Why Not Invest in Europe!

Euromines Annual Report 2016

Foreword

People have been investing in Europe for millennia. Indeed. But Europe always changes, sometimes very quickly. Today our industry has to respond to new uncertainties, not to defend itself but rather, to supply over 500 million Europeans in a very uncertain world.

Some of you will have heard me question audiences, asking if they themselves had invested in mining in Europe. Why? Because we all invest through pensions, funds and other savings, and yet few people seem aware of where that money actually goes. In Canada for example there is a different tradition, one of active investing in mining by households, supported by fiscal incentives linked to exploration and development. So popular mining investment is seen as normal rather than "new". In participating in new EU projects toward its existing trading partners such as Canada and Latin America Euromines is trying to encourage greater information, dialogue and investment both in and for, Europe.

We do so from a recognised position of knowledge, reliability and professionalism and that is due to the quality and dedication of our Secretariat led by Dr. Hebestreit and outstanding efforts from our members both individually and collectively.

But as you will read, we can only succeed by working together. With our trading partners, our suppliers and customers, other industries, academia, trades unions and civil society. In short our industry must belong to more people, be recognised as of value and as part of Europe's future and its hope. As we reach more people and demonstrate our sustainability, integrity and essential role in Europe, we will prosper.

After all rocks don't lie!

I commend this Annual Report to you. I remain honoured to be Euromines President and to have a small part in such valuable work.

Mark Rachovides

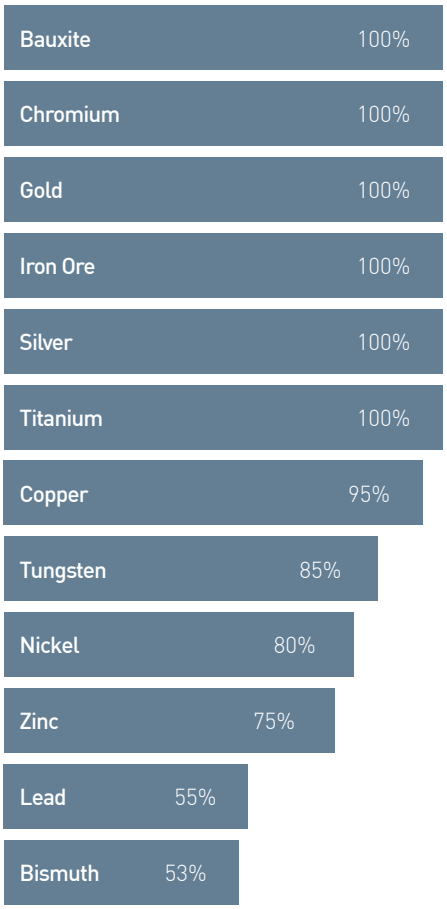
Contents

Euromines in Brief

Who we are

Euromines is the recognized representative of the European metals and minerals mining industry. Our members' main objective is to promote the industry and maintain their relations with European institutions at all levels. Euromines provides services to its members with regard to EU policy and forms a network for cooperation and the exchange of information throughout the sector within Europe. The association also supports contacts with the mining community throughout the world.

Euromines Representativity in Metals Mining
in % of EU production



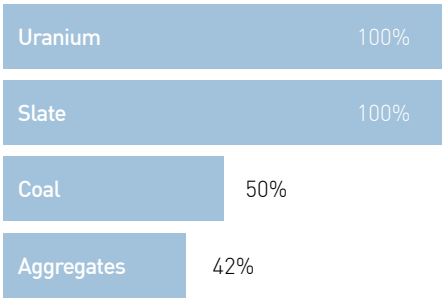
What we do

Euromines is the primary interface between the European Mining industry and the European authorities and international or intergovernmental bodies. The association works to establish common industry positions and initiatives, enhance constructive dialogue on areas of European and international policy affecting the industry and assert the industry's views and positions. As an advocate for the industry, Euromines promotes the benefits and societal value of both its activities and its investments.

Euromines members are diverse, National Associations, large and small companies who, within Europe and in other parts of the world, provide jobs to more than 350,000 people. Their activities and operations produce more than 42 different metals and minerals.

For some metals and minerals, Europe is the world's leading producer.

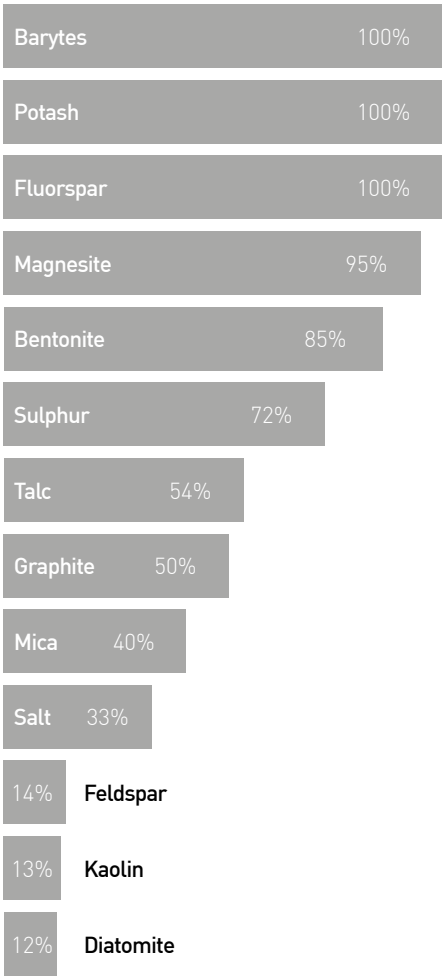
Euromines Representativity in other Minerals
in % of EU production



Why we do it

Euromines provides members with early warnings of policy change. The association also stimulates policy debate, articulates what's needed and creates opportunities to secure those needs. At the same time, Euromines seeks to protect and maintain the industry's reputation so that members can stay in business.

Euromines Representativity in Industrial Minerals
in % of EU production



Euromines Vision & Mission

Euromines' Vision for the European extractive industry

A viable and responsible extractive industry, which provides the essential economic, social and environmental assets for society's sustainable development.

Euromines' Mission

- To promote a sustainable and prosperous extractive industry in Europe through operational excellence;
- To serve as a network for cooperation and for the exchange of information throughout the sector;
- To foster contacts with the mining community internationally to achieve its objectives;
- To participate in European and international policy-making.

Euromines Steering Committee

Mark Rachovides	- President	Eldorado Gold Corporation
Thorsten Diercks	- Vice President	Vereinigung Rohstoffe und Bergbau
Roman Stiftner	- Vice President	Austrian Mining and Steel Association
Leif Boström	- Member	LKAB Minerals
Ingmar Haga	- Member	Agnico-Eagle
Pierre Heeroma	- Member	Boliden
Sebastia Isart	- Member	Iberpotash
Mikael Schauman	- Member	Lundin Mining
Beata Staszków (until June 2017)	- Member	Polish Copper Employers Association
Marek Swider	- Member Designate	KHGM Polska Miedzy

Euromines Team

Corina Hebestreit	- Director
Johannes Drielsma	- Deputy Director
Petros Maraboutis	- Coordinator BAT
Veronika Sochorova	- Communication Manager
Mirona Coropciuc	- Environment, Trade and Energy Manager
Kasia Palaczanis	- Public Relations Manager
Azi Bairami	- Office Manager

Chapter 1

A Continent of Potential

"Striving for a viable and responsible extractive industry, which provides the essential economic, social and environmental assets for society's sustainable development."

Potential

Chapter 1

A Continent of Potential

Strategic importance of raw materials

Domestic production of raw materials is an essential part of the EU economy. It provides a reliable supply of inputs to many downstream industries (e.g. automotive, chemicals, and electronics manufacturing). Domestic extraction of construction minerals has increased since the 1970s, allowing the EU to remain more or less self-sufficient. However, domestic extraction of industrial minerals stagnated in the 1980s, and for metals — in spite of an exponential increase in demand — it has even decreased slightly. On the other hand, Eurostat data show that the EU processes more raw materials than it extracts. This difference can be explained by imports and recycling. For industrial minerals Europe is often self-sufficient or is even exporting. Looking more closely at metal mining, it can be seen that several metallic raw materials are mined in the EU. Indeed, the EU has the potential to increase the current production and start new production units. Nevertheless, domestic extraction of metals is largely insufficient to meet the EU's raw materials demand.

In July 2016, the EU published its annual report on the implementation of the European Innovation Partnership on Raw Materials: the EIP Scoreboard. The scoreboard tries to assess the situation of the industry in Europe and provides a basis for identifying future challenges. The Scoreboard provides a comprehensive set of indicators on both primary and secondary raw materials. It highlights the need to address the EU's growing skills shortage, innovation needs and its import-dependency, providing some valuable information for policy decisions.

"The supply and affordability of raw materials are of strategic importance for the future of the European economy and society. With the European Innovation Partnership, the raw materials community has taken important steps towards increased security of supply and a more circular economy."

Commissioner Elżbieta Bieńkowska

Euromines welcomes and supports further work on the European Innovation Partnership on Raw Materials and insists on a continued long-term EU approach to raw materials to allow for Europe's economic development and recovery.

More than

11 million jobs

in sectors such as electronics manufacturing, automotive and machinery depend on the secure supply of raw materials.

Europe in a global context

Within the EU, mined raw materials include base, precious and specialty metals. Yet despite the existence of operating mines, domestic production is largely insufficient to meet the EU's growing demand for certain metals and minerals. However, plentiful amounts of unexploited EU resources offer sizeable potential for increased domestic production, depending however on the policy and legal framework conditions.

Certain European countries are major producers, but the majority of European countries depend chiefly on imports from other continents.

European (EU36 countries) mine production of selected metals as world percentages:

Metal	% world	EU36 countries with > 1 % of world output in 2014
Chromium	19.4	Turkey (13.7 %), Finland, Albania
Silver	8.1	Poland (5.0 %), Sweden
Zinc	7.3	Ireland (2.1 %), Sweden, Turkey
Titanium	6.6	Norway (6.6 %),
Lead	6.4	Poland (1.5 %), Sweden, Turkey
Copper	5.5	Poland (2.3 %),
Tungsten	2.9	Spain (1.2 %), Austria
Nickel	2.8	Greece (1.0 %),
Gold	1.9	Turkey (1.0 %),
Iron	1.7	Sweden (1.1 %),

In the table 'Europe' is defined as the 28 EU countries, the EU associates Norway and Switzerland, and the EU candidate countries Albania, Iceland, Macedonia, Montenegro, Serbia and Turkey; this group of 36 countries is for convenience referred to as 'EU36'.

Source: European Mineral Statistics, BGS, 2016

European production of industrial minerals supplies a fairly high proportion of the continent's requirements, but there are cases of several minerals, where the EU production is dominated by one country only while the majority are still mostly dependent on imports.

European (EU36 countries) production of selected industrial minerals as world percentages:

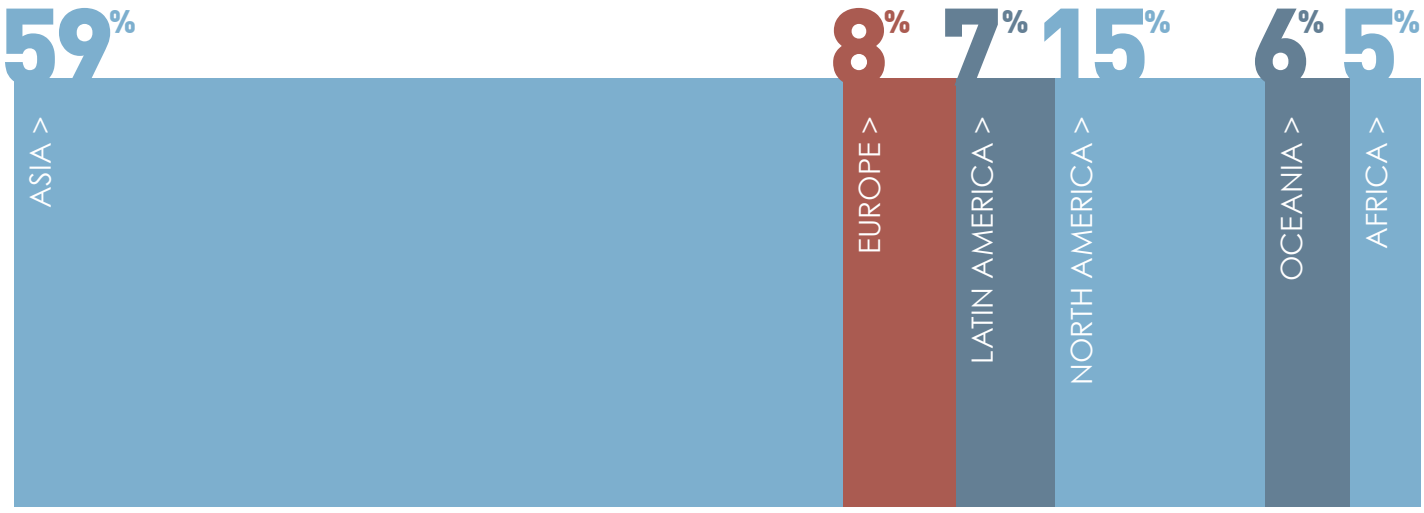
Industrial mineral	% world	EU36 countries with > 2 % of world output in 2014
Feldspar	59.5	Turkey (30.1 %), Italy, Spain, France
Kaolin	32.6	Germany (16,5 %), UK, Turkey, Czech Republic
Salt	19.5	Germany (3,9 %), Netherlands, France
Diatomite	19.5	Denmark (5,2, %), France, Turkey, Spain, Germany
Bentonite	17.9	Greece (6,2 %), Turkey, Germany
Gypsum	20.3	Turkey (5,5 %), Italy, Spain
Talc	13.9	Finland (4,6 %), France
Potash	12.0	Germany (8,0 %), Spain
Magnesite	11.6	Turkey (5,5 %)
Mica	11.1	France(5,9 %), Finland
Barytes	5.4	Turkey (3,7 %)
Fluorspar	5.4	Spain (2,2 %)

In the table 'Europe' is defined as the 28 EU countries, the EU associates Norway and Switzerland, and the EU candidate countries Albania, Iceland, Macedonia, Montenegro, Serbia and Turkey; this group of 36 countries is for convenience referred to as 'EU36'.

Source: European Mineral Statistics, BGS, 2016

World mineral production

Total mineral production by Continent 2014 (excl. bauxite)
total: 17.434.662.951 metr. t



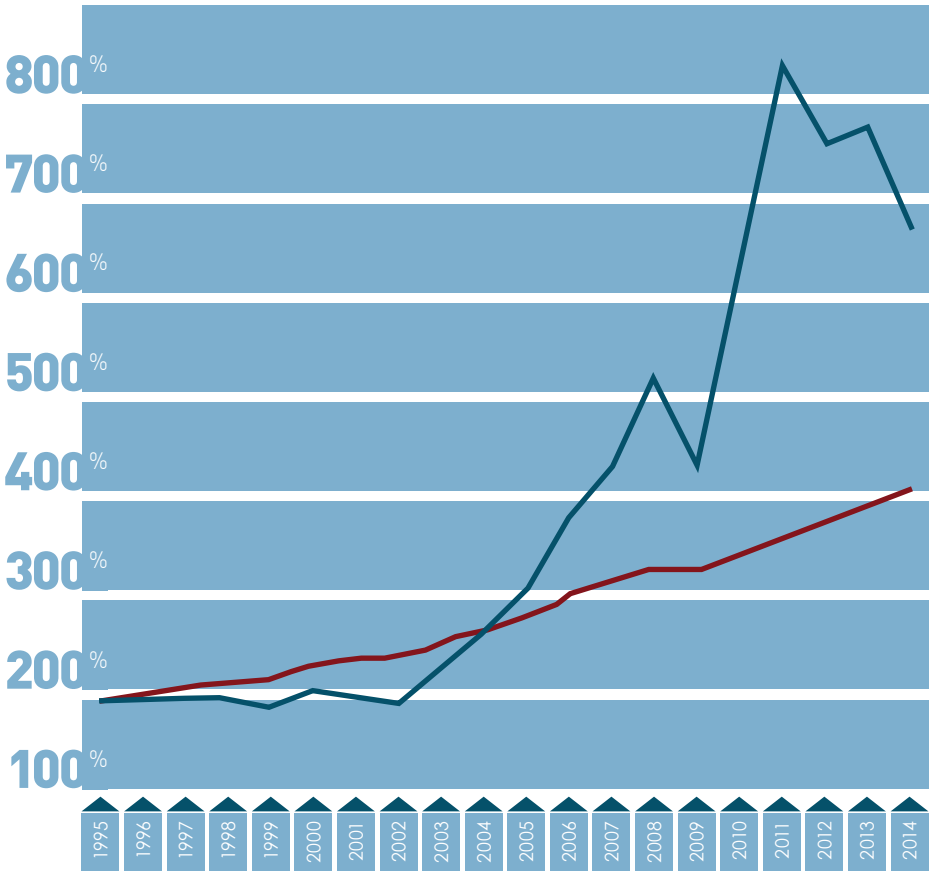
Source: World-Mining-Data, Federal Ministry of Science, Research and Economy, Vienna 2016

Demand of minerals from OECD countries has remained fairly constant since 1995 (at around 3 million metric tonnes per annum), but rising demand from emerging countries – especially China – has ensured a substantial increase in total metal consumption. Total world GDP in current prices increased by about 140% from 1995 to 2015, while the value of metallic minerals produced rose much faster, by no less than 470% between 1995 and 2014.[1]

1 *Role of mining in national economies, third edition, ICMM, 2016*

World GDP and total mineral production – 1995 to 2014 (1995 = 100)

Total mineral production (excl coal)
World GDP (PPP, current prices)



Sources: SNL database and World Bank

It is reasonable to assume that continued high rates of growth for at least a subset of the world's poorer countries could be an ongoing stimulus to sustain the significant growth in metal demand for many more years, even though demand from OECD countries remains flat.

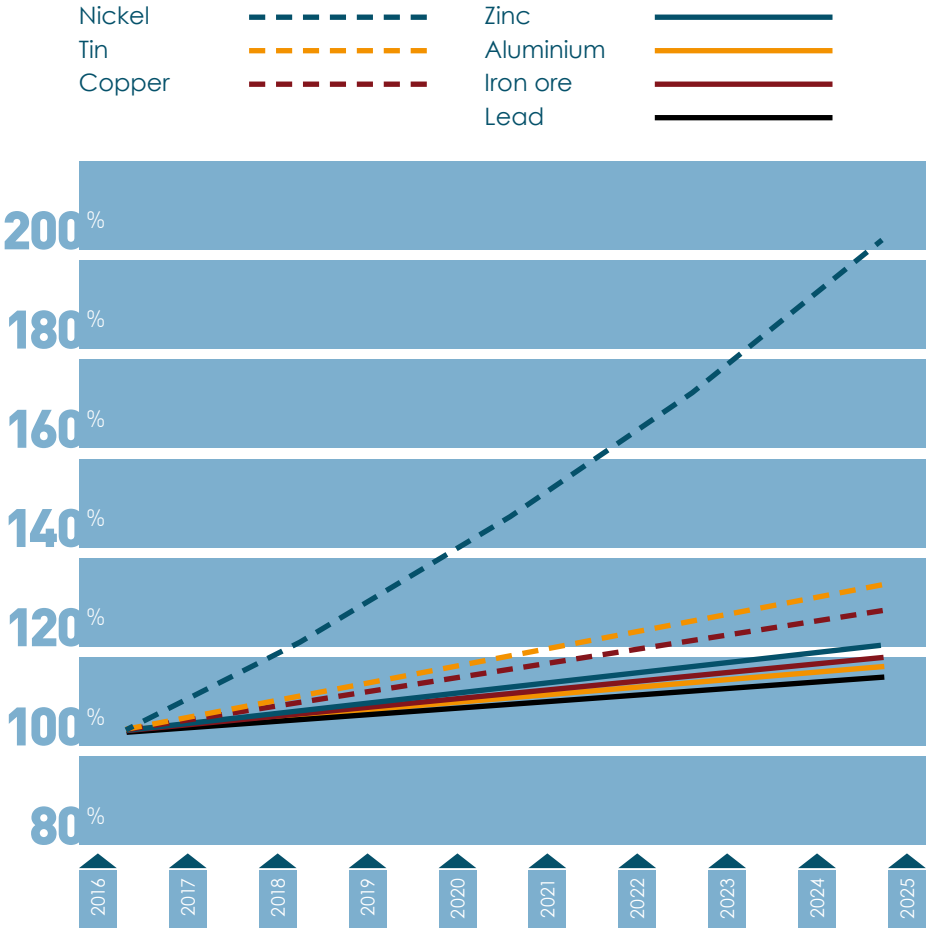
Studies have consistently demonstrated that metal demand increases quickly when per capital incomes reach 5,000 to 10,000 USD per capita. Populous countries such as India and China will cause dramatic effects on metal demand when they reach this developmental stage. Only a prolonged global economic recession or an environmental disaster could stop this overall growth in demand. It will continue despite economic fluctuations that cause peaks and troughs in short-run demand.

China's recent slower growth may have worried market commentators, but the economy is still expected to grow by 6 to 7% per annum – and from a much higher base, with its total GDP having quadrupled since 2000. Thus, a still high growth rate is being applied to a much bigger total economic base that is shifting more towards consumption as prosperity rises and spreads.

China is not the only country growing rapidly. Any diminished growth from China could be balanced by more rapid growth of demand from India and other Asian and African economies approaching the critical $5,000–$10,000 per capita income level.[2]

2 *Role of mining in national economies, third edition, ICMM, 2016*

World GDP and total mineral production – 1995 to 2014 (1995 = 100)



Sources: SNL database and World Bank

Addressing future sustainable supply

A global exchange on raw materials issues remains important since the EU will both continue to be dependent on raw material imports on the one hand and enjoy exports of mining products, related machinery and technology on the other.

Global cooperation also allows the EU to compare policies and create partnerships which can be beneficial to all by fostering economic growth and technological development.

The three events "6th EU-US-Japan Trilateral Conference on Critical Raw Materials", "Towards a World Forum on Raw Materials" – FORAM, and the "Development Minerals: Transforming a Neglected Sector in Africa, the Caribbean and the Pacific" organised in 2016, as well as Euromines membership in ICMM and BIAC provided possibilities to address this issue.

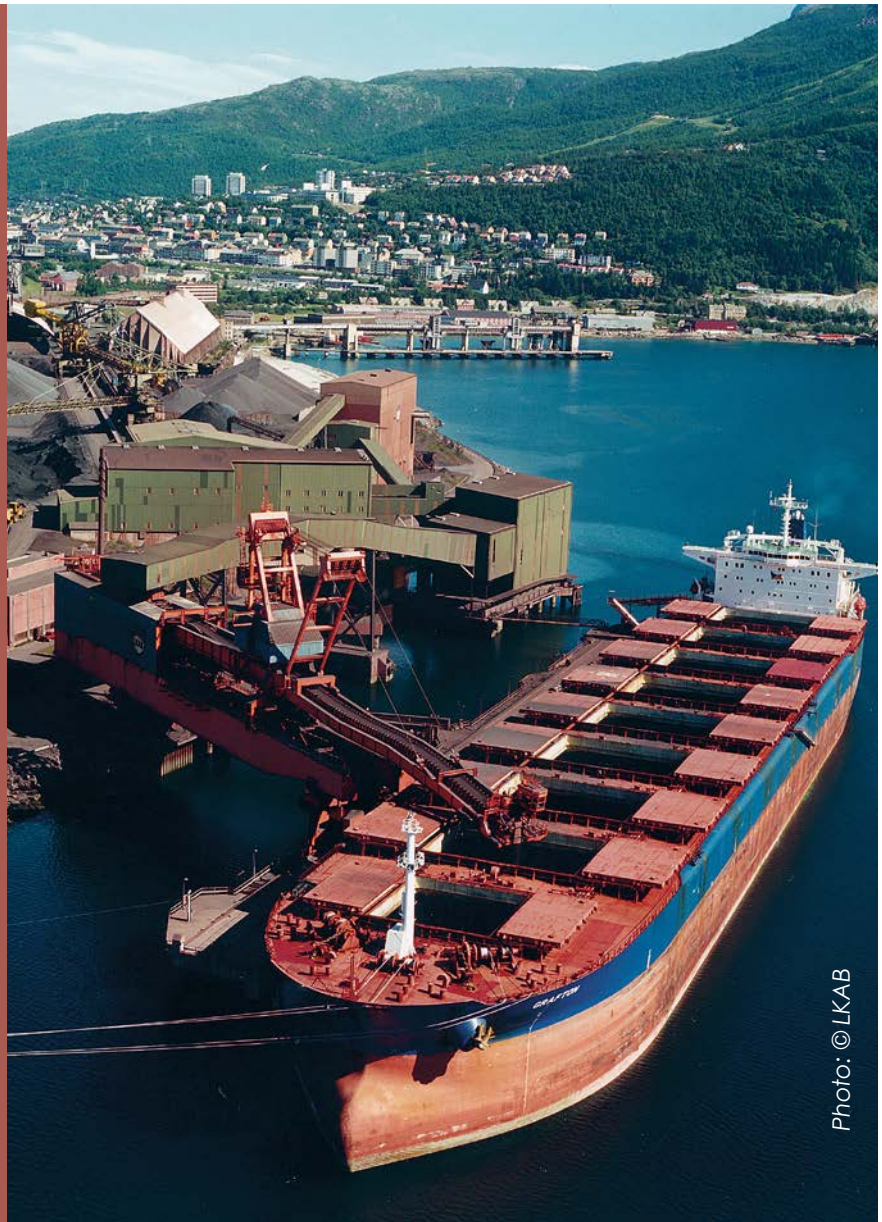


Photo: © LKAB

Changing from critical resources to strategic resources

A strategic approach to economic development is based on two key elements: natural and human resources and ensuring well-being in our societies. Access to both will be vital if the EU wishes to ensure the well-being of its population and maintain its standard of living in the coming decades.

Different nations have defined "strategic" differently and the EU has hitherto limited its considerations deliberately to "critical" resources, an review assessment which was carried out by the Commission in 2016 with the assistance of Euromines and other organisations. It has conducted several studies in order to identify the EU's mineral potential in terms of primary and secondary resources. Most of the currently available criticality assessments have been based on an analysis of the availability of raw materials for and from the current economic situation. Considerable work still needs to be done to turn this into a truly strategic approach. Partnerships between producer and user countries in the EU therefore should be forged with greater urgency.

The concept of circular economy seeks to provide a holistic approach to resource management by strengthening the idea of making the best of natural capital, but it does not yet include the concepts of Material Banks and the temporary use of land with its return to future use. This is of growing importance when closing current and future mines and making use of old waste disposal sites.

Whilst in the past the prevention of waste in general was a priority issue, the focus should be turned to turning waste into resources, which is also a theme of the EU's Circular Economy Policy. However, access to resources can currently be constrained by legal hindrances in the form of negative legacies such as environmental liabilities linked to accessing old sites and their materials. Thus, the potential for revitalising older mining regions and providing new resources remains underdeveloped. Such legal hindrances need to be reconsidered in today's circumstances. An integrated approach to a new mine and old waste management is the optimal and most economic and environmentally sound way forward.

Chapter 2

Essentials for Europe's Industrial Renaissance

"Promoting a sustainable and prosperous extractive industry in Europe through operational excellence."

Renaissance

Essentials for Europe's Industrial Renaissance

Staying competitive

The EU's Economic Policy is essentially for economic growth – and rightly so. The EU still has not recovered from the recessions in 2008 and 2011 and has seen a widening competitiveness and innovation gap open up between itself and its major trading partners.

Mining, being subject to its own economic cycles, has also been affected by the crisis and is equally in need of policy measures to ensure that it contributes as much as it can to renewed growth in Europe. Mining already helps ensure the employment of some 30 million people in Europe. The still strong demand for metals and minerals arising from the emergence of new industrialised economies in other parts of the world means that mining - as a sector - is even better placed to provide the kind of investment, jobs, training, government revenues, valuable materials, wealth creation and tradable goods that the EU policy is looking for.

The EU should no longer sacrifice economic or strategic interests for the sake of "free trade" only, but should insist on free and fair trade - particularly in the area of raw materials. Creating a more solid and predictable and sustainable network of raw-materials supply is essential for manufacturing industries to produce their tradable goods and services. Providing better conditions for mining in Europe can decrease dependency on imported raw materials and therefore make the EU a stronger, more reliable trading partner. Free and fair trade should be promoted and all legislative proposals properly assessed for undesirable impacts on raw material supply, recognising both geological and social conditions in each Member State properly in order to improve access to raw materials for all.

Comprehensive EU and national industrial policies are needed that address resources, technology, manufacturing, expertise, indeed all steps in the value chain in order to achieve "Industry 4.0"[3]. Such a strategy needs to be supported with evidence-based policies - not driven by principles but by impact assessment. These strategies need to be developed in a global context and anticipate other nations' policies.

To achieve

Industry 4.0

comprehensive EU and national industrial policies are needed

3 *Industry 4.0 is the current trend of automation and data exchange in manufacturing technologies. It includes cyber-physical systems, the Internet of things and cloud computing.*
The term "Industrie 4.0" originates from a project in the high-tech strategy of the German government, which promotes the computerization of manufacturing. Source: Wikipedia

The EU industry employs over

34 million people

across all Member States

JOINT DECLARATION FOR AN AMBITIOUS EU INDUSTRIAL STRATEGY

In April 2017 158 industrial sectors across Europe called for an ambitious industrial strategy for the EU which still is the cradle of manufacturing industry and has been at the forefront of industrial revolutions and technological innovations. The EU industry employs over 34 million people across all Member States, in supply chains comprising hundreds of thousands of SMEs and larger suppliers. The European manufacturing industry has tremendous capacity for innovation, boasts a skilled workforce and has earned a reputation for quality.

Between 2000 and 2014, the share of manufacturing in total EU output fell by 3.5 percentage points in nominal value-added terms, from 18.8% to 15.3%, while 3.5 million jobs were lost in manufacturing only between 2008 and 2014.

At the beginning of his mandate, European Commission's President Jean-Claude Juncker identified reindustrialization of Europe as one his top priorities and confirmed the objective of increasing the share of industry in European GDP to 20% by 2020. Therefore we, the European manufacturing industry called on the European Commission to reaffirm its commitment to reaching the target of 20% of GDP from industry, with a realistic timeline; to propose an Action Plan to tackle the challenges that the industrial sectors are facing, in the framework of a Communication that would include concrete steps and milestones; and to commit to implement this Action Plan in a timely manner and regularly report on progress.

The EU Raw Materials Strategy and the European Innovation Partnership were well under way to address the investment and competitiveness of vital raw material supply for the EU's manufacturing industry by trying to raise awareness across Member States and the general public, but also by trying to improve the access to and investments into raw material projects inside the EU but also outside of the EU.

Inward investments

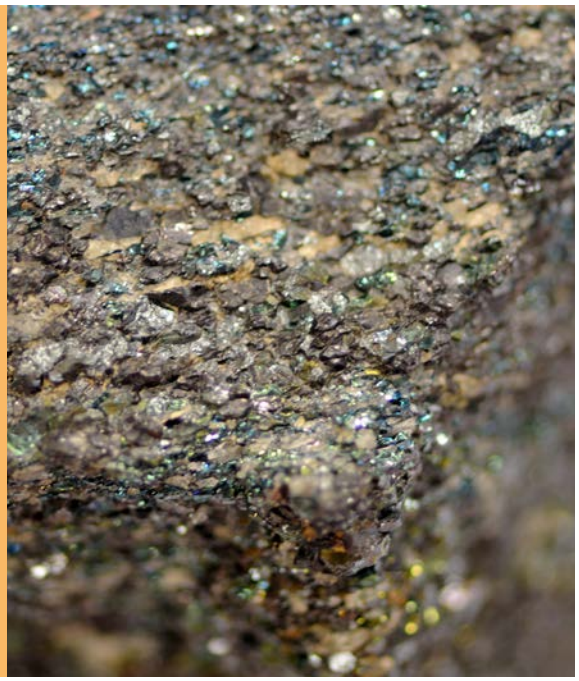
Mining in Europe makes it possible to meet the EU's minimum demand for metals & minerals to upgrade and maintain infrastructure; ensure that urbanisation is resource-efficient; deploy new sustainable technologies; care for the increasing number of elderly people, and connect with growth markets outside of the EU through exports. Additionally, it can and does enable provision of health, child-care, housing and energy supplies to its host communities.

Europe's high-tech mines serve as examples to other facilities in the world in terms of safety, energy efficiency and general operating efficiency. Yet, the mining industry's ability to contribute to an economically stronger Europe is currently being constrained by Europe itself. Access to deposits, skilled labour and competitively priced energy are some of the things we expect European economic policy to deliver – for the long-term good of the European Union.

Whether we want to access primary or secondary raw materials, access to risk capital will remain a challenge and could be facilitated by a European investment facility for exploration, mining and waste management operations.

"We, as an industry, invest hundreds of millions into a project that will produce jobs, taxes, infrastructure and a future to many communities where there was at best sheep previously. Is that not value?"

Mark Rachovides, President of Euromines



Supporting exploration

Looking at mineral exploration activities, data suggest that the EU's minerals potential is under-explored and under-exploited. Mineral exploration is an important step in the mining life cycle because it contributes to the discovery of potential new deposits and the opening of new mines. Yet there is still a low level of investment, despite of the mineral potential in the EU. Furthermore, in recent years, investment in metallic minerals exploration has steadily decreased, both in the EU and globally. This is mainly due to prices, a lack of incentives and access to risk capital, not due to lack of exploitable resources.

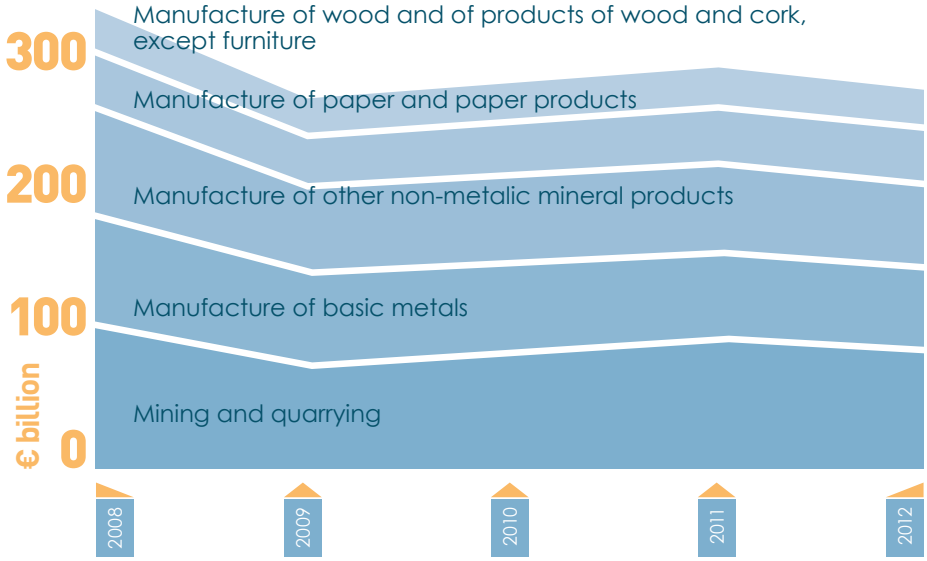
A Euromine's Quick Guide provides potential investors with short, readable summaries of EU/International Investment Agreements

Institutional framework conditions — national minerals policies, data on mineral endowments, environmental regulations, public acceptance, etc. — can either impede or expedite the development of mining operations. The policy framework and regulatory structure in particular are important factors that affect the EU's attractiveness to mining operations. Frequently updated or new legislation, changing requirements impacting cost structures, as well as at times weak implementation are obvious deterrents to investors. The sound-proofing of administrative procedures would be recommended. Attracting investment for exploration in Europe is one of the key objectives of the EU-Canada study launched by the Commission on an investment facility (see next page).

Providing value and employment

Taken together, the raw materials industries in 2012 provided EUR 280 billion of added value and more than four million jobs. However, the economic importance of the raw materials sector goes far beyond the economic activities strictly related to the extractive and processing industries.

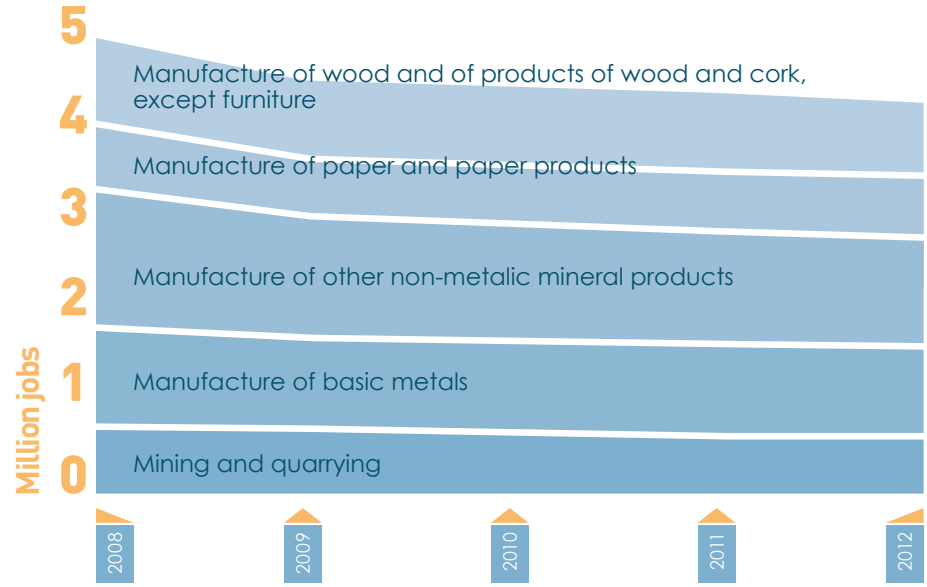
Value added by raw materials sector in the EU



Looking at the metals value chain alone, the secure supply of raw materials is essential for jobs in downstream manufacturing sectors. These include the production of fabricated metal products, electronics, and machinery and equipment. It is estimated that more than 11 million jobs are affected, equal to 40% of the jobs and value added from the EU's entire manufacturing sector.

If the EU wishes to maintain this employment, it needs to ensure that the sector can expand in Europe. For competitive and technical reasons the sector needs to automate as much as possible, which may mean job losses. Hence, it will be possible to maintain this vital element of the EU economy only if mines can be extended, new mines opened and the whole supply chain kept and extended in Europe.

Jobs by raw materials sector in the EU



EIP Scoreboard 2016, based on data from Eurostat, retrieved on 20 May 2015. Value added at factor cost from the Annual detailed enterprise statistics for industry, code sbs_na_ind_r2. Number of employees from Industry by employment size class statistics (NACE Rev. 2, B-E), code sbs_sc_ind_r2.

Involving all stakeholders on a national and regional level

In 2016 Euromines and its members continued their efforts to involve stakeholders at all levels through conferences and national industrial roundtables.

Official Conference of the Slovak Presidency to the European Union: 21st - 22nd November 2016, Bratislava

Euromines continued its tradition to hold conferences in cooperation with the EU Presidencies. The theme of this year's conference was "Sustainability of Mineral Resources and the Environment". The conference and accompanying exhibition procured a high level of participation from Slovakia, Poland and the Czech Republic with more than 100 participants.

The conference addressed the EU's adopted policy of the Circular Economy by which a more holistic approach should be taken to managing resources and related wastes. Throughout the whole life cycle improved efficiency in the use of resources needs attention.

In addition to the mineral resources we extract and the resources we farm, human resources are important components in achieving our goals. This is why we believe such conferences are extremely valuable. Advances in research and technology and in management practices need to be disseminated. The EU's BAT documents and many other governmental or industrial best practices guides help us to bring the latest knowledge to the wider community and drive progress.

Cooperation with the European Economic and Social Committee

It is in the nature of the EU that Member States, and sometimes even regions, are the key-holders to industrial and supporting raw material policies. Hence, it is felt that addressing national, regional and local questions by stakeholder consultations in Member States is the best way forward: Euromines therefore supported the European Economic and Social Committee with an initiative in 2015 and 2016, encompassing:

- An active dialogue on national and regional economic policies and their relevance for raw materials supply issues;
- Stimulating engagement with a diversity of stakeholders and governmental institutions;
- Encouraging transparency and understanding of current challenges such as the limitations of current and future supply and discussion of possible solutions.

> *"We need to praise and demonstrate the success stories and then spend money to bring others up to the same level. You have to point out the countries that are strong in certain areas such as regulation, why they are strong, and then engage with countries that aren't so good to identify the key areas in which they could improve and enjoy the same success."*
>
> Mark Rachovides, President of Euromines

The Industrial Roundtable Series of 2015 and 2016 was organized by the European Economic and Social Committee's (EESC) Consultative Commission on Industrial Change (CCMI) in partnership with relevant European and national organizations: Euromines, Euracoal, IndustriAll Europe, the European Commission and numerous national high level partners from academia, geological surveys, Non-Governmental Organisations and civil society.

The various national Roundtables were conducted in:

- 2015: Spain (March), Slovakia (April), Romania (June), Finland (September), and
- 2016: Portugal (April), Ireland (May), Poland (June), Czech Republic (November), Belgium (November),
- There is a need for a medium-term action plan until 2030 and a long-term one till 2050. This action plan needs to address the following challenges:
- security of raw material supply including the definition of base load, specific requirements for enabling technologies and addressing economic resilience;
- addressing the energy/climate change nexus including development of clean technologies, sustainability of regions facing closures of coal mines, and ensuring of raw materials for alternative energy generations and uses.

Member States consider the EU's mineral resources potential as a factor of economic development. It is therefore necessary to define an integrated approach to this sector, covering the economics, social and environmental issues, as well as the definition of a legal and institutional framework for the effective exercise of the various activities.

Creating overseas partnerships

At the end of 2016 Euromines became actively involved in two major international projects financed by the European Commission.

Canada

The general objective of the first project "Feasibility Study for an EU-Canada Mineral Investment Facility" is to support the Raw Materials Initiative objective of guaranteeing access to a secure and sustainable supply of Raw Materials for the EU industry.
The feasibility study, which will encompass associated events and stakeholder dialogue, should analyse the current state of play of co-operation between the EU and Canada on the mining sector and related technology and services. It should then conclude how to better promote and structure this co-operation and whether this could be achieved through the establishment of a mineral investment facility (MIF) between the EU and Canada, examine all options within the context of the EU-Canada relationship in the field of raw materials, and make a proposal on the best design of a potential MIF. The project was awarded to Ernst & Young, with MAC and Euromines as subcontractors.

Latin-America

The aim of the second project "EU-Latin America Mineral Development Network Platform" MDNP is to bring together, building on existing multilateral cooperation, all relevant stakeholders from entities and disciplines linked to the non-energy extractive industries in the EU and the participating Latin-American countries. It will thereby support a continuous and structured cooperation between the EU and Latin America, reinforcing the dialogue, promoting cutting edge technologies, strengthening business, institutional and academic ties and opening new business prospects, thus leading to win-win situations between the two strategic partners. On the basis of an ad-hoc, comprehensive analysis of the EU and Latin-American extractive sectors, the MDNP will be designed to enable spaces for networking, information gathering and exchange of best-practices.

In April 2018, the Mining Exploration and Trade Show Conference (METS) www.mets2018.eu will be organized for the first time in Madrid for all interested stakeholders. EU and Latin American partners will be able to meet in person, gather first-hand information, engage in discussions and promote their technologies, companies and organizations.

This action is embedded in the Raw Materials Initiative (first pillar) and in the Strategic Implementation Plan of the European Innovation Partnership on Raw Materials (third pillar). The leader of the Consortium is Projekt-Consult, joined by Euromines, Zabala, and DMT.

The extensive benefits of these partnerships make these international projects essential to the ongoing success of mining as a European industry as well as for meeting the current and future mineral needs of European citizens. Indeed, they will further our endeavours to properly contribute to the wellbeing of our people as we nurture our businesses and organizations.

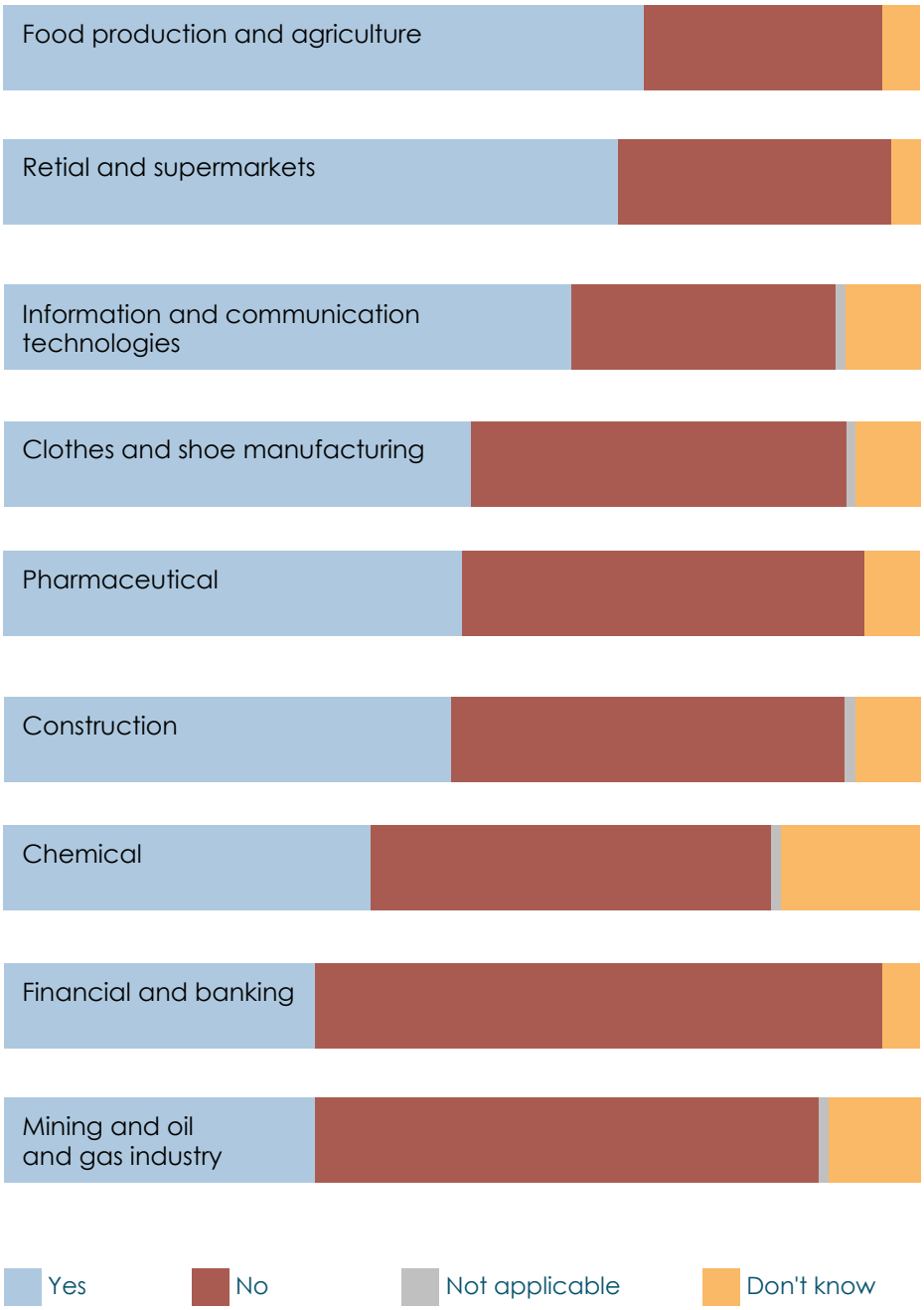
Changing the image of the industry

Public acceptance is another factor that greatly affects mining companies' operations. Data show that public acceptance of extractive activities in the EU is low as compared with other economic sectors, which is partly due to the past performance of the sector, but also to the continued political support for the service industry which should not have neglected the existing industries whilst promoting new ones.

Perceptions of mining may vary across Member States, but data show that compared with countries outside of the EU, overall trust towards the extractive industries within the EU is relatively low (below 50 %).

Public perception of the efforts of various types of company to behave responsibly towards (2012)

Do companies make efforts to behave responsibly towards society in our country? Average values for the EU* by type of company - Eurobarometer survey



** EU average coresponds EU 27 since the survey took place before Croatio joined the EU.*

Source: EIP Scoreboard 2016, JRC analysis based on data from the (2013) Flash Eurobarometer 363

Factors such as environmental impacts, highly-publicised accidents and the NIMBY effect (not in my backyard) contribute to a negative perception of the effects of mining activities and overshadow the benefits.

Yet public opinion plays a major role in influencing government policy. Legislators can't feasibly prioritize agendas that will make non-energy extraction efforts plausible, safer, more efficient or more sustainable if their citizens are closed off to any and all expansion.

To help the general public understand how far-reaching the benefits of mining within the EU are, Euromines is taking action in a number of ways.

"Before It's Yours, We Mine It"

This slogan and campaign connects raw materials extraction to the many ways it shapes our daily lives. Among other communication tools this slogan was used as the title to a book that was published by Euromines in 2016. The information presented is relevant to a broader audience and can help to shake public perceptions of mining. This slogan permeates all efforts to connect with the general public.

EUmining.org

In addition to the main Euromines.org website, we have launched EUmining.org to help improve the image of the mining industry and draw clear connections between the raw materials mined in the EU and the products and infrastructure where they end up. It is highly visual and written in a conversational manner that is more easily readable and appealing to the general public. Among other things, the website features a Mineral of the Month as well as an Event of the Month that connect raw materials to current events. In 2016 the website was redesigned, and in 2017 it was adapted for mobile devices.

Social media

Data show that the development of smartphones and emergence of social media are changing how people receive news and communicate with each other. There is an extremely limited number of ways to connect with the general public, but social media is one of them. It is also an effective and affordable choice.

It is nearly impossible to connect with the general public (those who have no direct or professional connection to the mining industry) without a presence on social media. This is especially true for younger generations who make up more than half the population and will be the source of future employees and innovators in the mining industry.

Social media is also an affordable way to engage in two-way communications with the wider stakeholder community that includes investors, industry analysts, community organizations and the media. To reach both types of audiences, we have continued the Euromines accounts on Facebook, Twitter and LinkedIn, and we have initiated EUmining accounts on Facebook, Twitter and Instagram.

Newsletters/Quick Guides

These publications reach beyond the Euromines member base and connect with an external audience that is relevant to raw materials extraction.

The Quick Guides provide generic information about the issued legislation relevant to the mining industry and providing positions on policy topics that are currently under discussion. The current list of publications is as follows:

- A Quick Guide to a Sound National Minerals Policy
- A Quick Guide to EU/International Investment Agreements
- A Quick Guide to an Attractive Investments Framework for Mines and Quarries
- A Quick guide to Community Development
- A Quick Guide to Socio-economic Analysis of a Mining/Quarrying Project
- A Quick Guide to the EU – Canada Free Trade agreement

"Good performance in health and safety, good performance in research and development, in innovation and in general corporate sanity, deserve more attention from the public than simply demands for better margins and cheaper input prices for consumer goods."

Mark Rachovides, President of Euromines

Chapter 3

Transition to Industry 4.0

Transition

"Serving as a network for cooperation and for the exchange of information throughout the sector."

Chapter 3

Transition to Industry 4.0

The EIP - delivering innovation across the sector

The European Innovation Partnership (EIP) is a new approach to EU research and innovation. By bringing together actors from across the entire value chain, it aims to streamline efforts and accelerate the market take-up of innovations that address the main challenges being faced in the EU.

Under current circumstances, the Europe 2020 target on R&D is unlikely to be met by 2020. European research and innovation are held back by fragmentation and inadequate framework conditions. There is not enough collaboration between the public and private sectors and the innovation gap is widening in Europe. Innovation stimulus in the mining sector, e.g. funding of research on mining techniques, will continue to be important after 2020. Investments into mining sector technologies are long-term by definition.

The continuation of EU support under Horizon2020 and its successive programmes as well as support from national RTD funding will be crucial to deliver innovation across the sector.

The importance of the EIT Raw Materials cannot be underestimated since it brings together an otherwise fragmented community that has been under pressure in the economic crisis and which can deliver enhanced education and training as a vehicle to improve competitiveness and business creation.

EIT on Raw Materials:

In 2017
there will already be more than

150
projects running

"Industry 4.0 is already having a major impact and will continue to do so. In the future, we're looking at fully automated mines. That won't happen right away – it will be a gradual process – but the lower levels in some mines in Europe are already being managed from above."

Corina Hebestreit, Director of Euromines

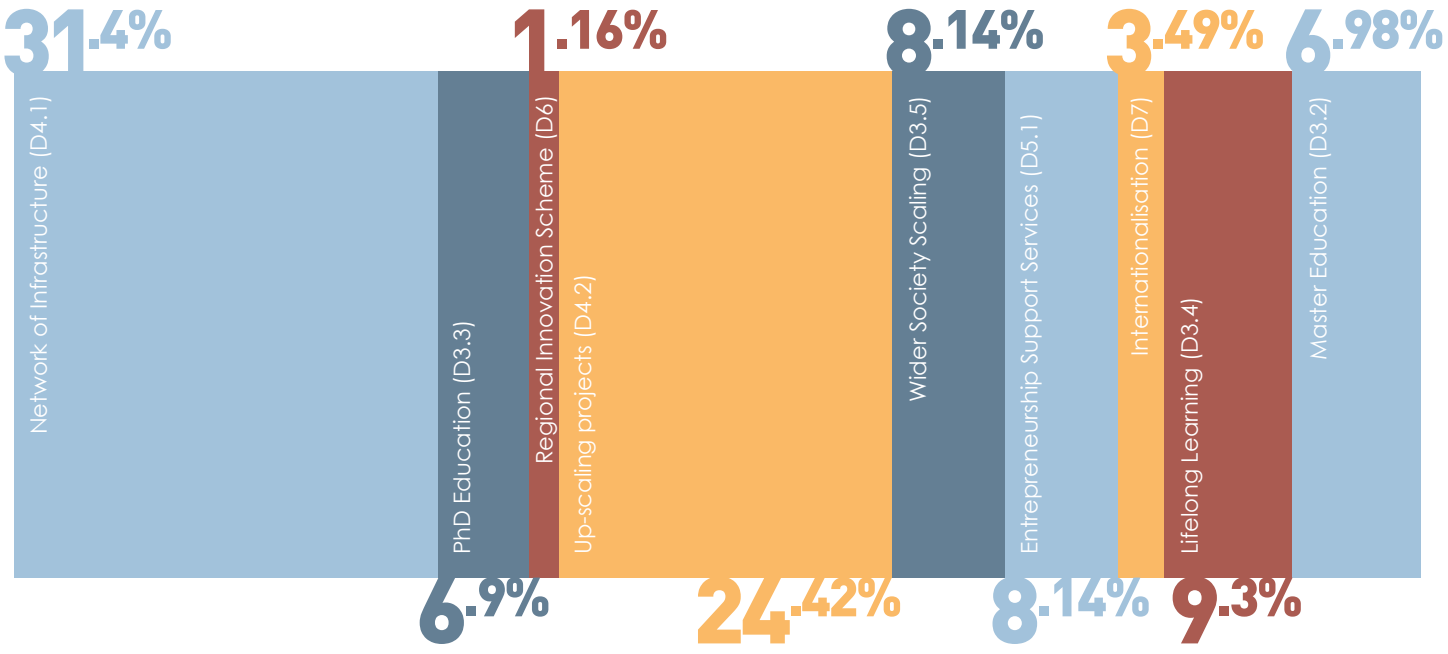
The EIT on Raw Materials – seed money for education training and start-ups

The European Institute of Innovation and Technology (EIT) has supported a Knowledge Innovation Community (KIC) on Raw Materials. This KIC is committed to increasing innovation capacity, competitiveness, and sustainable growth in Europe in the area of raw materials, and does so by strengthening collaboration across the entire value chain, from exploration to recycling.

Its vision is to turn the challenge of raw materials dependency into a strength for Europe. Its mission is to boost the competitiveness, growth, and attractiveness of the European raw materials sector via radical innovation and entrepreneurship by integrating multiple disciplines, diversity, and complementarity along the three sides of the knowledge triangle (research, industry, and education), and across the whole raw materials value chain. The KIC consortium consists of more than a hundred partners from all parts of the value chain. The operational implementation takes place in six regional hubs jointly delivering Europe-wide coverage and providing a strong basis for global cooperation. Quite a number of Euromines members are involved in these activities.

EIT KIC Raw materials - Projects 2016 by activity type

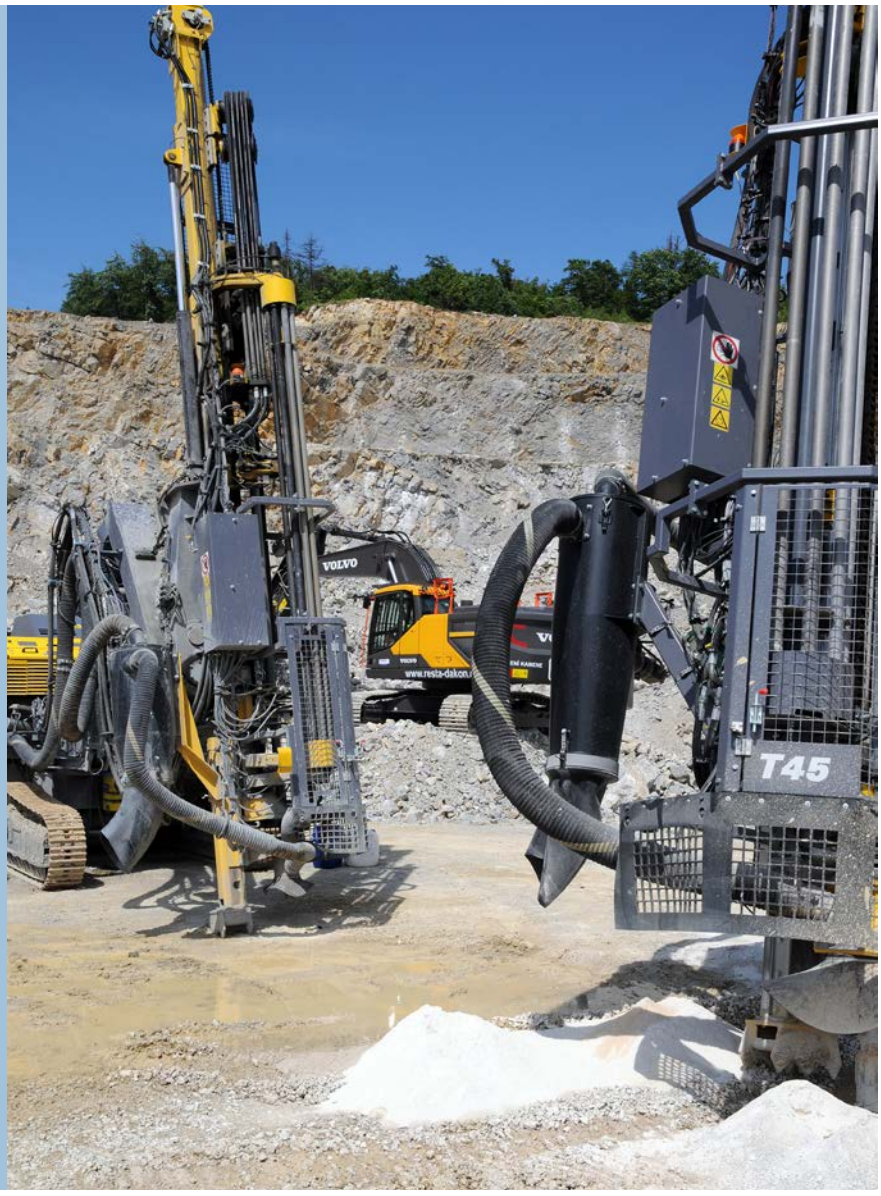
By activity – 86 projects



Source: World-Mining-Data, Federal Ministry of Science, Research and Economy, Vienna 2016

2016 was EIT Raw Materials first operational year, where several activities started up. In 2017, there will already be more than 150 projects running covering all activity types and all themes.[4]

4 *Euromines Newsletter, Sustainability of Mineral Resources and the Environment. 2016*



Growing R&D investments

EU statistics do not record exploration expenditure, hence the sector appears to have an overall low R&D intensity sector, which is not true. If these figures were taken into account, the situation would look different. However, even taking just the top R&D investor companies in the raw materials sector, they have almost doubled their annual R&D expenditure since 2003. Between 2003 and 2013, it grew more than twice as fast as public R&D investments.

Facilitating access to risk capital and assisting companies to bring innovations to the markets will be necessary.

EU patent applications in the raw materials sector on the other hand show a decreasing trend. Nevertheless, in 2011, the EU still accounted for 36 % of patent applications filed by the EU, Australia, Canada, Japan, Russia and the USA together.[5]

5 *EIP Scoreboard, European Commission, 2016*

European Technology Platform on Sustainable Mineral Resources

The European Technology Platform on Sustainable Mineral Resources (ETP SMR) is working to enhance innovation in the raw materials industry in Europe by uniting stakeholders from across the value chain to drive forward innovation, secure the mineral resources supply, and promote new and better jobs, while minimising the related environmental footprint. The ETP SMR Members act as a think-tank. Euromines still provides the President of the ETP SMR.

The European Technology Platform on Sustainable Mineral Resources is working to develop a roadmap for innovation for the future of the raw materials sector and supply. First and foremost that's within Europe, but, at the same time, by developing new technologies, products and materials for new applications – and doing so in a way which is more socially acceptable and more resource- and energy-efficient – we might also be able to help foster a sustainable supply of raw materials to other parts of the world.

The EU-funded VERAM Project

The two year VERAM project, funded under Horizon 2020, started in January 2016 and looks to the future. VERAM is the first and only coordination project that links two European technology platforms and two ERA-NETS to develop a Vision and Roadmap for European Raw Materials.

VERAM aims to provide an umbrella and coordination function for raw materials related research and innovation activities across the relevant ETPs and their national technology platforms (while maintaining the flexibility and individual visions of each ETP network) as well as with other related stakeholders across the raw materials value chain. This will increase synergies and facilitate uptake of research results and innovation across the sectors and their value chains.

Vision 2050

The final result of the activities will create a 2030 medium-term vision and a 2050 long-term Strategic Research & Innovation Roadmap for Raw Materials and enable collaboration between established transnational research and innovation programmes in the area of raw materials.

All participants who are members of various platforms and other networks will be invited to contribute to the definition of the vision by their own input, but also as facilitators for identifying other key stakeholders who can bring expertise.

To achieve these important objectives, the VERAM partnership includes representatives of all the major stakeholder networks. It will attempt to define different targets along a time axis and identify actions to achieve these. To achieve the vision, the VERAM partnership will review existing foresight studies from various sources, Strategic Research Agendas of the EU's ETPs, consult with representatives of major stakeholder networks along the different raw material value chains, represented by the ETPs, the ERA-NETs as well as the EIT KIC on Raw Materials.

A successful execution of the VERAM proposal will help the society to address the Societal Challenges by a more sustainable and resource-efficient use of raw materials and to reap the benefits of a growing circular economy.

Research and innovation activities in the area of primary and secondary raw materials are currently dispersed between different players and supported by a variety of fragmented funding sources both on the EU- as well as on Member States' level.

As major impact of VERAM's efforts it is expected to bring back investors and financing mechanisms into a secure and sustainable supply of resources.

Chapter 4

High Legal Standards and Transparency

Standards

"Participating in European and international policy-making."

Chapter 4

High Legal Standards and Transparency

Emissions

from the production of raw materials in the EU

decreased by

10-40%

Adapting to climate change goals is one of the key challenges for the raw materials sector for the future.

Data on air emissions suggest already a decoupling between raw materials production and air pollution and greenhouse gas emissions. Between 1995 and 2009, emissions from the production of raw materials in the EU decreased by 10-40%. Given that many parts of the raw materials industry are energy-intensive, this decrease is a reflection of the economic down-turn, fuel switches and the increased uptake and effectiveness of energy and air emission management systems in the EU.

Occupational health and safety is also important for social sustainability. While the raw materials sectors are relatively exposed to occupational hazards — accident rates are at the same level as those of other high-risk sectors such as construction — accident rates have been decreasing since the middle of the 1990s. New technologies will continue to decrease hazards and risks in the sector.

Further, the EU raw materials sector is a world leader in sustainability reporting. About one third of the Global Reporting Initiative reports in the raw materials sector are filed by companies with their headquarters in Europe.

Enhancing implementation and capacities

Waste from the extractive industry provides a challenge and an opportunity in times where the EU is committed to circular economy and wishes to secure access to raw materials in order to ensure its economic growth. It is therefore important that the EU continues to follow different avenues in order to improve its waste and land management. Resource efficiency needs to drive recovery of primary and secondary raw materials from extracted materials and old mine waste disposal sites, as well as end-of life products. Equally important, rehabilitation of old sites and application of modern technologies and techniques need to ensure the return of the land to society in an adequate condition for future use.

RTD and innovation into new techniques that achieve higher environmental, health, and safety protection has been and needs to be supported. In order to achieve better implementation across the EU, efforts need to be made in capacity building of all concerned stakeholders.

The objective of the newly formed EU **Mining Mentor Centre** is to provide to the industry and other public and private stakeholders high quality expertise and support in the area of mine and quarry issues (as may be stipulated by EU or related national legislations). This includes environmental management, water management, material recovery for added-value, mine closure, and site remediation and aftercare, as well as expertise on social restructuring and retraining. Mine closure and site remediation is a long term and complex process. Not only the technical implementation, but also social and health impacts, safety regulations, specific legislative expertise, etc. are needed to be dealt with in this complex process.

The EU Mining Mentor Centre is capable of providing the necessary competences with a proven track record of the experts involved.

The vision is to build a European Competence Centre that can give high quality support on these mine issues.

Its objectives are:

- To deliver high quality support on mine issues (as may be stipulated by EU or related national legislations) including environmental management, water management, material recovery for added-value, and mine closure and site remediation based on competences with a proven track-record of the experts involved.
- To deliver solutions for mine closure and site remediation which are long term and complex processes. Not only the technical implementation, but also social and health impacts, safety regulations, specific legislative expertise, etc. are needed to deal with in this complex process.
- The EU Mining Mentor Centre consists of a number of relevant and related experts who will cover the whole spectrum of issues and will provide training and consultancy services.

Working towards investment security and attractiveness

Dependency on imports from countries outside of the European Union is high, and within the EU, raw material resources are not fully taken advantage of. European mineral needs are only growing, and solutions to supply insecurity must be found. There are currently three EU-funded projects in progress that are aimed at strengthening national policies on non-energy mineral raw materials. In 2016 Euromines and its members were actively involved in these and continue to do so.

MIN-GUIDE

The MIN-GUIDE project aims to address supply security by developing a 'Minerals Policy Guide'. This online guide will provide a policy framework that promotes innovative and sustainable approaches to tackling challenges in the mining value chain. The project links to the European Innovation Partnership on Raw Materials (EIP) by feeding back its results into EU policy process and supporting outreach activities and community building.

THREE MAIN OBJECTIVES

- **Providing guidance for EU and Member States on minerals policy and legislation**
  An online Mineral Policy Guide achieves greater transparency of European and national minerals policies. The knowledge repository outlines the innovation potential of those policies and highlights good practice examples along the whole chain of mining activities.
- **Facilitating minerals policy decision making**
  MIN-GUIDE will profile the European Member States minerals policies, identify the needs for future policy development, explore legal frameworks for cross-border exploitation and review minerals database standardisation and systematisation. These activities facilitate efficient and effective policy decision making.
- **Fostering network-building for co-management and knowledge co-creation in minerals policy**
  MIN-GUIDE foresees numerous activities (Annual Conferences and Policy Laboratories) and tools (Collaborative Spaces) to create a community of key stakeholders that are engaged and committed to building an inclusive stakeholder community for sustainable minerals policy. Both tools and activities guarantee the participation and the exchange of expertise of all stakeholders.

Minlex

Minlex is a study aimed at defining a legal framework for mineral extraction and permitting procedures for exploration and exploitation in the EU.

A major factor limiting access to minerals is a lack of policies and complicated mining and/or environmental permitting procedures. Fewer permits, short duration of permits, expensive and time-consuming procedures for both operators and authorities, as well as complaints regarding a lack of transparency have all been problematic in recent years. There exist cases of unequal treatment on the basis of nationality, administrative barriers to the freedom of establishment, unreasonable timeframes and a multiplicity of administrative "stops" to get an authorization to explore or exploit resources.

To improve the policy and regulatory framework conditions of the extractive industries in the 28 Member States, the European Commission must have a full and complete understanding of what the current constraints are. The goal of the Minlex study is to foster supply security of raw materials within Europe by gathering and analysing information on every national mining and relevant legislation in all 28 Member States.

Minatura2020

Providing a policy-planning framework that comprises the "sustainability principle" for mining as with other land use is the key driving force behind Minatura2020. The objective of this project is to develop a concept and methodology for the definition and subsequent protection of "mineral deposits of public importance" in order to ensure their best use in the future.

Minatura2020 aims to assess exploitable mineral deposits such as known geological deposits, abandoned mines and historical mining sites in the face of other land uses (agriculture, forestry, habitats for fauna and flora, other environmental concerns, priorities for settlements and infrastructure, etc.). The deliberation between these diverse land uses requires adequate consideration of the exclusiveness, reversibility, and consequences on the surrounding areas.

For the coming two years Euromines and its members are looking forward to national dialogues on the findings of these three studies.

A balanced approach to energy efficiency

Emissions Trading System (ETS)

Euromines welcomed the European Union commitment to reduce greenhouse gas emissions and is prepared to take all necessary measures to reach this objective.

Nevertheless, the whole design of the EU ETS should not undermine the competitiveness of industry. Currently the future of the global energy policies remains unpredictable and current efforts to put a price on GHG emissions around the world remain fragmented. Both the coverage and carbon price vary significantly between jurisdictions. In such an asymmetric world, the EU mining sector is competing at local, national and international levels, especially in terms of costs. There is legitimate concern that climate action may undermine the international competitiveness of the industry. This will result in losing market share and profit margins to competitors who do not face similar carbon costs abroad.

For our industry, cost increases cannot be passed to consumers precisely because the mining and mineral processing companies compete at a global level and must maintain cost structures comparable to the ones of their international competitors. In this context, a strong industrial base, reliable and fair international competition and unhindered access to raw materials is of key importance for Europe's prosperity and growth.

As long as a global commitment to price carbon is not reached, free allocation at the European level should continue to be the key tool for sectors exposed to carbon leakage as well as financial compensation for the CO2 indirect costs and electricity prices. At the same time, alternative measures such as separate policy regimes for industrial and power generation sectors and the inclusion of imports in EU ETS should be analysed and further explored.

The use of the financing mechanisms should be transparent and clear, and support the objectives of the 2030 climate and energy framework.

Continuing environmental protection and restoration

Keeping the new Circular Economy rolling

The European Commission's new Communication on Circular Economy is focussed on maintaining the value of resources rather than necessarily reducing their use; explicitly acknowledges the important role that primary raw materials will continue to play; and is structured to reflect the different needs and capacities of sectors when it comes to resource use, waste generation and waste management.

Having recognised that EU Product Policy would be one of the main means for the European Commission to implement its Circular Economy policy proposal, Euromines contributed €10K annually to a 2014-16 pilot of the EU's Product Environment Footprint calculation (PEF), which draws heavily on Life Cycle Assessment (LCA). At the beginning of 2016, two peer-reviewed journal articles[5,6] on the current inadequacies of LCA were published reflecting over four years of work with Euromines members, explorers, geologists, economists and LCA experts, including during workshops co-hosted with the Natural History Museum London and the International Council on Mining and Metals (ICMM). Following publication, the European

5 *http://link.springer.com/article/10.1007%2Fs11367-015-0991-7*

6 *http://www.mdpi.com/2079-9276/5/1/12*

Commission Joint Research Centre recognised the issues raised and the need to avoid letting the PEF's treatment of natural mineral resources result in poorly-founded policies.

Revised PEF Guidance, adopted by the EU PEF Steering Committee in October 2016, therefore recommends comparing a product's mineral resource consumption to the entire content of the Earth's crust rather than to estimates of Mineral Resources and/or Reserves.

Environmental Liability Directive

Euromines welcomed the Environmental Liability Directive (ELD) implementation Report, published on 14 April 2016 by the European Commission. The assessment confirmed Euromines' position, concluding that the scope of the environmental liability directive in force is sufficient to cover any damage and there is no need to extend it to include the mining industry specifically, as initially suggested. The evaluation found that the Directive is generally consistent with other parts of EU environmental law and with the relevant international conventions. The Directive is satisfactorily integrated in the EU acquis, supplementing other environmental legislation, in particular the Environmental Impact Assessment Directive, the Industrial Emission Directive and legislation on waste, including the Mine Waste Directive.

All throughout the ELD implementation assessment, Euromines claimed that:

- All mining waste management activities falling within the scope the Mining Waste Directive are already covered by Annex III of the ELD and are therefore subject to a strict liability regime
- The scope of environmental liability directive in force is sufficient to cover damage and there is no need to extend it to include the mining industry in the Directive
- A fund to cover environmental liability and losses will result in additional costs and administrative burden for the extractive sector already subject to very stringent requirements under EU legislation, without increasing the uptake of preventive actions already taken by our sector.

Best practice management of waste from the extractive industries

During 2016, Euromines co-ordinated industry working groups to provide input to revision of the BAT document, including two-day meetings in April and September to discuss issues for members on either side of release of the first draft BAT document in June. The draft contained several gaps in sector-specific sections, for which generic BAT were unlikely to be applicable. Euromines members delivered comments to the draft BAT document before the European Commission's deadline.

Meanwhile, a Task Force of the Euromines Environment Committee supported a European Commission study on inspection and monitoring practices for extractive waste facilities in Europe and delivered a set of industry messages to the responsible consultant. The same Task Force provided comments to drafts of the ICMM's Tailings Review report and its Tailing Governance Framework, adopted by ICMM member companies at the end of 2016.

Euromines has also supported voluntary preparation of a European Handbook on hydraulic transport and storage of extractive waste as a guide to European practice as well as a European Standard on hydraulic placement of extractive wastes (prEN 16907-7). This handbook will be published during 2017 and the new European Standard is preliminarily scheduled for publication early in 2018.

Photo: © Boliden

Prioritizing Health & Safety

Health and Safety is a key priority for the sector and 2016 was determined by active participation in the consultations for the three major Commission initiatives:

- The Commission's Occupational Health and Safety (OHS) Refit exercise,
- The amendment of the Chemical Agents Directive, and
- The amendment of the Carcinogens Directive.

In addition, Euromines held its first Health and Safety Conference in Luxembourg.

The OHS refit included extensive stakeholder consultations and, at the end, lead to the conclusions that only a few directives needed reworking.

Chemical Agents Directive – OELs for NO_2, NO and CO

In February 2015, the Commission and the Working Party on Chemicals finalised their proposals for an IOELVs and agreed on the following limits for NO of 2 ppm and NO_2 of 1 ppm.

Due to the current difficulties of the sector to implement such limit values, after long discussions, presentations and argumentations, the Commission agreed to propose for NO, NO2 a Recital and a specific Article in the amendment of the CAD (4th list of IOELs) giving a Moratorium of 5 years for the application of the IOEL in the extractive and tunnelling industry. This was accepted by the Member States on the specificity of the extractive industry, and time was granted to improve technical

feasibility. Each Member State can take advantage of this period before revising the national OEL.

A review will be carried out after 3 years. The Standing Working Party on the Extractive Industry will accompany the process with its work programme and a task force. The first steps in 2017 will be a baseline study of the current situation and a best practice guide in implementing the OELs.

Amendment of the EU's Carcinogens Directive (CMD) with OELs for respirable crystalline silica

The European Commission published a proposal to revise the CMD in May 2016 and to revise the annexes by adding 24-25 substances in two waves. An impact assessment on possible changes was made but the potential impact on the minerals industry is certainly underestimated.

At the Dutch Presidency conference "Preventing work-related cancer" held in May 2016 in Amsterdam, the Commission revealed its possible initiative on presenting a proposal to introduce Occupational Exposure Limit values (OELs) for a third set of 13 priority chemical agents under the Carcinogens and Mutagens Directive (CMD).

The industry and the unions of many industrial sectors organised around the NEPSI agreement presented many reports and studies to prove that good risk management prevents an OEL lower than 0,1 mg/m³.

Euromines Health and Safety Conference in Luxembourg

The conference was held on 20-21 April 2016 in Luxembourg. It attracted over 40 participants including representatives of national H&S authorities, policy makers (EC), industry representatives and other associations. During the first day of the event, the presentations focused on safety culture. The speakers presented the industry´s achievements in modern health and safety management. On the second day of the conference, the main theme was health monitoring. The conference allowed an interesting exchange of experiences and discussions. The outcome will be a publication on safety culture in the extractive industry in 2017. The Secretariat envisages organizing the second conference on H&S which will be held in November 2017.

ESCO and the EU-wide standardisation of professions in the extractive industry

In order to complement the sector's efforts in innovation, the sector needs the necessary knowledge and skills or skilled workforce. The mining and minerals sector in particular is already reported to be suffering from a significant talent shortage.

ESCO is the multilingual classification of European Skills, Competences, Qualifications and Occupations relevant for the EU labour market and education and training. ESCO is part of the Europe 2020 strategy.

The Commission services launched the project in 2010 with an open stakeholder consultation. ESCO has been developed in an open IT format, is available for use free of charge by everyone and can be accessed via the ESCO portal. The first version of ESCO was published on 23 October 2013. The classification was revised through the end of 2016. The classification was revised through the end of 2016.

The Commission developed a list of 27 sectors of economic activities which all together reflect the European labour market. One of them is Mining and Heavy Industry. Euromines was part of the Sectoral Reference Group which developed a list of occupations that reflect the labour market of their sector. In occupational profiles they record knowledge, skills, competences and qualifications that are related to each occupation. The group completed its work and presented to the ESCO board in June 2015 which adopted the report and made it available for series of professions (for details visit: https://ec.europa.eu/esco/portal).

In the future, the ESCO programme foresees developing a skills programme and an assessment of the possibilities for harmonising qualifications.

As a follow-up in 2016, the Social Dialogue Committee developed an initial plan of establishing a Skills Roadmap for the sector and will follow this up in 2017 with a special seminar on skill demands and training and education schemes across Member States.

www.eumining.org

"Before it's yours, we mine it."

euromines

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