



Minerals⁴EU - project

Minerals Intelligence Network for Europe

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The Geological Surveys of Europe

EGS published a comprehensive Atlas on European bottled waters

European groundwater has no secrets anymore, thanks to the new atlas of bottled water recently published by EGS. The new comprehensive guide prepared on the basis of analysis of bottled water will allow consumers to make a conscious choice of the best product for their health and taste. The book provides the chemical composition of 1,247 bottled water samples, divided into 1,247 different sources at 640 locations, from 38 European countries altogether. EuroGeoSurveys geochemists analysed the chemical composition of European bottled water from a geological point of view.



Only very few samples exceeded mineral (or drinking water) action levels. The editors also point out that given the large revalorization for some elements deficiency problems may play an even larger role than toxicity.

"As a matter of fact - the editors say - the range in concentration of chemical elements in bottled water represents the range naturally found in European groundwaters. The new results from this harmonised overall European survey show an enormous revalorization (up to 7 orders of magnitude for some elements, including uranium) of many elements in water at the European scale! But the main message from the atlas is clearly that geology influences the quality of groundwaters."

"The atlas is another success story of our Geochemistry Expert Group."

It is evident that it brings a further crucial contribution to the knowledge of the quality of groundwater at the continental scale, and of its strong dependency on the geology of Europe", says Luca Demicheli, Secretary General of EuroGeoSurveys.

The samples were purchased in supermarkets during 2008 and subsequently analysed in one single laboratory. The survey is important, since more than 1,000 brands of bottled water are currently registered in Europe and the market is rapidly expanding. The book has been edited by Clemens Reinhard, from the Geological Survey of Norway (NGU) and Manfred Orlin, from the Federal Institute for Geosciences and Natural Resources (BGR) in Germany, and is the result of the multi-institutional work of the EuroGeoSurveys Geochemistry Expert Group, an informal group of top level European specialists in the field of regional geochemistry, in cooperation with a number of hydrogeologists. Some bottled water samples exceeded the water norms for parameters like Arsenic, Barium, Fluoride, Nitrate and Nitrites and Selenium.

Moreover the data demonstrates that a common European action level for Uranium in drinking water is urgently needed. As an example, the highest amount of the rare earth elements were found in Norway, the highest Uranium value in the Czech Republic and the highest nitrate value in a mineral water from Slovakia. Overall, however, the editors say that the quality of the analysed bottled water samples was surprisingly good.

Message from the Expert Groups

Mineral Resources Expert Group in 2010: building a prosperous future? Slavko Solar

Mineral resources became an important economic and societal issue within the European Union in the second half of the first decade of the 21st century despite the world economic crisis. The main cause was depletion of raw materials access. Concern about this situation is reflected by EU Communication (COM (2008) 699: THE RAW MATERIALS INITIATIVE - MEETING OUR CRITICAL NEEDS FOR GROWTH AND JOBS IN EUROPE - (SEC(2008) 2741)), the Raw Materials Initiative (RMI) for short.

The follow-up to RMI has included creation of two Working Groups, one on Criticality and the other on Exchange of Best Practices. Reports from these WGs has passed the consultation process. In the second half of 2010 a preparation for an Innovation Partnership planning also began. It is entitled Innovation Partnership: Non-Energy Raw Materials for a Modern Society.

In late 2009, the EuroGeoSurveys Expert Group Mineral Resources (MREG) was reorganized as were other the Expert Groups. Membership was newly appointed by the management of Member Surveys and the relationship with the EGS office was clarified. The MREG, which officially has 33 members from 23 member surveys, did not start from scratch: a good foundation was laid by EGS ex-Secretary General Patrice Christmann, among others.

First, the MREG re-thought the essence of existence and its basic framework: mission and vision. The mission of the MREG is to provide the best available mineral expertise and information based on the knowledge base of member geological surveys, for policy, industry, communication and education purposes on the European level. The Vision of the MREG is based on the goal of becoming the leading partner within a European mineral

information network, or other forms of cooperation, that will be providing tools and expertise to support sustainable minerals supply for Europe. Mineral information provided by the MREG is based on globally comparable standards of excellence for science and expertise, and it is agreed that these standards will be maintained. The Vision will be carried out collaboratively with other organizations that have mineral information and expertise, and with consumers of that information.

The main features supporting the MREG program are to:

- 1- strengthen the EGS MREG and its relations with other relevant bodies or institutions by improved communication and coordination and
- 2- focus on agreed priorities: the Raw Materials Initiative - RMI, European Technological Platform, Sustainable Mineral Resources, and EU funded minerals projects (past & ongoing).

Within the RMI the EU Commission has laid out two tasks for national geological surveys:

- 1- improve the knowledge base of mineral deposits within the EU, and
- 2- ensure that there is better networking between the national geological surveys to facilitate the exchange of information and improve the interoperability of data and their dissemination, with particular attention to the needs of SMEs. ●●●

Slavko Solar
EuroGeoSurveys Mineral Resources Expert Group Chairman



Message from the Expert Groups

The MREG response includes "EuroGeoSurveys proposal for the implementation of a coherent EU non-energy raw materials policy" (April 2008), concept notes: "CRISYS (Geological data to locate mineral deposits)" and "eMINEnt (Data sources for EU-level mineral development)" (November 2009), and first upgrade of eMINEnt proposal (May 2010).

European Minerals Network (eMINEnt), based on Raw Materials Initiative, has been proposed. The Network will comprise three coordinated programmes

Each programme will build on existing national-level data that are already being collected, including that for which annual national-level collection is mandatory, as well as outcomes of relevant, and in particular EU, minerals projects and other sources. All data and

information will conform to globally comparable standards, through adaptation or transformation if needed.

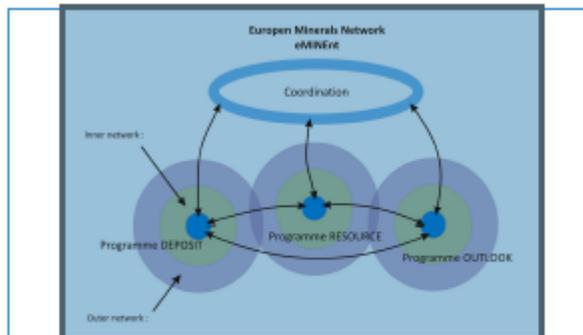
The DEPOSIT (EU mineral deposit database) programme will develop an investors' portal, giving information on the mineral resources and deposits within European Union. The RESOURCE (EU mineral data/statistics) programme will collect national-level data on minerals and harmonize it among the Member States. These data will be provided at the European level in a format that correlates with data already collected and reported by EUROSTAT, which has the MS and EC responsibility for economic data such as exports and imports.

The OUTLOOK (EU mineral outlook) programme will produce an annual or bi-annual forward-looking analysis on the minerals supply and demand situation in Europe with special attention given to critical minerals based on the outputs of the

programmes DEPOSIT and RESOURCE and various other sources. The Coordination body will deal with horizontal activities and harmonization, such as terminology data interoperability, communication / education, uniform output, promotion, distribution / dissemination etc.

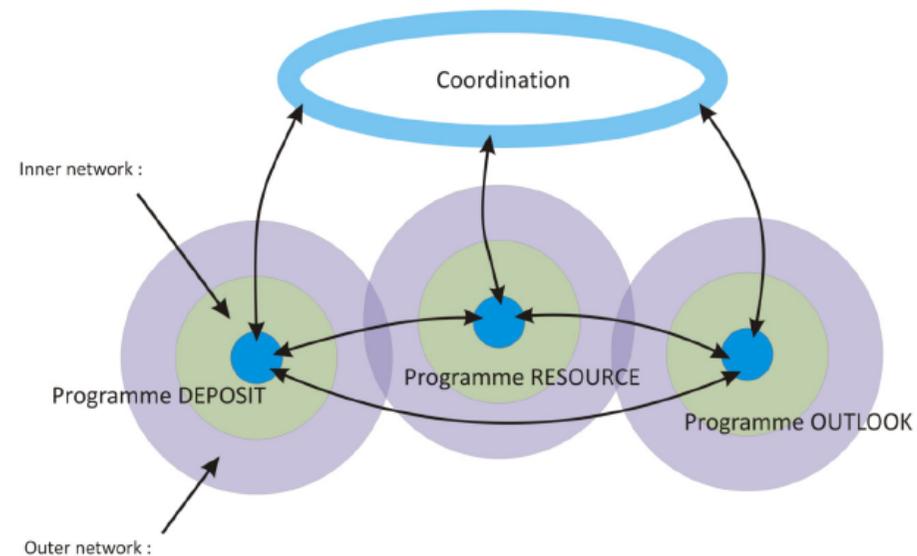
The other important part of MREG work is assistance in creation of EU mineral project proposals, as well as support of on-going projects: EGS, EGS 2, EGS 3, AEGOS, EO MINERS, EuroGeosource POLINARES, Promine, SARMA, etc. EGS MREG is member of ETP SMR Steering Committee and has an impact of European Technology Platform on sustainable Mineral Resources (ETPS SMR) activities and intends to increase it in the near future.

Slawko Solar



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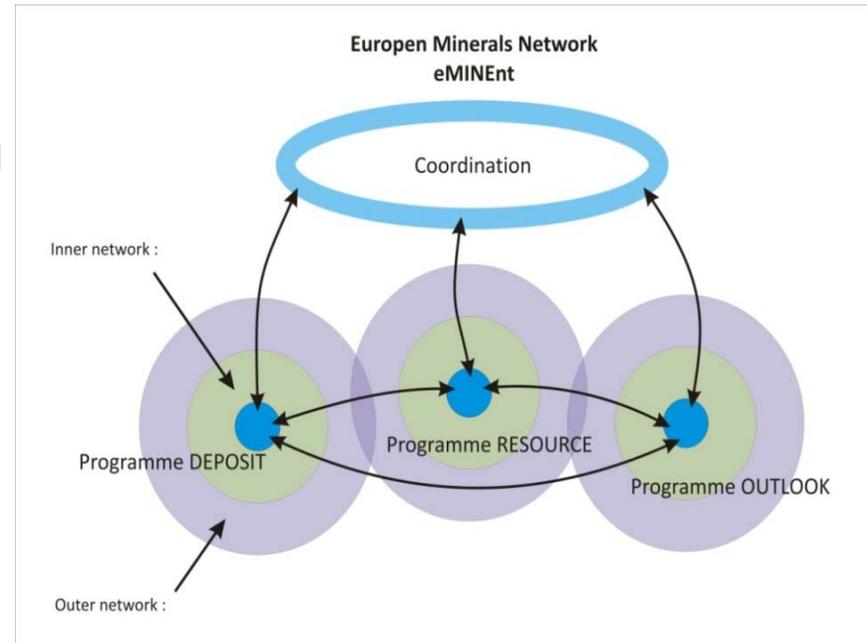
European Minerals Network eMINEnt





MREG - turning ideas into projects

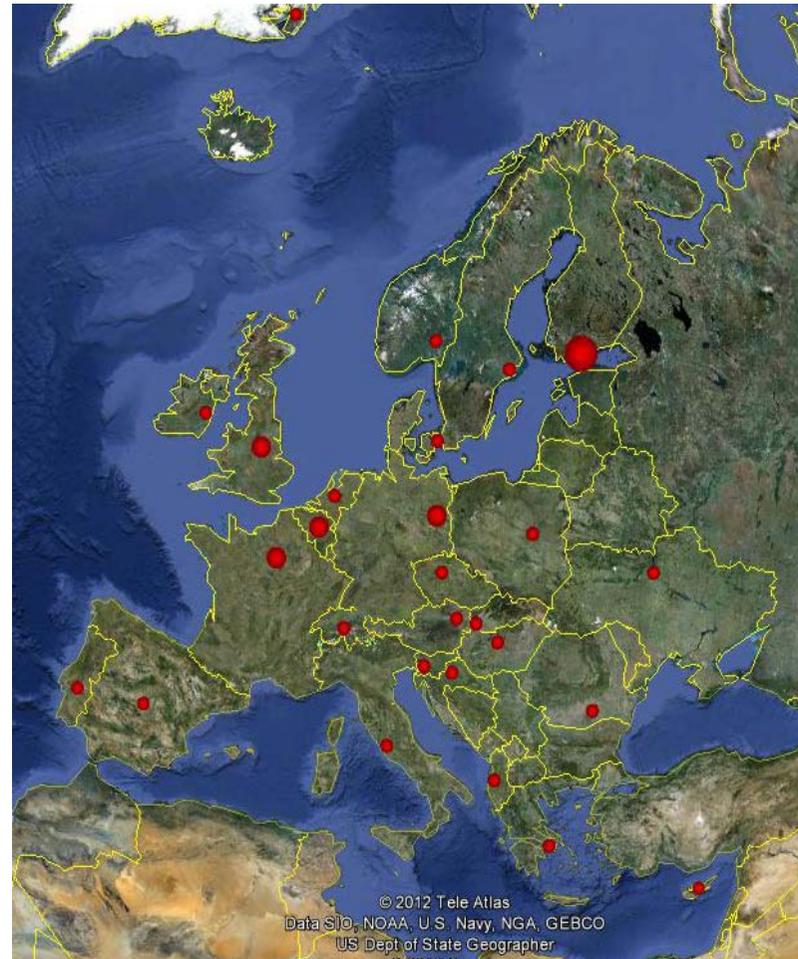
- 2009: European Minerals Intelligence Network (eMINEnt)
- 2011: Pilot Action -Improving Europe's raw materials regulatory framework, knowledge and infrastructure base-
- 2013: Minventory – EU Raw Materials Statistics
- 2013: Minerals4EU ↔ EGDI



EGDI-Scope, EuroGeoSource, ProMine, EURARE are significant steps in the right direction, but there are still a number of barriers and bottlenecks that need to be addressed:

- no legal framework or EU institution or agency with formal responsibility for mineral intelligence;
- although EU Geological Surveys hold in-depth knowledge of their national mineral resources, and are taking steps to harmonise this knowledge on a European level, their mandate is strictly national;
- accessibility of national mineral information is governed by national legal frameworks.

Minerals⁴EU aims to become **the leading European mineral information network structure** that will provide tools and expertise to enhance resource efficiency, minerals supply security and support sustainable minerals development for Europe



Budget: 2 770 000 € (3 745 000 \$)

Official start date: 1.9.2013 (+2 years)

Technical and overall coordination: GTK

Scientific coordination: EGS-MREG, GTK

Consortium: 31 partners, 26 NGOs, 26 countries

Best available mineral and also secondary raw material expertise and information for policy, industry, communication and education purposes on the European level.

Target

Creating a Minerals Intelligence Network to facilitate access for the EU to the raw materials information sources, **gathering a critical mass of institutions with the relevant authority and competencies at world, EU and national levels**, resulting in the creation of a permanent structure before the end of the project.

Before the end of the project this network should be transformed into **a sustainable operational service.**

INSPIRE compatible infrastructure (Integrated Knowledge Management System) that enables partners to share mineral knowledge, and the public and private stakeholders to find, view and acquire standardized and harmonized information from:

- National and regional data sources (e.g. mining authorities, Surveys)
- Past and ongoing national and EU projects (e.g. ProMine, EuroGeoSource, EURARE)
- Web portals at partner and stakeholder sites (e.g. EUROMINES, IMA, UEPG)
- National and European statistics (e.g. EUROSTAT)

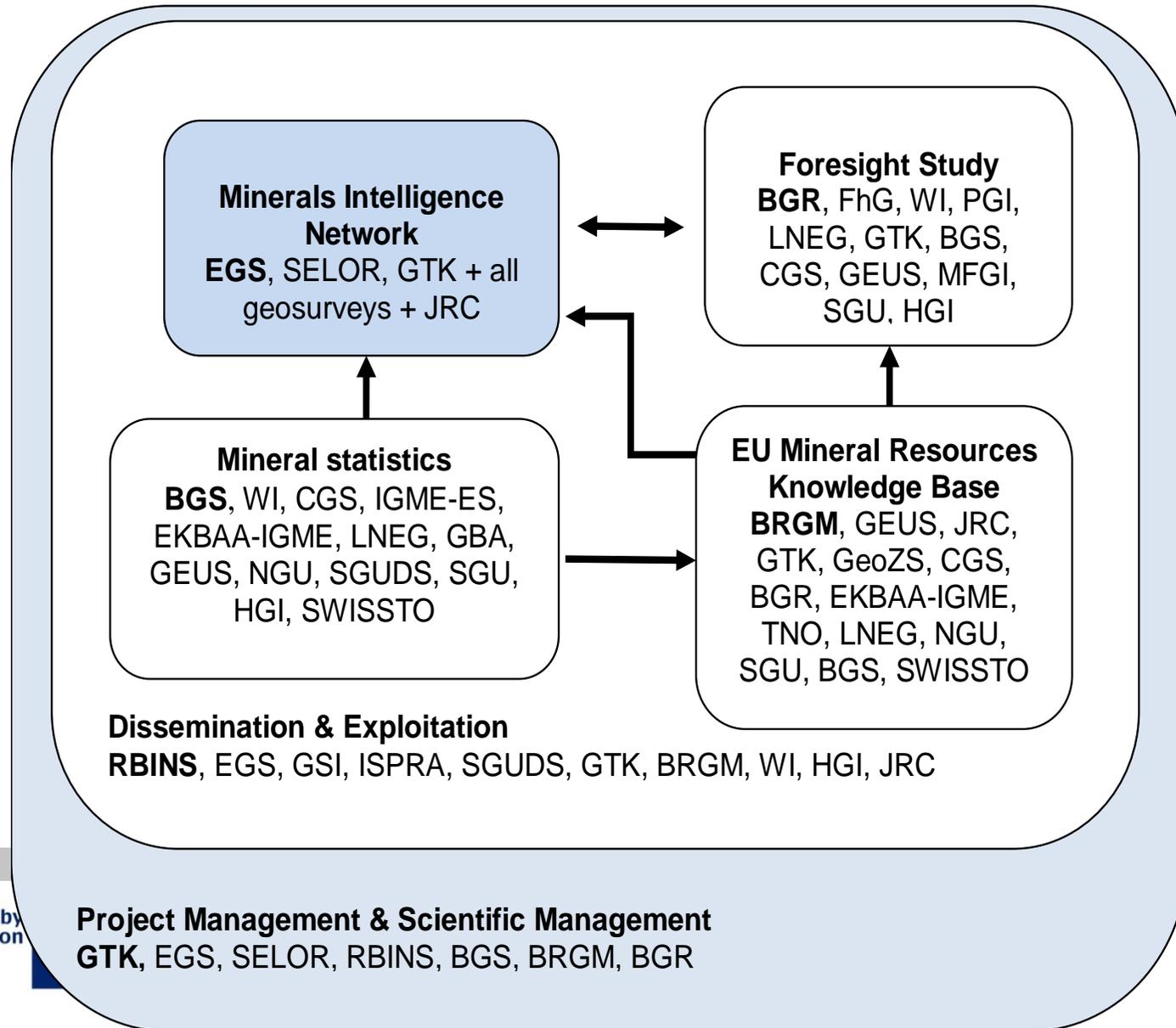


Spreading of excellence

The Minerals4EU Mineral Intelligence Network is a pan-European organisation bringing together the National Geological Surveys and other organisations with the aim of delivering high quality data on mineral resources, **both primary and secondary**, down to depths of 4km on land, and also in the **marine environment**. Not only will the network provide data, **it will provide an analysis and interpretation of the data** for use by the Commission, as well as academics, platforms, stakeholders, industries, regulators, and the general public.

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Capacity and capability

The coordinator and WP1 Leader GTK will work closely with the WP leaders as part of the extensive management infrastructure. GTK has a long track record of experience in successful EU and international project management.

Dissemination & Exploitation: WP3 (Knowledge management) by the **RBINS** and **EGS** (with 33 member countries), communicating results to the scientific community, the industry and the general public.

Mineral statistics: WP4 is led by **BGS-NERC**, which is the leading provider of long-term mineral statistics data and associated analysis in Europe.

EU Mineral Resources Knowledge Base: BRGM the leader of this **WP5** has extensive experience in mapping and characterizing Geological resources of Europe (e.g. developer of the ProMine and EURARE databases).

Foresight Study: The leader of **WP6** is **BGR** who will work in close cooperation not only with the key NGSO's but also with Wuppertal Institute, Fraunhofer Institute and the Raw Materials Group.

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WP2: Sustainable Minerals Intelligence Network

WP2 is created to deliver the main output of the project, which is the EU Minerals Intelligence network.

The network will be structured, organised, and a business model with recommendations for its long term sustainability will be developed.

The network is initially composed of the members of the consortium , but later organisations other than Geological Surveys will be recruited to the network, including industry, academics, platforms, NGOs and regulators.

WP2: Sustainable Minerals Intelligence Network

Build up a minerals intelligence provision service, incorporating links to existing projects and auxiliary datasets consisting of mineral data from (deep) primary and secondary resources on land and the sea-floor.

Develop the concept of the network structure and implement it, enabling the Network to deliver the concrete products proposed, such as the web portal, the European Minerals Yearbook and the foresight study.

Develop a network system which connects national and European mineral datasets and information, taking into account existing initiatives, policies and directives, as well as relevant projects, and considering an impact analysis from a broad stakeholders' consultation.

Establish a permanent body to guarantee the sustainability of the network in the long term, for the on-going and routine provision of Minerals4EU services for all potential stakeholders.

| WP | Task | Description |
|---|------|---|
| WP1: Project Management | | |
| WP2: Minerals Intelligence Network | 2.1 | Scope of the network |
| | 2.2 | Membership structure |
| | 2.3 | Network structure and permanent body |
| WP3: Knowledge Management | 3.1 | Communication and Dissemination |
| | 3.2 | Exploitation Management |
| WP4: Mineral statistics | 4.1 | Establish a data gathering network |
| | 4.2 | Data gathering survey |
| | 4.3 | Assessment of data availability and standardisation |
| | 4.4 | Developing a European Minerals Yearbook |
| WP5 Minerals4EU knowledge data platform | 5.1 | Data identification |
| | 5.2 | Definition of the EU-MKDP architecture |
| | 5.3 | Development of the EU-MKDP system |
| | 5.4 | Support to geological surveys for web services implementation |
| WP6 Foresight study | 6.1 | Foresight study on raw materials supply and demand in the EU |
| | 6.2 | Strategy for updates of the Foresight study |



Intelligence and Foresight

- ❑ Establishment of a [permanent structure to guarantee the sustainability of the network](#) in the long term, for the on-going and routine provision of Minerals4EU services for all potential stakeholders.
- ❑ Identification of existing data sources and assessment of data availability and quality for primary and secondary raw materials [to achieve harmonization and standardization of EU mineral statistics](#).
- ❑ Development of the a '[European Mineral Raw Materials Yearbook](#)' and a roadmap for future implementation, updating and maintenance after project.
- ❑ Development of an [operational EU Knowledge data platform](#) compliant with INSPIRE.
- ❑ Production of a [foresight study \(demo\) on mineral raw materials future supply and demand in the EU](#) with special attention given to critical minerals, but not excluding Fe, Al, Cu, Ni.





Industrial involvement

Industrial Consultation Committee is an expert board (5-7 members) to strengthen the connection of the project with the European Industry and society.

It is consulted regularly by the Management Committee, in order to steer the project towards the actual needs of the European industry and society and to help in cultivating the appropriate climate needed in the European market for the dissemination and exploitation of the Minerals4EU results.

The following organizations are currently members of the Committee:

EUROMINES, EUROMETAUX, IMA and UEPG

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Thank you for your attention!