

Supplementary materials

Table S1. Scene ID and acquisition date of ALOS PRISM data used in this study.

Scene ID	Acquisition date
ALPSMN051073030	9 January 2007
ALPSMN051073035	9 January 2007
ALPSMN051073040	9 January 2007
ALPSMN093083030	24 October 2007
ALPSMN104753030	12 January 2008
ALPSMN104753035	12 January 2008
ALPSMN104753040	12 January 2008
ALPSMN104753045	12 January 2008
ALPSMN124883030	29 May 2008
ALPSMN207883030	19 December 2009
ALPSMN207883035	19 December 2009
ALPSMN207883040	19 December 2009
ALPSMN207883045	19 December 2009
ALPSMN211383030	12 January 2010
ALPSMN211383035	12 January 2010
ALPSMN211383040	12 January 2010
ALPSMN212113030	17 January 2010
ALPSMN212113035	17 January 2010
ALPSMN212113040	17 January 2010
ALPSMN213863030	29 January 2010
ALPSMN213863035	29 January 2010
ALPSMN213863040	29 January 2010
ALPSMN221303030	21 March 2010
ALPSMN221303035	21 March 2010
ALPSMN221303040	21 March 2010
ALPSMN221303045	21 March 2010
ALPSMN223053030	2 April 2010
ALPSMN223053035	2 April 2010
ALPSMN229763030	18 May 2010
ALPSMN229763035	18 May 2010
ALPSMN229763040	18 May 2010
ALPSMN254853040	6 November 2010

ALPSMN254853045	6 November 2010
ALPSMN259083030	5 December 2010
ALPSMN259083035	5 December 2010
ALPSMN259083040	5 December 2010
ALPSMN259083045	5 December 2010
ALPSMN260833030	17 December 2010
ALPSMN260833035	17 December 2010
ALPSMN260833040	17 December 2010
ALPSMN261563030	22 December 2010
ALPSMN261563035	22 December 2010
ALPSMN261563040	22 December 2010
ALPSMN261563045	22 December 2010
ALPSMN263313030	3 January 2011
ALPSMN263313035	3 January 2011
ALPSMN263313040	3 January 2011
ALPSMN265793030	20 January 2011
ALPSMN265793035	20 January 2011
ALPSMN265793040	20 January 2011
ALPSMN267543030	1 February 2011
ALPSMN267543035	1 February 2011
ALPSMN267543040	1 February 2011
ALPSMN271773035	2 March 2011
ALPSMN271773040	2 March 2011
ALPSMN272503030	7 March 2011
ALPSMN272503035	7 March 2011
ALPSMN272503040	7 March 2011

Table S2. Scene ID and acquisition date of ALOS AVNIR-2 data used in this study.

Scene ID	Acquisition date
ALAV2A051073030	9 January 2007
ALAV2A053553030	26 January 2007
ALAV2A053553050	26 January 2007
ALAV2A093083030	24 October 2007
ALAV2A102273030	26 December 2007
ALAV2A102273040	26 December 2007
ALAV2A200443040	29 October 2009
ALAV2A207883030	19 December 2009
ALAV2A207883040	19 December 2009
ALAV2A207883050	19 December 2009
ALAV2A211383030	12 January 2010
ALAV2A211383040	12 January 2010
ALAV2A212113030	17 January 2010
ALAV2A212113040	17 January 2010
ALAV2A221303030	21 March 2010
ALAV2A221303040	21 March 2010
ALAV2A221303050	21 March 2010
ALAV2A254853030	6 November 2010
ALAV2A254853040	6 November 2010
ALAV2A254853050	6 November 2010
ALAV2A259083030	5 December 2010
ALAV2A259083040	5 December 2010
ALAV2A260833030	17 December 2010
ALAV2A260833040	17 December 2010
ALAV2A261563030	22 December 2010
ALAV2A261563040	22 December 2010
ALAV2A263313030	3 January 2011
ALAV2A263313040	3 January 2011

The ALOS-derived glacier outlines generated for this study were corrected four times prior to finalisation (e.g., Fig. S1) in order to assess the manual editing of the glacier shapes. As a consequence, the total number of delineated outlines changed from 1406 to 1583. We calculated the overlap ratios (r_{ov}) of each version (V1 to V4) against the finalised version (V5) (Fig. S2). Toward finalisation, the mean overlap ratio (R_{V5}^{Vn} , where Vn denotes different versions from V1 to V4) increased from 0.65 to 0.97, implying that more outlines had well-overlapping shapes against V5. The numbers of non-overlapping outlines decreased from 351 (V1) to 42 (V4), whereas those with the same shape ($r_{ov} = 1$) as the finalized version increased from 7 (V1) to 1539 (V4).

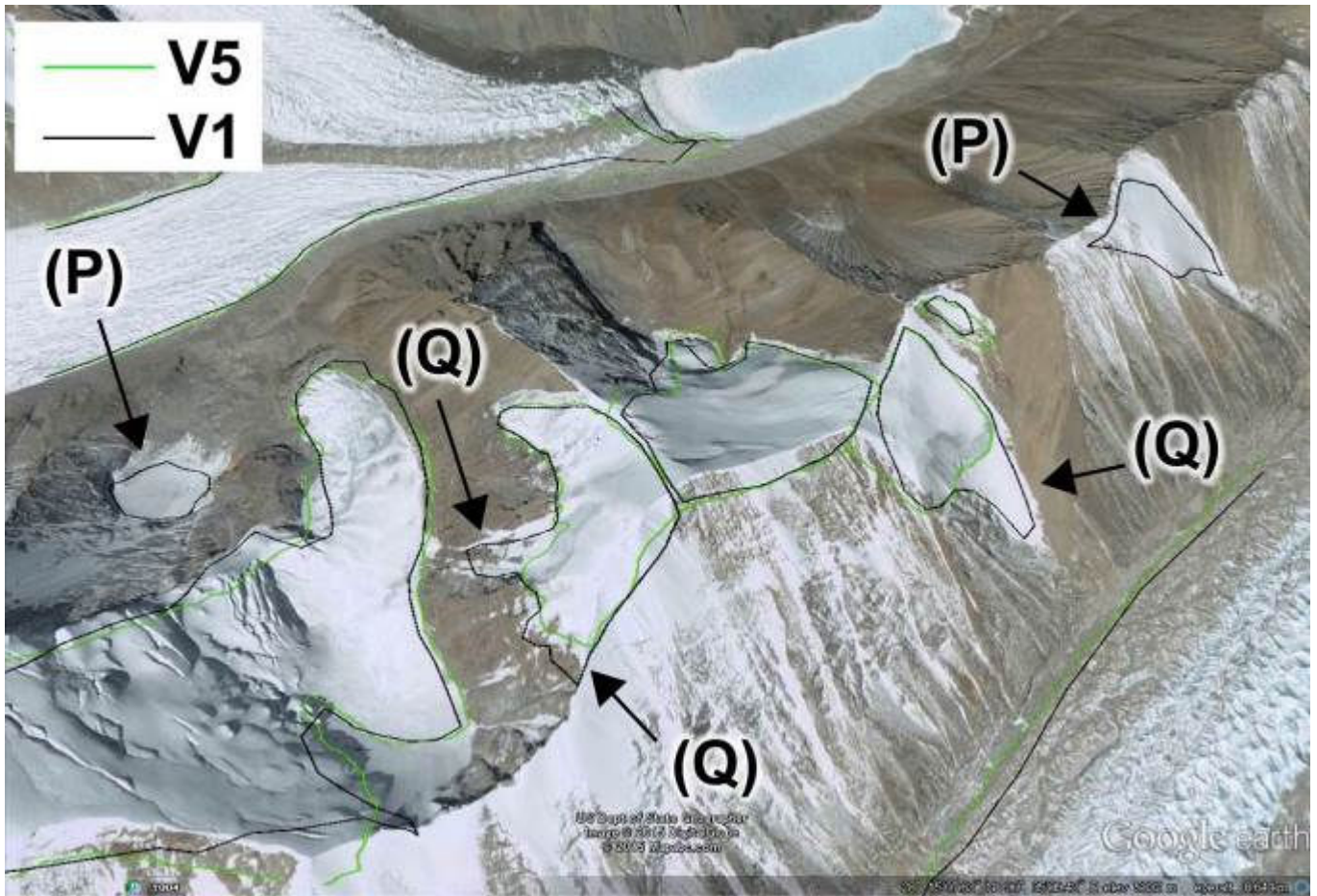


Figure S1. Pre-revised (V1) and finalised (V5) glacier outlines on a Google Earth image in part of our study site. (P) Misidentified glaciers were removed and (Q) excess outlines were corrected.

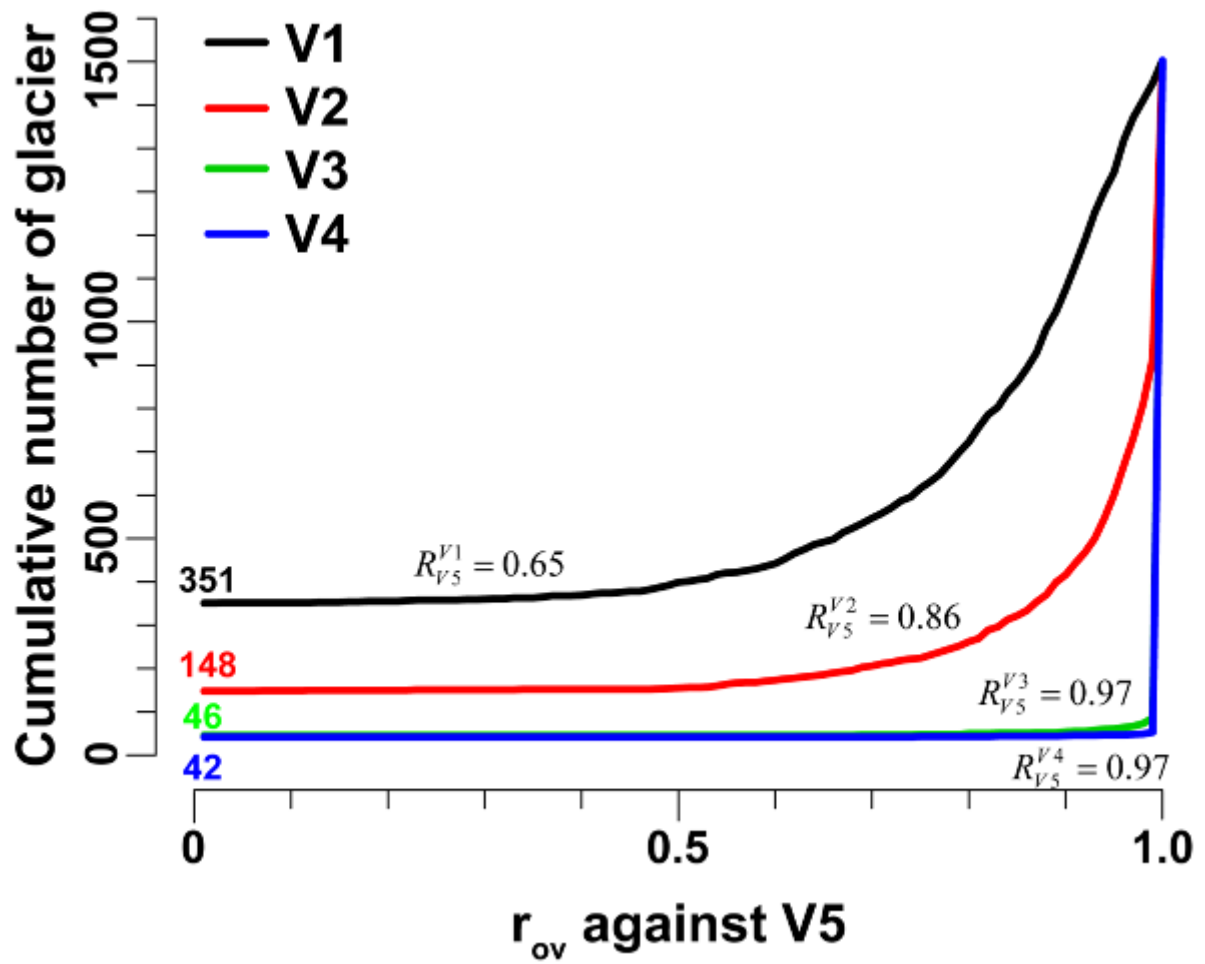


Figure S2. Cumulative number of glaciers against the overlap ratio (r_{ov}) of pre-revised ALOS glacier inventories (V1 to V4), relative to the finalised version (V5). Numbers of non-overlapping glaciers ($r_{ov} = 0$) are shown on the left.

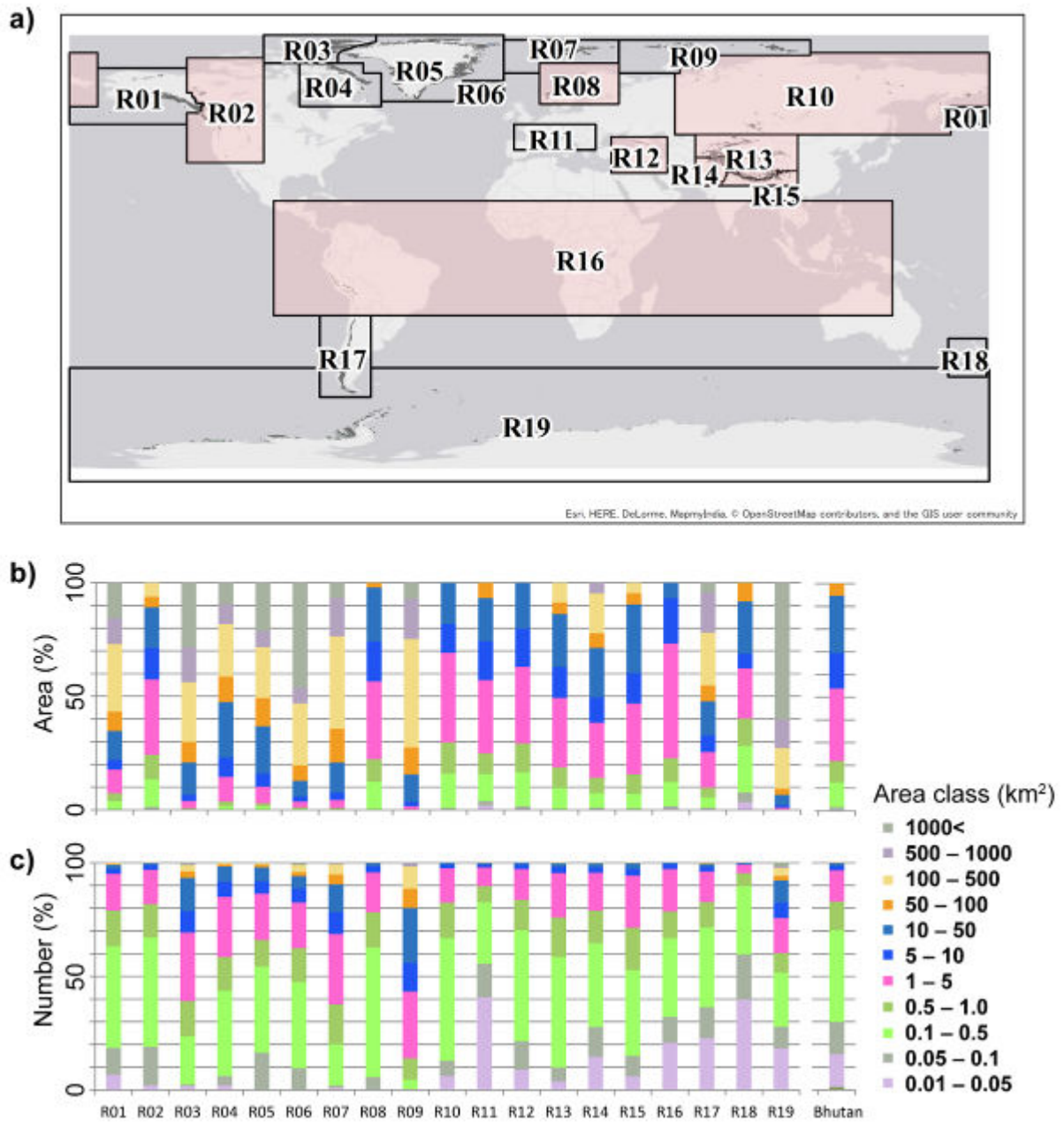


Figure S3. Glacier area statistics for 19 regions in the Randolph inventory. (a) Area distribution and (b) number distribution are categorised into 11 classes. (c) Coloured regions exhibit similar class distributions of glacier area and number as those in the Bhutan Himalaya.