

Call For RIS Task Partner in BioLeach

1. Project information

Project name:	BioLeach: Innovative Bio-treatment of RM
Lead Partner:	Technical University of Kosice (TUKE)
RIS Task Partner Patron:	Technical University of Kosice (TUKE)

2. Project description

High economic investments into import of raw materials significant for further industrial utilization increase the importance of local sources, which after proper technical adjustments can represent environmental and financially attractive alternative. However, their lower quality and lack of technologies improving their industrial value prefer serious financial investments into import of higher quality materials. These materials include metallic raw materials (mRMs) - extremely important sources of CRMs, REEs and metals, but also non-metallic raw materials (nRMs) widely used in several industrial sections as paper, ceramic, glass, chemical industry and agriculture.

The first aim of the BioLeach project (main objective) is to create impact on the local ecosystem by and along development/improvement of the technology and especially by engaging the relevant local players. Technology will be applied to local deposits to obtain RMs appropriate for industrial utilization. While currently used technologies are very expensive and environmentally not acceptable, low cost and ecological method of bioleaching is suggested. Bioleaching is an alternative way of improving deposits via activity of bacteria, which induce changes of chemical and structural features of rocks and minerals. The challenge of the project is to configure/improve this effective, economical and innovative method for specific local sources.

The second aim is related to greater utilization of local sources. Effective bacteria can be used industrially for treatment of mRMs to extract CRMs, REEs and metals, but also for treatment of nRMs, whose commercial value is decreased by impurities limiting the area of their application. Therefore further aim of this project is to test and evaluate local minerals as new potential sources, whose increased industrial value was obtained by bioleaching.

Improvement of efficient biotechnology, recovery of valuable components as well as refinement the features of deposits, will contribute to the regional development of Slovakia, as well as other RIS countries.

3. Expected role of RIS Task Partner

Selected RIS task partner is expected to implement project tasks as listed below:

- Actively participate in BioLeach project implementation under TP Patron.
- Provide inorganic/organic chemical analyses (metals, cationic and anionic species)
- Have an opportunity to provide solid phase analyses (particle size distribution surface are, SEM, XRD, XRF)
- Providing the support during the pilot plant build and testing on site and in the laboratory

4. Conditions for financial support

a. Maximum amount of financial support

RIS Task Partner will receive their funding via the Task Partner Patron (TUKE). Funding for RIS Task Partner will be 15,000 EUR in 2020; 15,000 EUR in 2021 and 3,000 EUR in 2022.

b. Categories of persons / organisations that may receive financial support

- Association / Chamber related to the raw materials sector;
- Industry representative / company active in the field of raw materials
- University with academics and/or research in the field of raw materials;
- Research Institute / Organization active in the field of raw materials;
- Other stakeholders contributing to the raw materials sector.

c. Criteria for giving financial support and selection process

Criteria

At the time of selecting a RIS Task Partner, the following criteria will be considered:

- A. Task Partner comes from Slovakia
- B. Task Partner is able to contribute to and maximize the impact of BioLeach project.
- C. The selected candidate shall provide the expertise in the raw materials sector as the **legal entity** with specific knowledge, access to data-set or equipment available in the RIS country of their origin. The expertise is in particular demonstrated by the following:
 - i. Possessing the know-how in the field of mineral processing, bioleaching and hydrometallurgy

- ii. Possessing the access to the pilot experiment facilities/sites and enabling them for usage in a BioLeach project;
- iii. Carry out research and development in the field of mineral processing, environmental biotechnology and biohydrometallurgy conducting it or utilizing its results in a specific project;
- iv. Ability to provide advanced chemical analyses of environmental samples (solid, liquid and gaseous)

D. Main activity related to the project is performed in Slovakia

Quality criteria:

E. Deep understanding of RM Industry needs

F. Eager and competent to expand the BioLeach network

Selection process

In case there are several organisations or persons that qualify for the Tasks to be implemented, the selection will be based on the following:

- For each Type of Activity a rating between 1 (poorly meeting the criteria) and 3 (criteria met by 100%) will be given;
- Based on the sum of the individual ratings a ranking of organisations will be established;
- For establishing the consortium the partner ranked 1st will be approached, in case this potential partners refuses to become a partner the 2nd ranked potential partner etc. will be contacted.

Application Form

All applications must be submitted using the Application Form

Submission of application / contact details for more information

The application must be submitted to tomas.pavlik@tuke.sk, by 4th of July 2020, 12:00 CET.

The following persons can assist you in case of questions:

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