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SUPPLEMENTARY MATERIAL

The heavy metals/trace elements contents of sediments from Owalla Reservoir, Osun State, Southwest Nigeria

Adedeji Idowu Aduwo,* Israel Funso Adeniyi

Limnology and Hydrobiology Laboratory, Zoology Department, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria

***Corresponding author**: anjiaduwo@gmail.com

Supplementary Tab. 1. Grid coordinates and morphometric characteristics of the sampling stations.

S/N	Grid coordinate		Elevation (m)	Distance and direction from dam (km)	Depth range (m)	Mean depth ± SE (m)	Description of station	
	Latitude (N)	Longitude (E)					Reach	Region
1	07° 58.644'	004° 32.889'	336 ± 7	9.26 (N)	0.98 – 4.24	3.04±0.57	Upper reach	Open water
2	07° 57.575'	004° 33.115'	332 ± 9	7.47 (NE)	3.93 – 7.05	6.05±0.60	Upper reach	Open water
3	07° 57.506'	004° 32.903'	332 ± 8	7.42 (N)	1.20 – 4.00	2.88±0.48	Upper reach	Littoral
4	07° 57.673'	004° 33.287'	332 ± 8	7.55 (NE)	2.00 – 5.53	3.88±0.57	Upper reach	Littoral
5	07° 56.515'	004° 34.361'	336 ± 7	5.98 (NE)	2.71 – 6.81	4.76±0.73	Mid-basin	Open water
6	07° 56.664'	004° 33.758'	334 ± 7	5.96 (NE)	4.15 – 9.60	6.40±1.06	Mid-basin	Open water
7	07° 56.867'	004° 33.741'	335 ± 7	6.29 (NE)	2.36 – 5.18	4.24±0.52	Mid-basin	Littoral
8	07° 56.518'	004° 33.685'	334 ± 8	5.71 (NE)	1.98 – 4.77	3.41±0.47	Mid-basin	Littoral
9	07° 55.611'	004° 32.699'	340 ± 7	4.98 (N)	2.31 – 5.56	4.90±0.43	Mid-basin	Littoral
10	07° 55.636'	004° 33.044'	334 ± 7	4.51 (NE)	4.07 – 6.73	5.58±0.47	Mid-basin	Open water
11	07° 55.760'	004° 33.449'	334 ± 7	4.91 (NE)	2.25 – 5.68	4.19±0.60	Mid-basin	Littoral
12	07° 54.831'	004° 33.886'	338 ± 8	2.99 (NE)	6.90 – 9.12	8.06±0.44	Lower reach	Open water
13	07° 55.005'	004° 33.956'	336 ± 8	3.23 (NE)	1.73 – 4.94	3.34±0.69	Lower reach	Littoral
14	07° 54.732'	004° 33.813'	338 ± 7	2.88 (NE)	1.00 – 3.50	2.49±0.53	Lower reach	Littoral
15	07° 54.206'	004° 32.147'	339 ± 7	1.94 (N)	2.65 – 5.31	3.65±0.44	Lower reach	Littoral
16	07° 54.089'	004° 32.403'	341 ± 7	0.87 (N)	12.70 – 17.26	14.25±0.81	Lower reach	Open water
17	07° 53.905'	004° 32.689'	339 ± 7	1.56 (NE)	3.16 – 5.89	5.01±0.63	Lower reach	Littoral
18	07° 56.594'	004° 33.487'	333 ± 8	5.71 (NE)	0.18 – 0.25	0.21±0.01	Mid-basin	Littoral
19	07° 54.802'	004° 33.460'	336 ± 8	2.81 (NE)	0.15 – 0.20	0.17±0.01	Lower reach	Littoral
20	07° 53.669'	004° 32.792'	342 ± 10	1.10 (E)	0.16 – 0.20	0.18±0.01	Lower reach	Littoral

Supplementary Tab. 2. Instrumentation methods used in the chemical analyses of elements in the sediments.

S/N	Parameter	Instrument used	Wavelength (nm)	Digestion method		Reference
				Solution	Procedure	
1	Arsenic (As)	Atomic absorption Spectrophotometer (AAS)	193.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
2	Cadmium (Cd)	Atomic absorption Spectrophotometer (AAS)	228.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
3	Cobalt (Co)	Atomic absorption Spectrophotometer (AAS)	240.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
4	Chromium (Cr)	Atomic absorption Spectrophotometer (AAS)	429.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
5	Copper (Cu)	Atomic absorption Spectrophotometer (AAS)	324.7	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
6	Iron (Fe)	Atomic absorption Spectrophotometer (AAS)	248.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
7	Manganese (Mn)	Atomic absorption Spectrophotometer (AAS)	403.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
8	Nickel (Ni)	Atomic absorption Spectrophotometer (AAS)	232.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
9	Lead (Pb)	Atomic absorption Spectrophotometer (AAS)	283.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)
10	Zinc (Zn)	Atomic absorption Spectrophotometer (AAS)	213.0	0.05N Na_2 EDTA	10g soil in 100 mL solution	APHA (1995); IAEA (2003)