

SUPPLEMENTARY MATERIAL

Metal concentrations in fishes collected within Peru's oldest and largest petroleum concession

Supplementary table 1

Common name	Scientific name
Acarahuazu	<i>Astronotus ocellatus</i>
Bagre	<i>Pimelodus sp.</i>
Boquichico	<i>Prochilodus nigricans</i>
Bujurqui	<i>Chaetobranchius flavescens</i>
Canero	
Carachama	<i>Fam. Loricariidae</i>
Chambira	<i>Rhaphiodon vulpinus</i>
Chiripira	<i>Sorubim lima</i>
Corvina	<i>Plagioscion quamosissimus</i>
Cunchis	<i>Pimelodus blochii</i>
Doncella	<i>Fam. Pimelodidae</i>
Zungaro	<i>Fam. Pimelodidae</i>
Fasaco	<i>Hoplias malabricus</i>
Lisa	<i>Leporinus sp.</i>
Mota Punteada	
Palometa	<i>Mylossoma sp.</i>
Piranha	<i>Serrasalmus sp.</i>
Ractacara	<i>Psectrogaster amazonica</i>
Sabalillo	
Sabalo	<i>Brycon sp.</i>
Sardina	<i>Triportheus sp.</i>
Shuyo	<i>Hoplerethrinus unitaeniatus</i>
Tucunare	<i>Cichla monoculus</i>
Turushuqui	<i>Oxydoras nigher</i>
Yahuarachi	<i>Potamorhina latior</i>
Yambina	<i>Potamorhina altamazonica</i>
Yaraquiri	
Zorrichallura	

Supplemental Table 2

Table 2.1. Calculation of fish consumption or Intake Ratio (IR) as kg person⁻¹ day⁻¹ from data collected in 2019 from 8 families in the Corrientes, Pastaza and Tigre river basins.

Community	Family	No. Family Members	Offal consumed?	Reported fish species collected in a week	whole fish Wt. (kg ww)	reported portion of fish person ⁻¹	kg fish person ⁻¹ meal ⁻¹	reported frequency (meals week ⁻¹)	kg fish person ⁻¹ week ⁻¹
Pampa Hermosa	1	7	yes	boquichico	0.370	0.5	0.185	5	0.924
			yes	carachama	0.208	0.5	0.104	7	0.726
			yes	canero	0.202	0.5	0.101	7	0.707
			yes	mota	0.157	0.5	0.079	7	0.550
			yes	ractacara	0.132	0.5	0.066	7	0.462
			yes	turushuqui	0.783	0.5	0.392	7	2.741
			yes	zungaro	0.592	0.5	0.296	7	2.072
						Total kg fish eaten by family			8.181
						kg fish eaten by a family member			1.169
						kg fish eaten by a family member day ⁻¹			0.167
Pampa Hermosa	2	8	yes	bagre	0.102	5	0.510	7	3.570
			yes	boquichico	0.370	0.5	0.185	7	1.295
			yes	chambira	0.212	5	1.060	1	1.060

Pampa Hermosa	3	8	yes	ractacara	0.132	5	0.660	35	23.100
			yes	tucanare	0.172	0.5	0.086	1	0.086
			yes	yambina	0.196	0.5	0.098	1	0.098
						Total kg fish eaten by family			29.209
						kg fish eaten by a family member			3.651
						kg fish eaten by a family member day ⁻¹			0.522
			yes	bujurqui	0.080	1	0.080	21	1.680
			yes	acarahuazu	0.098	0.5	0.049	4	0.196
			yes	doncella	0.251	0.5	0.126	4	0.502
			yes	paco	0.080	1	0.080	21	1.680
Pampa Hermosa	4	5	yes	sabalo	0.142	0.5	0.071	4	0.284
			yes	tucanare	0.172	0.5	0.086	4	0.344
			yes	zungaro	0.592	0.5	0.296	7	2.072
						Total kg fish eaten by family			6.758
						kg fish eaten by a family member			0.845
						kg fish eaten by a family member day ⁻¹			0.121
			yes	boquichico	0.370	0.5	0.185	7	1.294
			yes	bujurqui	0.080	1	0.080	4	0.320
			yes	doncella	0.251	0.5	0.126	5	0.628
			yes	paco	0.080	1	0.080	2	0.160
			yes	ractacara	0.132	0.5	0.066	7	0.462

Pampa Hermosa	5	8	yes	tucanare	0.172	0.5	0.086	3	0.258
						Total kg fish eaten by family			3.121
						kg fish eaten by a family member			0.624
						kg fish eaten by a family member day ⁻¹			0.089
			yes	bagre	0.102	4	0.408	4	1.632
			yes	boquichico	0.370	0.5	0.185	7	1.294
			yes	cunchi	0.113	4	0.452	7	3.164
12 de Octubre	6	5	yes	mota	0.157	0.5	0.079	4	0.314
			yes	palometa	0.142	1	0.142	3	0.425
			yes	piranha	0.337	0.5	0.169	5	0.843
						Total kg fish eaten by family			7.671
						kg fish eaten by a family member			0.959
						kg fish eaten by a family member day ⁻¹			0.137
			yes	boquichico	0.370	0.5	0.185	7	1.294
			yes	carachama	0.208	0.5	0.104	7	0.726
			yes	mota	0.157	0.5	0.079	3	0.236
			yes	palometa	0.142	1	0.142	7	0.991
			yes	sardina	0.145	1	0.145	7	1.015
			yes	zungaro	0.592	0.5	0.296	0.5	0.148
						Total kg fish eaten by family			4.409
						kg fish eaten by a family member			0.882

						kg fish eaten by a family member day ⁻¹			0.126
Titiyacu	7	7	yes	boquichico	0.370	0.5	0.185	7	1.294
			yes	lisa	0.332	0.5	0.166	7	1.162
			yes	doncella	0.251	0.5	0.126	7	0.879
			yes	Piranha	0.337	0.5	0.169	7	1.180
			yes	palometa	0.142	1	0.142	7	0.991
			yes	carachama	0.208	0.5	0.104	7	0.728
			yes	sardina	0.145	1	0.145	7	1.015
			yes	shuyo	0.167	1	0.167	7	1.169
						Total kg fish eaten by family			8.416
Titiyacu	8	5				kg fish eaten by a family member			1.202
						kg fish eaten by a family member day ⁻¹			0.172
			yes	boquichico	0.370	0.5	0.185	7	1.295
			yes	doncella	0.251	0.5	0.126	5	0.628
			yes	palometa	0.142	1	0.142	7	0.994
			yes	shuyo	0.167	1	0.167	4	0.668
			yes	zungaro	0.592	0.5	0.296	0.5	0.148
						Total kg fish eaten by family			3.733
						kg fish eaten by a family member			0.747
						kg fish eaten by a family member day ⁻¹			0.107
			Mean kg fish eaten person ⁻¹ day ⁻¹						0.180
			STD						0.141

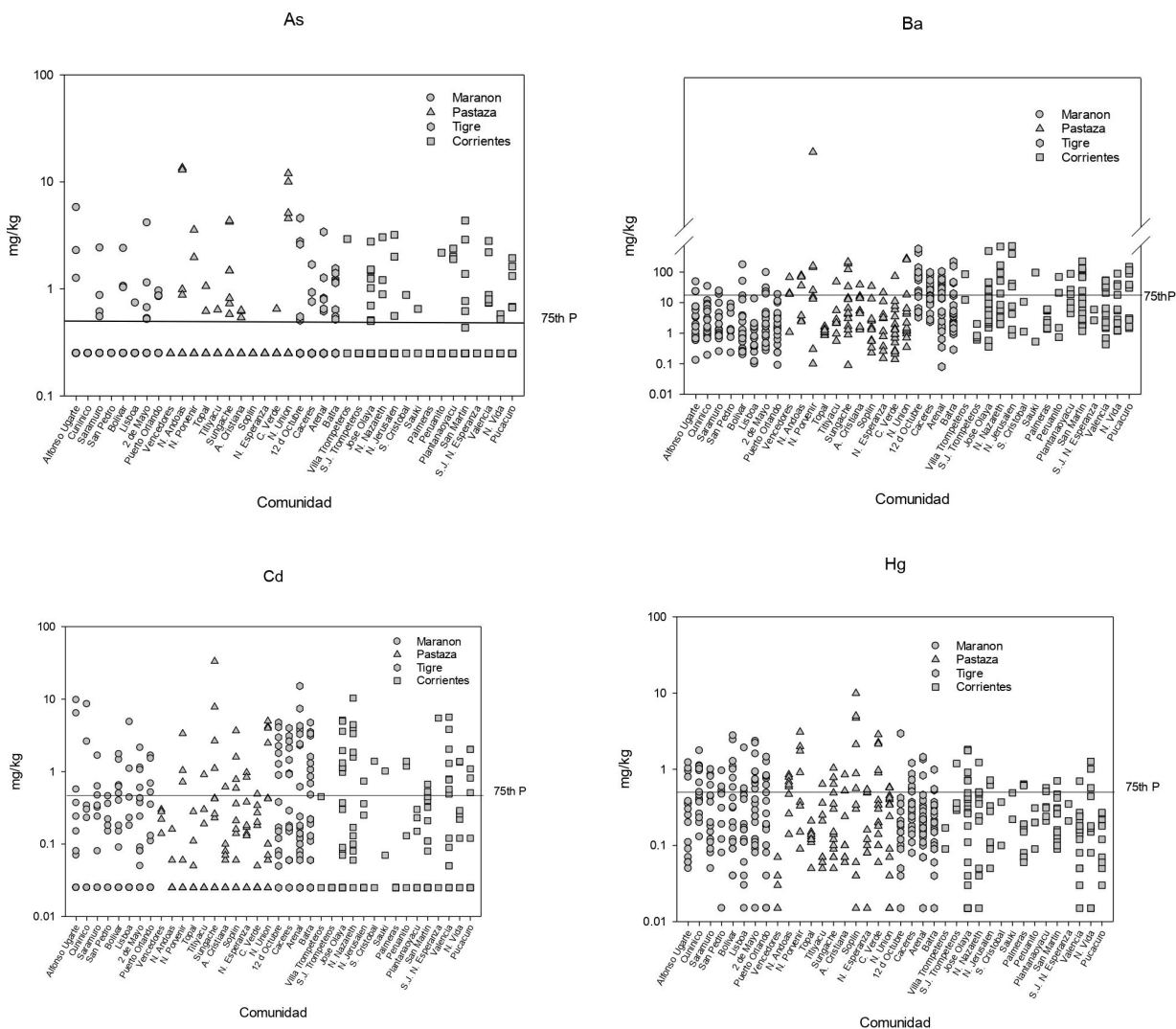
Table 2.2. Literature review of fish consumption in Amazonian subsistence-fishing communities.

Country	Region	River	Consumption (g person ⁻¹ day ⁻¹)	Reference	Year
Peru	Amazon	Ucayali	136	http://revistas.lamolina.edu.pe/index.php/rfp/article/download/834/857)	1967
Peru	Amazon	Ucayali	158	http://revistas.lamolina.edu.pe/index.php/rfp/article/download/1096/1046	1974
Brazil	Amazon	Lago Grande de Monte Alegre	369	https://www.researchgate.net/publication/249444111	1997
Brazil	Amazon	Solimoes	550	https://www.researchgate.net/publication/227805417	2003
Brazil	Amazon	Manacapuru	542.1 +/- 251	https://www.researchgate.net/publication/276248291	2009
Peru	Amazon	River comm. In general	153 - 277	As cited in: https://api-repositorio.iiap.gob.pe/server/api/core/bitstreams/7954ffa5-a909-4545-837c-22cd49d155b7/content	2009
Brazil	Amazon	Amazon, Purus, Trombetas	462	https://doi.org/10.1590/0001-3765201520140250	2015
Peru	Loreto (rural, selva)		142	https://www.acomerpescado.gob.pe/wp-content/uploads/2015/09/Patrones_Consumo_Productos_Hidrobiologicos_PNACP-2015.pdf	2015
Brazil	Amazon	Solimoes	Avg 66.13	https://doi.org/10.1590/1519-6984.271572	2023

Colombi a	Amazon	Caqueta	Max 116.45 197	https://doi.org/10.1590/1519-6984.271572 https://doi.org/10.4060/cd5515es	2025
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Supplemental material 3.

Scatter plot concentrations of As, Ba, Cd, Hg, and Pb in of fishes collected in four river basins of the Peruvian Amazon. Each symbol represents the metal concentration in either viscera or carcass.



Pb

