

Supplementary file

Assessment of Water Quality Based on Trophic Status and Nutrients-Chlorophyll Empirical Models of Different Elevation Reservoirs

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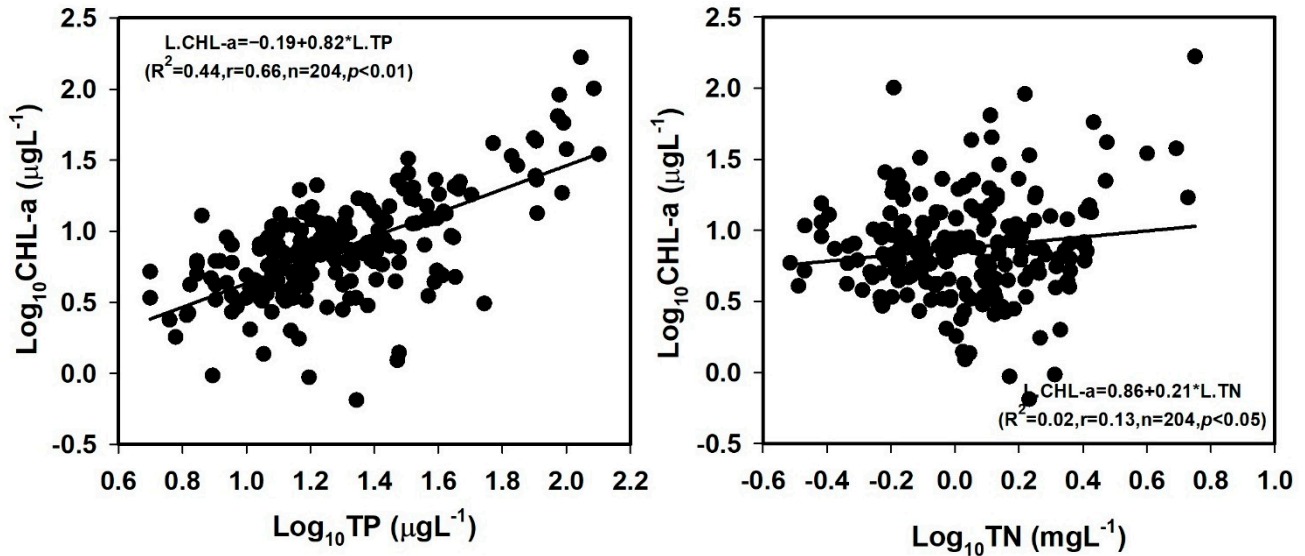


Figure S1. Empirical relations among nutrients (TP: total phosphorus, TN: total nitrogen) with chlorophyll-a (CHL-a)

Table S1. Trophic state criteria based on TP, TN, CHL-a, and SD from Nurnberg (1996) for high land (HLR), midland (MLR), lowland (LLR), and very low land (VLLR) reservoirs. (TN: total nitrogen, TP: total phosphorus, CHL-a: chlorophyll-a, SD: Secchi depth, O: oligotrophic, M: mesotrophic, E: eutrophic and H: Hypereutrophic).

Variables	Trophic state				Mean values			
	O	M	E	H	HLR	MLR	LLR	VLLR
TP ($\mu\text{g/L}$)	<10	>10 - 30	>30 - 100	>100	14.41 (M)	16.84 (M)	20.32 (M)	39.10 (E)
TN (mg/L)	<0.75	0.75 - <1.5	>1.5 - 3	>3	1.45 (M)	1.25 (M)	1.12 (M)	1.33 (M)
CHL-a ($\mu\text{g/L}$)	<3.5	3.5 - <9	>9 - 25	>25	5.81 (M)	6.71 (M)	8.24 (M)	19.26 (E)
SD (m)	>4	<4 - >2	<2 - 1	<1	2.48 (M)	2.55 (M)	1.91 (E)	1.61 (E)

Table S2. Thresholds of risk associated with potential growth of cyanobacteria in high land (HLR), midland (MLR), lowland (LLR), and very low land (VLLR) reservoirs (adopted from WHO, 2015, LRG: lower risk of growth, MRG: moderate risk of growth and HRG: higher risk of growth, TP: total phosphorus, CHL-a: chlorophyll-a, SD: Secchi depth)

Variables	Thresholds			Risk of cyanobacterial growth			
	LRG	MRG	HRG	HLR	MLR	LLR	VLLR
TP (µg/L)	<10 - 25	25 - 100	>100	14.41 (LRG)	16.84 (LRG)	20.32 (LRE)	39.10 (MRG)
CHL-a (µg/L)	<10	10 - 50	>50	5.81 (LRG)	6.71 (LRG)	8.24 (LRE)	19.26 (MRG)
SD (m)	>2	<2 - 1	<1	2.48 (LRG)	2.55 (LRG)	1.91 (MRE)	1.61 (MRG)