SUSMIN
- Tools for sustainable gold mining in EU

Budget: 1.9 ME
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) and Trinity College Dublin (TCD)

Stakeholders: Global mining industry (e.g. RMGC, SAMAX, MedGold, Agnico-Eagle, Dragon Mining), technology companies (e.g. 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
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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. Sosio-economics of gold mining
   → Tools for enhancing the corporate social responsibility, community engagement and management of the stakeholder relations

7. Synthesis, communication, coordination
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CASE STUDIES
- In Finnish, Swedish, Portuguese and Romanian mines

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

MORE INFO
- http://projects.gtk.fi/susmin/