

SUPPLEMENTARY INFORMATION ON MANUSCRIPT

TABLE 1: Results of fieldwork in the study area

VILLAGE NAME	WELL CODE	LATITUDE	LONGITUDE	WELL CLASS (Protected, semi protected, unprotected)	WELL DEPTH IN (m)	WELL DEPTH IN (ft)	PH	TDS	TOTAL HARDNESS
AJUONA 1	AJ 1	N 6.73783	E 7.017507	Unprotected	4.115 m	(13.5ft)	7.1	175.99	210
AJUONA 2	AJ 2	N 6.736488	E 7.017163	semi protected	3.658 m	(12ft)	6.5	94	86
AKUTARA 1	AK 1	N 6.736947	E 7.014556	semi protected	4.877 m	(16ft)	6.1	72	38
AKUTARA 2	AK 2	N 6.738195	E 7.015493	Semi protected	6.401 m	(21ft)	5.9	138	114
AMOKWE 1	AM 1	N 6.732759	E 7.013754	Protected	7.010 m	(23ft)	6.3	120	106
AMOKWE 2	AM 2	N 6.733671	E 7.013638	Protected	5.486 m	(18ft)	5.9	80	56
ANIOCHA 1	AN 1	N 6.735066	E 7.011058	Semi protected	5.182 m	(17ft)	6.7	88	82
ANIOCHA 2	AN 2	N 6.734529	E 7.011045	Semi Protected	6.401 m	(21ft)	6.1	150	140
EZEAMA 1	EZ 1	N 6.732401	E 7.016396	Unprotected	5.486 m	(18ft)	6.3	170	150
EZEAMA 2	EZ 2	N 6.732154	E 7.016009	Unprotected	5.486 m	(18ft)	6.2	160	140
IYKENIGA 1	IY 1	N 6.733487	E 7.014169	Unprotected	5.791 m	(19ft)	5.8	90	84
IYKENIGA 2	IY 2	N 6.733544	E 7.014185	Unprotected	5.334 m	(17.5ft)	5.3	98	96
OTUGUZO 1	OT 1	N 6.732395	E 7.015198	Protected	6.096 m	(20ft)	5.6	100	100
OTUGUZO 2	OT 2	N 6.732084	E 7.011632	Protected	6.888 m	(22.6ft)	5.9	140	120
UWENEAKPA 1	UW 1	N 6.729397	E 7.00455	Protected	4.877 m	(16ft)	5.8	68	36
UWENEAKPA 2	UW 2	N 6.730837	E 7.004902	Unprotected	5.425 m	(17.8ft)	5.7	64	32

Source: Fieldwork, 2024.

TABLE 2: Results of lab analysis of water samples from the study area

WELL CODE	Ca	Na	Mg	Cl	So4	Hco3	K	Po4	EC	Zn	As	Cr	Fe	No3	E COLI
AJ 1	46.6667	3.6022	4.6678	181.76	2.78	0.14	0.3094	1.2	240	0.0519	1.5806	0.6667	0.8559	4.2	36
AJ 2	47.3333	3.5844	4.6808	63.9	3.07	0	0.1547	0.2	115.4	0.0346	1.129	0.6667	0.9782	4.2	16
AK 1	17.3333	1.7654	1.1343	25.56	3.26	0	2.011	0.1	64.4	0.0346	2.7097	0	0.1223	4.2	6
AK 2	16.6667	1.6536	1.0692	97.98	4.8	0	1.4696	0.4	146.7	0.0173	3.8387	0	0.1223	6.29	18
AM 1	14	4.4559	2.5555	103.66	3.26	0	18.718	0.4	138.4	0.0606	3.8387	0	0.2445	4.2	16
AM 2	16	4.3665	2.5946	34.08	4.8	0	19.182	0.1	89.9	0.026	2.7097	0	0.2445	6.29	10
AN 1	25.3333	4.3799	2.1122	59.64	2.98	0	15.083	0.2	111	0.0087	0.2258	0	0.8559	4.2	14
AN 2	26.6667	4.3486	2.0079	122.12	3.36	0	13.381	0.6	172.4	0.0346	0.4516	0	0.7336	4.9	20
EZ 1	21.3333	4.1385	2.8619	133.48	3.26	0	19.492	0.8	184.1	0.0087	5.1935	0.6667	0.9782	4.2	24
EZ 2	20.6667	4.0626	2.901	123.54	3.36	0	18.641	0.6	173.4	0.0173	4.7419	0.6667	0.8559	4.2	22
IY 1	16.6667	3.0793	0.9518	66.74	4.61	0	21.348	0.2	112.3	0.0779	4.0645	0	0.2445	5.59	16
IY 2	17.3333	3.2313	0.9192	72.42	5.57	0	19.414	0.3	126.7	0.0693	4.5161	0	0.3668	6.99	16
OT 1	17.3333	3.6514	1.8971	83.78	5.38	0	28.464	0.4	137.8	0.0519	0.6774	0	0.6114	6.29	16
OT 2	18.6667	3.5084	1.858	102.24	4.8	0	26.917	0.5	152.9	0.0346	0.9032	0	0.6114	6.29	18
UW 1	5.3333	1.0905	1.3299	24.14	4.99	0	4.8729	0.1	63.6	0.0346	3.3871	0	0.9782	6.29	4
UW 2	6.6667	1.1575	1.3625	19.88	5.18	0	4.9503	0.1	62.6	0.0173	4.0645	0	0.9782	6.29	4

Source: Fieldwork, 2024.

