The Renaissance of EU Mining

A contribution to Europe’s material sustainability
minerals make more of life
Euromines Steering Committee
June 2004-June 2006

President:
TOM NIEMI
Boliden, Sweden

Vice President:
NORBERT SCHÄCHTER
Wirtschaftsvereinigung Bergbau, Germany

Vice President:
ANDERS FURBECK
LKAB, Sweden

Vice President:
DOMINIQUE BAMAS
Magnesitas de Navarras, Spain

Member:
THOMAS DRNEK
RHI Refractories, Austria

Member:
Dorian Emmett
Anglo-American, UK

Member:
GUY THIRAN
Eurometaux

Member:
CORINA HEBESTREIT
Euromines
# Table of contents

**Foreword by the President**

1

1. **The renaissance of mining in Europe - New deposits - New mines**
   - The sector’s contribution to economic growth and economic competitiveness 2-9
     1.1 The Chinese boom - supply of metals and minerals for a European downstream industry 2-4
     1.2 Staying competitive - framework conditions and innovation 5-9

2. **The sector’s contribution to our standard of living and the world of tomorrow** 7-10
   2.1 Thematic strategy on the sustainable use of natural resources 10
   2.2 Sustainable Development Indicators 10
   2.3 The EU’s environmental legislation and its impacts on the EU extractive industry 10-12
     - The EU Mine Waste directive
     - The EU Energy policy
     - The EU Chemicals Policy

3. **The sector’s contribution to Europe’s social cohesion** 13-17
   3.1 Social Dialogue at European level 13-14
     - Extractive industry
     - Multisectoral
   3.2 European Network for Mining Regions 15-16
     - Environmental partnership for Mining in Romania
   3.3 Education and training - improving the human capacity in the sector 16-17

**Euromine members** 18-19
2005 was a good year for the Global and the European extractive industry. The consumption and prices for commodities reached a high level and allowed the companies to recover after years of depressed prices. The good economical results facilitated new investments in exploration, research and development and investments in new production projects. The Chinese demand for primary and secondary resources remained strong and is expected to continue to grow, even if it may be not at the same rate as in the past year. The development of the energy sector, during the year has been dramatic. Energy prices have increased and put extreme pressure on the extractive industry in Europe even to the extent that plant closures have been announced. Going forward the development of this sector will have an important role also in Euromines to assure our industry can compete on equal terms with the rest of the world. 

The association has developed further and strengthened its relationship to the New Member States. We are pleased to see an increased active participation of our Eastern European colleagues and also the European Commission’s support in fostering the further integration. It has been interesting to follow the need for information that has been requested from our New Members, which request has naturally put a lot of pressure on the whole organisation for for timely and quality responses. The year 2005 has also seen the adoption of a new Directive on the Management of waste from the extractive industry and the development of new directives in the area of water management. All these will bring additional requirements for the sector in terms of environmental protection and bureaucracy which need to be dealt with. That being said, the consultation process, in particular on the “mine waste directive” was well handled and has yielded good results.

For the coming months we are looking forward to similar good consultations on water and soil.

The association staff has grown to 4 permanent staff members. In 2005 we welcomed Johannes Drielsma who joined in June as our environmental manager. At the end of the year Nathalie Williams joined the Secretariat who replaced Mr Fudel who had left mid-year.

I would like to thank all our members, the commitees and especially our staff for the successful year 2005 and all the hard work they put in.

Tom Niemi
President
1. The renaissance of mining in Europe - New deposits - New mines

The sector's contribution to economic growth and economic competitiveness

1.1 The Chinese boom - supply of metals and minerals for a European downstream industry

2005 was a very successful year for the European mining industry. Prices for most commodities - after years of depression - reached levels which allowed for good profit margins and allow now for major new investments. The reason for all of this was the boom in the Chinese economy and that for many commodities China has been the main driver of consumption in 2005. It should be noted that Europe is relying in many areas on imports from other parts of the world. This is particularly the case for metal ores and concentrates, but also for a series of industrial minerals. Whilst China was and has been exporting many minerals and a growing number of products over the past years, it has also been massively absorbing primary and secondary raw materials from all over the world in 2005 which has led to an overall increase of prices for primary and secondary raw materials and has rendered deposits previously considered uneconomic economical under the current market conditions.

In terms of the general consumption of metals, China today consumes 17% of the world’s metals production and this is growing at an annual rate of 12%. This results in a 2% growth globally of all metals. Similar figures could be established for the consumption of industrial minerals since they are similarly linked with many consumer products. Taking into account the Chinese population growth, a longer strong increase in consumption is still expected although the various experts make different forecasts depending on their assessment of the energy situation in China. Decisions such as the building of gas pipelines from Russia to China, however, will fuel further growth expectations.

Consumption in industrial minerals has also risen considerably and means that in many industrial minerals the Chinese production provides 50% and more of the world production. Due to its
own strong industrial mineral deposits the surge of these commodities towards China has not been felt in Europe as strongly as on the metals side.

As a result new mines were opened, such as those in Germany or Sweden, others are in the planning phase; for 2006 even the reopening of previously mothballed mines is being considered. Major extensions and further investments in installations were implemented in 2005 and are going to be continued in 2006 and 2007. The new interest in mining as an investment opportunity was also reflected in the first joint seminar of Euromines and the London based Association of Mining Analysts in February 2005 which will be repeated in February 2006.

The annual conference on Exploration and Mining in Fennoscandia in Rovaniemi in December 2005 had a record participation of more than 400 people all interested in mining in Northern Sweden and Finland. Associations, such as the German Association for Mining in non-EU countries, are booming and held major meetings with country delegations such as China. Although the latest figures for 2005 are not yet available, it is expected that exploration budgets will have increased considerably in 2005 and will continue to grow for 2006.

In terms of percentage of world production relative to world landmass Europe (7% of landmass) contributes disproportionately to some metals. If Europe wishes to continue to supply its downstream industries and consumers with metal and mineral products it will have to continue mining in Europe and around the world in order to satisfy the demand in a world where there will be
increased competition for these commodities to guarantee development and an increased standard of living.

<table>
<thead>
<tr>
<th>Metal</th>
<th>% world</th>
<th>EU30 countries with &gt;1% of world output in 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>10.5</td>
<td>Poland (6.9%), Sweden</td>
</tr>
<tr>
<td>Zinc</td>
<td>9.6</td>
<td>Ireland (4.6%), Sweden, Poland</td>
</tr>
<tr>
<td>Titanium</td>
<td>8.3</td>
<td>Norway (8.2%)</td>
</tr>
<tr>
<td>Lead</td>
<td>7.3</td>
<td>Poland (1.8%), Sweden, Ireland</td>
</tr>
<tr>
<td>Copper</td>
<td>6.1</td>
<td>Poland (3.7%)</td>
</tr>
<tr>
<td>Chromium</td>
<td>4.7</td>
<td>Finland (3.3%), Turkey</td>
</tr>
<tr>
<td>Tungsten</td>
<td>4.6</td>
<td>Austria (3%), Portugal</td>
</tr>
<tr>
<td>Iron</td>
<td>2.3</td>
<td>Sweden (1.7%)</td>
</tr>
<tr>
<td>Aluminium (bauxite)</td>
<td>2.3</td>
<td>Greece (1.6%)</td>
</tr>
<tr>
<td>Nickel</td>
<td>1.8</td>
<td>Greece (1.6%)</td>
</tr>
<tr>
<td>Gold</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.7</td>
<td>-</td>
</tr>
<tr>
<td>Tin</td>
<td>0.1</td>
<td>-</td>
</tr>
</tbody>
</table>

The extractive industry provides a major contribution to the EU’s policy for sustainable development, not only by providing the basis for economic growth and social development, but also by continuously reducing its environmental footprint and supplying metals and minerals for many environmental applications.

It should not be forgotten that the European metals and minerals industry provides vital inputs to Europe’s economy and social well-being. In their great diversity, minerals and their derived products are necessary for almost every aspect of life: Housing, construction, transport, energy supply, health, information and communication technologies, space technologies, would be either nonexistent or suffer dramatically, without secure and stable mineral supplies to the EU economy.

It should also be noted that the increase of construction, housing and infrastructure projects in Eastern Europe as a consequence of EU Enlargement has led to a steady growth in that sector in the past few years, that aggregates production in those countries has increased as well and is needed if Eastern Europe’s standards of living and business development is to grow as expected.

<table>
<thead>
<tr>
<th>A European’s life time consumption of minerals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand &amp; Gravel: 307 t</td>
</tr>
<tr>
<td>Brown Coal: 158 t</td>
</tr>
<tr>
<td>Crushed Rock: 130 t</td>
</tr>
<tr>
<td>Petroleum: 116 t</td>
</tr>
<tr>
<td>Natural Gas (1000 M³): 99.6</td>
</tr>
<tr>
<td>Limestone, Dolomite: 72 t</td>
</tr>
<tr>
<td>Hardcoal: 67 t</td>
</tr>
<tr>
<td>Crude Steel: 39.5 t</td>
</tr>
<tr>
<td>Cement: 29 t</td>
</tr>
<tr>
<td>Rocksalt: 12 t</td>
</tr>
</tbody>
</table>

Source: P. Norrl & M. Ericsson
1.2 Staying competitive - legal framework conditions and innovation

DG Enterprise assessing the Competitiveness of the non-energy extractive industry EU

DG Enterprise began in 2004 to assess the competitiveness of the non-energy extractive sector. As a first step, a provisional assessment was made based on the characteristics of this sector in the EU and the Enlargement Countries, and consideration was given to some of the key issues identified in the past as being likely to influence the industry’s competitiveness. The assessment raised a number of questions, which were used to focus discussion:

- Choice of indicators to be used to describe the sector;
- The availability and quality of data required in producing the indicators;
- Time scales to monitor trends;
- The analysis;
- Assessment of the factors influencing competitiveness; and
- Links to other sectors of industry.

In the meantime the report is taking shape and in 2005 not only substantial information about the various sub-sectors but also first case studies and first drafts of recommendations were developed. It is expected that the analysis will be finalised in 2006 and that, in conjunction with other initiatives with regards to the competitiveness of the whole European industry, this work will benefit the industry.

Recommendations from the industry with regard to special policy recommendations can be summarised as follows:

- Reliable long-term legislative framework for the extractive industry supporting the supply of mineral resources from Europe in addition to world supplies
  - A growing number of member state authorities are creating competitive distortion by going beyond environmental legislation and submitting some producers to additional administrative and environmental restrictions. In times when there are, for some mineral resources, only a few EU producers left who are trying to compete within Europe and on the world market this is killing the smaller installations.

- Future access to land
  - Clearer land planning criteria taking into account the need to access resources
  - More consideration of competing land-uses, i.e. Natura 2000
  - Clearer regulation - the one stop - one shop concept
  - EIAs problems with cost-benefit analysis - need for guidance
  - Biodiversity risk assessment

- Access to capital and tax breaks for investments into minerals

- Reduction of permitting and administration

- Reduction of energy costs

- Support for the alleviation of skill shortage

It remains to be seen whether the European policy maker will take up these recommendations and what form the final document will take.
The Evaluation of the implementation of the EU Communication on the Sustainable development of the EU non-energy extractive industry from 2000

In 2005 DG Enterprise reviewed a number of its activities including the EU Communication on the Sustainable development of the EU non-energy extractive industry from 2000. It appointed a consortium of consultants to investigate the relevance and the uptake of the communication’s recommendations. The process will be finished in the first half of 2006 and the final report is due then.

However, preliminary conclusions indicated that the objectives of the Communication in the priority area of environmental protection are still highly relevant in the view of the interviewed stakeholders.

With the amendment of the Seveso II Directive and the adoption of the Directive on the management of Waste from the extractive industry at the beginning of 2006 the Communication’s aim of creating more effective legislation that contributed to the safe operations of extractive industry installations, and to the sound management of extractive waste, seemed to have been achieved to a large extent. Most stakeholders were satisfied with both Directives, and with the fact that their tangible effect is likely to be limited to the most dangerous / polluting activities. As for the BAT note, most stakeholders viewed this in a positive light, but whether it will provide effective guidance to regulators, the industry and others will not be known until the Directive on the management of waste from the extractive industry is implemented.

While the use of voluntary agreements and initiatives seems to have increased in most EU Member States over the last five years, it is not clear whether these have been inspired by the Communication or by a general shift in the industry.

Large companies increasingly issue environmental reports, and the take-up of environmental management systems in line with ISO 14001 is on the rise; EMAS, however, hardly plays a role in the non-energy extractive industry.

The exercise to develop sustainable development indicators has been found useful, but it is also generally acknowledged that the indicators do not yet facilitate a detailed assessment of the industry’s environmental performance. Some progress has been made on the Communication’s recommendation to study the issue of the net societal costs and benefits of measures affecting the industry in order to be better able to assess what environmental objectives should be adopted from a societal point of view. Such analysis is expected within the context of the EU-funded network of mining regions ENMR which has such analysis included in its work programme. The reports are expected in 2006. This can only be considered as a first step and needs to be followed up and clarified.

Thus, the EC has delivered on all of the actions in the area of environmental protection that the Communication recommended it to take, but there are no indications that the Communication has made any significant difference in the behaviour of other stakeholders.

While most agree with the recommendations in principle, few seem to have acted upon them, and the increase in the use of non-regulatory instruments that can be observed in many MS is likely to be more the result of individual considerations by the stakeholders involved than of the Communication’s encouragement. At best, the Communication, and possibly the study/inventory, may have raised awareness of voluntary initiatives to a degree.

The issues of accident prevention and waste management have been addressed to the satisfaction of the majority of stakeholders since the adoption of the Communication in 2000. There does not seem to be an urgent need to review any other legislation to improve the industry’s environmental performance at present. However, most industry representatives, and a significant proportion of competent national authorities, demand a review of certain pieces of environmental legislation (in particular EC legislation on biodiversity) with a view to reducing its perceived negative impact on the competitiveness of the sector. In particular, a guidance note on
compatibility of Natura 2000 sites and the extractive industry seems desirable in order to improve land access without jeopardising environmental protection goals and to create better planning security for companies and permitting authorities.

While the increased use of non-regulatory instruments continues to be seen as desirable to most stakeholders, to date the Communication seems to have failed to have contributed significantly to this objective. In most MS the take-up of voluntary initiatives is still limited to large companies, on whom the Communication’s expression of support for non-regulatory instruments is unlikely to have made much difference. It would seem that an effective approach to increase the use of voluntary initiatives would have to target SMEs. It may therefore be worthwhile to explore concrete measures to encourage and facilitate environmental reporting, management systems, and other initiatives and agreements among smaller companies.

**Analysing the RTD needs of the sector - the finalisation of an EU-funded research network**

In March 2005 the NESMI network, a European-funded network for a sustainable minerals industry concluded its three year work programme. One of the objectives of this network was of course to bring policy makers, industry, academia and research institutions closer together and to integrate in particular the stakeholders in the new Member States in the process. Its second objective was to provide an in depth analysis of the research needs for the sector. Its findings are published in the extractive industry’s research Handbook which is available from the EMIREC Secretariat and the NESMI coordinator. Its analysis clearly demonstrated those areas where the available research capacity and expertise could not match the required research for innovation.

**The need of innovation and the establishment of a European Technology Platform Sustainable Mineral Resources**

**The ETP-SMR, an industry-led initiative**
The economic downstream impact of the mining and minerals sector in Europe is huge. It is therefore essential for European industrial activities to continue the research activities towards a sustainable mineral resources supply. The European Technology Platform Sustainable Mineral Resources will ensure the necessary “critical mass” for future RTD activities. Following the closure of NESMI the industry therefore embarked on a new joint European wide research initiative: a European Technology Platform.

**Its Members**
The ETP SMR is an initiative from the vast majority of entities and companies in the EU minerals industry and its supporting organisations. These have formed the High Level Group of the ETP SMR and are listed below. In addition several other organisations, academic and research institutes follow the initiative with a less formal stakeholder status. The management of the ETP SMR is done by a Steering Committee chosen from members from the HLG group.
The issues addressed by the ETP will include:

- **Supply issues:**
  Within Europe access to available resources is tending to become increasingly problematic and in many countries minerals exploration has been very limited in the last two decades. The EU is highly dependent on imports of energy and of metallic minerals from outside its borders. In the industrial minerals segment this dependence is much less, Europe being an important producer of a wide range of industrial minerals such as magnesite, gypsum, kaolin, bentonite and Fuller’s earth, perlite, potash and talc. The EU is self sufficient in construction minerals. The dependence issue, and the particular the vulnerability of Europe to imports and to the related geo-strategic issues, is likely to become of increasing strategic importance as the coming decades will see a significant increase of the world population, while some highly populated developing countries such as China and India are rapidly developing their industry and their infrastructure, hence creating a huge demand for minerals and intensified competition for these resources.

- **Competitiveness**
  The EU minerals industry is not only an important supplier to the EU economy; it is also a world leader supplier of services, technology, engineering, consultancy, finance and equipment. Because of the high environmental standards and the often challenging geological conditions prevailing in Europe, European extractive technology has a leading position. Pre-competitive cooperative R&D on a European scale, engaging the industry, academia and research as well as other stakeholders for research on the environmental and social sustainability issues is needed. Among the challenges it has to meet, the industry has to continuously adapt to technology and regulatory shifts and the phasing out of some types of production while facing sudden changes in the demand for new products; it has to confront growing energy costs and to address a major skills issue due to a rapidly ageing population of professionals resulting from industrial restructuring and mine closures in the last three decades.

- **Decoupling growth from environmental footprints**
  While in Europe extractive activities comply with strict regulations, most of the environmental footprint related to the extraction of minerals occurs outside the EU borders. Many of the minerals and metals used by Europe are imported, including those from developing countries that need support to develop extractive activities with high social and environmental standards in support of their sustainable development. Technological developments are necessary for the continuous reduction of the potential impacts of extraction and downstream activities, including...
lowering the amount of energy and water used per unit produced, the economical exploitation of lower-grade ores, increasing the recovery of all valuable components of the extracted materials and phasing out hazardous components in the waste and in the emissions generated by the production process. The development of the know-how and of the technologies needed to achieve decoupling will also benefit developing countries.

**The ETP SMR Strategic Research Agenda (SRA)**

The scope of work within the European Technology Platform on Sustainable Mineral Resources is related to the value chain for raw materials. The SRA is structured in 5 Focus Areas (FAs) covering this value chain, from the initial stage of exploration and extraction of the resource (FA1) to the marketed products and materials for the future (see figure). A fifth Focus Area, of a transverse nature, addresses mineral economics, sustainability indicators and societal issues.

The details of the Strategic Research Agenda are printed in the document which will be published on 21 March 2006.
2. The sector’s contribution to our standard of living and the world of tomorrow

2.1 Thematic strategy on the sustainable use of natural resources

It is in the context of the strong demand, but also strong competition from China and other parts of the world that the European extractive industry participated actively in the development of the European Commission’s **Thematic Strategy on the Sustainable Use of Natural Resources** which was finally adopted in the form of a Communication at the end of 2005.

The originally intended objectives of “absolute decoupling of environmental impacts from the economic growth in the EU” which would be an ideal goal, however, is idealistic in the context of international developments and competition for resources and products as well as improved lifestyles.

The industry appreciates the Commission’s decision to put more time and effort into understanding resource issues and their environmental impacts in a European, but also in international contexts. For most commodities of the minerals industry today what happens outside of Europe is as important as what happens within Europe. The industry is therefore looking forward to the **High Level Forum of Member States** that will be set up in 2006 and the data gathering on performance of EU, but also non-EU industry before any decisions on further legislation will be taken which impact on the competitiveness of the industry.

EUROMINES members will actively participate in collecting data and developing indicators as well as participating in the newly established working groups on metals and metallurgy with Russia. In order to intensify cooperation with China EUROMINES decided in 2005 to join a cooperation with the Metals and Mining part of the Chinese Chamber of Commerce.

2.2 Sustainable Development Indicators

In 2000 the whole of the extractive industry agreed on a set of 15 sustainable development indicators to which the whole sector would report.

In 2005 the second set of reports for the years 2003 and 2004 were concluded and the results are being published. (The report is available on the European Commission’s website and in hardcopy from the European federations involved, such as EUROMINES)

The major achievements for those reporting years were the increase in numbers of companies reporting throughout all sub-sectors and the increased participation of the New Member States in the exercise. The results of the reporting are still to be taken with some caution since it will only be possible in the longer run to place the data collected in a relevant context. However, it is a strong contribution to sector-wide transparency on certain aspects of their economic, social and environmental performance.

The whole process is accompanied by major conferences on the subject, such as the one held
in 2003 on Milos, Greece, and the one in June 2005 in Aachen, Germany. These conferences continue to develop and discuss the indicators scientifically, but also address the implementation and reporting issues. This has become more and more important due to the growing number of indicators being developed, such as for example under the Global reporting initiative with its Metal and Mining Supplement.

The future will show how the various indicators on resource productivity, eco-efficiency, and resource specific impacts, to be developed also under the EU’s Strategy for the Sustainable Use of Natural Resources, will have to be reported. It should however be kept in mind that a one-sided reporting in Europe without any comparison to the performance around the rest of the world will not lead to any appropriate conclusions and policy making. Without doubt, progress and innovation in environmental protection is needed, but it cannot be achieved in isolation and at the cost of European primary industry losing out to other parts of the world which are far less environmentally conscious.

2.3 The EU’s environmental legislation and its impacts on the EU extractive industry

**Waste Management: the adopted Directive on the management of waste from the extractive industry**

In January 2006 the industry saw the adoption of the Council Directive on the management of waste from the extractive industry. Adoption followed an extensive dialogue with Parliament and Council and has led to a much more balanced piece of legislation.

What remains to be developed are answers to a number of technical issues, including points such as the methodology for waste characterisation, sampling and testing as well as classification of sites and inventories and the guidelines for the financial guarantees; These issues will be discussed and agreed upon in the Technical Adaptation Committee of the Member States in the coming two years. It is expected that part of the tasks will be dealt with in a CEN Technical Committee 292 WG 8 which was established in 2005 and which includes, among other scientific experts, a number of industry representatives including members of EUROMINES.

**Water Management: Proposed Directive on Groundwater**

The European Commission is in the process of developing a Directive on Groundwater, as stipulated by the Water Framework Directive. Although the extractive industry is largely exempted from the Framework Directive, the sector needed to ensure, through detailed discussions with Member State representatives and Parliamentarians, that the Groundwater Directive will provide adequate provisions for the extractive industry.

In particular the various emission limits and indicators for good water quality as well as special water management aspects relevant for the extractive industry were discussed in the relevant working groups and workshops. The second reading in the Parliament is foreseen for the spring 2006.

**The EU energy policy**

The secure supply of energy at competitive prices and the development of energy prices are key factors for the competitiveness of the extractive and mineral processing industry.

The industry is monitoring the development of the EU’s energy supply policies and the liberalisation policy of the electricity and gas markets very closely. Of great concern is therefore the energy policy of the new Member States which are closing more and more coal mines and switching to gas. The growing dependency on imports is of long-term concern for the energy consuming industries.
Energy prices, despite the intended liberalisation, are today higher than in 1990 and do not foster the competitiveness of producers that have to compete with worldwide operators. The industry therefore would like to see any possible tax breaks, such as for example those on diesel fuel for agricultural, use also applied to them.

**Emission trading**

The EU emission trading scheme coming into effect on 1 January 2005 increased costs rather than alleviated them. Although most parts of the extractive industry were not included in the emission trading scheme, some member states have applied the allocation of CO₂ emissions and trading certificates to some installations. This is creating internal market distortions. The industry would like to see a review of the current implementation. In addition, the sector is strongly opposed to the extension of the scheme to other sectors or to other emissions such as NOx and SOx.

**The EU Chemicals Policy**

The year 2005 has seen a further development of the Proposed Regulation concerning the Registration, Evaluation, Authorisation and Restrictions of Chemicals (REACH), establishing a European Chemicals Agency and amending Directive 1999/45/EC and Regulation (EC) on Persistent Organic Pollutants. Although the industry strongly supports the safe use of chemicals and the information about substances used, the extractive industry was deeply concerned about the current proposal, its scope and its practicalities. In particular, the imbalance in requirements for organic and inorganic substances, the burden of registration for high volume of substances that will be handled in closed circles of industrial installations and will never be sold to an end-consumer, as well as the unfair stigmatisation of certain substances which might lead to substitution despite a lack of risk of uncontrolled...
exposure led to many interventions of raw material producers (REACH ALLIANCE), from the extractive industry.

EUROMINES welcomed the restrictions of the scope for registration proposed by the Parliamentarians and the Council for “naturally occurring minerals” and the limitation to those minerals that contain hazardous substances in certain concentrations. The authorisation procedure is still of concern since it will still pose substantial difficulties due to the wide variety of composition among mineral substances.

EUROMINES was actively involved in developing the European Commission’s implementation documents, the so-called RIPs which will be concluded before the summer 2006.

3. The sector's contribution to Europe's social cohesion

With the enlargement of the European Union, the number of mining regions and communities in Europe has increased by 100% and with it also the potential of and the issues around the extractive industry, such as the development of the regions, the restructuring, and rehabilitation issues. The industry is therefore working actively to integrate these new regions and communities, their enterprises and their employees into the constructive dialogue in Europe. To this end the industry continued to use all available stakeholder fora and initiated new activities and conferences.

3.1 Social Dialogue at European level

Social Dialogue Committee “Extractive Industry”

Within the existing Committee, the number of actively participating employers and employees from Eastern European Countries has increased in 2005. The Committee addresses EU policy issues which are of concern to the extractive industry in general, be it, for example, the energy policy or the resource strategy. In this context the Social Dialogue Committee held its annual conference in Poland in order to address the need for a resource policy for Europe and the need for extensive Social dialogue due to the current restructuring policies, in particular in the energy sectors in the New Member States, which has had a major impact on employees and their families.

In addition, health and safety or training issues are of interest and following the adoption of an agreement on H & S issues the first interim report was presented which concluded that, for most parts of the agreement, a complete implementation in the Member States could already be reported. A further investigation and report will be due on two years.

One of the upcoming issues will be the concept of Corporate Social responsibility, which is a concept currently promoted by the European Commission. The Committee decided to establish a working party to investigate the concept and its relevance to the sector in more detail and to collect good examples of such practices in the sector. This work will be continued in 2006.

- NEPSI - Multisectoral negotiation platform on respirable crystalline silica

2005 saw a major exercise in the realm of Social dialogue at European scale under the leadership of IMA, the Industrial Minerals Association. On the issue of respirable crystalline silica a large number of social actors, employers and unions, from various sectors, including
EUROMINES, came together for a 9 month negotiation on an agreement on the prevention and reduction of exposure to respirable crystalline silica. This agreement is the first multi-sectoral agreement of its kind in the EU. Sector specific agreements had been concluded in a few sectors before.

The negotiations included the general objectives of the agreement, the scope, definitions, principles, a good practices guide, rules for monitoring, reporting and improvement, the setting up of a structure for monitoring the agreement. It included health surveillance, research data collection and other formal necessities.

The negotiations were concluded in February 2006 and it is expected that the agreement will be signed on 30 March 2006 in the presence of the EU Commissioner on Employment and Social Affairs. The coming years will see the implementation of the agreement throughout the various sectors concerned with the subject.

The sector appreciated the Commission’s support in the exercise and welcomed the new approach taken to such issues and allowing the Social Partners to find a consensus on such important issues.
3.2 European Network for Mining Regions

Born from a cooperation idea between the Regional offices of Northern Sweden and Lapland and EUROMINES and following the approval in 2004, the new EU-funded network of mining regions started its activities in 2005 in full force.

Its general objectives include:

- developing a publically-driven European collaboration of regional partnerships in the mining regions (including representatives from local/regional authorities, industry, R&D institutions, union, NGOs);
- uncovering innovations required to secure future successful regional development and to highlight actions to meet these needs and objectives;
- recognising the network as a genuine stakeholder in the future debate on EU policies;
- maintaining competitiveness by fostering European co-operation of actors in the mining regions;
- articulating the common interests of the mining regions towards European institutions;
- enhancing the image of the extractive industry and a positive attitude on new investments in mining regions;
- dissemination of innovative ideas;
- overcoming cultural barriers and building an environment of mutual respect and trust.

The various regions have embarked on in-depth regional analyses and a SWOT analysis comparing the strong and weak points of the regions. As a result, they started to develop a Roadmap for the mining regions in Europe, trying to draw conclusions from this analysis and recommendations what needed to be done in Europe to foster and develop these regions through EU and national policies. The ENMR draft roadmap will address the three dimension of sustainability, to include the thematic areas:

1) Regional Functions, Industries and Clustering

2) Socio-Economic Effects

3) Mining and the Environment

Those reports will be finalised in 2006, the final year of the project and will be presented at a final conference. It is hoped that this work can be continued in a new project in and after 2006 since the information exchange amongst and between the regional authorities and the exchange with EU officials from Commission and Parliament has proven extremely useful. With the increasing
number of environmental directives of relevance to the extractive sector being adopted in 2004/2005, the importance of the dialogue with the regional authorities will increase in the coming two to three years. EUROMINES therefore strongly supports this network.

- **Environmental Partnership for Mining in Romania (EPM)**

  The Environmental Partnership for Mining in Romania (EPM) is a stakeholder consultation of a different kind since it addresses mining related issues at a national level by involving many key players and stakeholders in and around the sector.

  The foundation registered in Romania in 2005 is an extensive network of professionals and concerned people. The foundation is supported by the mining, environmental, and research industries, and by both governmental and non-governmental organizations. The ultimate goal is to provide support along the long and often difficult road leading to sustainable development. EPM is a focal point for addressing relevant issues and policies of a generic nature at national level and of a specific nature at regional level.

  - a picture of the choices that mining communities currently face;
  - specific factual information on the existing situation of some mining projects;
  - relevant information on social, environmental and economic issues within the context of sustainable development;
  - future co-operation on research and environmentally related projects and all possibilities to restore environmental integrity into sites previously negatively impacted by mining;
  - site visits to mine sites to fully and professionally assess their situation first hand;
  - informed discussion leading to effective action by multiple parties - thus providing a robust basis for sustainable development through diversification of its origin;
  - case studies and experiences as well as the BAT document that can be used for similar sites in other parts of Romania and neighboring regions, and for education and training.

  In 2005 the foundation held a major conference with the participation of the Romanian Minister of Environment and the European Commission in Bucharest in which new EU environmental legislation and its implementation in Romania was one of the key issues. Case studies have since been worked on and for 2006 more activities are planned such as seminars on Best available technology in mine waste management and Environmental Impact Assessment.

3.3 Education and training - improving the human capacity in the sector

The Foundation of European Mineral Programmes (FEMP) is the formal contact between Industry and the European universities. Members of Euromines and a number of other companies have supported the programs from the beginning. All of the universities involved have good and strong ties with the mining, processing and metallurgical industries in their respective countries. Through these pre-existing ties, strengthened by the co-operation of the joint education programs, the relevance and acceptance of research are enhanced. The involvement of Industry with the program stimulates interaction and improves the quality of the program.

The Board of directors of the Federation includes professors and one delegate of the industry, appointed by Euromines, the European Association of Mining Industries, Metal Ores and Industrial Minerals, who acts as a representative of the major European mining / mineral companies. In total some 25 companies are now member of FEMP. All these companies have representatives at the Industrial Advisory Board (IAB), which meets
once a year to discuss co-operation between Industry and Education and items like curriculum requirements. This is also a good opportunity for the representatives to meet other Industries and students and alumni of the programs. It is to be included in the future in the new clusters.

### Total enrolment of students in European Mineral Programs 1996 - 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Place</th>
<th>University</th>
<th>EMC</th>
<th>EMEC</th>
<th>EGEC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>Aachen</td>
<td>RWTH</td>
<td>27</td>
<td>28</td>
<td>55</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Clausthal</td>
<td>TU Clausthal</td>
<td>7</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Freiberg</td>
<td>TU Freiberg</td>
<td>14</td>
<td>2</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Berlin</td>
<td>TU Berlin</td>
<td>11</td>
<td>1</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Delft</td>
<td>TUD</td>
<td>31</td>
<td>39</td>
<td>71</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Helsinki</td>
<td>HUT</td>
<td>16</td>
<td>4</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>London</td>
<td>RSM</td>
<td>22</td>
<td></td>
<td></td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Exeter</td>
<td>CSM</td>
<td>11</td>
<td>5</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Austria</td>
<td>Leoben</td>
<td>TU Leoben</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Kingston</td>
<td>Queen’s</td>
<td>14</td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Brisbane</td>
<td>U. of Queensland</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Madrid</td>
<td>via RWTH</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Virginia</td>
<td>Virginia Tech</td>
<td>11</td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Miskolc</td>
<td>Univ. of Miskolc</td>
<td>1</td>
<td>8</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Krakow</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Kosice</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Tallinn</td>
<td>10</td>
<td>1</td>
<td>8</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Santiago</td>
<td>12</td>
<td>12</td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Concepcion</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>San Juan</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Rio Grande do Sul</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>173</td>
<td>103</td>
<td>43</td>
<td>319</td>
<td></td>
</tr>
</tbody>
</table>

The sponsoring companies strongly believe in the European and international dimension of this programme and it is therefore not surprising that more and more companies join the programme as sponsors. In 2005 Phelps Dodge and SMZ joined.

The support for university programmes which will permit students to carry out their studies at various universities and to acquire language, social and cultural competences which are highly sought after in the sector is a concerted effort in the realm of Corporate Social Responsibility.

**Sponsoring companies are:**

- ABN AMRO Bank
- Aixo-therm
- Aktiengesellschaft
- Anglo American - Anglo Coal
- Anglo American plc
- Arctic Platinum Partnership
- avocet mining
- Balgzand-Ham Dredging (BHD)
- Bedrijfsregeling Arnsberg
- BHP Billiton - Cannington
- Booz Allen & Hamilton
- Compañía Minera Doña Inés de Collahuasi
- Corus B.V.
- Cristalix International Corporation
- DBE Pelze
- Deoma Decotech GmbH
- Department of Housing, Spatial Planning
- Deutsche Stein Kohle
- Eckhoff Maschinenfabrik
- ELG
- Elkem Materials
- European Space Agency
- ExxonMobil Chemical Holland
- Falconbridge Sudbury
- Falconbridge, Raglan project
- GE
- Gridpoint Finland Oy
- GTS
- Hanson Holdings plc
- Health and Safety
- Heidelberg Cement AG
- Herforth Umwelttechnik GmbH
- Horiomitarbiens Bane Prievldza, a. s.
- IDD
- IHC Holland NV
- Internet Vision
- K+S
- Kennecott Energy - Jacobs Ranch Mine
- KGHM Polska Miedz S.A.
- Kvaerner Process (Netherlands)
- Lhoist Coordination Centre S.A.
- Lifshew Mine
- LKAB
- Metsä Minerals
- Minera Alumbrera
- MIRARCO - Mining Innovation
- Moduslink
- Mosaic
- MTM Holland B.V.
- N.V. Billiton Maatschapij Suriname
- Nobel Drilling
- Nokia
- Outokumpu Oyj
- Patent Attorneys Niedmers Jaeger Köster
- Placer Dome-Campbell Mine
- Resource Capital Funds
- Rio Tinto (Hamerley Iron)
- Rio Tinto plc
- Rockwell Intl
- Rockplan Ltd
- Roland Berg Strategy Consultants
- RWE Power AG
- Sandvik Tamrock
- Seco VE Oy
- Shell International
- SMS-Demag
- SQM
- State Supervision of Mines
- Tamrock
- Targus Management Consulting AG
- tesa Werk Hamburg GmbH
- Vattenfall Europe Mining AG
- W. C. Heraeus GmbH & Co. KG
- Weatherford
Mr. Herbert Bardach  
Wirtschaftskammer Österreich  
Wiedner Hauptstrasse 63  
A - 1045 Wien  
AUSTRIA  
Phone: +43 5909003310  
Fax: +43 590903378  
E-mail: herbert.bardach@wko.at

Mr. Christophe Baulinet  
FEDEM  
Rue Hamelin 17  
F - 75016 Paris  
France  
Phone: +33 140764450  
Fax: +33 145636154  
E-mail: christophe.baulinet@fedem.fr

Mr. Olavi Paatsola  
FAERI  
Runkopolkku 4  
SF - 7800 Siilinjarvi  
FINLAND  
Phone: +358 174624784  
Fax: +358 174624784  
E-mail: olavi.paatsola@dnainter.net

Mr. Christos Kavalopoulos  
Greek Mining Enterprises Association  
Vassileos Georgiou B & Rigillis Street 10  
GR - 10674 Athens  
GREECE  
Phone: +30 2103636318  
Fax: +30 2103634019  
E-mail: sme@hol.gr

Dr. Akos Zoltay  
Hungarian Mining Association  
Margit Circle 85  
H - 1024 Budapest  
HUNGARY  
Phone: +36 13367801  
Fax: +36 13367801  
E-mail: mbsz@axetero.hu

Mr. Sean Beary  
Irish Mining Exploration Group  
Confederation House, 84/86 Lower Baggot Street, Dublin 2  
EI - Dublin  
IRELAND  
Phone: +353 16051500  
Fax: +353 1600117  
E-mail: sean.beary@ibc.ie

Mr. Robert Fenton  
Mining Association of the United Kingdom  
78 Coxt Heath Drive Knowle, West Midlands  
GB - B933PQ Solihull  
UNITED KINGDOM  
Phone: +44 1564205079  
Fax: +44 1564205079  
E-mail: bob.fenton@mauk.org.uk

Mr. Karel Lorek  
Tezobni Unie/Mining Union  
Prikop 15/17  
CZ - 656 13 Brno  
CZECH REPUBLIC  
Phone: +420 545211014  
Fax: +420 545414205  
E-mail: unie@tezobni-unie.cz

Mr. Ing. Anton Ondrejkovic  
Slovak Mining Chamber  
Malice slovenskej, c. 10  
SK - 97101 Previdiza  
SLOVAK REPUBLIC  
Phone: +421 421 465421682  
Fax: +421 421 465421682  
E-mail: sbk@sbk.sk

Mr. Tomas From  
SVEMIN  
Kungsträdgårdsstigen 10, PO Box  
1721  
S - 11187 Stockholm  
SWEDEN  
Phone: +46 87626715  
Fax: +46 86116264  
E-mail: Thomas.from@svemin.se

Mr. Ismet Kasapoglu  
Turkish Miners Enterprises Association  
Istiklal Caddesi Tunca, Apt. No. 47/1-1  
Tr - 34840 Istanbul  
TURKEY  
Phone: +90 2122261503  
Fax: +90 2122262556  
E-mail: turkiye@iic.com

Mr. Norbert Schächter  
Wirtschaftsvereinigung Bergbau  
Am Schillertheater 4  
DE - 10997 Berlin  
GERMANY  
Phone: +49 3031518241  
Fax: +49 3031518252  
E-mail: n.schaechter@ww-bergbau.de

Mr. Dorian Emmett  
Anglo American Plc  
20 Carlton House Terrace, St. James  
GB - SW1Y5AN London  
UNITED KINGDOM  
Phone: +44 2078988732  
Fax: +44 2078988860  
E-mail: demett@angloamerican.co.uk

Mr. Tom Niemi  
Bolden AB  
PO Box 44  
S - 10126 Stockholm  
SWEDEN  
Phone: +46 86101528  
Fax: +46 8315545  
E-mail: tom.niemi@bolden.com

Mr. David Reading  
European Goldfields Services  
Level 3, 11, Berkeley Street  
GB - W1J8DS London  
UNITED KINGDOM  
Phone: +44 2074089534  
Fax: +44 2076737119  
E-mail: dr@eogoldfields.com

Mr. David Pybus  
Cleveland Potash  
Boulby Mine, Loftus Saltburn-by-the-Sea  
GB - TS134UZ Cleveland  
UNITED KINGDOM  
Phone: +44 1287640140  
Fax: +44 1287640834  
E-mail: david.pybus@clevelandpotash.co.uk

G/o Mr. David Pybus  
Iberpotash  
Boulby Mine, Loftus Saltburn-by-the-Sea  
GB - TS134UZ Cleveland  
UNITED KINGDOM  
Phone: +44 1287640140  
Fax: +44 1287640834  
E-mail: david.pybus@clevelandpotash.co.uk

Mr. Gerd Grimmig  
K+S AG  
Bertha-von-Suttner-Strasse 7  
DE - 34131 Kassel  
GERMANY  
Phone: +49 56193011291  
Fax: +49 561930111875  
E-mail: gerd.grimmig@ks-plus-s.com

Dr. Ing. Herbert Wirth  
KGHM Polska Miedz  
Ul. Marii Sklodowskiej Curie 48  
PL - 59301 Lublin  
POLAND  
Phone: +48 76847836 ; 717812357  
Fax: +48 7684 8500 ; 771812357  
E-mail: h.wirth@kghm.pl
Mr. Anders Furbeck
LKAD
Varvsgratan 45 Box 952
S - 97126 Lulea
SWEDEN
Phone: +46 92038178
Fax: +46 703196113
E-mail: anders.furbeck@lkab.com

Mr. Eduardo Jimenez Dominguez
Magnesitas de Rubian
Ctra. Comarcal 546, km 35, Villa de Mouros (O Inco)
E - 27341 Lugo
SPAIN
Phone: +34 982424211
Fax: +34 982424250
E-mail: commercial@mge.es

Mr. Domingue Bamas
Magnesitas Navarras
Avenida Roncesvalles, s/n, Zubiri
E - 31630 Navarra
SPAIN
Phone: +34 948421617
Fax: +34 948304253
E-mail: d.bamas@magnesitasnavarras.es

Mr. Otto Krediet
Nedmag Industries
Billionweg 1 P.O. Box 241
NL - 9640 AE Veendam
NETHERLAND
Phone: +31 598861200
Fax: +31 598452484
E-mail: O.Krediet@nedmag.nl

Mr. David Baril
Rio Narcea Gold Mines
C/Secundino Roca Riera, 3-2°, Centro de Empresas Asipo 1
E - 33860 Cayes-Llanera-Asturias
SPAIN
Phone: +34 985831500
Fax: +34 985832159
E-mail: david.baril@rmsg.mes

Mr. Shaun Stewart
Rio Tinto plc
6, St. James’s Square
GB - SW1Y4LD London
UNITED KINGDOM
Phone: +44 2077532348
Fax: +44 2077532288
E-mail: shaun.stewart@riotinto.com

Dr. Ulrich Kowalski
Südwestdeutsche Salzwerke
Salzgrund 67
DE - 74076 Heilbronn
GERMANY
Phone: +49 71199292215
Fax: +49 7131179071
E-mail: Ulrich.Kowalski@salzwerke.de

Mr. Peter Huxtable
Barytes Association
Jaca Ranada, 10 Brookfields, Calver, Hope Valley
GB - S323XB Derbyshire
UNITED KINGDOM
Phone: +44 1433639879
Fax: +44 1433639879
E-mail: bartles@aol.com

Mr. Petar Petrov
Bulgarian Mining Chamber
205, Al. Stambolijski Boulevard, Office 30
BG - 1309 Sofia
BULGARIA
Phone: +359 28293722; 2298373
Fax: +359 28229373; 29201857
E-mail: bmc@mbbia-bg.com

Mr. Demetrio Campo Fernandez
Eurosite, Synthetic Slate Tiles FER Federation Española de la Pizarra, Centro Tecnologico de la Pizarra, Orense
E - 32330 Sobrado de Valdeorras
SPAIN
Phone: +34 988335045
Fax: +34 988335092
E-mail: asociacion@agenda.es

Mr. Daniel Surulescu
PATROMIN
Str. Timisoara, No. 2
RO - Petrosani
ROMANIA
Phone: +40 254541460
Fax: +40 254541315
E-mail: surulescu@cnh.ro

Mr. Jack Testard
BRGM
3, Avenue Claude Guillemin BP 6009, Cedex 2
F - 45060 Orleans
France
Phone: +33 238643493
Fax: +33 238643861
E-mail: j.testard@brgm.fr

Mr. Mike Cambridge
Cantab Consulting Kent
51, Albert Road Ashton
GB - TN248NU Kent
UNITED KINGDOM
Phone: +44 1233646186
Fax: +44 1233646186
E-mail: mcambridge@cantabkent.co.uk

Mr. Frank Harenburg
Cypius GmbH
Rodenbacher Chaussee 4
DE - 63457 Hanau-Wolfgang
GERMANY
Phone: +49 6181569927
Fax: +49 6181569940
E-mail: frank.harenburg@cypius.com

Mr. Alain-Louis Dangeard
MEED
51, Rue Spontini
F - 75116 Paris
France
Phone: +33 147044237
Fax: +33 147556723
E-mail: alain@wanadoo.fr

Mr. Alan R. Hill
Rosia Montana
Suite 1501, 110, Yonge Street, Ontario
CA - M5C1T4 Toronto
CANADA
Phone: +1416 9559200
Fax: +1416 9554661
E-mail: arh@gabrielresources.com

euromines
asbl, Avenue de Broqueville, 12 – B-1150 Bruxelles
Phone: +32 2 775 6331 Fax: +32 27706303
euromines@euromines.be
www.euromines.org
Graphic Design: V.D.H.O. +32 475 60 30 74 Brussels - Belgium
Printed by Breuerdruck Düsseldorf - Germany