

Europe: A continent revises its raw materials policy

After new policies in Japan, the US and China, Europe is looking at its raw materials supply



LKAB's iron-ore-mine in Kiruna

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AT THE end of last year, the European Commission published its new raw-materials initiative; 'Meeting our critical needs for growth and jobs in Europe'. Realising it needed to address this very important issue at the highest level in order to ensure the security of supply for economic growth, Europe proposed a host of measures to improve the delivery of raw materials.

The term 'raw materials' is often used to denote materials that came from nature and it can cover many different commodities. Most of these commodities are already covered by specific EU legislation and the new

initiative deals mainly with the 'non-energy extractive industry', which is responsible for the extraction through mining and quarrying of over 50 broad categories of minerals within the EU.

The sector is usually considered to consist of three main sub-sectors: construction, industrial and metallic minerals. This is based on the physical and chemical characteristics of the minerals produced and on their uses and the industries to which they are sold.

In recent years an array of EU legislative measures, and a lack of public awareness in Europe, has made access to raw materials for the extractive industry more difficult and time consuming. For this reason, Euromines (the European association for mining industries, metal ores and industrial minerals) has welcomed this initiative wholeheartedly.

"The challenges in ensuring a sustainable supply of non-energy raw materials for the EU are multiple, complex and interrelated"

The latest economic crisis, and the associated crash of the industrial and consumer markets, has also led to a decrease in raw-materials prices. This will result in a lack of investment in the raw materials sector, which, in Europe in the past decades, had not been very high in the first place. It is foreseeable that when economies

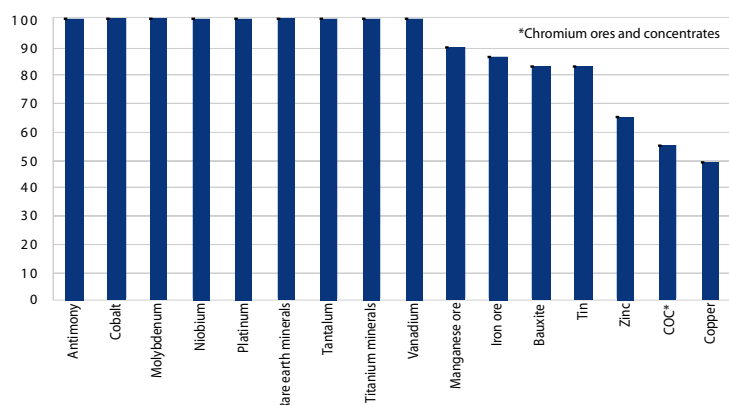


Figure 1: Metal concentrates and ores (net imports as share of apparent consumption)

NB: Metal concentrates produced at or nearby mining site; Net imports = imports-exports;

Apparent consumption calculated as EU27 (mine production + imports - exports)

Source: DG Enterprise and Industry data from British Geological Survey (2008) and Bureau de Recherches Géologiques et Minières (2008)

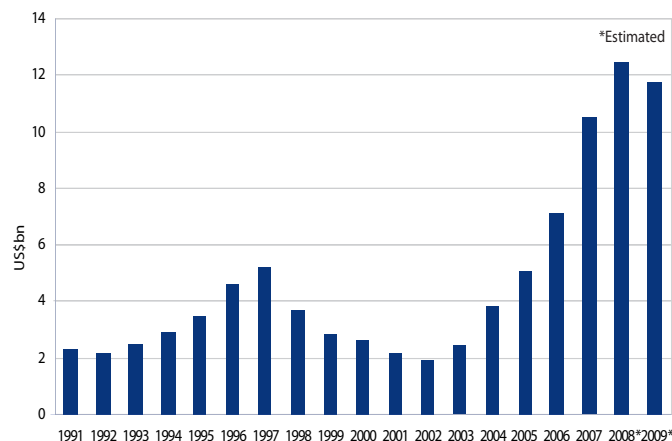


Figure 2: Global mineral exploration expenditure

Source: Raw Materials Data, Stockholm, 2008

EU32* MINE PRODUCTION (SHARE OF WORLD TOTAL)

	Share (%)	EU32 countries with >1% world output (2007)
Silver	9.4	Poland (5.9%), Sweden, Turkey
Chromium	9.3	Turkey (7.0%), Finland
Zinc	8.6	Ireland (3.6%), Sweden, Poland
Lead	7.5	Poland (2.1%), Sweden, Ireland
Titanium	6.8	Norway (6.8%)
Copper	5.3	Poland (2.9%)
Tungsten	3.5	Austria (2.0%), Portugal
Nickel	3.2	Greece (1.3%)
Mercury	3.2	Finland (3.2%)
Bauxite	1.8	Greece (1.0%)
Iron	1.6	Sweden (1.2%)
Gold	0.7	-
Manganese	0.4	-

* Europe is defined as the 27 EU Member States (as of February 2008), the EU associates Norway and Switzerland, and the EU candidate countries Croatia, Macedonia and Turkey; this group of 32 countries is for convenience referred to as the EU32

Source: European Mineral Statistics, 2003-2007, British Geological Survey (2009)

TOP PRODUCING MINING REGIONS (2006)

	First	%	Second	%	Third	%
Fuller's earth	US	72	EU	12	Senegal	4
Graphite	China	60	India	16	Brazil	10
Feldspar	EU	60	Turkey	10	Thailand	7
Barite	China	55	India	12	US	7
Perlite	EU	54	US	19	Japan	10
Boron	Turkey	53	US	21	Argentina	12
Fluorspar	China	51	Mexico	17	EU	7
Zircon	Australia	49	South Africa	28	US	10
Phosphate	Morocco	49	China	18	Israel	4
Bentonite	US	44	EU	24	Russia	6
Vermiculite	South Africa	43	US	22	Ukraine	14
Talc	China	37	EU	16	US	11
Magnesite	China	32	Turkey	22	EU	21
Kaolin	EU	31	US	28	Brazil	19
Diamonds (gems)	Russia	30	Botswana	24	Canada	13
Potash	Canada	30	EU	17	Belorussia	16
Gypsum	EU	23	US	18	Iran	11
Salt	EU	22	US	20	China	18
Sulphur	US	19	Canada	17	China	16

Source: DG Enterprise and Industry calculations based on World Mining Data (2008).

pick up again the expected shortage in available raw materials will increase competition and prices, but might also limit economic development and innovation.

Traditionally in Europe the supply of raw materials has been a national issue for the individual EU members. Now, for the first time, the EU is looking at the supply situation in a co-ordinated fashion from a European perspective.

The EU enlargement in 2004 included many states that had substantial mineral potential. Equally, neighbouring countries have high mineral potential, and Canada and Brazil have also expressed a strong interest in bilateral discussions with the EU on policy.

In terms of this initiative, the priority will be to define a list of critical raw materials, with a focus on raw materials that are essential for the EU economy.

PROTECTING EUROPEAN INDUSTRIES

If the supply of commodity is interrupted, the European industries that rely on it could be hurt, as could the EU's economic growth.

Sectors such as construction, chemicals, automotive, aerospace, machinery and equipment provide a total added value of €1,324 billion and employ some 30 million people in Europe.

The challenges in ensuring a sustainable supply of non-energy raw materials for the EU are multiple, complex and interrelated. These challenges are likely to persist, or even increase. There is a need for a decisive response in order to ensure European competitiveness.

The issue of raw materials is being given high-level political attention and will be addressed in an integrated EU strategy that ties together various EU policies and promotes further co-operation between member states.

The successive Czech, Swedish and Spanish presidencies of the EU have put the raw materials

issue high up on their agenda. The European Commission has established two working parties to define criticality and best practices in accessing raw materials.

EU SITUATION

Despite the presence of an active metal-mining industry in the EU, there is a significant import dependency for most metallic minerals (domestic production is currently limited to about 3% of world production, see figure 1).

Industry and academia claim that this is occurring despite the continued presence of significant mineral potential within Europe. Although the EU produces a wide range of industrial minerals – it is the biggest, or second biggest, producer of feldspar, kaolin, magnesite, perlite and salt – it remains a net importer of most of these commodities.

The situation is different for construction minerals, in particular aggregates. There are many suitable resources in the EU and, despite the large quantities

“An array of EU legislative measures has made access to raw materials for the extractive industry more difficult and time consuming”

used (3,000Mt/y), industry is generally able to meet this demand – provided the deposits are not sterilised through incompatible planning measures.

The ability of Europe's extractive industry to continue to supply existing markets and to contribute to global economic growth will depend on



K+S's Bernburg salt mine in Germany

additional resources becoming available.

The EU has many raw material deposits. However, in the past decade their exploration and extraction have faced increasing competition for different land uses and a highly regulated environment, as well as the technological limitations of accessing mineral deposits.

It is a myth that Europe is mined out and that no more metals and minerals can be found. For the time being only the near surface geology of Europe and the related mineral deposits are well known – subsurface deposits have not been fully explored.

The European Commission believes that an improved EU supply of many minerals lies in better access and permit extensions for existing deposits and in the development of deep-seated concealed deposits.

At this moment the focus in the EU is directed at creating a vibrant exploration market to provide new resources to the mining sector and to invest in new exploration with modern technologies.

IMPROVED ACCESS

Once the exploration has found deposits and the potential for extensions of existing operations, it will be important to improve the current investment climate for the extractive sector. A European Commission working group is looking at the legal framework across EU Member States. Permitting conditions and other administrative burdens, as well as measures to stimulate investments, are all being examined.

The access to raw materials from other parts of the

THE MAN FROM BRUSSELS

“We must act to ensure that access to raw materials for enterprises will not be hampered. We need fair play on external markets, a good framework to foster sustainable raw materials supply from EU sources as well as improved resource efficiency and more use of recycling. It is our aim to make sure that Europe's industry will be able to continue to play a leading role in new technologies and innovation.”

Gunther Verheugen (left), the European Union's commissioner of enterprise and industry, in November 2008.



Picture: Bloomberg

EU32* INDUSTRIAL MINERALS PRODUCTION

	World share %	EU32 countries with >2% world output (2007)
Feldspar	61.9	Turkey (27%), Italy, Spain, France, Czech Rep
Kaolin	22.2	UK (6%), Germany, Czech Republic, Turkey
Bentonite/Fuller's earth	22.1	Greece (5.6%), Spain, Italy, Turkey
Magnesite	21.5	Turkey (8.9%), Slovakia, Austria
Gypsum	21.0	Spain (9.4%), France
Salt	20.3	Germany (5.4%), Netherlands, France, UK
Talc	15.9	Finland (6.2%), France
Potash	13.7	Germany (10.9%)
Mica	11.5	France (6.5%), Finland
Fluorspar	4.2	Spain (2.4%)

* See EU32 mine production, page 25, for explanation of EU32

Source: European Mineral Statistics, 2003-2007, British Geological Survey, 2009

EUROMINES

Euromines represents the interface between the European extractive industry and the European authorities and international or intergovernmental bodies.

The aim is to establish a constructive dialogue with governmental institutions in order to ensure early consultation in all those areas of EU policy and legislation affecting the industry, and to asserting the industry's views and positions.

At the same time, Euromines promotes the benefits of the industry and its products to society, endeavouring to

uphold the industry's interests and raising public awareness accordingly.

The association represents large and small companies in Europe and in other parts of the world. They together provide jobs to more than 350,000 people. The activities and operations of these members produce more than 42 metals and minerals.

Countries represented by Euromines are Austria, Bulgaria, the Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, the Netherlands, Poland, Romania, Slovakia, Spain, Sweden, Turkey and the UK.

world is seen as equally important. The EU wishes to ensure that environmental, health and safety, extraction and processing issues will be assured worldwide.

The debate is not just about easy, cheap access, but also the wish for competitively priced raw materials balanced with sustainability.

Innovation in the sector in order to meet the high expectations for a sustainable raw materials supply in the future will be a key element. A European Technology Platform on Sustainable Mineral Resources (ETP SMR), together with many European and international partners, has already launched, and will continue to launch, major research projects into the future of mineral exploration, extraction, processing and new materials.



KMK's Krasno feldspar quarry in the Czech Republic

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