

Supplementary materials

Table S1. Taxonomic richness of culturable microbiota (TRMB) and water invertebrates (TRWI) in 22 water sources from the Gold Mining Area of Zlatna

Water sources	TRMB	TRWI
1Up	3	8
2Dw	3	7
3Ad	3	2
5Sp	3	8
7Ad	3	7
8Up	3	6
10Up	3	6
11W	3	3
13Dw	3	5
16Dw	3	6
18Ad	3	8
19Mn	0	0
20Up	3	7
21Am	2	0
22Am	2	3
23Ad	3	12
24Up	3	3
25W	3	9
26Dw	3	0
27W	3	8
29Am	1	1
30Up	3	4

Table S2. Seasonal averages of precipitation (PP) and temperature at 2 meters above ground level (T2M) in the Gold Mining Area of Zlatna, sourced from the POWER Data Services databases [48,49]

Season sampled	T2M (oC)	PP (mm/day)
Spring 2015	15,56	2,42
Summer 2015	23,54	2,19
Autumn 2015	9,54	1,66
Winter 2015	1,27	0,29
Autumn 2022	6,51	1,72
Winter 2023	2,58	2,2

Table S3 . Total abundance (TA) of culturable microbiota (MB) and total water invertebrates (TWI) in 22 water sources from the Gold Mining Area of Zlatna

Water sources	TC	Y	M	WI
1Up	1108	38	12	9
2Dw	776	48	48	11
3Ad	130	9	11	4
5S	290	101	15	76
7Ad	81	2	1	47
8Up	114	2	9	55
10Up	630	32	309	20
11W	525	14	7	7
13Dw	868	57	35	14
16Dw	615	22	27	9
18Ad	437	12	27	30
19Mn	0	0	0	0
20Up	1142	87	38	28
21Mn	3	0	1	0
22Mn	1	0	8	4
23Ad	284	37	9	149
24Up	907	41	306	13
25W	496	55	2	100
26Dw	766	75	310	0
27W	706	256	3	80
29Mn	5	0	0	1
30Up	245	14	1	9
Total	10129	902	1179	666

Table S4 . Relative abundance (RA%) of culturable microbiota (MB) and total water invertebrates (TWI) in 22 water sources from the Gold Mining Area of Zlatna

Water sources	TC	Y	M	WI
1Up	10,94	4,21	1,02	1,35
2Dw	7,66	5,32	4,07	1,65
3Ad	1,28	1,00	0,93	0,60
5S	2,86	11,20	1,27	11,41
7Ad	0,80	0,22	0,08	7,06
8Up	1,13	0,22	0,76	8,26
10Up	6,22	3,55	26,21	3,00
11W	5,18	1,55	0,59	1,05
13Dw	8,57	6,32	2,97	2,10
16Dw	6,07	2,44	2,29	1,35
18Ad	4,31	1,33	2,29	4,50
19Mn	0,00	0,00	0,00	0,00
20Up	11,27	9,65	3,22	4,20
21Mn	0,03	0,00	0,08	0,00
22Mn	0,01	0,00	0,68	0,60
23Ad	2,80	4,10	0,76	22,37
24Up	8,95	4,55	25,95	1,95
25W	4,90	6,10	0,17	15,02
26Dw	7,56	8,31	26,29	0,00
27W	6,97	28,38	0,25	12,01
29Mn	0,05	0,00	0,00	0,15
30Up	2,42	1,55	0,08	1,35

Table S5 . Frequency (F%) of culturable microbiota (MB) and total water invertebrates (TWI) in 22 water sources from the Gold Mining Area of Zlatna

Water sources	TC	Y	M	WI
1Up	10,94	4,21	1,02	1,35
2Dw	7,66	5,32	4,07	1,65
3Ad	1,28	1	0,93	0,6
5S	2,86	11,2	1,27	11,41
7Ad	0,8	0,22	0,08	7,06
8Up	1,13	0,22	0,76	8,26
10Up	6,22	3,55	26,21	3
11W	5,18	1,55	0,59	1,05
13Dw	8,57	6,32	2,97	2,1
16Dw	6,07	2,44	2,29	1,35
18Ad	4,31	1,33	2,29	4,5
19Mn	0	0	0	0
20Up	11,27	9,65	3,22	4,2
21Am	0,03	0	0,08	0
22Am	0,01	0	0,68	0,6
23Ad	2,8	4,1	0,76	22,37
24Up	8,95	4,55	25,95	1,95
25W	4,9	6,1	0,17	15,02
26Dw	7,56	8,31	26,29	0
27W	6,97	28,38	0,25	12,01
29Am	0,05	0	0	0,15
30Up	2,42	1,55	0,08	1,35

Table S6 . Frequency (F%) of major taxa of water invertebrates (MTWI), in different water types (mine waters, adit waters, upstream waters, downstream waters, and groundwaters)

MTWI	Adit	Mine	Downstream	Upstream	Groundwater
CLA	51,30	0,00	0,00	1,49	0,00
OST	3,04	0,00	0,00	1,49	0,00
CYC	3,04	20,00	0,00	0,00	9,13
HAR	2,17	0,00	2,94	4,48	44,11
NAU	2,61	0,00	0,00	0,00	14,07
AMP	4,35	0,00	5,88	9,70	1,90
ISO	0,43	0,00	2,94	0,00	0,38
CLB	1,30	40,00	11,76	2,24	5,32
COL	0,00	0,00	0,00	0,75	1,14
DIP	15,22	40,00	41,18	48,51	5,32
EFE	4,35	0,00	5,88	8,96	0,00
MEG	0,00	0,00	2,94	0,00	0,38
ODO	0,87	0,00	0,00	2,24	0,00
PLE	5,22	0,00	11,76	13,43	1,90
INF	3,04	0,00	11,76	4,48	13,31
ACA	3,04	0,00	2,94	2,24	2,66
GAS	0,00	0,00	0,00	0,00	0,38

Table S7.
Differences in taxonomic richness of biota (TRB) between 2015 and 2022-2023 in the Gold Mining Area of Zlatna

Water sources	Years	TRB
1Up	2015	7
	2022-2023	5
2Dw	2015	5
	2022-2023	8
3Ad	2015	1
	2022-2023	3
5Sp	2015	5
	2022-2023	11
7Ad	2015	3
	2022-2023	3
8Up	2015	5
	2022-2023	6
10Up	2015	4
	2022-2023	7
11W	2015	3
	2022-2023	6
13Dw	2015	4
	2022-2023	7
16Dw	2015	5
	2022-2023	7
18Ad	2015	6
	2022-2023	8
19Mn	2015	0
	2022-2023	0
20Up	2015	7
	2022-2023	6
21Am	2015	0
	2022-2023	2
22Am	2015	0
	2022-2023	1
23Ad	2015	7
	2022-2023	10
24Up	2015	4
	2022-2023	4
25W	2015	4
	2022-2023	7
26Dw	2015	3
	2022-2023	3
27W	2015	9
	2022-2023	5
29Am	2015	2
	2022-2023	1
30Up	2015	4
	2022-2023	4