

Table S1. Grading criteria for lake resistance to basin influence after Bajkiewicz-Grabowska, 2010 [8].

Parameters	Number of points			
	0	1	2	3
Mean lake depth [m]	> 10	5 - 10	3 - 5	< 3
Lake volume [hm ³] to shoreline length [m] ratio	>5	3 - 5	1 - 3	< 1
Thermal stratification [%]	> 35	20 - 35	10 - 20	< 10
Active bottom surface [m ²] to epilimnion volume [m ³] ratio	< 0.10	0.10 – 0.15	0.15 – 0.30	> 0.30
Rate of annual water exchange	> 10	5-10	1-5	< 1
Schindler's Index [m ² m ⁻³]	< 10	10 - 30	30 - 100	> 100

Table S2. Categories of lake resistance to basin influence after Bajkiewicz-Grabowska, 2010 [8].

Final score (points)	Descriptive lake characteristics	Category of lake resistance
≤ 0.89	High resistance of a lake to the influence of its basin	Category I
0.90 – 1.69	Medium resistance of a lake to the influence of its basin	Category II
1.70 – 2.40	Little resistance of a lake to the influence of its basin	Category III
≥ 2.41	A lack of lake resistance; lake strongly vulnerable to the influence of its basin	Category IV

Table S3. Point criteria for the evaluation of a drainage basin as a supplier of matter to a lake after Bajkiewicz-Grabowska, 2010 [8].

Characteristic	Number of points			
	0	1	2	3
The "C" lake index (the quotient that results from a division of the total basin area by the lake's surface area) Ohle's Index	< 10	10 - 40	40 - 150	> 150
Type of lake based on its water balance	–	Open (outflow)	Closed (no-outflow)	Open (throughflow)
Morphometry of direct drainage area:				
- density of channel network [km km ⁻²]	< 0.5	0.5 - 1,0	1.0 – 1.5	> 1.5
- average slope of terrain in the basin [m km ⁻¹]	< 5	5 - 10	10 - 20	> 20
- share of endorheic areas in direct drainage basin of lake [%]	> 60	45 - 60	20 - 45	< 20
Geological type of direct drainage area	loamy	sand-loamy	loam-sandy	sandy
Type of land use in direct drainage area	forest, swampy, agricultural-forest, pasture-agricultural-forest, pasture, pasture-forest	forest-agricultural, pasture-agricultural	agricultural, pasture-forest-agricultural with settlements, forest with settlements	forest-agricultural with settlements, pasture-agricultural with settlements, agricultural with settlements

Table S4. Groups of susceptibility of basins to the release and transport of biogenic matter after Bajkiewicz-Grabowska, 2010 [8].

Final score (number of points)	Descriptive characteristic of basin	Susceptibility group of basin
≤ 1	Basin has a limiting influence on the release and transport of biogenic matter to a lake	1 st susceptibility group
1.01 – 1.49	Basin has little influence on the release and transport of biogenic matter to a lake	2 nd susceptibility group
1.50 – 1.99	Basin is characterized by average influence on the release and transport of biogenic matter to a lake	3 rd susceptibility group
≥ 2	Basin is characterized by a high degree of release and transport of biogenic matter to a lake	4 th susceptibility group

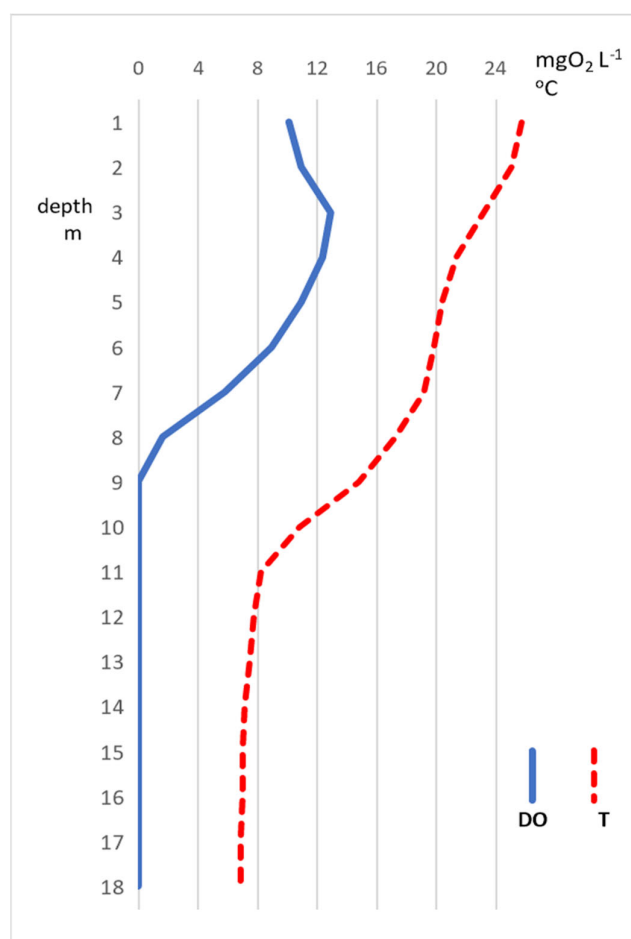


Figure S1. Variability of water temperature (T) and dissolved oxygen (DO) in the vertical profile at site S4, during the summer season (DO—dissolved oxygen in water, in mg O₂ L⁻¹; T—water temperature, in °C).