

Table S3: Overview of temperature (T), specific conductance (SpC), dissolved oxygen (DO), pH, community respiration (R) and primary production (P) for the different sampling sites during the dry season sampling campaign of 2013. SD represent standard deviation.

River	Station ID	Date	Lat.	Long.	Altitude	Distance from source	Catchment area	T	SpC	DO	pH	R±SD	P±SD
			[DD]		[m]	[km]	[km <sup>2</sup> ]	[°C]	[μS cm <sup>-1</sup> ]	[%]	[NBS]	[μmol L <sup>-1</sup> h <sup>-1</sup> ]	
<b>Zambezi mainstem</b>													
Zambezi River	ZBZ.1	19-Oct-13	-11.3503	24.3286	1442	3	25	18.8	5.4	84.2	6.14	0.27±0.03	0.2±0.0
Zambezi River	ZBZ.2	20-Oct-13	-13.0974	22.6854	1043	575	80346	27.0	32.6	104.0	6.06	0.40±0.05	35.1±3.9
Zambezi River	ZBZ.3	21-Oct-13	-14.3838	23.2362	1028	773	213627	26.2	164.8	97.5	7.94	0.74±0.04	30.8±0.4
Zambezi River	ZBZ.4	23-Oct-13	-15.2060	22.9223	1014	893	281007	26.1		99.0	7.41	0.67±0.03	
Zambezi River	ZBZ.5	22-Oct-13	-16.1300	23.2883	1005	1085	309896	26.5	106.9	101.7	7.39	0.97±0.10	66.1±3.4
Zambezi River	ZBZ.6	24-Oct-13	-17.4667	24.2469	939	1280	336405	26.1	110.9	104.0	7.72	0.95±0.06	32.6±0.7
Zambezi River	ZBZ.8	25-Oct-13	-17.8874	25.8426	889	1511	520912	25.9	111.4	101.1	7.71	0.68±0.03	33.4±0.1
Zambezi River	ZBZ.10	29-Oct-13	-16.5043	28.7907	400	1944	678810	24.3	88.4	70.5	6.56		
Zambezi River	ZBZ.11	27-Oct-13	-15.9850	28.8808	371	2010	682655	24.7	88.1	86.2	6.78	0.50±0.08	17.6±0.4
Zambezi River	ZBZ.13	10-Nov-13	-15.6244	30.4135	327	2201	857673	29.1	109.7	106.5	7.96	0.85±0.03	122.1±3.2
<b>Tributaries</b>													
Kafue River	KAF.1	14-Nov-13	-12.4643	27.8507	1258	159	5569	27.3	602.2	87.2	7.84	1.27±0.17	104.8±48.0
Kafue River	KAF.4	15-Nov-13	-14.5624	26.4576	1100	743	55017	29.7	536.0	143.0	8.54	1.52±0.17	21.8±0.7
Kafue River	KAF.5	16-Nov-13	-14.9778	25.9926	1075	882	95590	28.3	413.1	96.3	8.12	1.06±0.13	35.8±1.2
Kafue River	KAF.6	17-Nov-13	-15.7638	26.0303	998	1009	106434	23.9	228.2	116.6	7.82	1.69±0.23	21.6±0.9
Kafue River	KAF.8	20-Nov-13	-15.7479	27.8283	982	1317	148151	27.2	249.7	49.0	7.12	1.09±0.14	60.5±1.2
Kafue River	KAF.9	21-Nov-13	-15.8365	28.2376	979	1430	151896	26.7	248.0	43.9	7.10	1.07±0.11	94.6±8.9
Kafue River	KAF.10	24-Nov-13	-15.9512	28.8602	375	1521	155774	27.6	246.8	107.9	8.06	1.15±0.25	76.1±2.5
<b>Reservoirs</b>													
Kariba	KAR.3	29-Oct-13	-16.5755	28.6887	488	1928	678367	27.6	91.0	112.5	7.93	1.17±0.36	8.8±2.5
Itezhi Tezhi	ITT.2	18-Nov-13	-15.7741	25.9692	1030	1004	104450	28.6	223.7	121.3	8.51	1.43±0.08	25.1±0.7