

Tools for sustainable gold mining in EU - The SUSMIN project

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Timetable: 1.1.2014-31.12.2016

Budget: 1.9 M€

Partners:

Geological Survey of Finland (GTK)
Wroclaw University of Technology (WUT)
Geological Institute of Romania (GIR)
University of Babes-Bolyai (UBB)
Luleå University of Technology (LTU)
University of Porto (UP)
Trinity College Dublin (TCD)

Stakeholders:

Global mining industry: RMGC, SAMAX, MedGold, Agnico-Eagle, Dragon Mining
Technology companies: Outotec Finland Oyj, Kemira Oyj, Oulu Water Alliance Ltd

NEEDS

- Sustainable supply of gold is crucial to revitalise Europe's industry and economy to meet increasing demand without compromising the social and environmental issues of gold mining
- Gold mining has challenges in eco-efficiency and extraction methods (e.g. cyanide)
- Novel sustainable methods and technologies for mineral processing, water treatment and management of environmental and social impacts are needed

OUTCOMES AND IMPACTS OF THE RESEARCH

- Supports environmentally, socially and economically sustainable gold production in EU
- Project provides technologies and methods for sustainable mineral processing, water treatment and management of environmental and social impacts
 - To manage economical, social and environmental risks of gold mining
 - To achieve sustainability and long-term development of the mining areas
- Results will be combined to reports and recommendations for mine industry, environmental authorities as well as consultants
- Result will be disseminated through workshops in participating countries

APPROACH and WORK PACKAGES

1. Gold exploration

→ New geophysical techniques for gold exploration



2. Mineral processing

→ Eco-efficient ore beneficiation methods and alternatives to cyanide leaching



3. Mine water treatment technologies

→ Novel water treatment solutions by advanced adsorbents



4. Mine waste management

→ Long-term stability of mine wastes and waste facilities and prevention of contaminated drainage



5. Environmental monitoring, modelling and risk assessment

→ Solutions for monitoring, predicting and preventing environmental effects of mining



6. Socio-economics of gold mining

→ Tools for enhancing the corporate social responsibility, community engagement and management of the stakeholder relations

7. Synthesis, communication, coordination

CASE STUDIES

Romania: Rosia Montana and Brad-Certej

Portugal: Castromil and Lagoa Negra

Sweden: Dragon Mining Svartliden Mine

Finland: Agnico-Eagle Kittilä Mine and Dragon Mining Orivesi

MORE INFO

<http://projects.gtk.fi/susmin/>

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