

# WATER, SOIL AND SEDIMENT SAMPLING TRAINING ACTIVITIES

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## Abstract

Theoretical and practical training courses for PhD students concerning the sampling of water, soil and sediments are realized in a period May-July 2021. During the theoretical training some details for the sampling are presented in a form of a Power Point presentation. Two sampling training courses were performed on the locations of Bor River and Robule accumulation. All activities were realized by the members of Serbian team and by the volunteers from the MMI Bor. Graphical documentation and short movies were presented on the on-line meeting as a part of the thematic excursions that were organized by the Romanian partner.

**Keywords:** sampling, theoretical, practical, PhD students

## THEORETICAL AND PRACTICAL TRAINING COURSES FOR PHD STUDENTS

Within the project "ROmania Serbia NETwork for assessing and disseminating the impact of copper mining activities on water quality in the cross-border area" (RoS-NET2), theoretical and practical training activities for volunteers, doctoral students of MMI Bor were realized. On May 10, 2021, a theoretical training with the topic: Sampling of water, soil and sediments was performed in MMI Bor. Theoretical training is the starting point for practical trainings that were held on 14.05.2021 and 02.07.2021. Three doctoral students from the MMI Bor and three members of the RoS-NET-2 project, also from the MMI Bor were participated in the trainings realization. Theoretical training for doctoral students - volunteers was realized in the MMI Bor laboratories, from 08-12 h, on 10.05.2021. During the training, all details about sampling water, soil and sediments were explained. The presentation was made in the form of a Power Point presentation that aimed to prepare volunteers for sampling water, soil and sediments in the field.



Figure 1. Theoretical training course for PhD students volunteers from MMI Bor

On May 14, 2021 in the period from 08-12 h, a practical training was held for sampling of water, soil and sediments from the location of the Bor River. This activity was also of a volunteer character, and in order to assist in the implementation of the thematic excursion organized by the West University of Timisoara, Department of Biology-Chemistry and Advanced Environmental Research Laboratories – WUT, as part of regular project activities. Bearing in mind that the existence of a pandemic caused by the corona virus (Covid 19) prevented the arrival of WUT team members and students in Serbia, the Serbian sampling team realized field sampling at the same time as the WUT team during the first thematic excursion. Individual sampling was demonstrated by team members, and doctoral volunteers were engaged during the measurement and data entry. Those activities were accompanied by photo documentation (Figure 2) and the 3 mini movies presented during the online presentation within the I thematic excursions activities for which the Romanian partner was responsible.



Figure 2. Practical training course for PhD students-volunteers from MMI Bor, Location: Bor River

On July 2, 2021, a II practical training, as a part of II thematic excursion was held for sampling water, soil and sediments on the location of Robula accumulation-acid mine water. This activity was also of a voluntary character and realized in order to assist in the implementation of the II thematic excursion organized by the Romanian partner: The team that realized the mentioned activities on May 14, 2021 also realized the training of three doctoral students on July 2, 2021, at the new location, Robula accumulation. Robule accumulation was formed as a consequence of the leaching of the copper overburden in the vicinity of Bor. During these training PhD students - volunteers were actively involved in the implementation of all activities, while supervision was conducted by the team members from MMI Bor. Those activities were also accompanied by the photo documentation (Figure 3) and the 1 mini movies presented during the online presentation within the II thematic excursions activities for which the Romanian partner was responsible.



Figure 3. Practical training course for PhD students-volunteers from MMI Bor, Location: Robule accumulation

Sampling protocol lists were filed with the values of measured parameters. Figure 4 shows, as an example, the sampling protocol lists that were completed during the sampling of water from the Bor River and from the Robule accumulation.

Figure 3. Sampling protocol lists

## ACKNOWLEDGEMENTS

We acknowledge the financial support of the 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), implemented under the Interreg-IPA Cross-border Cooperation Romania-Serbia Programme that 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.