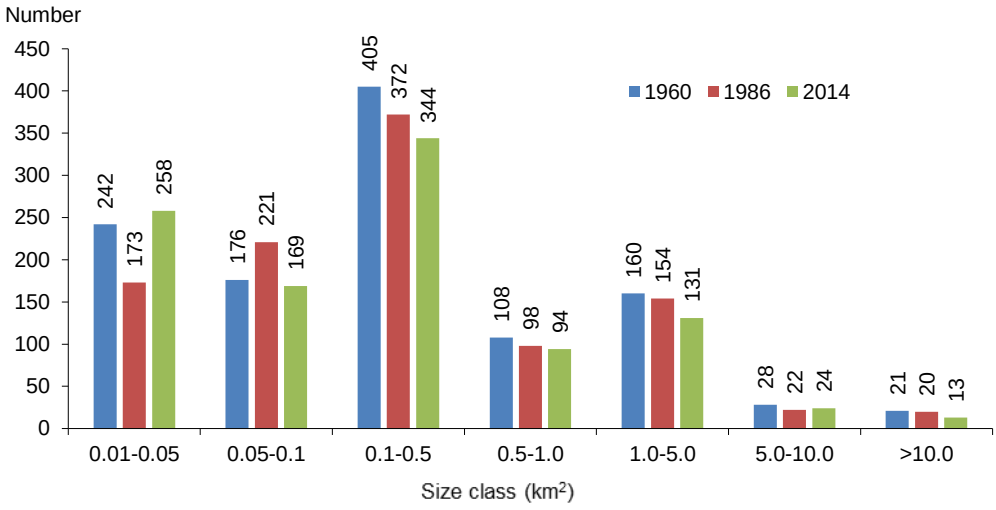

Figure S10. Cumulative glacier number values for seven size classes in 1960, 1986 and 2014 for the central Greater Caucasus.

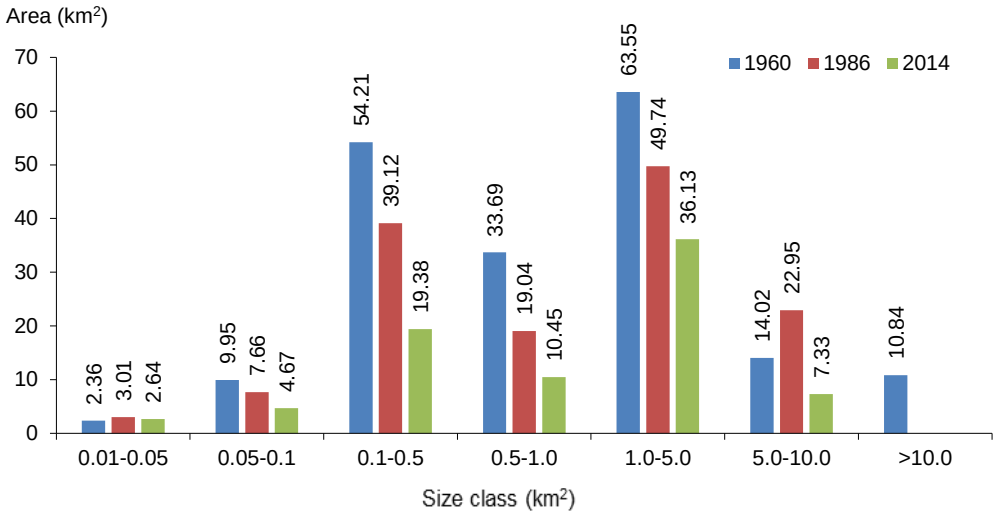

Figure S11. Cumulative glacier area values for seven size classes in 1960, 1986 and 2014 for the eastern Greater Caucasus.

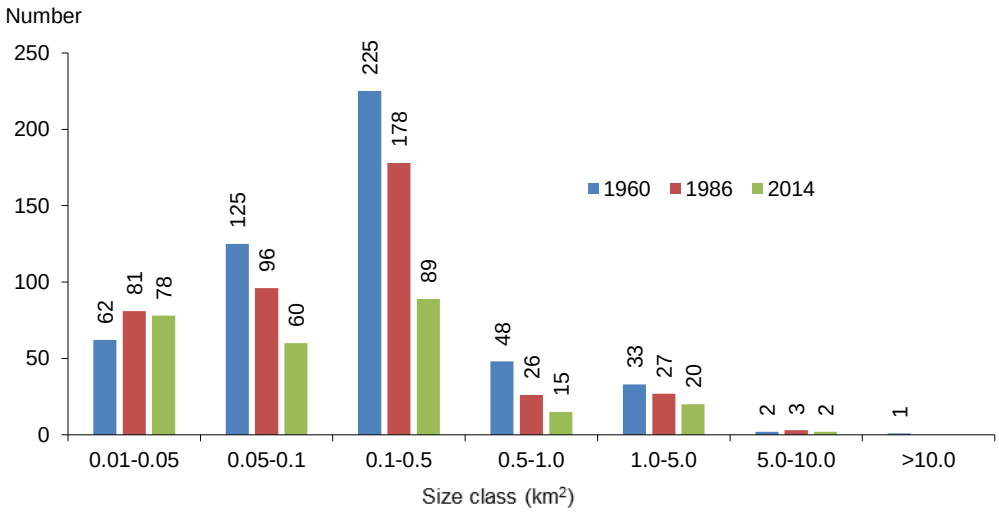

Figure S12. Cumulative glacier number values for seven size classes in 1960, 1986 and 2014 for the eastern Greater Caucasus.

Table S6. y% Area change for the seven glacier size classes in the western, central, eastern sections and entire Greater Caucasus in 1960–1986, 1986–2014 and 1960–2014.

Western Caucasus				Central Caucasus			Eastern Caucasus			Entire Greater Caucasus		
Size class (km^2)	1960-1986 y%	1986-2014 y%	1960-2014 y%	1960-1986 y%	1986-2014 y%	1960-2014 y%	1960-1986 y%	1986-2014 y%	1960-2014 y%	1960-1986 y%	1986-2014 y%	1960-2014 y%
0.01-0.05	0.42	1.47	1.05	-0.96	1.42	0.08	1.05	-0.43	0.21	-0.69	1.15	0.15
0.05-0.1	0.69	-0.1	0.26	0.85	-0.85	-0.12	-0.88	-1.39	-0.98	0.49	-0.89	-0.28
0.1-0.5	-0.77	-0.6	-0.37	-0.28	-0.46	-0.36	-1.07	1.8	-1.18	-0.43	-0.74	-0.55
0.5-1.0	0.09	-0.93	-0.44	-0.14	-0.07	-0.1	-1.67	-1.61	-1.27	-0.44	-0.61	-0.49
1.0-5.0	-0.65	-0.78	-0.65	-0.008	-0.6	-0.31	-0.83	-0.98	-0.8	-0.28	-0.68	-0.46
5.0-10.0	-0.59	-1.16	-0.8	-0.74	0.43	-0.17	2.45	-2.43	-0.88	-0.54	0.03	-0.24
>10.0	-	-	-	-0.57	-1.18	-0.8	-	-	-	-0.65	-1.18	-0.82

Table S7. Characteristics of glaciers used for measuring length change. The average error terms are ±15 m.

Name/WGI ID	River basin	Area 1960	Area 1986	Area 2014	1960–1986 % yr^{1}	1986–2014 % yr^{1}	1960–2014 % yr^{1}	Length change 1960–1986		Length change 1986–2014		Length change 1960–2014	
								m	m yr^{1}	m	m yr^{1}	m	m yr^{1}
Glaciers with >10 km^2 area													
Bezingi	Cherek-Bezingskiy	40.42±0.98	39.98±0.9	37.47±0.94	-0.04	-0.22	-0.13	-519	-19.7	-374	-13.4	-893	-16.5
Dych-sy-Ailama	Cherek-Balkarskiy	39.49±0.98	34.85±0.94	27.53±0.78	-0.45	-0.75	-0.56	-461	-17.7	-1094	-39.1	-1555	-28.8
Karaugom	Karaugom	29.94±0.6	29.17±0.62	23.99±0.44	-0.09	-0.63	-0.36	-164	-6.3	-1366	-48.8	-1530	-28.3
Lekhziri	Enguri	35.80±0.9	33.95±0.94	23.76±0.72	-0.19	-1.07	-0.62	-859	-33.0	-736	-26.3	-1595	-29.5
Agashtan	Cherek-Balkarskiy	21.35±0.36	20.39±0.32	18.93±0.44	-0.17	-0.25	-0.20	-368	-14.2	-587	-21.0	-955	-17.7
Mizhirgi	Cherek-Bezingskiy	13.77±0.5	13.90±0.48	12.71±0.48	+0.03	-0.30	-0.14	-808	-31.1	+40	+1.4	-768	-14.2
Tsaneri southern*	Enguri	28.26±0.52	14.38±0.32	12.31±0.32	-0.21	-0.51	-1.04	-448	-17.2	-781	-27.9	-1229	-22.8
Tseya	Tseyadon	14.03±0.42	12.83±0.38	11.87±0.36	-0.32	-0.26	-0.28	-295	-11.3	-341	-12.2	-636	-11.8
Tsaneri northern	Enguri	-**	13.30±0.22	11.28±0.22	-0.58	-0.54	-	-	-	-574	-20.5	-	-
Glaciers with 5-10 km^2 area													
Kvitlodi	Enguri	12.23±0.26	11.65±0.24	9.58±0.2	-0.18	-0.63	-0.40	-598	-23.0	-883	-31.5	-1481	-27.4
Adishi	Enguri	10.48±0.22	10.34±0.2	9.58±0.2	-0.05	-0.26	-0.15	-124	-4.8	-390	-13.9	-514	-9.5
Challaati	Enguri	12.71±0.36	12.36±0.38	9.24±0.28	-0.10	-0.90	-0.50	-460	-17.7	-223	-8.0	-683	-12.6
Khalde	Enguri	11.87±0.38	10.65±0.36	8.59±0.26	-0.39	-0.69	-0.51	-130	-5.0	-130	-4.6	-260	-4.8

Shkhelda	Baksan	13.61±0.48	12.50±0.50	8.28±0.65	-0.31	-1.20	-0.72	-950	-36.5	-480	-17.1	-1430	-26.5
Bashil	Chegem	8.16±0.19	7.91±0.19	7.34±0.19	-0.11	-0.25	-0.18	-230	-8.8	-530	-18.9	-760	-14.1
Dolra	Enguri	7.95±0.21	6.44±0.16	5.36±0.12	-0.73	-0.59	-0.60	-595	-22.9	-160	-5.7	-755	-14.0
Glaciers with 1-5 km^2 area													
Boko	Rioni	5.07±0.12	4.71±0.12	4.62±0.11	-0.27	-0.07	-0.16	-287	-11.0	-436	-15.6	-723	-13.4
Mostotsete	Urukh Headwaters	4.27±0.14	3.58±0.012	3.23±0.13	-0.62	-0.34	-0.45	-105	-4.0	-135	4.8	-240	-4.4
Marukh northern	Malii Zelenchuk	3.25±0.08	3.30±0.08	2.82±0.07	+0.05	-0.51	-0.24	-255	-9.8	-240	-8.6	-495	-9.2
Chungurjar	Ullukam	3.13±0.09	2.11±0.07	1.88±0.07	-1.25	-0.39	-0.74	-490	-18.8	-405	-14.4	-895	-16.6
Tbilisa	Riorni	2.90±0.10	2.21±0.09	1.91±0.08	-0.91	-0.48	-0.63	-186	7.2	-354	-12.6	-540	-10.0
Sakeni	Kodori	2.47±0.07	2.39±0.08	1.99±0.05	-0.12	-0.59	-0.35	-560	-21.5	-275	-9.8	-835	-15.5
Abano	Tergi (Terek)	1.96±0.09	1.49±0.09	1.33±0.09	-0.92	-0.38	-0.60	-550	-21.2	-240	-8.6	-790	-14.6
Glaciers with <1 km^2 area													
SU5T09106388	Rioni	0.86±0.05	0.73±0.04	0.69±0.03	-0.58	-0.20	-0.36	-360	-13.8	-70	-2.5	-430	-8.0
***	Sharo Argun	0.90±0.05	0.77±0.04	0.55±0.03	-0.55	-1.02	-0.72	-65	-2.5	-270	-9.6	-335	-6.2
SU4G08011072	Tergi (Terek)	0.62±0.03	0.55±0.03	0.42±0.02	-0.43	-0.84	-0.60	-60	-2.3	-310	-11.1	-370	-6.9
***	Andiiskoe Koisu	0.63±0.04	0.43±0.03	0.29±0.02	-1.22	-1.16	-0.99	-243	-9.3	-245	-8.8	-588	-10.9
SU4G08007139	Cherek-Balkarskiy	0.36±0.03	0.37±0.03	0.26±0.02	+0.10	-1.06	-0.51	-189	-7.3	-210	-7.5	-399	-7.4
SU4G08011083	Tergi (Terek)	0.99±0.04	0.55±0.03	0.15±0.01	-1.70	-2.59	-1.57	-234	-9.0	-470	-16.8	-704	-13.0
SU5T09105282	Enguri	0.19±0.02	0.13±0.01	0.10±0.005	-1.21	-0.82	-0.87	-60	-2.3	-60	-2.1	-120	-2.2

*, ** Until the 1980s the Southern and Northern Tsaneri were merged as one compound-valley type glacier. Their division likely happened in 1980–1985.

*** Omitted in WGI database.

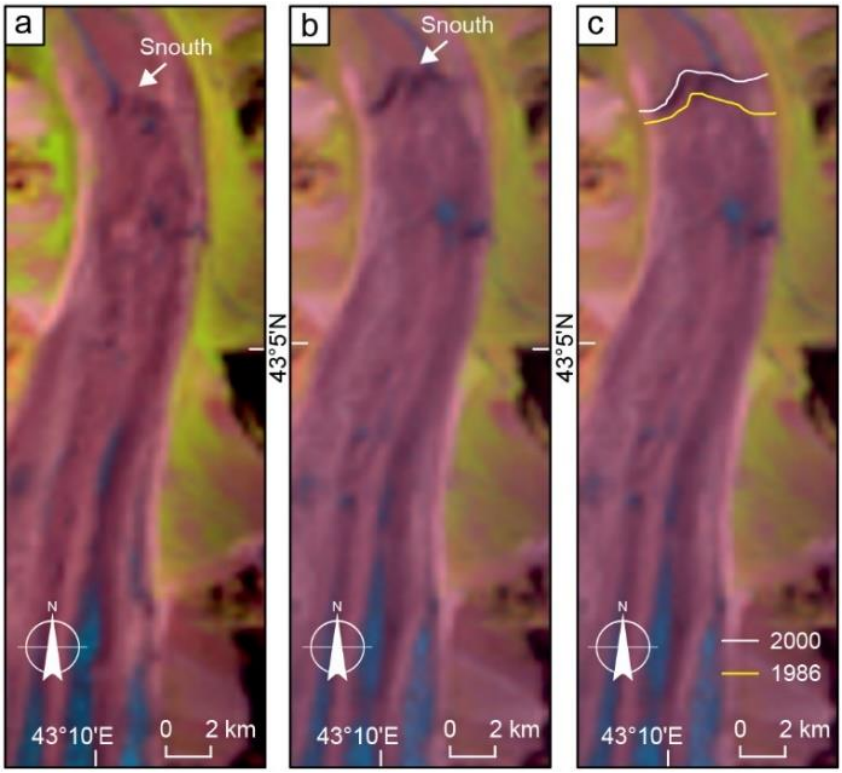

Figure S13. Mizhirgi Glacier advance between 1986–2000. (a) Landsat 5 TM, 6 August 1986. (b) Landsat 5 TM, 12 August 2000. In 1986, the meltwater flow comes from a different position at the terminus. (c) With the snout comparison, it is visible that the snout has advanced.

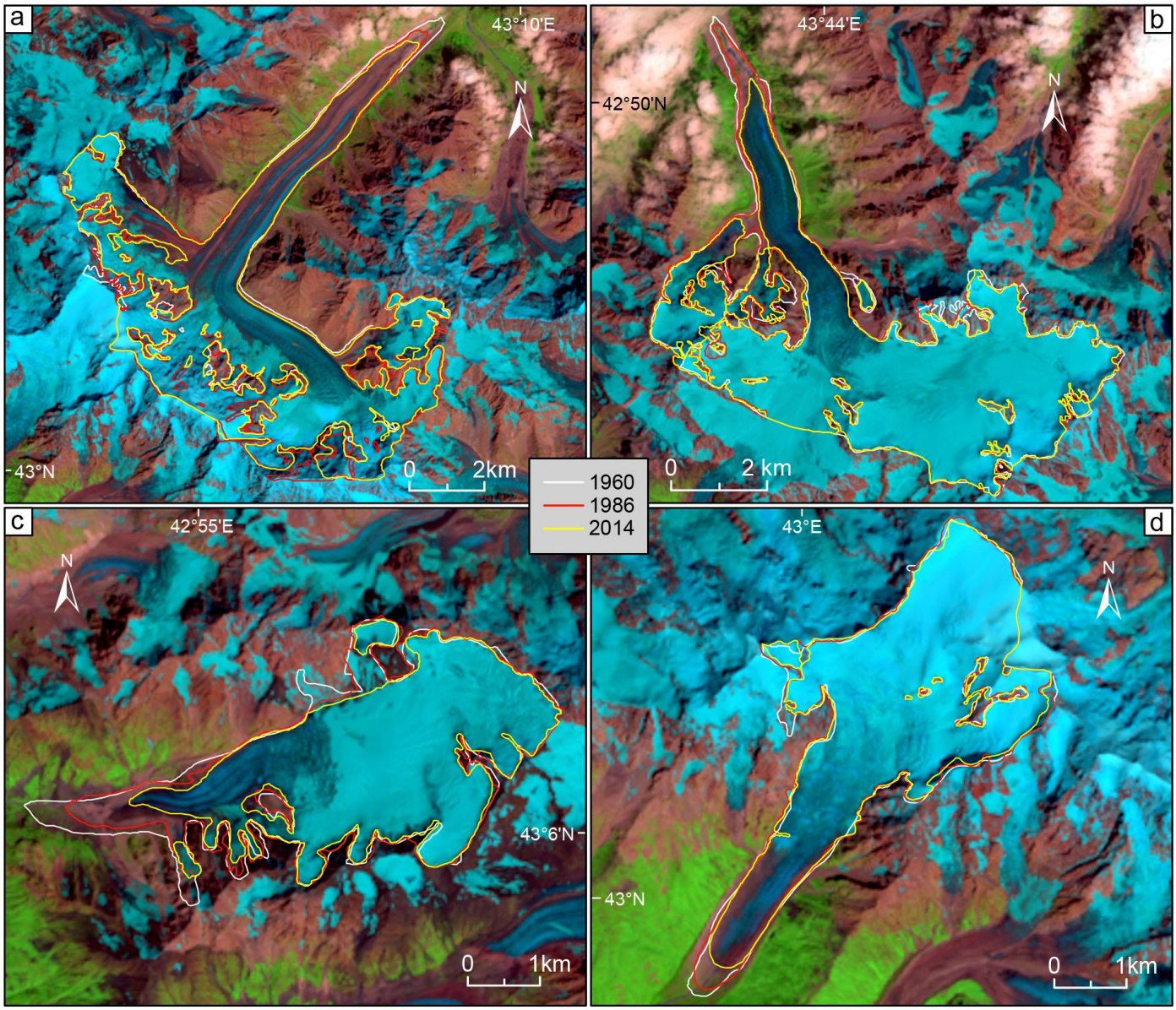

Figure S14. (a) Bezingi, (b) Karaugom, (c) Kvitlodi and (d) Adishi glaciers reduction in the years 1960, 1986 and 2014. The 03 August 2014 Landsat 8 image is used as background.