

Mining with minimal environmental footprint

The BIOMore concept of using in-situ recovery as a minimal footprint mining technique offers significant advantages for health and safety and the environment.

The new approach evades the creation of waste heaps and tailings and thus the challenges of their safe long-term management. It keeps infrastructure on the surface to a minimum while the underground bioleaching procedure notably reduces dust production and dust exposure, energy consumption, greenhouse gas emissions, noise and chemical impacts on surface water bodies.

Also the bacteria employed in the process are beneficial. With distinctly reduced environmental impacts, acceptance among the public concerning the extractive industry is anticipated to improve.

The methods and procedures will be designed, evaluated and enhanced drawing on laboratory experiments, numerical simulations and state-of-the-art geological, geotechnical and biochemical modelling. A holistic characterisation of respective geological conditions will complement this work and allow for the identification of suitable deposits for in-situ bioleaching.

About BIOMore

BIOMore (www.biomore.info) is an EU-funded research project within the Horizon 2020 Research and Innovation programme. The objective of the project is to develop advanced technological concepts for the in-situ recovery of metals from deep deposits using a combination of channelling and bioleaching.

The methods and procedures will be designed, evaluated and optimised using laboratory experiments, numerical simulations and modelling.

By developing new methods through innovative ideas, the BIOMore project is working towards strategies for securing sustainable, reliable and eco-friendly access to raw materials that are vital to the European economy.

For further information please contact:

Knut Hirsch
Phone: +49 (0)201 172 1315
Mail: press@biomore.info

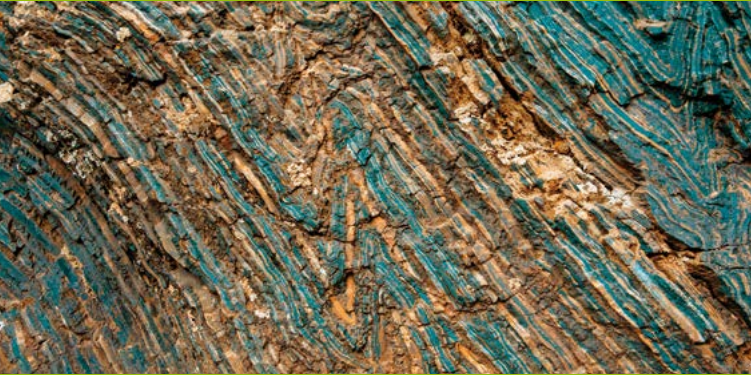
BIOMore public relations are managed by
DMT Marketing & Communications Consulting

BIOMore
An Alternative Mining Concept

info@biomore.info
www.biomore.info

Research on
future mining





The BIOMore project focuses on extracting metals from deep mineralised zones in a refined economic and ecological way.

Compared to conventional mining techniques the BIOMore approach offers various benefits.

Technology:

The BIOMore objective is to develop an optimised technological concept for the in-situ recovery of metals, operating at the surface without the need to establish an underground infrastructure. The BIOMore technology will make commodities accessible at depths greater than 1000 metres which are not exploitable by prevalent underground methods. It is applicable to newly discovered deposits as well as to the extension of existing mines.

Technical benefits:

- extraction of metals from mineral deposits at depths exceeding 1000 meters
- suitable even for densely populated areas due to its minimal footprint

Economy:

The increasing demand for technology metals (Cu, Zn, Ni, Pb, Co, Mo, Re, Rare Earth Elements and precious metals) in the EU requires new and innovative, yet environmentally sustainable mining techniques. BIOMore can offer efficient and eco-friendly solutions. Expanded pre-feasibility studies, related capital expenditures and operational cost calculations are part of the project.

Economical benefits:

- reduction of the EU's dependency on the import of technology metals
- cost reduction of mining activities (surface and underground infrastructure, energy supply, tailings management)
- improvement of mine safety through surface operation, thereby eliminating the exposure of personnel to underground hazards
- maintenance of job stability and expanding work force (mining industry, suppliers, machine engineering, IT, green technologies)

Environment:

The BIOMore concept aims to reduce the mining industry's environmental impacts and to achieve heightened public acceptance. The utilisation of this new technology will conform to mining laws and environmental and water protection regulations.

Ecological benefits:

- evaluating sustainability measures is an integral part of the process development
- minimal surface infrastructure and less heavy machinery reduce the impact on habitats, dust formation, noise and visual pollution
- energy consumption is curtailed
- waste rock and tailings are minimised and environmental contamination originating from large tailings facilities such as acid mine drainage is avoided