

Table S1. Coordinates of sampling sites and information on the respective rivers at each site (Windisch et al. 2022a)

Site	River	Coordinates
1	Tweelopiespruit	26°06'27.5899''S 27°43'19.8500''E
2	Bloubankspruit	26°02'48.9100''S 27°43'09.5966''E
3	Bloubankspruit (+ Tweelopiespruit)	26°00'31.2599''S 27°44'28.9199''E
4	Bloubankspruit (+ Tweelopiespruit)	25°58'28.9900''S 27°50'34.8800''E
5	Crocodile River	25°58'40.2200''S 27°50'37.4499''E
6	Crocodile River (+ Bloubankspruit + Tweelopiespruit)	25°58'31.9400''S 27°50'34.9900''E
7	Lake Heritage	26°06'27.5899''S 27°43'19.8500''E

Table S2. Mean, SD, minimum and maximum of total length as well as weight and trophic level $\pm$ SD of the investigated fish species. Trophic level taken from Froese, R. and D. Pauly (2022).

	Total length (cm)				Weight (kg)				Trophic level
	Mean	SD	Min	Max	Mean	SD	Min	Max	
<i>O. mossambicus</i> (n=4)	28.1	8.9	19.9	36.3	0.513	0.442	0.120	0.911	2.2 $\pm$ 0.0
<i>L. polylepis</i> (n=13)	34.3	5.1	28.9	47.1	0.411	0.221	0.253	1.04	3.3 $\pm$ 0.5
<i>L. marequensis</i> (n=28)	36.8	6.5	27.3	46.9	0.680	0.421	0.241	1.64	3.2 $\pm$ 0.4
<i>C. gariepinus</i> (n=30)	69.7	8.7	55.8	85.9	2.82	1.06	1.32	4.39	3.8 $\pm$ 0.4

Table S3. Certified and measured concentrations $\pm$ SD of elements in DOLT-3, DOLT-5 (by NRCC) and BCR-482 (by IRMM) including the recovery rates and methods used for analysis; Limit of Detection for the different methods under the applied conditions

Element	Reference Material	Method	Reference value mg/kg	Measured value mg/kg	Recovery rate %	Limit of detection mg/kg
Fe	DOLT-5	TXRF	1070 $\pm$ 80	1032 $\pm$ 104	96.4	2.0
Ni	BCR- 482	TXRF	2.47 $\pm$ 0.07	2.43 $\pm$ 0.12	98.4	0.4
Ni	DOLT-3	TXRF	2.72 $\pm$ 0.35	2.66 $\pm$ 0.29	97.8	0.4
Cu	BCR- 482	TXRF	7.03 $\pm$ 0.19	7.22 $\pm$ 0.44	103	0.8
Cu	DOLT-5	TXRF	35 $\pm$ 2.4	35.6 $\pm$ 2.5	102	0.8
Zn	BCR- 482	TXRF	100.6 $\pm$ 2.2	96.2 $\pm$ 3.2	95.6	2.0
Zn	DOLT-5	TXRF	105.3 $\pm$ 5.4	102 $\pm$ 7	97.0	2.0
As	DOLT-5	TXRF	34.6 $\pm$ 2.4	34.1 $\pm$ 1.4	98.6	2.0
Se	DOLT-5	TXRF	8.3 $\pm$ 1.8	7.9 $\pm$ 2.3	95.2	2.0
Ag	DOLT-5	GF-AAS	2.05 $\pm$ 0.08	2.12 $\pm$ 0.11	103	0.008
Cd	BCR- 482	GF-AAS	0.56 $\pm$ 0.02	0.61 $\pm$ 0.07	109	0.003
Cd	DOLT-5	GF-AAS	14.5 $\pm$ 0.6	14.7 $\pm$ 1.4	101	0.003
Hg	BCR- 482	CV-AAS	0.48 $\pm$ 0.02	0.46 $\pm$ 0.05	95.8	0.008
Hg	DOLT-5	CV-AAS	0.44 $\pm$ 0.18	0.45 $\pm$ 0.28	102	0.008
Pb	BCR- 482	GF-AAS	40.9 $\pm$ 1.4	38.5 $\pm$ 2.6	94.1	0.009
Pb	DOLT-5	GF-AAS	0.162 $\pm$ 0.032	0.156 $\pm$ 0.025	96.3	0.009

Table S4. Calculated translocation factors (TLF) for macrophytes at different sites

species	site	n	TLF _(Stem/Root)								
			Fe	Ni	Cu	Zn	As	Ag	Cd	Hg	Pb
<i>P. australis</i>	1	13	0.010	0.15	0.32	0.71	0.12	0.39	0.38	0.45	2.9
	3	9	0.35	0.31	0.75	0.39	0.032	1.4	0.21	1.1	0.026
<i>Typha</i> sp.	5	4	0.47	0.084	0.14	0.18	0.033	0.16	0.052	0.89	-
	7	4	0.038	0.035	0.60	0.22	0.29	0.24	0.0067	1.03	-
<i>P. crassipes</i>	5	3	0.13	1.6	0.8	1.6	-	0.9	1.2	1.2	-
	7	13	0.018	0.17	0.13	0.24	0.086	0.27	0.28	0.37	0.011