Testing the consistency between changes in simulated climate and Alpine glacier length over the past millennium

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SUPPLEMENTRAY MATERIAL

Table S1: Names and position of the selected glaciers, following Leclercq et al. (2014), and corresponding RGI index (RGI Consortium, 2015)

NAME	Lon	Lat	RGI
Allalin	7.93	46.05	RGI50-11.02715
Alpeiner	11.13	47.05	RGI50-1.00376
Argentiere	6.93	45.97	RGI50-11.02835
Bachfall	11.08	47.08	RGI50-11.00325
Basodino	8.47	46.42	RGI50-11.01987
Berglas	11.12	47.07	RGI50-1.00343
Bluemlisalp	7.77	46.5	RGI50-11.01621
Bossons	6.78	45.87	RGI50-1.03067
Brunni	8.78	46.73	RGI50-11.01120
Daunkogel	11.1	47.0	RGI50-11.00518
Diem	10.95	46.82	RGI50-11.00886
Dorfer	12.33	47.1	RGI50-11.00164
E. Gruebl	11.23	46.98	RGI50-11.00577
Fee	7.88	46.08	RGI50-11.02607
Ferpecle	7.58	46.02	RGI50-1.02728
Fiescher	8.15	46.05	RGI50-1.01478
Forni	10.57	46.4	RGI50-11.01974
Forno	9.7	46.3	RGI50-11.02245
Gaissberg	11.07	46.83	RGI50-11.00836
Gepatsch	10.77	46.85	RGI50-11.00746
Gorner	7.8	45.97	RGI50-11.02848
Gr Aletsch	8.03	,46.5	RGI50-11.01450
Gries	8.33	46.43	RGI50-11.01876
Grosselend	13.32	47.03	RGI50-11.00291
Gurgler	10.98	46.8	RGI50-11.00887

Hallstaetter	13.62	47.48	RGI50-11.00002
,Hintereis	10.77	46.8	RGI50-11.00897
Horn	11.82	47.0	RGI50-11.00459
Hufi	8.85	46.82	RGI50-11.00872
Karlinger	12.7	47.13	RGI50-11.00067
Kehlen	8.42	46.68	RGI50-11.01193
Kleinelend	13.25	47.07	RGI50-11.00181
Krimmler	12.25	47.08	RGI50-11.00233
La Mare	10.6	46.43	RGI50-11.01863
Langgletscher	7.93	46.47	RGI50-11.01698
Langtaler,	11.02	46.8	RGI50-11.00929
Marzell	10.88	46.78	RGI50-11.00958
Mer de Glace	6.93	45.88	RGI50-11.02923
Morteratsch	9.93	46.4	RGI50-11.01946
Niederjoch	10.87	46.78	RGI50-11.00992
Ob Grindelwald	8.1	46.62	RGI50-11.01270
Oedenwinkel	12.65	47.12	RGI50-11.00124
Palue	9.98	46.37	RGI50-11.02144
Pasterze	12.7	47.1	RGI50-1.00106
Pizol	9.38	46.95	RGI50-11.00638
Pre de Bard	7.04	45.91	RGI50-11.02967
Rhone	8.4	46.62	RGI50-11.01238
Roseg	9.83	46.38	RGI50-11.02119
Rosenlaui	8.15	46.65	RGI50-11.01222
Rotmoos	11.05	46.82	RGI50-11.00871
Saint Sorlin	6.17	45.18	RGI50-11.03503
Saleina	7.07	45.98	RGI50-1.02815
Schwarzenstein	11.85	47.02	RGI50-11.00415
Simony	12.27	47.07	RGI50-11.00264
Stein	8.43	46.7	RGI50-11.01144
Sulzenau	11.15	46.98	RGI50-11.00541
Taschach	10.87	46.9	RGI50-11.00687
Trient	7.03	46.0	RGI50-11.02756
Tsanfleuron	7.23	46.32	RGI50-11.02249
Tsidjore Nouve	7.45	46.0	RGI50-11.02771
Turtmann	7.68	46.13	RGI50-11.02490
U Grindelwald	8.07	46.58	RGI50-11.01346
Umbal	12.25	47.05	RGI50-11.00278
Unteraar	8.22	46.57	RGI50-11.01328
Untersulzbach	12.35	47.13	RGI50-11.00068
Valsorey	7.27	45.9	RGI50-1.02979
Ventina	9.77	46.27	RGI50-11.02351
Viltragen	12.37	47.13	RGI50-11.00110
Waxegg	11.8	47.0	RGI50-1.00469
Zettalunitz	12.38	47.08	RGI50-11.00190
Zinal	7.63	46.07	RGI50-11.02641

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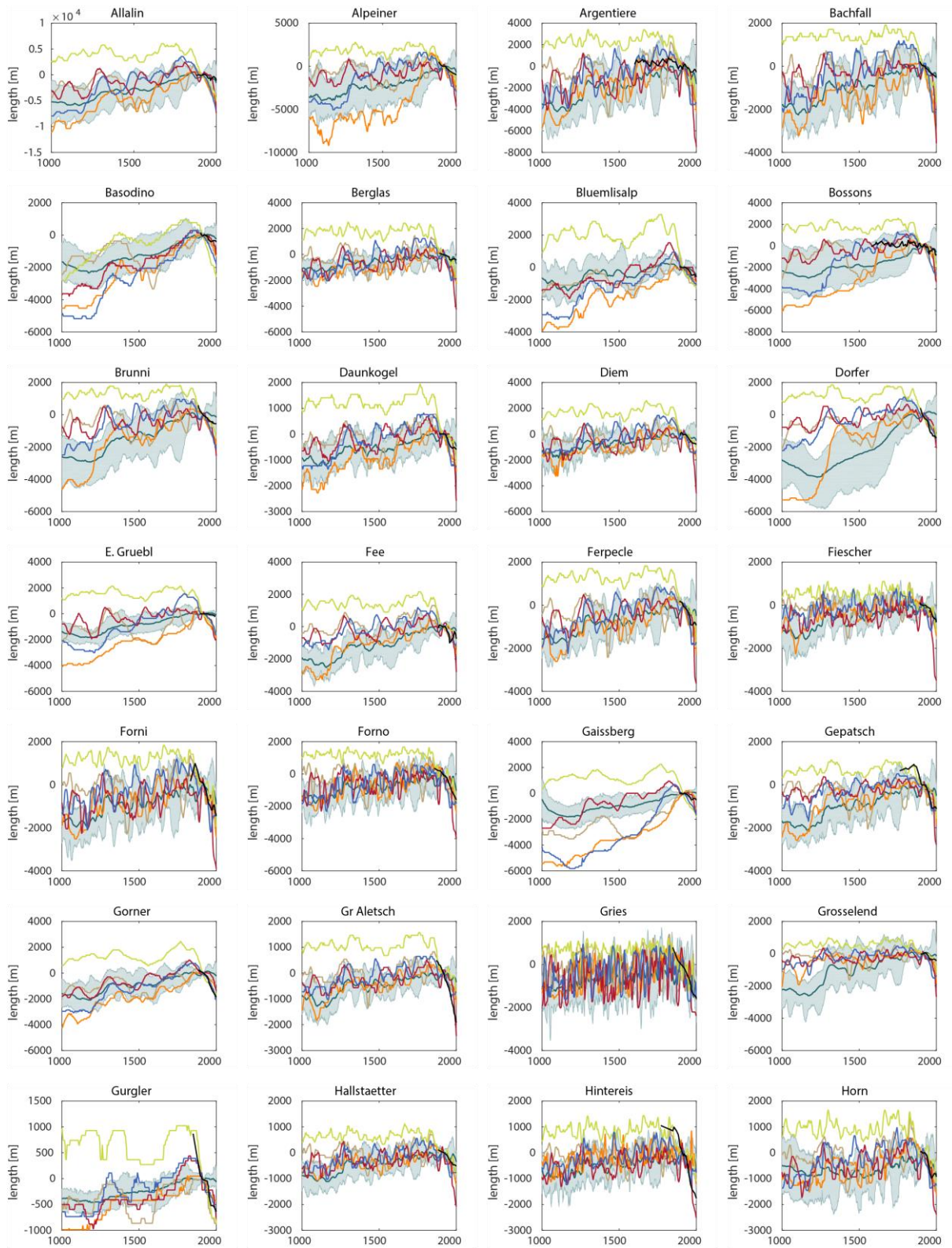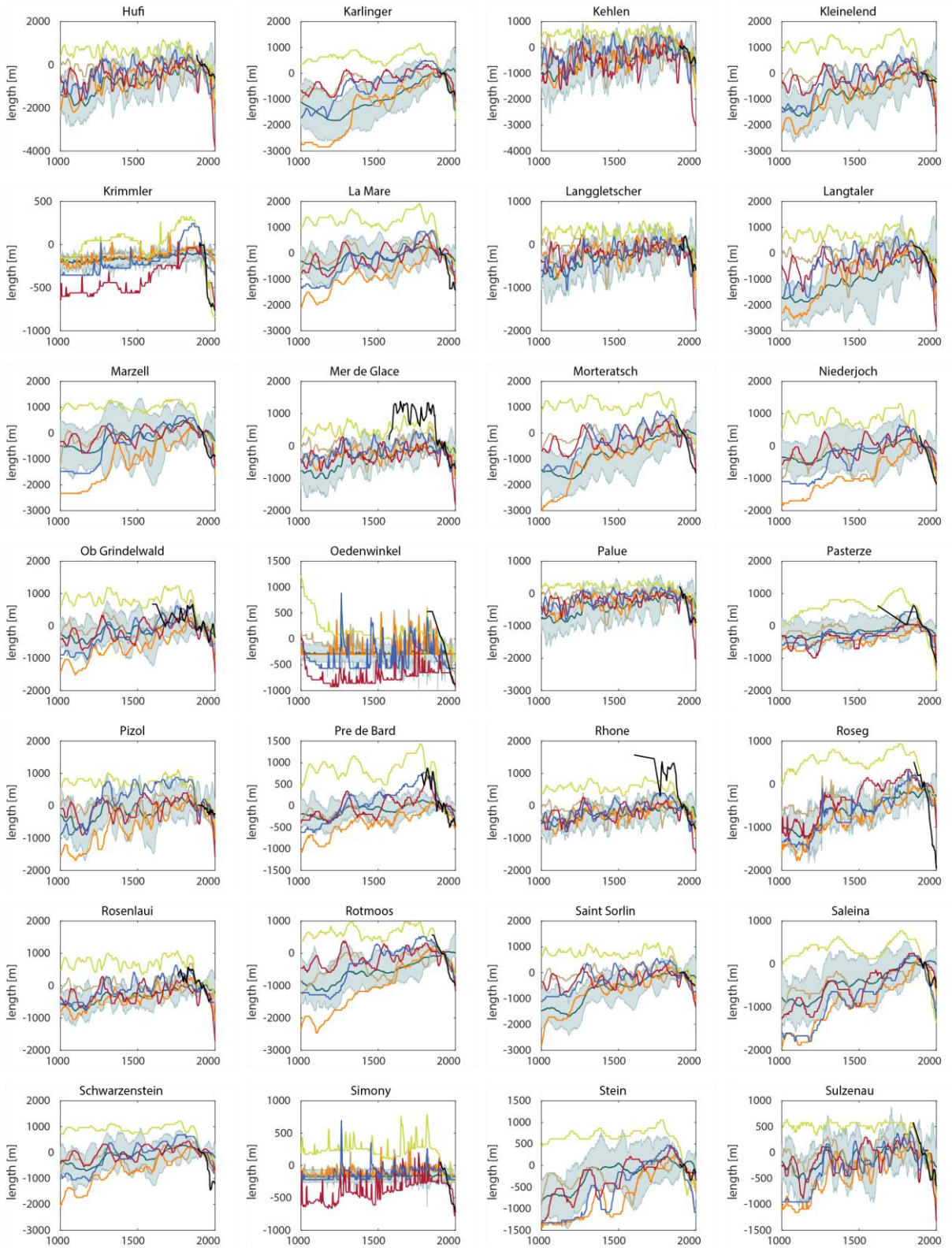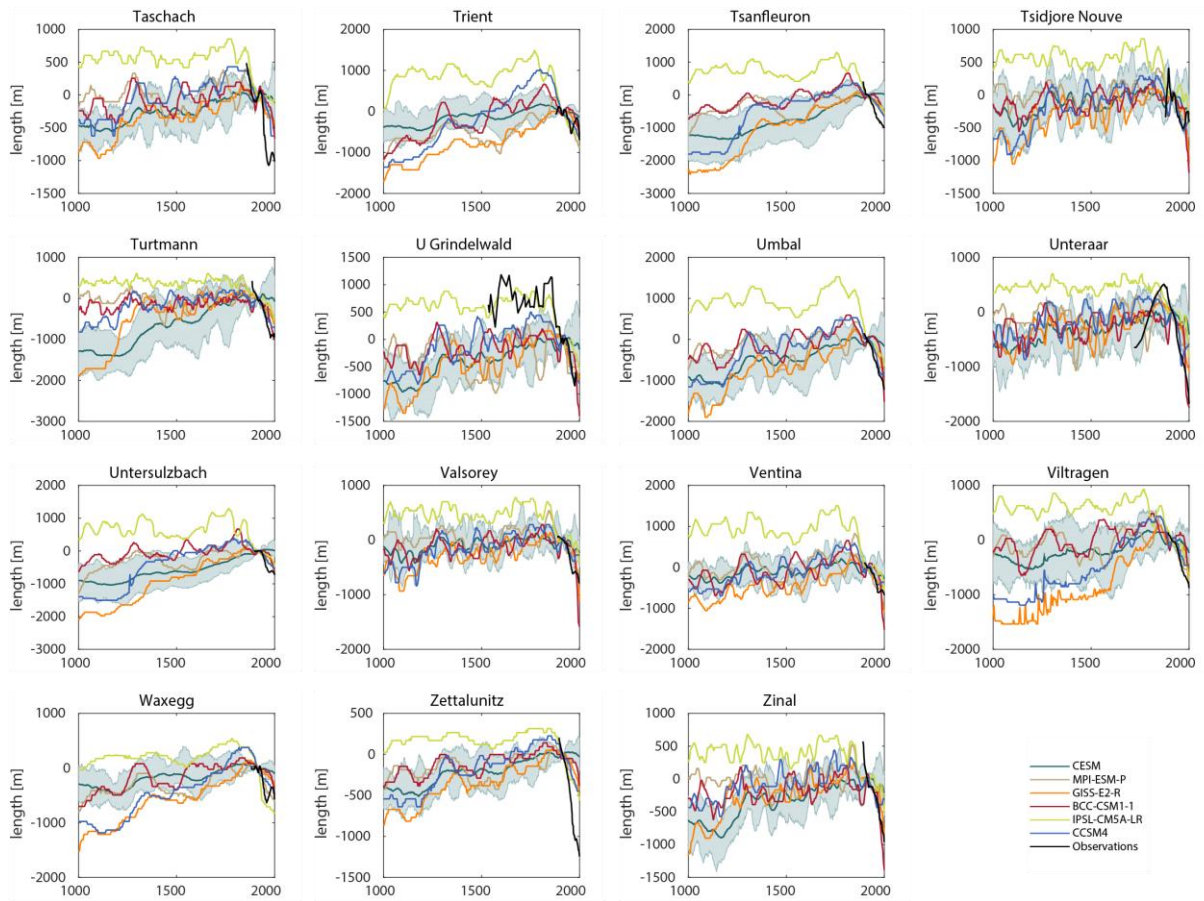
Supplementary Figure 1. Observed and simulated length for the 71 glaciers. The shaded area
represents the range of the ensemble of simulations driven by CESM outputs.

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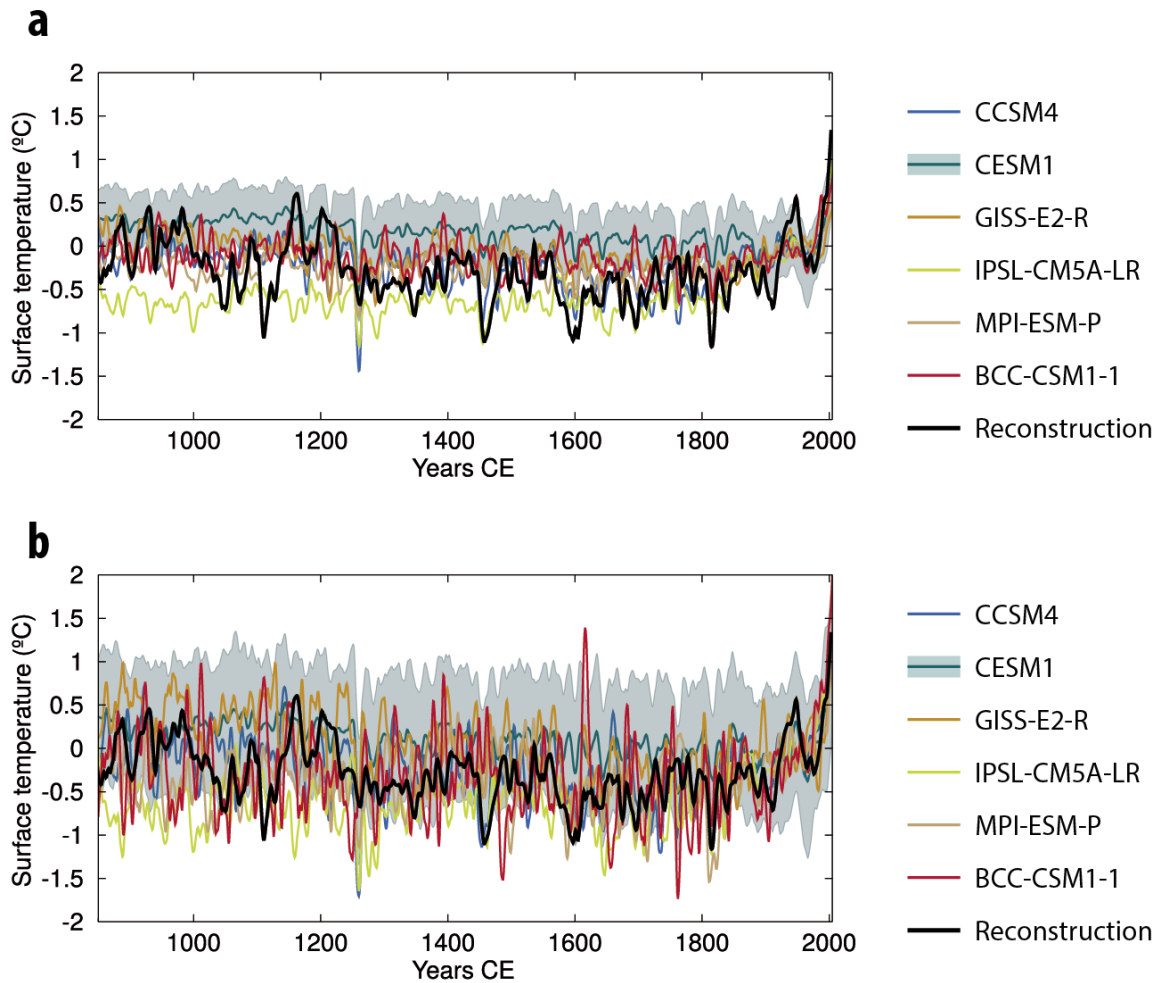
Supplementary Figure 2. Summer temperature overaged over a) Europe and b) the Alpine region (defined here as the area between 45 and 48°N and between 6 and 13°E) in the reconstruction of Luterbacher et al. (2016) and as simulated by climate models over the past millennium. The shaded area represents the mean plus and minus one standard deviation of the CESM1 model ensemble. A 15-year Lowess smoothing has been applied to the time series. The reference period is the years 1900-2000, in contrast with Figure 1 that used the years 1500-1850 CE.