Access to resources - a change in Europe's policy

by Corina Hebestreit[1]

The EU's Raw Materials Initiative is the first EU attempt (since the original Coal and Steel Treaty) to look at the raw materials supply for downstream industry in a coordinated way. Several strands of activities were identified for each of the stakeholders, EU Commission, national governments and industry in the EU economy in order to secure sustainable supply for future economic growth. Geological knowledge and research and technical development (RTD) play an important role in making Europe more competitive in the access to mineral resources. The Geological surveys and industry are well on the way to improve the situation.

La Directive européenne "Matières Premières" est la première initiative européenne (depuis le premier Traité Charbon et Acier) pour veiller, de façon coordonnée, à l'approvisionnement en matières premières de l'Industrie de transformation. Plusieurs domaines d'activités ont été identifiés pour chacun des dépositaires et acteurs, la Commission européenne, les gouvernements nationaux et l'industrie, au niveau de l'économie européenne, pour garantir un approvisionnement pérenne destiné au développement économique futur. La connaissance en Géologie et le Développement en matière de recherche et technicité (DRT) jouent un rôle important en rendant l'Europe plus compétitive dans l'accès aux ressources minières. Les études géologiques et l'industrie sont bien sur la voie d'une amélioration de la situation.

La Iniciativa sobre Materias Primas de la UE, es el primer intento (desde el Tratado del carbón y el acero original) de tener en cuenta el suministro de materias primas a la industria de un modo coordinado. Se identificaron varias ramas de actividades para cada una de las partes interesadas de la economía de la UE, la Comisión Europea, los gobiernos nacionales y la industria, para garantizar el suministro sostenible de minerales para el crecimiento económico futuro. El conocimiento geológico y la investigación y el desarrollo tecnológico (I+D) juegan un importante papel para hacer una Europa más competitiva en el acceso a los recursos minerales. Los servicios geológicos y la industria están ahora en camino para mejorar la situación.

In 2008, the European Commission added a focus in its European policy on raw materials by its Communication from the EC (Brussels, 4.11.2008, COM (2008) 699 final). But the struggle for natural resources has triggered not only the EU's Communication on the access to raw materials, but has lead to a whole raft of initiatives and discussions at all levels, EU Member States, EU, OECD and UN.

The EU Raw Materials Initiative (RMI) underlines that "*securing reliable and undistorted access to raw materials is increasingly becoming an important factor for the EU's competitiveness and, hence, crucial to the success of the Lisbon Partnership for growth and jobs*".

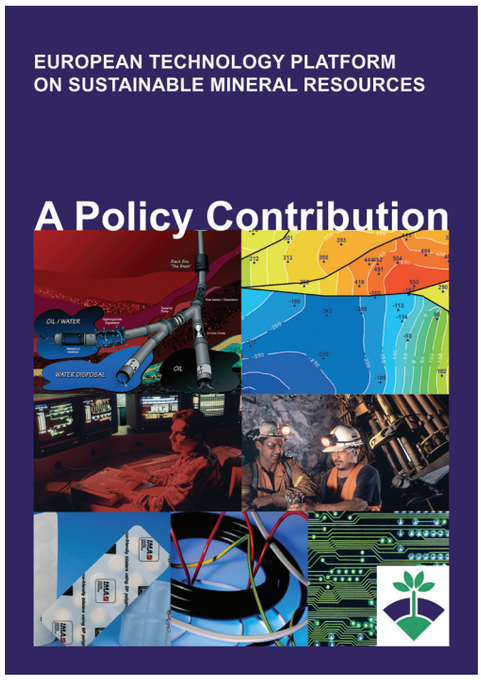
Another citation from the Communication *(COM(2008) 699 final)* states very clearly: "*The critical dependence of the EU on certain raw materials underlines that a shift towards a more resource efficient economy and sustainable development is becoming even more pressing*".

This Communication is a first step towards this, building on an in-depth analysis by the Commission and the results of a public consultation in 2008. It provides the basis for the EU to form a common approach in the international discussion on raw materials which has been addressed by the UN and by the G8 Summit in June 2007.

A catalogue of actions was established allocating responsibilities to the various stakeholders (Table 1).

As a result, at EU level, two working groups were established: one on "Criticality" with the aim to determine which resources are critical for the EU economy and one on "Best practices in land planning". For the Criticality working group, the Fraunhofer Institute has been appointed as a consultant to assist DG Enterprise in developing the methodology for defining the criticality and to screen a whole number of metals/minerals. Obviously the argument of criticality of European indigenous resources is accepted by DG Enterprise, but the criteria by which these should be selected or from what they should be protected, or how they should be fostered is not clear. This will be an opportunity to provide a mechanism.

Both working groups are supposed to deliver their results by about April 2010 with the aim of more formal Council of Ministers conclusions in June/July 2010. But just defining the degree of criticality of any raw material at any point in time or over the period of the next 10 years will not be sufficient.



[1] Director Euromines

	Level of response		
	EC	Member States	Industry
1.Define critical raw materials	X	X	X
2. Launch of EU strategic raw materials diplomacy with major industrialised and resource rich countries	X	X	
3. Include provisions on access to and sustainable management of raw materials in all bilateral and multilateral trade agreements and regulatory dialogues as appropriate	X X	X	
4. Identify and challenge trade distortion measures taken by third countries using all available mechanisms and instruments, including WTO negotiations, dispute settlement and the Market Access Partnerships, prioritising those which most undermine open international markets to the disadvantage of the EU. Monitor progress by issuing yearly progress reports on the implementation of the trade aspects, drawing, as appropriate, on inputs from stakeholders	X	X	X
5. Promote the sustainable access to raw materials in the field of development policy through the use of budget support, cooperation strategies and other instruments	X	X	
6.Improve the regulatory framework related to access to land by:- promoting the exchange of best practices in the area of land use planning and administrative conditions for exploration and extraction and –developing guidelines that provide clarity on how to reconcile extraction activities in or near Natura 2000 areas with environmental protection	X	X	
7.Encourage better networking between national geological surveys with the aim of increasing the EU's knowledge base		X	
8. Promote skills and focused research on innovative exploration and extraction technologies, recycling, materials substitution and resource efficiency	X	X	X
9. Increase resource efficiency and foster substitution of raw materials	X	X	X
10 Promote recycling and facilitate the use of secondary raw materials in the EU	X	X	X

Table 1. EU Communication: action points and responsibilities
(Orange colour: where industry is involved)

The Euromines recommendations for an action package for ensuring the secure supply of sustainable resources for Europe include a series of proposed key actions:

- Simplifying and streamlining the sustainable access to domestic raw materials, in particular by reducing permitting times and increasing the legislative reliability of investments in the extractive sector
- Facilitating exploration activities in Europe by re-establishing or increasing national expenditure for exploration with new technologies including the use of GMES* services and reinforcing the mineral intelligence at national and EU level
- Enhancing RTD and innovation in the area of extraction, processing and recycling of raw materials by supporting the ETP SMR and national research programmes that will provide access to new resources, provide improvements on resources and energy efficiency as well as improve their sustainability
- Strengthening the compatibility of extraction and environment, health and safety protection by supporting research and best practices in environmental management, including biodiversity
- Ensuring a sustainable supply from 3rd world countries through the creation of a level playing field by ensuring that competing imported resources are subject to the same environmental, health and safety standards as well as transparency, good governance and anti-corruption rules
- Investing at national level in universities and educational programmes for the sector to increase the longer-term perspective of new resources and new applications which would improve the sustainability of the use of resources for the future.

Given the situation with regard to the European resource base and the expenditure in exploration declining again (Fig. 1), a number of actions have already been taken to support these demands through industry-driven activities: in particular, research, and thus also exploration, has been given particular attention in the policy.

For the second pillar the RMI states "*To tackle the technological challenges related to sustainable mineral production, the Commission will promote research projects that focus on the extraction and processing of raw materials in its 7th Framework Programme (FP7). The European Technology Platform on Sustainable Mineral Resources focuses on innovative exploration technologies to identify deeply located onshore and offshore resources (including deep sea mining), and new extraction technologies to maximize economic and environmental benefits. The Waterborne Technology platform will undertake research for technologies that allow for a future sustainable exploitation of the seabed*" and "*the growing problem of skills shortage will have an impact on the future of the European mining industry19. In addition, there is still limited public awareness of the importance of domestic raw materials for the European economy. More effective partnerships between universities, geological surveys and industry should be encouraged to address these challenges. The Commission will encourage initiatives such as the European Minerals Day 2009 and will also foster the generation of new high skills on geology, earth observation and environmental issues, notably through the Erasmus Mundus Minerals and Environmental Programme (2009-2013) joint master and doctoral study programmes, to help counter this shortage*".

For the third pillar the RMI states: "*The Commission is promoting research projects that focus on resource-efficient products and production under FP7. In addition, the Eco-Design Directive 22 includes provisions for the design of resource-efficient products. Research will also play a major role in developing substitutes, in the interests of flexibility in the production process and reduced vulnerability to import dependence. Recently, the OECD23 recommended that its members promote resource productivity by strengthening their capacity for analysing materials flows. In the EU, the Data Centres on natural resources, products and waste will coordinate Member State input*".

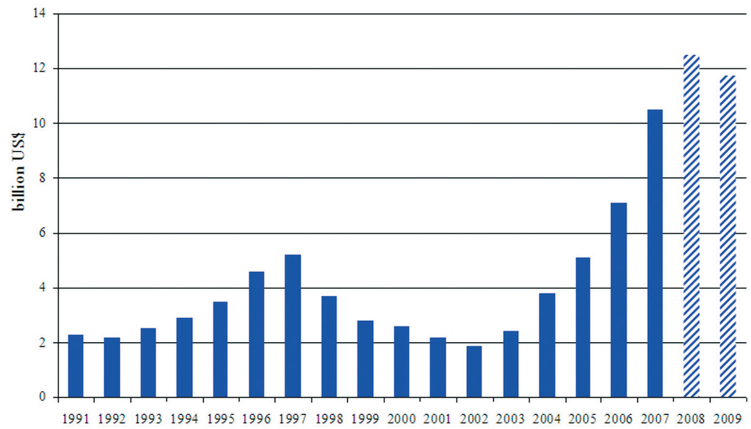


Figure 1. Global mining exploration expenditure (with 2008/2009 estimates)
Source: Raw Materials Data, Stockholm 2008

ETP SMR (European Technology Platform on Sustainable Mineral Resources

This has been active for several years now and reissued its Strategic Research agenda in light of the Resource Strategy. Over the past years, the industry, geological surveys and academia have developed a number of project proposals for research and have submitted these to the European Commission and some national governments for funding.

Projects such as ONE GEOLOGY are examples for the projects that have already been awarded funding by the European Commission.

The OneGeology-Europe (1G-EU) project was launched in September 2008 after successfully securing funds in the recent EC eContentplus funding round. OneGeology-Europe is a high profile €3.25 million European project with 29 partners working to make the rich geological data assets held by national Geological Surveys discoverable and accessible. For those outside the Survey, or nation, they are not easy to obtain, to understand, or use. Geological data is essential to the prediction and mitigation of landslides, subsidence, earthquakes, flooding and pollution. Geology is a key dataset in INSPIRE. It is needed for the Groundwater and Soils Directives, GMES and GEOSS*. OneGeology-Europe will make geological spatial data held by the Geological Surveys of Europe discoverable and accessible and see Europe play a leading role in the global OneGeology initiative.

The project will accelerate the development and deployment of a nascent international interchange standard for geological data, GeoSciML, enabling the sharing of data within and beyond the geological community. It will facilitate re-use of geological data by a wide spectrum of public and private sector users. It will address the licensing and multilingual aspects of access and move geological knowledge closer to the end-user where it will have greater societal impact. The project will provide examples of best practice in the delivery of high resolution digital geological spatial data to users, e.g. in the insurance, property, engineering, mineral resource and environmental sectors.

The results of the project will be: an interoperable geological spatial dataset at 1:1 million scale for all EU countries; a scientific and informatics specification for the harmonization of geological data and significant progress towards a harmonized dataset; a view service providing access to best practice high resolution geological spatial data services for 6 Member States; 2-4 case studies on cross-border delivery of harmonized high resolution data access; multilingual discovery metadata for all data provider participants' geological and applied map data; a robust data model, schema and mark-up language for the geosciences, which is OGC compliant; a web portal providing easy multilingual access to the above data and examples of user-focused web services; best practice examples of the delivery of geological data to a range of users; guidance and proposed code of practice on licensing and clearing arrangements facilitating re-use of geological spatial data; exchange of science, technology, informatics and communication skills and experience across the EU and globally.

These project achievements will allow substantial progress towards INSPIRE goals and not only benefit the geology theme but also provide a template for other environmental data themes. OneGeology-Europe will deliver data for the EU Geoportal and position Europe as the world leader in developing a geoscience SDI.

The ETP SMR has proposed a set of new projects which include projects on geological data collection and harmonization as well as the development of new exploration techniques in order to foster the discovery of new deposits and increase the European resource base for the EU's RTD calls for 2011-2013.

In addition, a number of events were and will be organized to raise political awareness for the needs of this industry and European society.

Following the Euromines event in Prague, addressing the question of demand and supply of minerals for the European Union, the Swedish Presidency continued in October 2009 with a conference on 'European higher education and research on metallic and mineral raw materials, a response to the Raw Materials Initiative', 12-14 October, 2009, in Luleå, Sweden addressing the question of research and mineral supply. The event was a joint event of the Luleå University of Technology, the County Administrative Board of Norrbotten, the Swedish Mining Research - MITU/ Bergforsk. and the ETP SMR.

This has been followed by the Swedish EU Presidency High-level Conference on 'Eco-efficient Economy - Towards Innovative and Sustainable Competitiveness', 2-3 November, 2009, in Linköping, Sweden. Events under the Spanish Presidency are still to be confirmed.

***GMES**: Global Monitoring for Environment and Security is the European Initiative for the establishment of a European capacity for Earth Observation
***GEOSS**: Global Earth Observation System of Systems