

Supplementary materials

Table S1. Time and space data of environment parameters.

Samplin g Points	Season	PH		ORP (Mv)		DO (mg/L)		T (°C)	
		Before degradatio n	After degradatio n	Before degradatio n	After degradatio n	Before degradatio n	After degradatio n	Before degradation	After degradation
1#	winter	7.64	/	37.50	/	15.63	/	10.59	/
	spring	7.41	7.63	74.67	89.40	7.90	9.11	17.78	20.32
	summer	7.96	7.59	54.20	50.70	8.15	8.10	25.70	26.40
	antumn	7.75	6.77	88.30	105.80	8.07	8.27	26.63	25.06
2#	winter	7.84	/	48.40	/	13.87	/	11.46	/
	spring	7.18	7.41	70.57	97.40	8.03	7.50	18.29	20.38
	summer	7.78	7.46	51.40	55.00	8.10	8.04	26.02	26.48
	antumn	7.79	6.82	87.90	105.00	7.91	8.14	27.47	25.13
3#	winter	7.11	/	75.37	/	7.57	/	11.59	/
	spring	7.20	7.38	65.63	94.03	7.04	7.56	19.93	20.95
	summer	7.76	7.30	50.30	55.00	7.92	8.01	27.16	26.46
	antumn	7.73	6.84	88.80	104.30	7.96	8.19	28.91	25.20

Table S2. Data processing table of each sampling point parameter.

Parameters	Sampling Points	State of degradation	Spring	Summer	Autumn	Winter	Mean	Mean	Standard Deviation	P-value	Coeff Var
DOC	1#	Before degradation	1.48	3.59	1.22	3.28	2.39				
	2#		2.15	2.05	1.43	1.73	1.84	2.15	1.07	0.02	
	3#		2.13	1.39	2.25	4.41	2.55				0.43
	1#	After degradation	2.12	2.66	1.58	--	2.12				
	2#		2.01	2.61	2.29	--	2.30	2.38	0.82	0.32	
	3#		2.62	2.59	3.73	--	2.98				
S _R	1#	Before degradation	4.32	3.67	3.31	--	3.76				
	2#		3.77	4.02	7.76	--	5.18	4.26	1.07	0.00	
	3#		4.06	4.35	4.40	--	4.27				0.24
	1#	After degradation	5.95	4.26	4.45	--	4.89				
	2#		5.21	4.82	4.28	--	4.77	5.26	1.23	0.44	
	3#		6.39	5.06	3.31	--	4.92				
SUVA ₂₅₄	1#	Before degradation	1.35	0.91	4.63	--	2.30				
	2#		1.80	1.83	3.33	--	2.32	2.12	1.23	0.23	
	3#		2.14	4.24	1.02	--	2.47				0.51
	1#	After degradation	1.07	1.31	2.53	--	1.64				
	2#		1.59	1.63	2.01	--	1.74	1.68	0.62	0.51	
	3#		2.19	2.10	1.05	--	1.78				
FI	1#	Before degradation	1.88	1.86	1.86	1.86	1.86				
	2#		1.90	1.89	1.95	1.93	1.92	1.94	0.09	0.02	
	3#		2.02	1.91	2.05	2.18	2.04				0.05
	1#	After degradation	2.01	1.82	1.88	--	1.90				
	2#		2.02	1.84	2.05	--	1.97	2.00	0.13	0.83	
	3#		2.14	1.93	2.03	--	2.03				
HIX	1#	Before	3.37	4.66	4.30	2.11	3.61	3.30	1.07	0.47	0.34

	2#	degradation	2.74	3.51	5.27	2.56	3.52			
	3#		2.92	3.71	3.88	2.30	3.20			
	1#	After	1.86	4.02	3.58	--	3.15			
	2#	degradation	2.17	2.59	2.87	--	2.54	2.44	0.92	0.58
	3#		1.88	2.99	2.74	--	2.54			
	1#	Before	0.83	0.86	0.87	0.91	0.87			
	2#	degradation	1.10	1.02	0.88	0.93	0.98	0.95	0.18	0.00
	3#		1.00	1.03	0.98	0.91	0.98			
BIX	1#	After	1.36	0.92	0.94	--	1.08			0.30
	2#	degradation	1.32	1.19	1.15	--	1.22	1.21	0.43	0.00
	3#		1.21	1.17	1.15	--	1.18			
	1#	Before	0.80	0.84	0.84	0.87	0.84			
	2#	degradation	1.03	0.98	0.85	0.89	0.94	0.91	0.15	0.00
	3#		0.95	0.98	0.93	0.87	0.93			
$\beta:\alpha$	1#	After	1.25	0.88	0.91	--	1.01			0.27
	2#	degradation	1.21	1.11	1.08	--	1.13	1.13	0.37	0.00
	3#		1.12	1.08	1.07	--	1.09			

Note: The total N value is 18 and the N values from which the statistics were calculated is 15.