

Supplemental data for

“The system nobody sees: Irrigated wetland management and alpaca herding in the Peruvian Andes” by Andres Verzijl and Silvano Guerrero Quispe, published in *Mountain Research and Development* 33(3), 2013. (See <http://www.bioone.org/toc/mred/33/3>)

TABLE S1 Artificially improved *bofedales* and canals and herd access.

Improved <i>bofedales</i> ①		Size (ha)	Access②	Canal/source③		Size
A-a	Ranraqasa	27	I, II, III	a1	Canal Ranraqasa	310 m
					Spring	
A-b	Lamapa wasin	8.7	I	b1	Canal Llamapawasin cucho	90 m
					Surfacing groundwater	
A-c	Qatunsura	2.2	IV	c1	Canal Qatunsora	120 m
A-d	Qollpawaqta / Patupa wachanan	5.9	IV	d1	Canal Qollpawaqta	425 m
				d2	Canal Occemocco	35 m
A-e	Otorongo	3.8	II	e1	Canal Otorongo	325 m
A-f	Pukalloqlla	2.2	III	f1	Canal Ccochachakin pequeño	55 m
A-g	Uchqu-puqio	6.9	III	g1	Canal Pucalloqlla	440 m
				g2	Canal Uchqupuqio	500 m
A-h	Iskay-qocha	9.6	III, V	h1	Canal antiguo Iskay-qocha	870 m
					Several smaller canals	500 m
A-i	Portachuelo bajo ④	5.2	V	i1	Canal Chuchullo	175 m
					Several smaller canals	350 m
					Stream	
A-j	Taqrápampa	5.6	V, VI	j1	Canal Portachuelo	200 m
A-k	Paqcha-pata	4	V, VI	k1	Canal Paqcha-pata	540 m
A-l	Tulamuqo	9.9	V, VI	l1	Canal Tulamuqo	765 m
A-m	Laqaypampa / Qello-esquina	8.8	VII	m1	Canal Qello-esquina	190 m
				m2	Canal Tukumachay	330 m
				p2	Offtake Vinopacana-chaka	105 m
					Several smaller canals	300 m
A-n	Botijapampa / cerqo-qucho	7.2	IV	n1	Canal Paqchawayqu right	85 m
				n2	Canal Vinopascana	730 m
A-o	Pampawasi	16.8	IV	o1	Canal Pampawasi alto	430 m
				o2	Canal Pampawasi bajo	550 m
				o3	Canal Paqchawayqu left	90 m
A-p	Vinopascana ④	10	VI, VII	p1	Canal Laqaypampa	320 m
				p2	Canal Vinopacana-chaka	860 m
				p3	Canal Vinopacana-pampa	260 m
A-q	Urqun-wasi ④	11.4	II, VI, VII	q1	Canal Qollpa	200 m
				q2	Canal Urqunwasi	150 m
A-s	Ccarhuancho Centro ⑤	103	VII-XI	r1	Main canal Ccarhuancho Centro	3100 m
					Other canals left bank	2600 m
					Other canals right bank	3300 m
A-r	Pantion-ukun	6.7	II, VII, VII, XVII	s1	Canal Pachachaka	350 m
				s2	Canal Pantiñ-ucun	280 m
	Total	254.9		Total	19.5 km	
	Total in Ccarhuancho Centro	605		Total Ccarhuancho Centro	36 km	

① Human intervention in *bofedales* in this study implies that significant efforts are put into its upkeep or extension.

② This refers to which herds have access to a *bofedal* (see Table 1, which links herds to families, animals, and *estancias*.)

③ A source is considered a canal if it is the principle source sustaining the *bofedal* in the dry season.

④ *Bofedal* is at risk due to drop in water retention capacity.

⑤ *Bofedal* at risk due to overexploitation.

TABLE S2 Natural *bofedales* and herd access.

Natural bofedales		Size (ha)	Access	Source
N-a	Chaka punko / Chacanniyuq	31	I, II	Surfacing groundwater
N-b	Corralpata / Aleluya	61	I, II, IV	Surfacing groundwater
N-c	Aqeña	2.6	II, IV	Spring
N-d	Añazo	2.7	IV	Spring
N-e	Patahuasi / Qapupata	48	II, IV, VI	Spring
N-f	Portachuelo alto	22	III	Stream
N-g	Chuchullo	7.3	VII	Lake
N-h	Yanaqocha	28	I–III	Stream
N-i	Huertaqucho	3.3	III	Spring
N-j	Taqrapampa	2.9	VII	Spring
N-k	Urunwasi	17.3	IV	Spring
N-l	Yuraqcoral	13.2	II, IV, XVII	Spring
	Total	239.3		
	Total Ccarhuancho Centro	770		
	Total improved bofedales	605		
	Total bofedales (natural and improved)	1375		

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