

## Sample collection campaign from 19.05.2022 in Moldova Nouă area for sustainability of the RoS-NET2 project: physicochemical parameters, microbiological, ecotoxicological and remediation analysis.

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, remediation 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 of the sample
W18-M	Boșneag River (Moldova Veche)
W19-M	Boșneag River (upstream Moldova Veche)
W20-M	Radimna River (Pojejena)
W21-M	Radimna River (upstream Pojejena)
W22-M	Nera River (Socol)
W23-M	Nera River (upstream Socol)
WU11-M	Well from village of Coronini, near the pond Boșneag
WU12-M	Well from village of Moldova Veche, near the pond Boșneag
WU13-M	Well from village of Măcești
WU14-M	Well from city of Moldova Nouă
S82-M	Sediments from W18 location (Boșneag River)
S83-M	Sediments from W19 location (Radimna River)
S84-M	Sediments from W20 location (Nera River)
S85-M	Soil near Boșneag tailings pond
S86-M	Soil at 200 m from Boșneag tailings pond (N-W direction)
S87-M	Soil at 400 m from Boșneag tailings pond (N-W direction)
S88-M	Soil at 600 m from Boșneag tailings pond (N-W direction)

### Microbiological analysis

#### Total Viable Count (TVC) of samples

From each water sample, soil and sediment suspension aliquots (100  $\mu$ L) of  $10^{-1}$  dilutions were plated on non-selective solid growth media and the plates were incubated at 25°C for different time intervals, from 24 hours to 7 days (Figure 1).

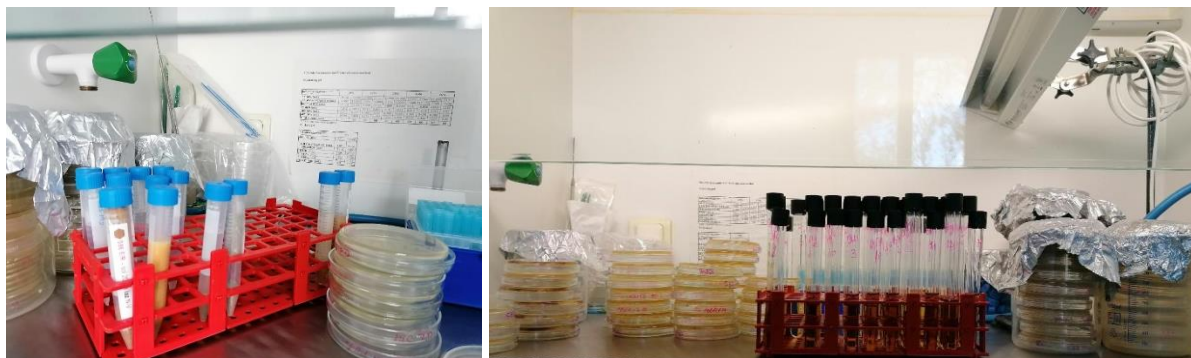


Figure 1. Inoculation of samples on non-selective culture media

The enumeration of Total Viable Count (TVC) from samples are presented in Table 2 and Table 3.

Table 2. Enumeration of TVC found in water samples

Sample ID	CFU/mL
W18-M	24967
W19-M	49167
W20-M	32633
W21-M	27067
W22-M	30933
W23-M	1000
WU11-M	47800
WU12-M	16333
WU13-M	27567
WU14-M	45200

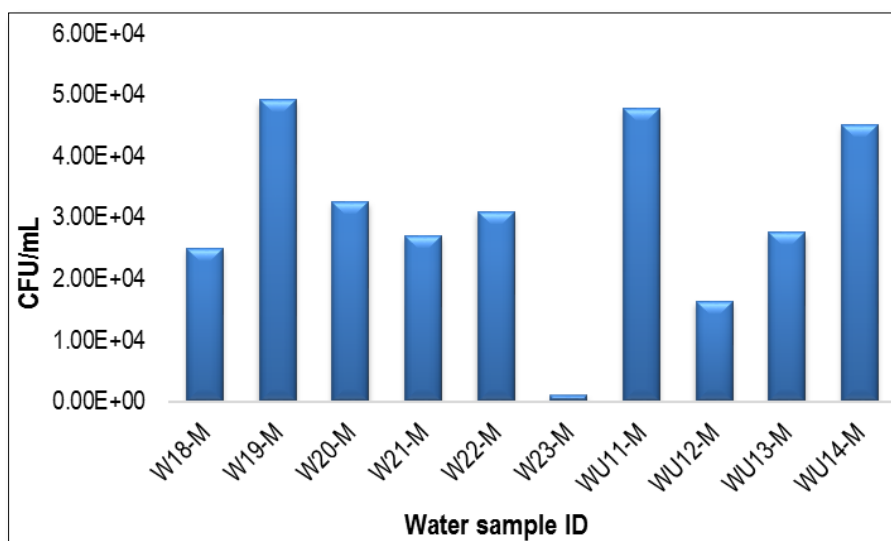


Figure 2. TVC from water samples (CFU/mL)

Table 3. Enumeration of TVC found in soil and sediment samples

Sample ID	CFU/g
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S82-M	95733
S83-M	96267
S84-M	105800
S85-M	43800
S86-M	39567
S87-M	19267
S88-M	110533

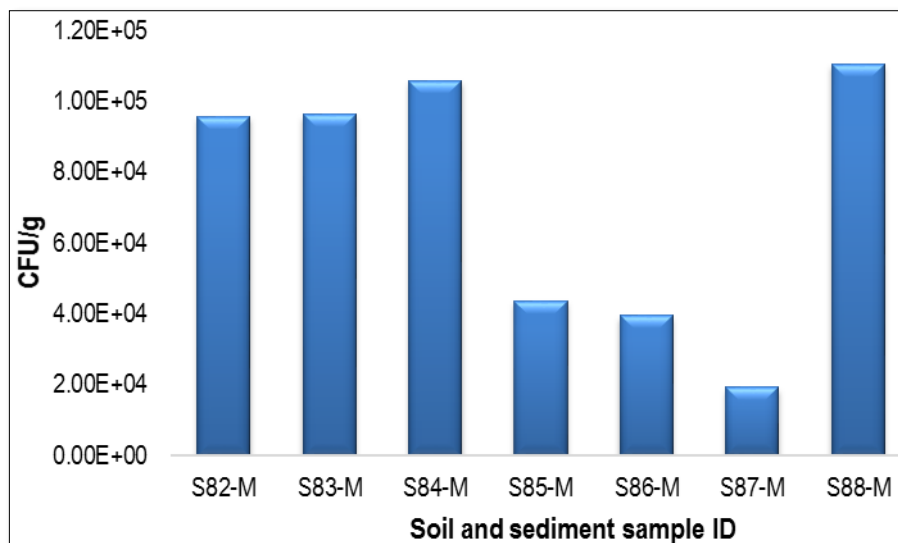


Figure 3. TVC from soil and sediment samples (CFU/g)

#### 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)**