

## Sample collection campaign from 19.05.2022 in Moldova Nouă area for sustainability of the RoS-NET2 project: physicochemical parameters

The first sample collection campaign for the sustainability of the RORS 337 project took place in 19.05.2022 in Moldova Nouă area.

The same samples were collected by the research team, the physico-chemical parameters were measured in situ, the microbiological and ecotoxicological analysis were made in the laboratory (Advanced Environmental Research Laboratory AERL, Timișoara, Romania). For the determination of metals, the samples collected from Moldova Nouă area were sent to the Institute of Mining and Metallurgy from Bor, Serbia.

Table 1. Sample locations in Moldova Nouă area

| Sample ID | Location name of the sample  | Location parameters of the sample |            |            |
|-----------|--|-----------------------------------|------------|------------|
|           |  | Altitude (m)                      | Latitude   | Longitude  |
| W18       | Boșneag River (Moldova Veche)  | 113                               | 44°43'53"N | 21°39'40"E |
| W19       | Boșneag River (upstream Moldova Veche)                                   | 165                               | 44°43'39"N | 21°41'25"E |
| W20       | Radimna River (Pojejena)   | 99                                | 44°47'33"N | 21°33'44"E |
| W21       | Radimna River (upstream Pojejena)  | 105                               | 44°50'27"N | 21°33'54"E |
| W22       | Nera River (Socol)   | 79                                | 44°51'26"N | 21°22'55"E |
| W23       | Nera River (upstream Socol)  | 163                               | 44°52'55"N | 21°33'44"E |
| WU11      | Well from village of Coronini, near the pond Boșneag                     | 77                                | 44°41'9"N  | 21°40'25"E |
| WU12      | Well from village of Moldova Veche, near the pond Boșneag (Moldova Noua) | 100                               | 44°46'57"N | 21°29'08"E |
| WU13      | Well from village of Macesti   | 88                                | 44°45'12"N | 21°36'21"E |
| WU14      | Well from city of Moldova Noua (Divici)                                  | 79                                | 44°43'24"N | 21°37'15"E |
| S82       | Sediments from W18 location (Bosneag River)                              | 113                               | 44°43'53"N | 21°39'40"E |
| S83       | Sediments from W20 location (Radimna River)                              | 99                                | 44°47'33"N | 21°41'25"E |
| S84       | Sediments from W22 location (Nera River)                                 | 79                                | 44°51'26"N | 21°22'54"E |

|     |  |    |            |            |
|-----|--|----|------------|------------|
| S85 | Soil near Bosneag tailings pond                        | 86 | 44°43'01"N | 21°38'41"E |
| S86 | Soil at 200 m in Bosneag tailings pond (N-W direction) | 89 | 44°43'03"N | 21°38'33"E |
| S87 | Soil at 400 m in Bosneag tailings pond (N-W direction) | 84 | 44°43'38"N | 21°37'18"E |
| S88 | Soil at 600 m in Bosneag tailings pond (N-W direction) | 83 | 44°43'19"N | 21°38'28"E |

For the sustainability of the RORS 337 project, our team from Timisoara has collected the samples from the Moldova Noua area and analysed the samples for physicochemical analyses *in situ*. The analyses which have been realized are pH, conductivity, oxygen dissolved, turbidity, and temperature measurements. All the results are illustrated in the following table.

#### Cooperation beyond borders.

Interreg-IPA Cross-border Cooperation Romania-Serbia Programme is financed by the European Union under the Instrument for Pre-accession Assistance (IPA II) and co-financed by the partner states in the Programme.

[Project RoRS 337- ROMania Serbia NETwork for assessing and disseminating the impact of copper mining activities on water quality in the cross-border area \(RoS-NET2\)](#)

Table 2 Physicochemical parameters of the samples from the Moldova Noua Area

| Sample ID | Physicochemical parameters of the samples |                      |                      |                         |                 |                            |                         |     |
|-----------|---|----------------------|----------------------|-------------------------|-----------------|----------------------------|-------------------------|-----|
|           | pH  | Redox potential (mV) | Conductivity (μS/cm) | Dissolved oxygen (mg/L) | Turbidity (FNU) | Temperature of sample (°C) | Temperature of air (°C) | Obs |
| W18       | 8.15                                      | -74                  | 934                  | 12.53                   | 2.99            | 15.6                       | 19.7                    |     |
| W19       | 8.12                                      | -72                  | 552                  | 12.22                   | 1.2             | 13.6                       | 20.7                    |     |
| W20       | 8.2                                       | -84                  | 378                  | 11.11                   | 2.37            | 14.6                       | 17                      |     |
| W21       | 7.94                                      | -65                  | 375                  | 9.9                     | 2.77            | 13.4                       | 17.3                    |     |
| W22       | 7.16                                      | -20                  | 304                  | 11.5                    | 6.31            | 17.1                       | 24.2                    |     |
| W23       | 7.16                                      | -23                  | 282                  | 9.25                    | 8.74            | 15.4                       | 13.4                    |     |
| WU11      | 7.1                                       | -15                  | 621                  | 12.25                   | 0.98            | 14.6                       | 22.1                    |     |
| WU12      | 6.9                                       | -3                   | 1717                 | 11.4                    | 0.62            | 13.1                       | 21.3                    |     |
| WU13      | 6.9                                       | -3                   | 734                  | 1103                    | 0.72            | 12.1                       | 23                      |     |
| WU14      | 7.05                                      | -11                  | 1163                 | 12.29                   | 0.9             | 14.4                       | 21.1                    |     |



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|     |  |  |  |  |  |      |      |                             |
|-----|--|--|--|--|--|------|------|-----------------------------|
| S82 |  |  |  |  |  | 15.6 | 19.7 | black, sludgy,<br>bad-smell |
| S83 |  |  |  |  |  | 14.6 | 17   | sandy, grey                 |
| S84 |  |  |  |  |  | 16.9 | 24.2 | black, sludgy,<br>bad-smell |
| S85 |  |  |  |  |  | 25.2 | 24   | sandy, grey, soft           |
| S86 |  |  |  |  |  | 24.3 | 24   | sandy,<br>yellowish, soft   |
| S87 |  |  |  |  |  | 22.7 | 24   | sandy, grey, soft           |
| S88 |  |  |  |  |  | 22.6 | 24   | sandy, yellow,<br>soft      |



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