



A SUSTAINABLE ECOSYSTEM FOR THE INNOVATIVE RESOURCE RECOVERY AND COMPLEX ORE EXTRACTION

PRESS RELEASE

12 FEBRUARY 2024

LAUNCH OF EU-FUNDED PROJECT “XTRACT”

The **XTRACT project**, launched in December 2023, is set to revolutionise the mining industry with its pioneering approach towards achieving the *Zero Emission Mine of the Future*. This ambitious three-year Horizon Europe-funded initiative brings together 14 partner organisations from 9 European countries. The aim of this project is to add a highly innovative new alternative to the toolbox of how stockpiles and tailings are assessed, relieving the pressure on resources, and contributing to the realisation of EU Climate Neutrality Goals, with a significant benefit of emission reduction.

XTRACT also aims to introduce low-TRL green technologies of phytoextraction and phytoremediation, particularly appropriate for mining waste piles and abandoned sites that represent a solution for mine waste remediation but also for the extraction and recovery of various precious metals.



XTRACT has received funding from European Union’s Horizon Europe Innovation Programme under Grant Agreement N°101138432. Content reflects only the authors’ view and European Commission is not responsible for any use that may be made of the information it contains.

BACKGROUND AND MOTIVATION: ADDRESSING THE CHALLENGE

In the backdrop of the global push for sustainability, the mining industry stands as a significant contributor to CO₂ emissions, accounting for 2 to 3 percent globally. Recognising the urgent need for decarbonisation and sustainable practices, the XTRACT project aligns with the European Commission's ambition for self-sufficiency in critical raw materials essential for the green and digital transition.

The industry is facing increasing pressure to reduce emissions, with underground mining operations emitting approximately 50% more greenhouse gases than open-cut operations. The demand for critical metals and minerals, crucial for Europe's transition, requires a paradigm shift in mining practices. The European way of mining must not only be resource-efficient but also environmentally friendly, safe, and economically viable to meet high environmental standards.

WHAT ARE THE MAIN OBJECTIVES OF THE PROJECT?

- **AUTOMATION** of mineral prospecting and extraction in a complex mining context.
- **INTRODUCTION** of the novel concept of “precision mining” for the selective recovery of valuable metals from low-grade minerals and mine wastes.
- **SCALING** and **DEPLOYMENT** of remote sensing systems and analytical resources to allow the systematic and remote monitoring of “hard-to-access” mining sites and waste deposits.
- **ENHANCEMENT** and **DEPLOYMENT** of an open standards-based, trusted, and certified digital repository, supporting data interoperability and enhancement of industrial symbiosis in the mineral recovery supply chain, fostering the transformation towards sustainable mining.
- **EVALUATION** of different mine sites and waste disposals. Demonstration of the feasibility (evidence-supported) of innovative technological solution supporting a green transition to the sustainable mining.
- **ORGANISATION** and **FACILITATION** of the uptake, replication and upscaling of the technological solutions developed by XTRACT.
- **PLANNING** and **FACILITATION** of the exploitation of project results.
- **COMMUNICATION** and **DISSEMINATION** of the project’s scientific and technical results – Outreach to other R&D initiatives, end-users’ communities and the global mining environment for knowledge transfer and Market development through liaison and training activities.



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The official **Kick-off Meeting** of the **XTRACT project** took place on January 25th, 2024, in Athens, Greece, and welcomed over 30 attendees committed to working together to develop prototype technologies and produce a valuable and deployable solution.

Further information can be found at <https://xtract-project.eu/>

FOLLOW XTRACT JOURNEY & KEEP UP WITH NEW DEVELOPMENTS AND UPCOMING RESULTS!

XTRACT CONSORTIUM

XTRACT is a 3-year, Horizon Europe funded project that started in December 2023 and will last until November 2026. It involves **14 partner organisations** from 9 European countries:

No	Partner	Organisation Website	Country
1	TUBAF	https://tu-freiberg.de/en	Germany
2	LTU	https://www.ltu.se	Sweden
3	MUON	https://muon-solutions.com/	Finland
4	USAL	https://tidop.usal.es/en/	Spain
5	ACCELI	https://www.acceligence.cy/	Cyprus
6	BGRM	https://www.brgm.fr/en	France
7	UNP	https://www.unparallel.pt/	Portugal
8	LNEG	https://www.lneg.pt/	Portugal
9	TUC	https://www.tuc.gr/	Greece
10	LAMMC	https://www.lammc.lt/en	Lithuania
11	BJORKDAL	https://mandalayresources.com/	Sweden



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12	SAXORE	https://www.saxorebergbau.com/	Germany
13	NTUA/AMDC	https://www.ltcp.ntua.gr/	Greece
14	GEOS	https://www.geosfreiberg.de/	Germany

XTRACT Website: <https://xtract-project.eu/>

Social Media: LinkedIn: [linkedin.com/company/xtract-project/](https://www.linkedin.com/company/xtract-project/)

Twitter: https://twitter.com/xtract_project

Duration: 36 months | Starting from December 1st, 2023

Total Funding/ EU contribution: € 4.995.636

Coordinator: Technische Universitaet Bergakademie Freiberg (TUBAF)

CONTACT US

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