

SUPPLEMENTARY FILE

Geochemical Characteristics of Tropical Estuarine Waters in Northern Borneo: Implication for Elemental Distribution, Mechanisms, Sources and Pollution Risk

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Table S1. Principal Component Analysis for river water samples. Highlighted values are statistically significant.

	Rotated Component Matrix			
	Component			
	1	2	3	4
pH	0.951	-0.203	0.058	0.053
Temp	0.444	-0.419	-0.025	0.361
DO	0.811	-0.069	0.123	-0.182
EC	0.902	-0.237	0.064	-0.053
TDS	0.890	-0.289	0.066	-0.046
Salinity	0.861	-0.299	0.126	-0.063
Turb	0.069	-0.060	-0.192	0.945
Ca ²⁺	0.105	0.853	0.309	-0.354
Mg ²⁺	-0.073	0.962	0.013	0.095
Na ⁺	-0.139	0.929	-0.060	-0.123
K ⁺	0.158	0.256	0.920	0.018
Cl ⁻	0.222	-0.045	0.904	-0.207
HCO ₃ ⁻	-0.297	0.876	-0.144	-0.288
SO ₄ ²⁻	0.142	-0.188	0.862	-0.153
NO ₃ ⁻	-0.591	-0.559	-0.155	-0.106
PO ₄ ³⁻	-0.604	-0.264	-0.227	-0.195
Zn	-0.686	0.334	-0.426	-0.248
Fe	-0.677	0.075	-0.171	0.688
Mn	-0.795	-0.353	-0.273	0.181
Cu	-0.230	0.838	-0.070	0.458
Pb	-0.216	0.750	-0.102	0.465
% of Variance	31.932	27.289	14.201	11.476
Cumulative %	31.932	59.221	73.422	84.898