

Kolarctic CBC KO1030 SEESIMA

- an EU Cross Border Collaboration project

Main objective – *The main programme objective that the SEESIMA project aims to address is achieving an acceptable balance between economic activity and environmental impact of mining.*

Participants

Kola Science Centre, Russian Academy of Science; University of Oulu; Luleå Technical University, Northern Research Institute Narvik A.S.;

Background

Society is dependent on the metals and minerals produced by mines, and the employment that the mines and mineral processing provide. However, at the same time the activities can result in emissions, such as of acid mine drainage with sulphates and heavy metals into waterways. The SEESIMA project aims to raise awareness of technological solutions to environmental impacts of mining activities, in order to reduce environmental impacts and improve economic returns.

Benefits of compiling a Best Practice guide

Four main benefits from the raising of awareness of new technologies by the project are identified:

1. Reduced environmental impact
2. Improved economic return, such as by obtaining valuable products from waste streams, or reducing energy and material consumption from process optimisation.
3. Improved public perception of the environmental performance of mining activities (help with permits)
4. Improve image of mining as a possible career amongst young people. Possibly also create new work opportunities suitable for younger entrants to workforce (expand on this later)

Main Outputs

The project will provide documentation and dissemination of technological tools that can improve the current practice of mineral processing, both for production and for the waste handling. The results will be documented in reports and disseminated via web page, own workshops and at regional conferences and other networking events. Where feasible practical demonstrations will be made and case studies made of existing implementations of technologies.

The lasting output from the project will be a toolbox of best practice technologies with guidelines for which situations they are appropriate for, and case study examples to illustrate their implementation. This resource can make the knowledge more accessible than is the case at present. Complementary expertise exists in the project partners and the project gives the opportunity to pool experiences and knowledge.

Specific Activities

- Workshops in order to a) document the current “State-of-the-Art” and knowledge around treatment of environmental impacts from mining and mineral processing activities; and b) to disseminate and document the gain in knowledge delivered by the project to target groups.

- Literature and experience review of recent international contributions to reducing environmental impact of mining.
- Own develop, testing and demonstration activities to document practical performance of new technologies

Target groups

In the first instance the target group are mining and mineral processing companies, who have the opportunity to implement new technologies (and the need/motivation in terms of environmental compliance fines). In some cases the valorisation of waste can be the basis for the establishment of new companies to implement the solutions and generate added-value.

The project results can also assist in improving (social) acceptance of the mining industry amongst regulatory authorities, general public and prospective workforce.

Project Organisation

The Northern Research Institute Narvik (NORUT) has taken the role as Lead Partner and responsibility for the work packages concerning management and coordination and communication. In addition they will lead the work package responsible for quantifying the Result Indicators that measure the impact of the project on the environmental, economic and social aspects of the mining industry.

The other project partners will lead work packages relating to their expertise. LTU will lead WP3 concerning technological improvements for mineral processing. KSC will lead WP4 concerning developing secondary products from waste and University of Oulu will lead WP5 concerning treatment of wastewater from mining activity. All WPs have economic, environmental and social impacts.

- WP1 - Management and Coordination (NORUT)
- WP2 – Communication (NORUT)
- WP3 – Mineral Processing Improvements (LTU)
- WP4 – Secondary Products from Waste (KSC)
- WP5 – Treatment of Waste Water from mining activity (UO)
- WP6 – Quantification of Environmental, Economic and Social Impacts (NORUT)

Further information

The Kolarctic SEESIMA project has a web page, <https://seesima.eu> that contains news and results from the project, as well as background and contact details for the project partners.

For more information, take contact with

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Project funding

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