

Supporting Information for

The freezing level in the tropical Andes, Peru: an indicator for present and future glacier extents

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Text S1.

The following CMIP5 model simulations were used for the analysis: bcc-csm1-1-m, bcc-csm-1, BNU-ESM, CanESM2, CCSM4, CESM1-CAM5, CNRM-CM5, CSIRO-Mk3-6-o, FGOALS-g2, FIO-ESM, GFDL-CM3, GFDL-ESM2G, GFDL-ESM2M, HadGEM2-AO, IPSL-CM5A-LR, IPSL-CM5A-MR, MIROC-ESM-CHEM, MIROC-ESM, MIROC5, MPI-ESM-LR, MPI-ESM-MR, MRI-CGCM3, NorESM1-M, NorESM1-ME.

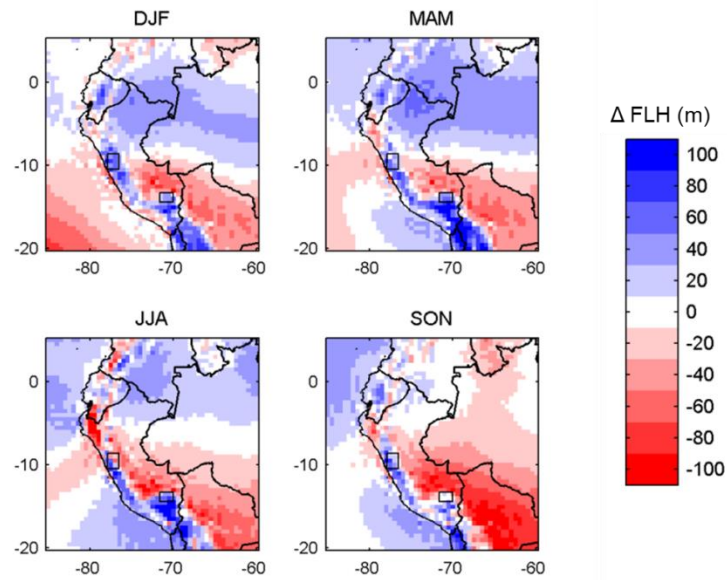


Figure S1. Seasonal plots of the difference between MERRA2 and ERA-Interim FLH. Blue means that the MERRA2 FLH lies above the ERA-Interim FLH, red means that the MERRA2 FLH lies below ERA-Interim FLH. The areas of the CB and CV are marked with black boxes.

Institution	Region	Station name	Latitude	Longitude	Elevation (m asl.)	Record length (used for analyses)	
UNASAM	CB	Chacas	-10.405	-77.449	3560	2012	2014
UNASAM	CB	Purhuay	-9.315	-77.206	3357	2012	2014
UNASAM	CB	Pasto Ruri	-9.889	-77.304	4125	2012	2014
UNASAM	CB	Quillcayhuanca	-9.498	-77.417	3688	2012	2014
SENAMHI	CB	Cabana	-8.3836	-78.0046	3354	2003	2015*
SENAMHI	CB	Cajatambo	-10.4667	-76.9833	3350	1964	2015*
SENAMHI	CB	Cerro de Pasco	-10.6936	-76.2503	4260	1964**	2015*
SENAMHI	CB	Chiquian	-10.15	-77.15	3350	1964	2015*
SENAMHI	CB	Dos de Mayo	-9.7169	-76.7736	3442	2000	2015*
SENAMHI	CB	Huaraz	-9.5342	-77.5316	3052	2009	2015
SENAMHI	CB	Santiago Antunez de Mayolo	-9.5165	-77.5249	3079	1998	2015*
SENAMHI	CV	Ccatcca	-13.61	-71.5603	3729	1964	2015*
SENAMHI	CV	Colquepata	-13.3631	-71.6731	3729	2001	2015*
SENAMHI	CV	Crucero	-14.3642	-70.0259	4183	1999	2015*
SENAMHI	CV	Macusani	-14.07	-70.4391	4345	1964**	2015*
SENAMHI	CV	Progreso	-14.6901	-70.0235	3980	1964	2015*
SENAMHI	CV	Sicuani	-14.2536	-71.2372	3574	1964**	2015*
*Records after 2015 were not used here							
** Records before 1964 were not used here							

Table S1. Details of meteorological stations