

Table S1. List of in situ rainfall stations from UNASAM and SENAMHI. * indicates stations with the same positions for both.

UNASAM N°	Name	Lat.	Lon.	Alt. (m)	Freq.
1	Nepena	-9.18	-78.37	125	hourly
3	Casma	-9.48	-78.24	133	hourly
10	Huarmey	-10.06	-78.14	18	hourly
13*	Ocros	-10.41	-77.40	3268	hourly
14*	Chiquian	-10.15	-77.15	3405	hourly
16	Pasto Ruri	-9.89	-77.30	4145	hourly
19	Quillcayhuanca	-9.50	-77.42	3850	hourly
20*	Shancayan	-9.52	-77.52	3091	hourly
21	Purhuay	-9.31	-77.21	3480	hourly
22	Chacas	-9.17	-77.45	3770	hourly
23	Shilla	-9.23	-77.62	3040	hourly
24	Tingua	-9.22	-77.69	2500	hourly
26	Canasbamba	-9.10	-77.77	2350	hourly
27	San Nicolas	-8.98	-77.18	2786	hourly
30	Corongo	-8.57	-77.90	3172	hourly
SENAMHI N°	Name	Lat.	Lon.	Alt. (m)	Freq.
2	Buena Vista	-9.43	-78.21	213	daily
4	Chacchan	-9.54	-77.78	2266	daily
5	Pira	-9.59	-77.71	3625	daily
6	Cajamarquilla	-9.63	-77.74	3286	daily
7	Pariacoto	-9.55	-77.89	1312	daily
8	Aija	-9.78	-77.61	3508	daily
9	Malvas	-9.93	-77.66	2979	daily
11	Chamana	-10.21	-77.56	1260	daily
12	Mayorarca	-10.16	-77.35	3335	daily
13*	Ocros	-10.40	-77.40	3249	daily
14*	Chiquian	-10.15	-77.16	3386	daily
15	Milpo	-9.88	-77.23	4400	daily

17	Recuay	-9.73	-77.45	3431	daily
18	Chavin	-9.59	-77.18	3140	daily
20*	SantiagoAntunezDeMayolo	-9.52	-77.52	3079	daily
25	Yungay	-9.14	-77.75	2466	daily
28	Pomabamba	-8.82	-77.46	2985	daily
29	Sihuas	-8.57	-77.65	2716	daily
31	Cabana	-8.39	-78.00	3364	daily