Supplementary Tables

Table S1. Statistical evaluation of elevation difference correction in off-glacier areas of ETPR.

Basin	NMAD		Median	
	original	co-registration	original	co-registration
Ganges	15.22	12.99	-4.96	1.02
Brahmaputra	17.30	14.61	-3.08	0.59
Salween	16.10	12.69	-2.75	0.51
Mekong	17.37	11.97	-6.60	0.53
Yangtze	12.47	8.70	-4.95	0.40
Yellow	9.30	7.71	-1.08	0.38
Irrawaddy	42.68	41.65	2.02	-0.20

Supplementary Figures

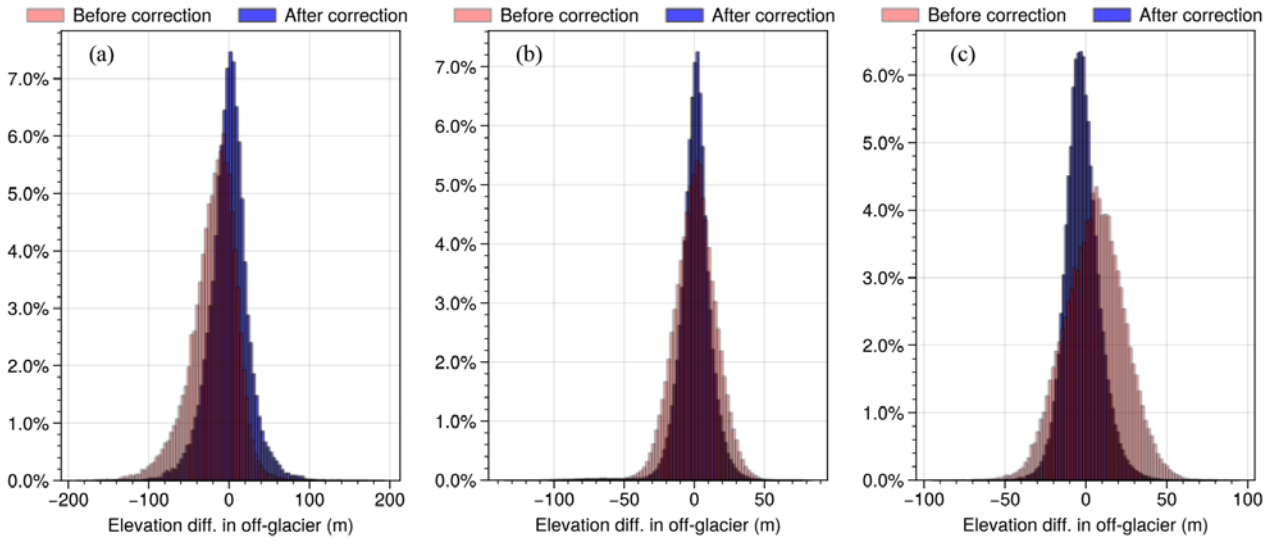

Figure S1. Impact of coregistration and bias correction on off-glacier elevation differences in the ETPR. The vertical axes in all subplots represent the ratio of pixels in each elevation difference zone to the total number of pixels. Briefly, subplots (a), (b), and (c) represent groups with underestimation, low-concentration, and overestimation of elevation difference, respectively.

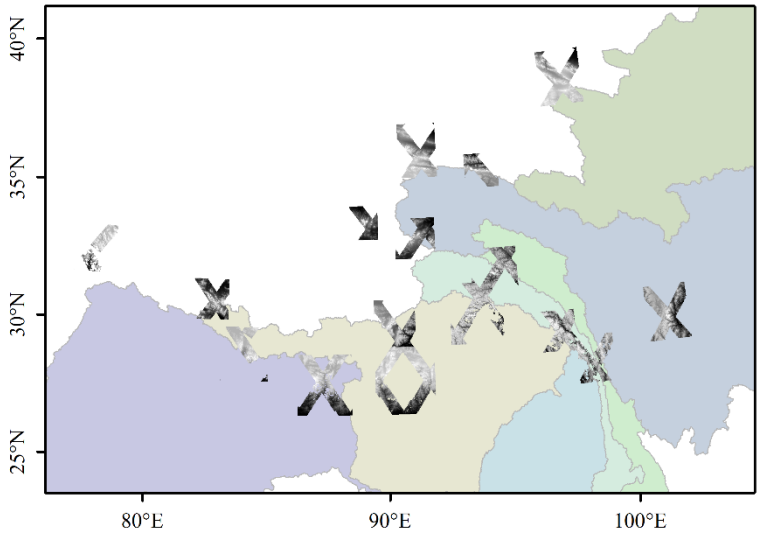

Figure S2. SRTM X-band images used in this study.

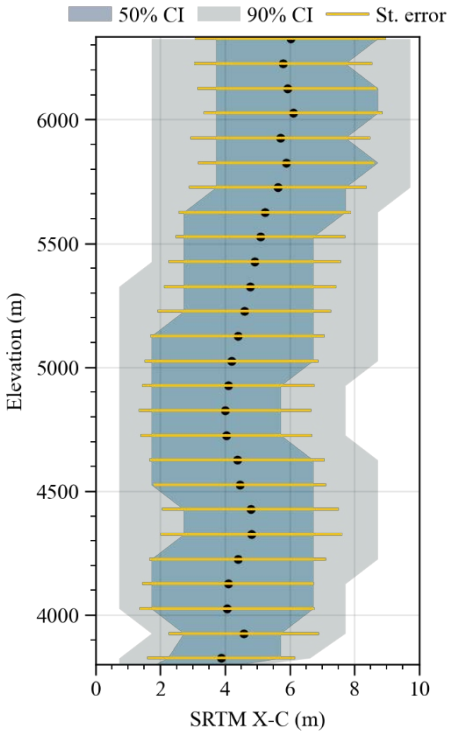

Figure S3. Distribution of the C-X band penetration depth along elevation.

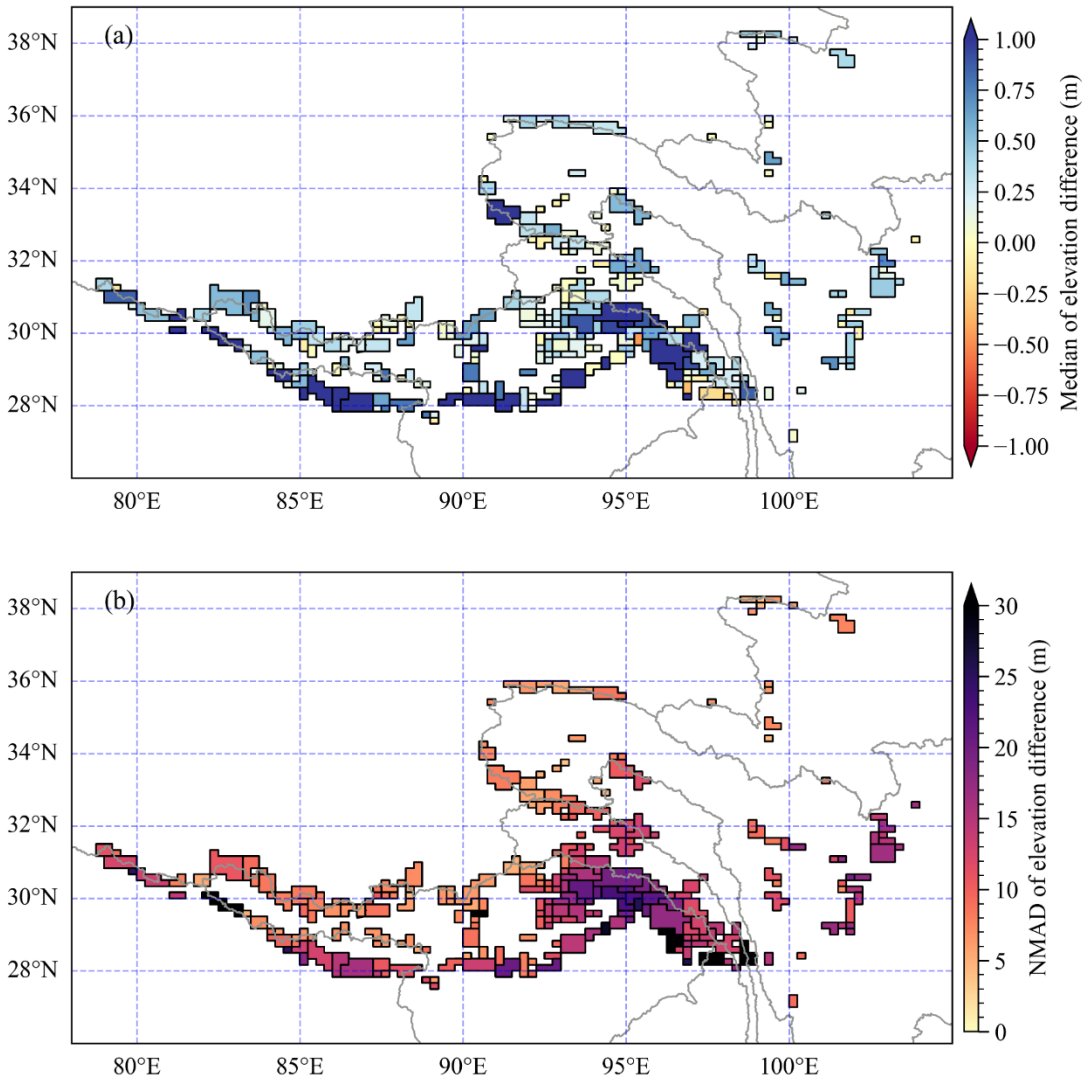

Figure S4. Spatial distribution of median (a) and NMAD (b) of elevation difference in stable areas.

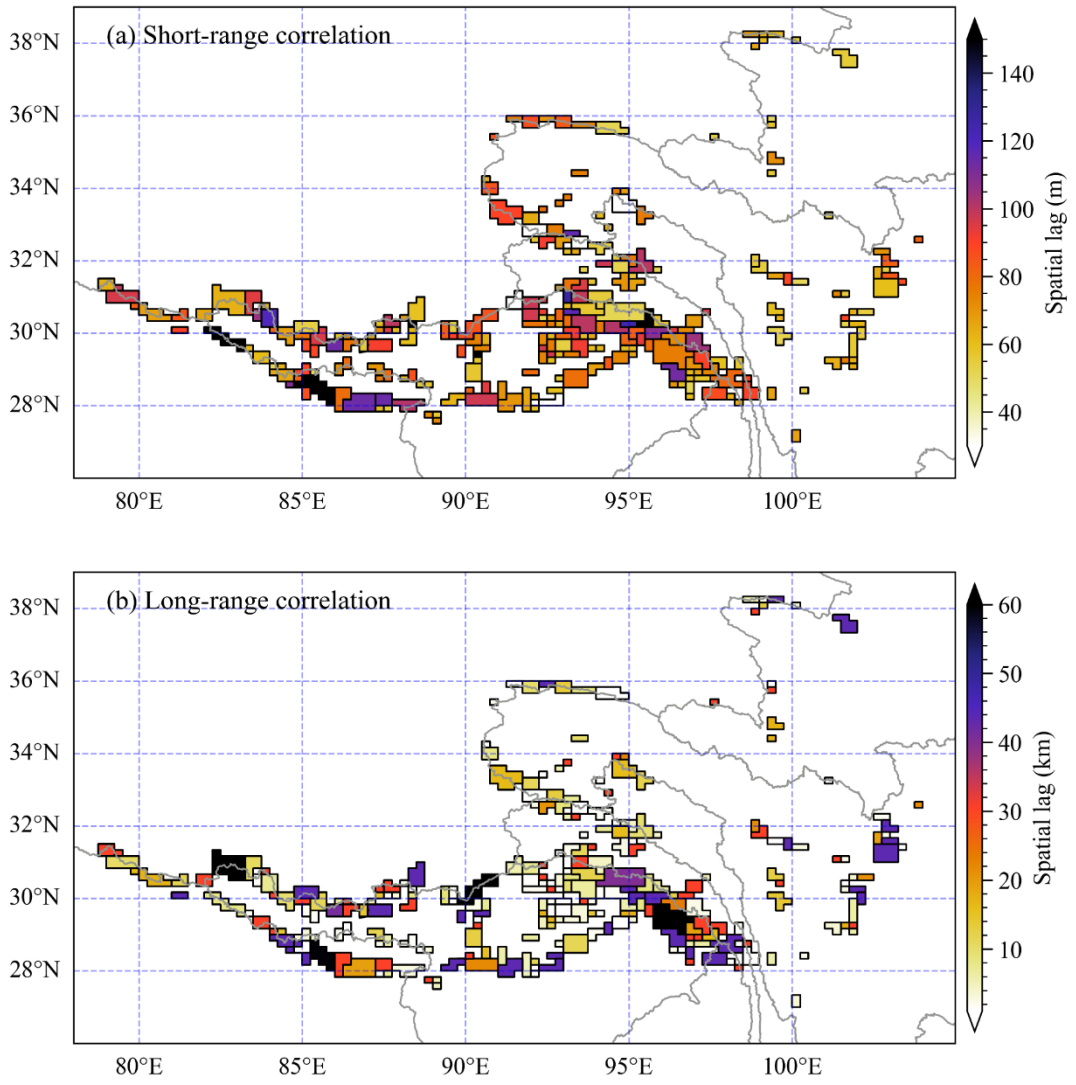

Figure S5. Short-range (a) and long-range (b) correlations of surface elevation difference in different glacier groups. Basin-averaged short-range correlation distance is ~95 m and long-range correlation distance is ~16.26 km.