Supplementary Materials
Hydrochemical analysis of reservoirs in Kazakhstan: Water quality and toxicology microbial indicators
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Table 8: Results of tests for the content of organic toxicants and pesticides in water samples from the Verkhnetobolskoye reservoir

Parameter	Unit of measurement	TLV	1	2	3	4	5	6	7	8	9	Mean	SD	CV,%
2,4-D	µg/l	≤1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Benzo[a]pyrene	µg/l	≤0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		
BOD20/BOD5	mgO2/dm3	*	2.5	2.5	1.6	2.5	2.6	2.5	2.4	2.6	2.2	2.38	0.315	
Bromodichloromethane	µg/l	≤10	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	
Dibromochloromethane	µg/l	≤10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Petrochemicals	mg/l	≤ 0.1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Heptachlor	µg/l	≤0.05	0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Lindane	µg/l	≤0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
Hexachlorobenzene	µg/l	≤0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
Atrazine	µg/l	≤0.2	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Simazine	µg/l	≤0.2	<0.05	<0.05	<0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Surfactants	mg/l	under	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
	mg/l	0.5	<0.02	<0.02	<0.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Phenol		≤ 0.25	0.000	0.000	<0.6	0.000	0.000	0.000	0.000	0.000	<0.02	<0.02		
Formaldehyde	µg/l	≤25	0.000	0.000	<0.7	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
α-HCH	mg/l	0.0020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
β-HCH	mg/l	0.0020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
γ-HCH	mg/l	0.0020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
DDT	mg/l	0.1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
DDD	mg/l	0.1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
DDE	mg/l	0.1000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2,4-D	mg/l	0.0002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
DDT	µg/l	0.50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		

*Source: Compiled by authors

Table 9: Results of tests for the content of organic toxicants and pesticides in water samples from the Karatomarskoye reservoir

Parameter	Unit of measurement	TLV	1	2	3	4	5	6	7	8	Mean	SD	CV, %
2,4-D	µg/l	≤1	<1.0	<1.0	<1.0	1	<1.0	<1.0	<1.0	<1.0			
Benzo[a]pyrene	µg/l	≤0.005	< 0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			
BOD20/BOD5	mgO2/dm3	*	2.6	2.4	1.6	2.3	2.3	1.2	2.3	2.6	2.1625	0.4984	23.0469
Bromodichloromethane	µg/l	≤10	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0010	0.0000	0.0000
Dibromochloromethane	µg/l	≤10	0	0	0	0	0	0	0	0	0		
Petrochemicals	mg/l	≤ 0.1	0	0	0	0	0	0	0	0	0		
Heptachlor	µg/l	≤0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Lindane	µg/l	≤0.5	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
Hexachlorobenzene	µg/l	≤0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		
Atrazine	µg/l	≤0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Simazine	µg/l	≤0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
Surfactants	µg/l	under	0	0	0	0	0	0	0	0	0		
	µg/l	0.5	<0.005	<0.005	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		
Phenol		≤ 0.25	0	0	0	0	0	0	0	0	0		
Formaldehyde	µg/l	≤25	0	0	0	0	0	0	0	0	0		
α-HCH	mg/l	0.0020	0	0	0	0	0	0	0	0	0		
β-HCH	mg/l	0.0020	0	0	0	0	0	0	0	0	0		
γ-HCH	mg/l	0.0020	0.001	0	0	0	0	0	0	0	0		
DDT	mg/l	0.1000	0	0	0	0	0	0	0	0	0		
DDD	mg/l	0.1000	0	0	0	0	0	0	0	0	0		
DDE	mg/l	0.1000	0	0	0	0	0	0	0	0	0		

2,4-D	mg/l	0.0002	0	0	0	0	0	0	0	0	0
DDT	µg/l	0.5000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

*Source: Compiled by authors