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GLOBAL MINING RESTRUCTURING AND EU 25 - CONSEQUENCES FOR EUROPEAN MINERS

GLOBÁLNÍ RESTRUKTURALIZACE BÁŇSKÉHO PRŮMYSLU A 25 ČLENSKÝCH ZEMÍCH EU – DŮSLEDKY PRO EVROPSKÉ TĚŽAŘE

Abstract

With the entry of 10 new member countries to the European Union in May 2004 the mining industry is becoming more important in EU than it was earlier, in particular during the EU 12 days. The mining industry in general is still suffering from a poor image in Europe, particularly among the administration in the European Commission in Brussels. With the current boom in the global mining industry and the possibility of combining the interests of the industry in all the 25 member countries there is a window of opportunity to improve the standing of the industry in Brussels.

Based on presentation made at the Faculty of Mining and Geology at the Technical University of Ostrava (VSB) in Ostrava 25 February 2004.

Abstrakt

Vstupem 10 nových členských zemí do EU v květnu 2004 se stal báňský průmysl v EU mnohem významnějším než dříve, zejména v době, kdy Společenství zahrnovalo 12 členů. Báňský průmysl v Evropě stále trpí špatnou pověstí, zejména mezi členy Evropské komise v Bruselu. Při současné konjunktuře světového hornictví a možnosti kombinace zájmů průmyslu ve všech 25 členských zemích EU existuje příležitost zlepšit postavení báňského průmyslu v Bruselu.

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Key words: mining industry, EU, mineral policy.

A booming sector

The global mining industry has been through some difficult years but is now out of the darkness of the tunnel:

- Metal prices are booming on the back of a continued strong demand primarily in Asia but also elsewhere in the world.
- China has proved that economic development in a Third world country demands huge amounts of metals. This giant country has become the engine of much of the mining industry globally.
- Exploration expenditure has turned upwards after a few poor years.
- Mining companies are back in the black and share prices are rising.

The total value of global mining by type of mineral is given in Figure 1. Metal mining values are detailed in Figure 2.

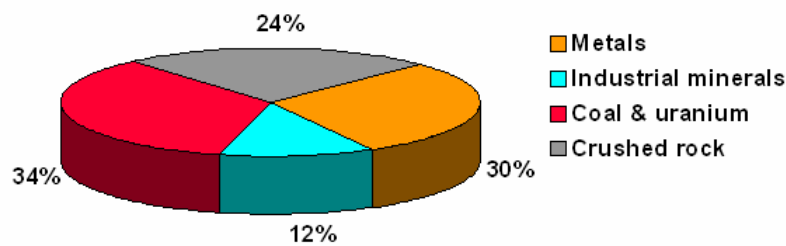
Global initiatives such as the Breaking New Ground [1] report of the Mining, Minerals and Sustainable Development initiative and the recent highly criticised World Bank initiated Extractive Industries Review (EIR) to better the poor public image of the sector that commenced in 1998 are slowly getting their message across:

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- Metals are necessary and non-substitutable in all parts of modern life.
- Environmental and democratic records of the industry can and will be improved.

Certainly the process to bring mining back to life has been costly and also painful. Marginal mines all over the world have been closed down and those surviving have shed many jobs and left unemployed workers and sometimes withdrawn the basis for the existence of complete societies. On the other hand it is important to emphasize that there is nothing more sustainable than a mine. After an initial big capital investment often spread over at least a five year period a mine will stay in operation as long as planned, usually at least 5-10 years often much more than that. The oldest industrial activities are mines which in some cases have been operating for centuries in the same area. An IT industry might be set up in a matter of months but it is also closed equally fast.

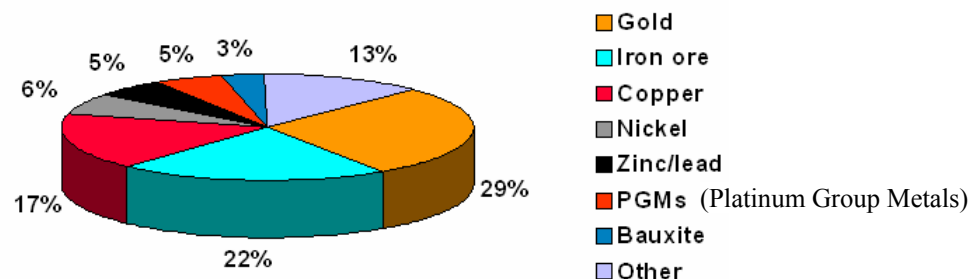
YEAR 2002 TOTAL ~ 310 billion USD



Source: RMG

Fig. 1: Value of world mining

YEAR 2002 TOTAL ~ 93 billion USD



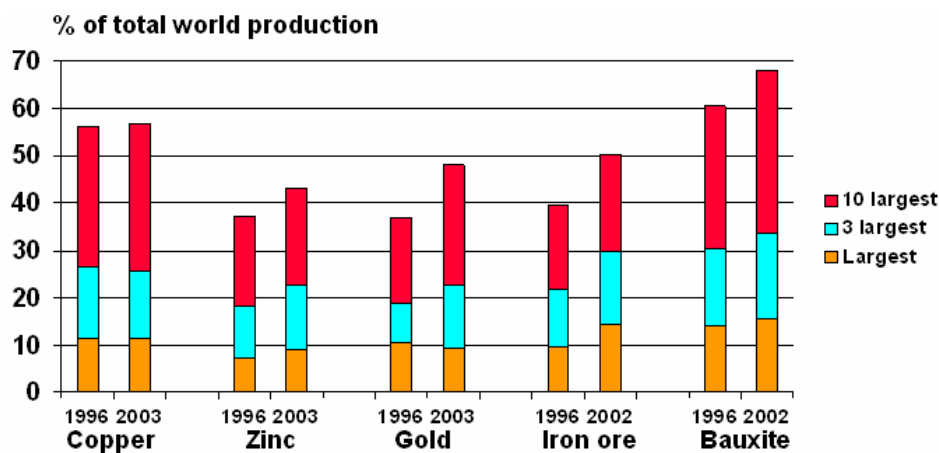
Source: RMG

Fig. 2: Metals value at mine

Gradually the industry has resurfaced. The mining industry is entering a new era, and changed global conditions set the demand for revising the strategies of the industry:

- The industry is finally becoming truly **global**. China, Russia and the other formerly centrally planned economies (particularly the Confederation of Independent States, CIS) are stabilising and opening up for equipment imports and also for foreign investments. These regions are growing quickly, and are also in need of more efficient and modern equipment. The Russians and the Chinese are also expanding abroad. In the rest of the world, Latin America, Australia, Canada and South Africa continue to be key markets. The US is gradually contracting although it remains a giant mining country.
- Mining companies are **consolidating** and the number of competitors is slowly being reduced. The remaining companies are cutting costs in order to become more profitable. But this trend is slow and a lot remains to be done in order to create even larger entities, necessary to generate stable profits. The concentrations of some of the economically most important metals are given in Figure 3.
- The outside pressures by politicians and multinational non-governmental organisations (NGOs) have made the environment, economic transparency and **corporate governance** areas of focus. Carefully planned corporate strategies could however turn this threat into an opportunity.

➤ **Research and technical development (RTD)** has historically not been very important to the mining industry. The level is only a few percent of total annual spending and this is too little to maintain the technological development necessary to meet the challenges of the future. However, this might be changing. Mining companies are pooling their scarce resources, which might lead to a new generation of technical solutions. In Figure 4 are given some figures of mining industry total spending.



Source: Raw Materials Data, Stockholm 2004.

Fig. 3: Metals mining corporate concentration 1996 & 2003

	MUSD
• RTD	200-250
• Exploration	3-5 000
• Pre-construction studies	500- 1 000
• Capex major constr. projects	4-6 000
• Replacement investments	5-6 000
• M&A	20 000
• Operating costs	60-70 000

Source: Raw Materials Group, 2003.

Fig. 4: Metal mining annual expenditure

Mergers and acquisitions more important than exploration

In this situation the major global mining companies have more and more turned to mergers & acquisitions (M&A) for their growth. They look to junior mining companies to undertake exploration and develop new green field projects. In this way they can avoid risk, and acquire mining assets once they have been proven viable. Each year, from 1995 onward, acquisitions valued at about US\$ 20 billion have taken place within the mining industry globally. In the same period the amount spent on exploration has dropped from over 5 billion USD in 1997 to less than 2 in 2002 and turned upwards again in 2003 (Figure 5). Doubts have been raised if this focus on M&A has meant that exploration necessary to find truly new deposits has been neglected and that the industry will suffer from a lack of new projects in the future. It is too early to know but time will tell.

These billions of dollars spent on M&A have however not resulted in a quick consolidation. There are some tendencies of an increased concentration but only for certain metals and minerals, as have been pointed out above, not for the industry as a whole (Figure 6).

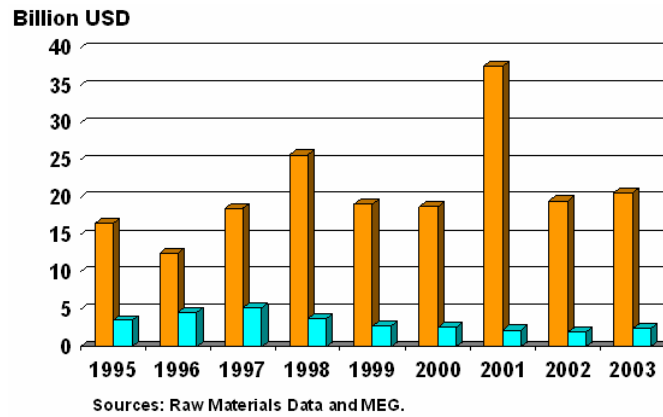


Fig. 5: M&A vs exploration 1995 – 2003

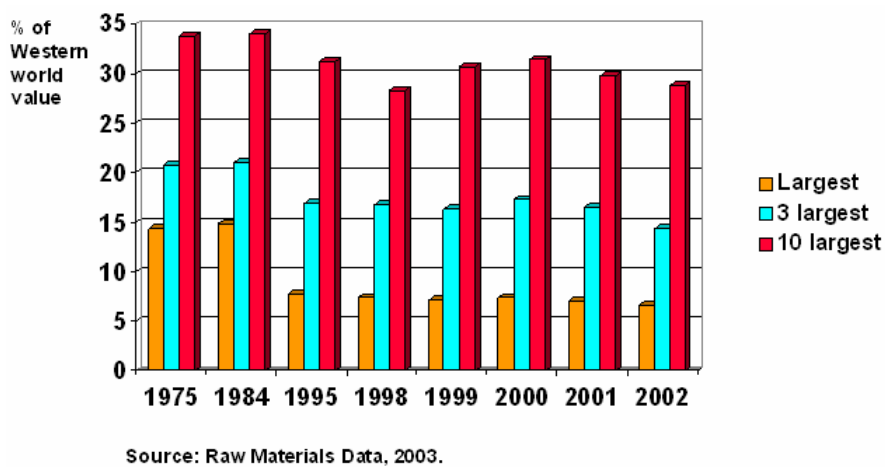
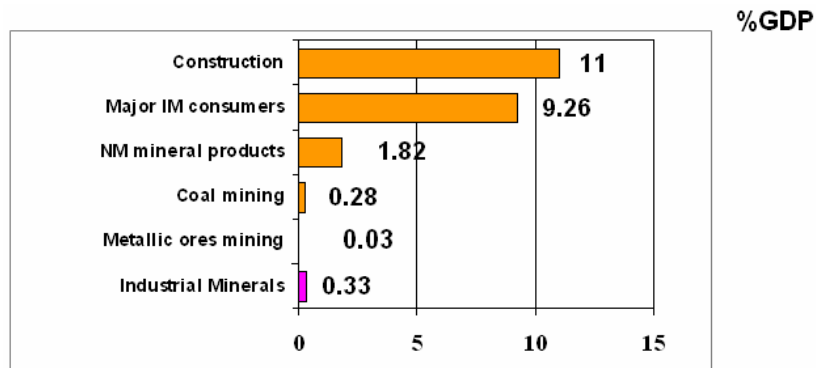


Fig. 6: Global mining – companies

Mining – an underestimated economic sector

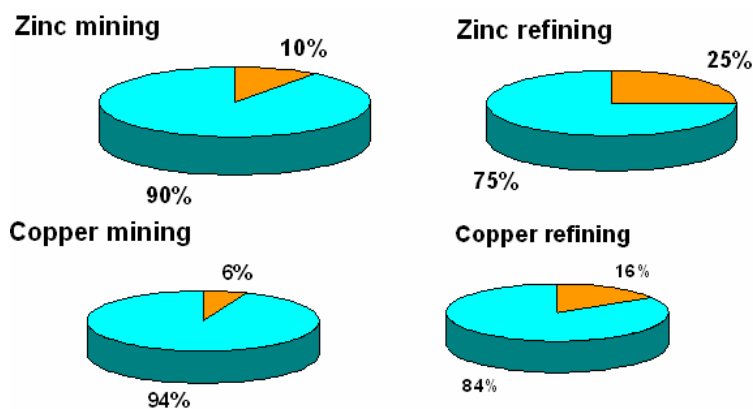
It is against this backdrop of fundamental change that the mining industry in Europe and in the European Union must be seen. Without a thorough understanding of the global challenges facing the sector, policies developed for European mining will have slim chances of success.

The economic basics of European mining are summarized in Table 1. The table is based on physical volumes of metals produced in EU 15 (Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden), EU 25 (EU 15 and in addition Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia and Slovakia), and all other countries in Europe (Albania, Armenia, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Georgia, Greenland, Macedonia, Moldavia, Norway, Romania, Serbia and the Ukraine), but excluding Russia. The share of total world production in each country is multiplied by the total value at the mine stage of this metal globally and the value for each metal produced is added to give a comparable sum for all metals produced. Some additional figures of European mining and smelting industries are given in Figure 8.



Source: Industrial Minerals XYZ

Fig. 7: Industrial minerals in the EU



Source: Raw Materials Data, Stockholm 2004.

Fig. 8: Europe in the world (excluding Russia)

Table 1.: European Mining Industry 2002/2003

Metal		Volume					Value (MUSD)					
		Total World	EU 15	EU 25	Other Europe	EU 25 (% of the world)	Total World	EU 15	EU 25	Other Europe	Total EU	Total Europe
Copper	(kt)	13670	175	534	176	0,05	16195	207	633	209	840	1048
Gold	(t)	2560	16,2	0,4	10	0,01	25930	164	4	101	168	269
Iron Ore	(Mt)	1070	24	0,3	63,4	0,02	17000	381	5	1007	386	1393
Lead	(kt)	2800	110	50	44	0,06	949	37	17	15	54	69
Manganese Ore	(Mt)	28	0	0	2,5	0,00	700	0	0	63	0	63
Nickel	(kt)	1290	25	0	5,3	0,02	5926	115	0	24	115	139
Platinum group	(t)	180	0	0	0	0,00	0	0	0	0	0	0
Silver	(t)	18800	460	1250	61	0,09	2810	69	187	9	256	265
Tungsten	(kt)	55	2,1	0	0	0,04	250	10	0	0	10	10
Zinc	(kt)	9200	663	130	41	0,09	4285	309	61	19	369	388
Bauxite	(Mt)	146	2,7	0,7	0	0,02	3400	63	16	0	79	79
Chromite Ore	(kt)	14100	550	0	75	0,04	685	27	0	4	27	30
Cobalt	(kt)	40	0	0	0	0	0	0	0	0	0	0
Molybdenum	(kt)	134	0	0	3,8	0	1000	0	0	28	0	28
SUM								1382	922	1479	2304	3783

Notes:

1. Excluding Russia.
2. Values from 2002, volumes from 2003.

Source: Raw Materials Data, Stockholm 2004.

EU 15 being an area where mining has lost most of its direct economic importance has relatively little mining left. Many of the best deposits are exhausted and alternative land uses are competing with metals mining for space in Central Europe but still 1.1 % of the total value of all non-fuel minerals produced annually in the world originates within EU 15. Admittedly mostly from the periphery of the region in countries such as Sweden, Ireland, Spain and Greece. What is probably more surprising is that the ten new EU members together accounts for 0.8 % of the total value of non-fuel minerals production globally. The new members hence bring a considerable strengthening of the metal production capacity of the EU. The value of metal production increases by 40 % to reach 1.89 % of the global total. The metal production of the new member countries varies considerably from negligible in the Baltic countries, Slovenia and Malta to the world's second silver and ninth copper producing country: Poland. Hungary, Slovakia and the Czech Republic are between the extremes. The EU 25 is a much stronger mining entity than the EU 15. The expanded EU accounts for 5 % of the total copper production in the world, 9 % of the silver, zinc 9 %, lead 6 % but is weaker in the ferrous metals (iron ore 2 %) and the ferroalloys 4 % of chromite but only 2 % of the nickel. The new member countries in particular Poland, Czech Republic and Slovakia should liaise closely with the mining countries of EU 15 to form a strong alliance to reshape the image of mining in Brussels and put mining back on the European agenda again.

All these figures refers only to metal mining and do not include coal or industrial minerals. European countries have a stronger position in industrial minerals and coal than in metals and if these two other groups of minerals are to be considered the strength of European mining would increase further. An estimate of the importance of industrial minerals in the economy of the EU 15 countries [2] is shown in Figure 7.

Table 1 also contains figures for the remaining countries of Europe which together has a more important metal mining sector than all EU 15, 1.2 % of the total value of metals is produced in these countries. The dominating country is the Ukraine with its huge iron ore and manganese mines but also Romania and Bulgaria as well as the other remaining countries in the Balkans still have an important metal mining industry. It is likely it has passed its bottom after market economic principles were introduced and with these countries included the periphery of Europe will become the region's metals treasury.

But the figures presented above still underestimate the importance of mining in European countries. In Finland the mining association Kaivannaisteollisuusyhdistys (KTY) took a proactive initiative in 2001 and completed a socio-economic study of the extractive industries and the mineral resource based cluster [3]. This study showed that the mining industry itself only employed 9 600 persons and created 0.6 billion EUR in value added. But the mineral resource based cluster i.e. the industries using the minerals produced as their input raw materials numbered over 200 000 employees and accounted for 34 % of all industry value added. In other words the mining industry is an important engine helping to drive Finnish economy. The situation is probably similar to this in the neighbouring Sweden and Norway although no specific studies have been made so far. Without doubt the mineral industry is further locally and regionally dominating the economy in areas of northern Sweden and also locally in parts of Finland. We do not know of similar studies for other European countries whether members of the EU or not, but there is no reason not to believe that the situation would be similar. It would be important to try to make more in-depth work in this area for the mining industry in all of Europe.

Scandinavia as an example?

Contrary to the global trend, exploration in the Nordic countries has increased up to 2001, it fell marginally in 2002 and has resumed growth in 2003. (Figure 9). There is a host of both global majors and juniors and local juniors active in exploration in the Nordic countries in 2003. The most exciting project in early 2004 is the APP project of Gold Fields of South Africa exploring promising platinum deposits in northern Finland. A number of small but rich gold deposits are also in the pipeline to start construction work.

There should be good opportunities for similar dynamic developments in exploration and later mining also in other parts of Europe, provided a conducive environment of mining legislation, tax situation and freedom from red tape is created. Many of the new member states have not been studied using the latest exploration techniques and earlier exploration results need to be re-evaluated in a market economic context. The political stability of Europe is a major contributing factor to the continued interest in the region. Certainly also the geology of the periphery is in certain areas attractive. With new mining legislation and economic reforms the potential of many countries could grow quickly. But this transition will not be easy and it is required that ideas previously considered almost as heresy are tested and accepted. The Nordic boom might be followed by similar developments elsewhere in Europe.

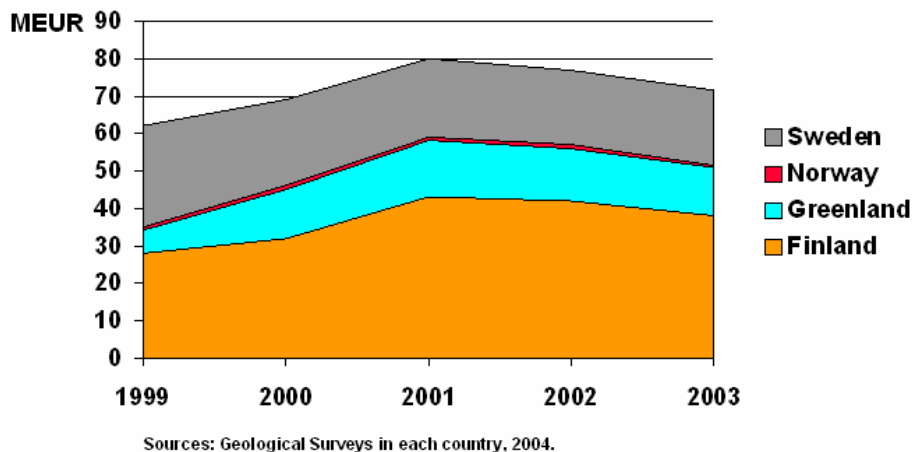


Fig. 9: Exploration in the nordic countries

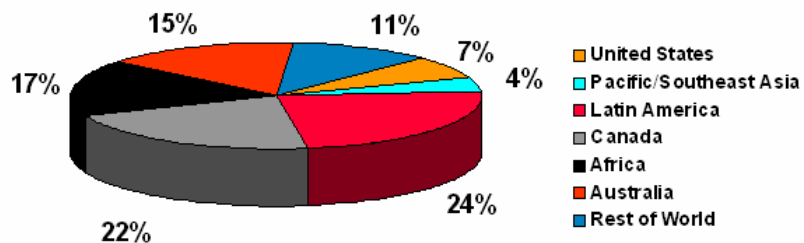
The future of European mining

When trying to forecast trends for European mining industry two set of figures can be used as indicators of where development will go:

- exploration,
- investments.

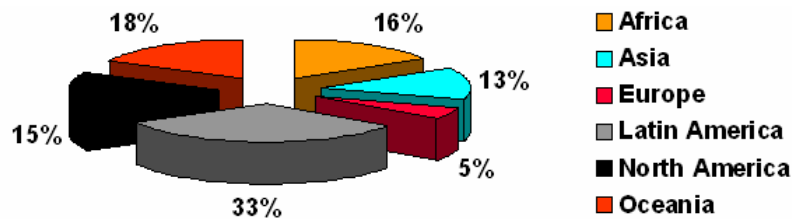
Exploration expenditure gives a long term indication of where new deposits might be found and hence where mining industry might be located. In Figure 10 is given the breakdown of global exploration expenditure in 2003. Europe is a small but fairly stable target for exploration accounting for some 5 % of the total expenditure. In these figures are included also money spent in Russia, which of course can be both in Europe and Asia. There is a small but not negligible amount of exploration dollars spent in Europe which indicates that mining will continue in the region. The picture is similar when looking at known investment projects at all stages. Five percent of these proposed investments are planned for Europe, also supporting the conclusion that European mining might be small but it is not dying. See Figure 11. It will be necessary to create larger entities gathering mines and smelters of several countries under the control of one company such as for example the recent merger of Boliden of Sweden and Outokumpu of Finland. As a rule of thumb it seems unlikely that the European continent can host more than a few producers of each main metal. There might be some smaller niche players aiming for specific markets with more beneficiated products such as the specialised iron producer Rana Gruber which produces a high value additive as its key products. A continuing restructuring process among the new EU member countries might be met with local protests but it seems as if the most painful steps have already taken and what remains will be less difficult.

YEAR 2003 TOTAL ~ 2.2 billion USD



Source: Metal Economics Group, 2003.

Fig. 10: Global exploration



Source: Raw Materials Data 2004.

Fig. 11: Mine project investments 2003/2004

EU mineral policy?

At present there is no common mining policy within the European Union. The legislative efforts underway are all focusing environmental issues such as the potentially damaging waste directive. This lack of interest in the mining sector has several explanations: Until Sweden, Finland and Ireland joined there were only countries with very marginal mining industries in the union. The metal consuming industries have been able to meet all their demand for metals without any problems from overseas. The concern about security of supply that was on the political agenda in the 1970s has subsided and since the late 1980s it has not been considered an issue at all. In particular after the demise of the Soviet Union and the peaceful political changes in South Africa strategic stockpiles of metals have been sold off and the government authorities dealing with these issues shut down.

It seems however that with the potential increase in demand for metals mainly in Asia a different situation might develop where it will be crucial to have access to a base supply of metals and minerals closer to home. Secondly the economic difficult situation in many of the peripheral areas of Europe makes it important to take care of the few job opportunities that there might be and exploration and mining is certainly one of them. To support these activities there is a need for a coherent mineral policy which makes it clear that minerals and metals are essential to economic development and that the mining industry must work according to high but not prohibitive environmental standards. The industry itself must further consolidate and accept to compete on a global level.

The new EU member countries bring more mining to the Union. In order to make the voice of the industry better heard in Brussels it will be important that new and old mining countries get together to formulate demands on a common mineral policy that can lay the foundations for a thriving mining industry in all of Europe.

References

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Resumé

Světové hornictví se zotavuje po několika obtížných letech, optimismus pramení z růstu cen kovů vlivem zvýšené poptávky, zejména v Asii, která podněcuje růst nákladů na průzkum a vede k ziskovosti těžebních společností.

Hornictví vstupuje do nové éry charakterizované:

- reálnou globalizací,
- koncentrací báňských společností a pomalou redukcí jejich počtu,

- vnějším tlakem týkajícím se životního prostředí, ekonomické transparentnosti a dozoru nad společnostmi,
- změnou postoje k výzkumu a vývoji. Za této situace se velké báňské společnosti stále více obracejí k fúzím a akvizicím jako prostředku jejich růstu.

Zakládající země EU tvořily oblast, kde hornictví ztratilo většinu svého významu vlivem vyčerpanosti nerostných ložisek a konkurence alternativního využití půdy. Nové členské země posílily produkční kapacitu rud v EU. Rozšířená Unie představuje mnohem silnější báňskou jednotku než společenství původních států. Navíc mnoho nových členských států nepoužívalo nejmodernější průzkumné techniky a dřívější výsledky průzkumu musí být přehodnoceny v kontextu tržní ekonomiky.

Evropa je malý, ale stabilní cíl nákladů na průzkum a báňských investic s možností vytvoření větších těžebních a zpracovatelských jednotek. Nové členské země přinesly do Unie více báňského průmyslu. Pro budoucnost bude nezbytné, aby „staré“ i „nové“ země formulovaly požadavky na společnou surovinovou politiku, která může položit základy prosperujícího báňského průmyslu v celé Evropě.

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