

Output factsheet: Internship

Version 1

Project index number and acronym	CE32 - AMIIGA
Lead partner	Central Mining Institute (Główny Instytut Górnictwa)
Output number and title	O.T1.3 - Trans-regio. & cross-sectoral capacity building by trainings & internships for collective tools development
Responsible partner (PP name and number)	PP5 - Technical University of Liberec (TUL)
Project website	http://www.interreg-central.eu/Content.Node/AMIIGA.html
Delivery date	08.2019

Summary description of the implemented training measure(s), explaining the specific goal(s) and target groups

Within the AMIIGA project, one of the PP5 responsibilities was to organize an internship focused on bio-molecular tools (BMT) - officially named "Internship on the Innovative BMTs tools and their application for contaminated site remediation". BMT are one of the methods to assess microbial communities at contaminated site related to groundwater remediation. The aim of this internship event was to follow up on the previous Workshop and Training taking place in April 2017 and to get project partners more acquainted with the BMT. The training was held on the 8th March 2018 in the Institute for Nanomaterials, Advanced Technologies and Innovation, Technical University of Liberec (Bendlova street 1409/7, Liberec 461 17, Czech Republic).

NUTS region(s) where training(s) have been conducted (relevant NUTS level)

The internship has been conducted in NUTS 3 - region CZ051 - city Liberec.

Expected impact and benefits of the trainings for the concerned territories and target groups

Goal of this internship was to show to all project partners the whole procedure of BMT analysis in more details and describe up-to-date approaches. All methods were thoroughly explained by Bc. Denisa Víková and Ing. Magda Nechanická with stress on the real usage in the field studies. A new software for data evaluation was introduced and other interesting techniques were presented by a field specialist prof. Andrea Franzetti, PhD., a guest from Milano. Target groups for the training workshop included project partners and interested employees from Technical University of Liberec.

Sustainability of the training(s) and developed training material(s) and their transferability to other territories and stakeholders

BMT is a very useful and progressive approach for evaluation of ongoing biodegradation processes at differently contaminated sites. This internship offered to the participants to become more familiar with the molecular-genetic analysis, to learn more information about relevant methods and techniques, and to understand bioremediation processes on localities. BMT could be applied to almost all territories/localities with groundwater or soil pollution suitable for bioremediation. Materials include presentations and the deliverable report which are now available online (<https://drive.google.com/drive/folders/0B1ady7gFIJszV0oyajZtei1Ba28>).

Lessons learned from the development and implementation of training measures and added value of transnational cooperation

First of all, the BMT techniques available at TUL for project partners were explained and discussed. This part included whole procedure from specific water or soil sampling for DNA analysis, followed by qPCR and/or sequencing, to the final data evaluation in order to be understandable and applicable for project partners. Moreover, different BMT approaches were compared across all project localities reflecting specific needs of the stakeholders. Then participants were acquainted with the innovative BMT software, its practical usage, advantages, disadvantages and application. The new software can be employed in routine work enabling fast diagnostics of ongoing microbial processes for remediation field specialists. Finally, a field specialist explained the usage of molecular-genetic analyses linked to physico-chemical data for practice. This presentation also introduced other techniques which can be used for data analysis and evaluation. Discussion of all partners revealed importance of such interesting topic to clarify practical impact of BMT on reasonable planning of bioremediation strategies.

References to relevant deliverables and web-links If applicable, pictures or images to be provided as annex

- D.T1.5.2 1 training & 1 internship among all PPs for innovative BMTs tools & guideline development & implement
- D.T1.3.1 Technical protocol - draft
- D.T1.3.3 Freeware software for BMTs data analysis for remediation assessment