

Project acronym	CuSlag2CRM		
Project title	Innovative copper slag processing for raw material supply		
Main topic	Topic 1: Supply of raw materials from exploration to mining		
Sub-topics	Sub-Topic 1.5: Mine closure, remediation and re-mining of tailings and waste rock		
Keywords	Copper Slag, Bioleaching, Solid State Chlorination, Geopolymer, Life Cycle Assessment		
Publishable abstract	<p>Copper slag is a by-product obtained during roasting, smelting and refining of copper. Applications are increasingly being sought for the copper slag from ongoing copper slag production. Historically, however, the slag was deposited over several centuries, creating artificial mountains of considerable size. The partners would like to investigate historical dumps in their area. These are Elyseina in Bulgaria (University of Mining and Geology St. Ivan Rilski), São Domingos mine in Spain (Universidad de Huelva) and Mansfeld, Germany (TU Freiberg, GEOS). The copper slag dumps will be analyzed with regard to their chemical and mineralogical composition. In particular, it should be examined how homogeneous the composition is or how it has changed over the time of deposition. The objective of CuSlag2RM is to recover REEs, metals and critical raw materials from copper slag by bioleaching and innovative chemical leaching methods. After leaching it is the target to generate a residue, which can be used for sustainable landfilling or as functional mineral filler for construction materials like cement or geopolymers. Building materials produced in CuSlag2RM will be analyzed for its recyclability, in order to fulfill the requirements of circular economy.</p>		
Participating Institutions	<p>TU Bergakademie Freiberg, Institute of technical chemistry, Germany; TU Bergakademie Freiberg, Institute of Biosciences, Germany; G.E.O.S. Ingenieurgesellschaft mbH, Engineering and biotechnology, Germany University of Mining and Geology "St.Ivan Rilski", Engineering Geoecology, Bulgaria; University of Huelva, Earth Sciences, Spain</p>		
Project duration	36 months		
Total Costs	776 735 €	Total Requested Funding	709 045 €

