

**RHI position concerning the
Consultation on the preparation of a Communication on Raw Materials**

PREFACE

RHI is the global leading supplier of high quality, ceramic, fire-resistant products (refractories). These are essential for producing almost every item in daily use because without them there would be no cars, planes, roads, windows etc. The company is based in Austria and has over 100 production and service locations around the world, including many European member states. The access to high-quality raw materials is essential for the production of refractories. RHI owns various magnesite mines in Europe e.g. in Austria or Turkey; it also secures extraction through a joint venture in China. RHI therefore has a vital interest in optimising framework conditions in Europe. Besides that the company also depends on a sustainable supply and import of raw materials, amongst others magnesite, graphite and bauxite. Hence trade issues are also highly important.

Given the fact of these different angles of concern, RHI welcomes the holistic approach the Commission has taken in this consultation. We encourage the Commission to pursue this path of integrated approach that ties together various EU-policies – notably trade, external relations, development, competitiveness, environment and research.

Below you will find the answers of RHI to the different policy areas and questions. We have kept answers as brief as possible. In this context we also like to mention that RHI has already actively contributed to the discussion since the topic was revived in November 2008 with the *'Raw materials initiative – meeting our critical needs for growth and jobs in Europe'* by then Commissioner Günther Verheugen. This includes that RHI lent its expertise to European Associations that were member of the Raw Materials Supply group respectively its two ad hoc Working groups 'Criticality'¹ and 'Best Practice'.² RHI also organized high profile discussion evenings with members of the European Parliament, the European Commission and Member States. On a national level RHI is actively engaged in initiatives with the Austrian Federal Economic Chamber and the Federation of Austrian Industries as well bilateral contacts with the responsible ministries.

CONSULTATION

POLICY AREA: DEFINING CRITICAL RAW MATERIALS

1. *Do you have any comments on the methodological approach, including the scope, to determine criticality at EU level? If so, please specify.*

RHI supports the methodology the Working Group 'Criticality' has presented as we think that it is a suitable approach to determine whether raw materials are critical or not. We think that the criticality assessment is a clear improvement when compared to other methodologies e.g. the US approach.

RHI also supports the classification into the three clusters 'critical', 'potentially critical' and 'not critical'.

¹ *ad-hoc* Working Group on defining critical raw materials

² *ad-hoc* Working Group on Exchanging Best Practice on Land Use Planning, Permitting and Geological Knowledge Sharing

2. *Do you see any additional raw material that should be considered as critical? If so, please explain.*

(No comment)

3. *Do you have any comments regarding the recommendations of the report? If so, please specify.*

RHI fully supports the recommendations for follow-up and further support outlined in the report. In particular we support the conclusion of the Working Group that the criticality assessment provides a snapshot in time, which makes it indispensable, that the list of 'critical raw materials' shall be updated every 5 years. We also agree that the scope of the criticality assessment should be increased and more/all materials analysed.

Furthermore RHI believes that there is a need for reliable and consistent data and additional work should be undertaken to gather and disseminate more such data and information.

Given the fact that RHI experiences trade distortive measures as outlined under the trade chapter (question 9) we strongly support the recommendation that fair trade and competition conditions should be actively pursued and consistently enforced.

4. *Are you aware of any initiatives in your country that aim to assess the criticality of raw materials? If so, please describe briefly.*

The BMWJF (The Austrian Federal Ministry of Science and Research) each year publishes the WORLD MINING DATA. RHI considers this information a good basis for the analysis of criticality.

5. *The functioning of raw materials markets has not been dealt with. Do you think that further analysis of their functioning should be carried out? What actions should be proposed to increase their transparency?*

WTO just published the report 'World Trade report 2010' with a focus on 'Trade in natural resources'. We therefore do not see any need for this.

6. *Do you think that the EU should propose a system of stockpiling for the critical raw materials? If so, please indicate whether you consider it more appropriate to do this at Community or alternatively at Member States level.*

(No comment)

POLICY AREA: TRADE

7. *Do you think that the importance of trade is adequately reflected in the work carried out so far in the Raw Materials Initiative?*

(No comment)

8. *Do you have any comment regarding the main findings of DG Trade activity report? What activities should be prioritised? Are there, in your opinion, additional activities not mentioned in the report, which should be pursued in this strategy?*

(No comment)

9. *Please identify trade distortive measures (i.e. export restrictions) concerning raw materials that in your view should be tackled.*

As outlined in the PREFACE of this position paper, RHI very much depends on a sustainable supply and import of raw materials, amongst others magnesite, graphite and bauxite.

Under this point we want to depict an example of trade distortive measures RHI is experiencing in respect to the raw material ‘magnesite’. The distortive measures are carried out by the Peoples Republic of China.

It is widely recognized that China has set up a protectionist trade policy concerning raw materials. Export licenses and export duties are among the heavy weights. These export licenses regulate the maximum amount of raw materials to be available for export to protect the domestic supply. Issued by official bodies, licenses are usually sold by private agents way over-priced. Additionally there exist more than 370 different types of export duties between 10% and 70% on various raw materials.

Beneficiary of these restrictions are Chinese enterprises, which do have access to bigger amounts of raw materials for lower prices than enterprises from other countries. For European enterprises this means already today a clear disadvantage when it comes to international competition and a threat to security of supply. The World Trade Organisation (WTO) recently criticized China heavily for its protectionist trade policy, writing that export restrictions on rare raw materials would let Chinese enterprises profit first.

Since mid of 2010 Chinese restrictions on raw material export became an inevitable problem. License pricing for magnesite tripled during the first half of the year 2010, **what leaves the licenses price tag higher than the actual products value**. Estimations for the end of 2010 expect a further significant raise in license prices. The successful fight against black-market trade of magnesia by the Chinese authorities, which is very welcomed by RHI, left an additional gap in export supplies. This results in the fact, that 30% of total exports had to be imputed to the black-market. Readjusting the export quotas has not compensated this share.

Coming back to licensing: shortcoming of licenses availability creates an artificial delay when it comes to exporting magnesia. Cases where shipments of raw materials are held for several weeks until the sufficient amount of licenses is available occur more and more often. Damages to economy and supply-chain are crucial.

Whilst mid- and long-term solutions as the composed WTO Dispute Settlement Panel DS395 are to be seen as important steps to establish equal trade requirements, RHI encourages the Commission to actively pursue and rigorously enforce fair trade and competition also on a short-term basis.

10. *Are you aware of any initiatives in your country that have one of the above-goals in mind such as, for example, developing a raw materials diplomacy, or supporting companies to invest in third countries in the raw materials sector? If so, please describe briefly.*

(No comment)

POLICY AREA: DEVELOPMENT

No comment from RHI in this policy area.

POLICY AREA: IMPROVEMENT OF THE REGULATORY FRAMEWORK CONDITIONS INSIDE THE EU

16. *Do you agree that these topics correspond to the major challenges in this policy area? If not, please specify.*

RHI agrees that setting the right framework conditions within the European Union in order to foster sustainable supply of raw materials from European sources is a very important policy area - if not the most important one - in the Commission initiative.

17. *Do you think of any other avenues, which should be followed by the Commission? If yes, please specify.*

In our view all relevant questions have been raised. We think it far more important that also the (all) Member States will move forward and give this topic priority.

18. *Do you agree with the recommendations made in the report on "Exchanging Best Practice on Land Use Planning, Permitting and Geological Knowledge Sharing" or do you have any specific ones to be added. Please explain.*

RHI thoroughly supports the recommendations of the report 'Best Practice'. We encourage that 'Best Practice' is drawn from Member States that, until now, do not have their own minerals policy. Those Member States can benefit in the field of National Minerals Policy, Minerals Planning Policy and a sustainable Minerals Policy based on the economic, the environmental and the social pillar.

RHI would also encourage that all parties are called in whenever a decision is taken that affects this policy field. Economical, ecological and social concerns have to be considered in equal measure.

19. *Do you consider it useful to establish a EU geological service based on a network of Member State geological services?*

RHI considers this useful. Such EU geological service should resemble the *United States Geological Survey*. The *Service* should integrate all European geological services (also national authorities) and should have the right and power to do research in the field of geology everywhere within the EU. E.g. it could explore and analyze the geology of a region anywhere in Europe without having to ask permission the respective Member State.

20. *Do you consider that EU regulatory framework conditions for wood and/or recovered paper need to be further analysed? If yes, please specify.*

(No comment)

POLICY AREA: PROMOTING SKILLS AND RESEARCH, DEVELOPMENT AND INNOVATION

21. *What type of actions would you propose to provide better cooperation between companies, universities and public authorities in order to promote skills and in the extractive or other raw materials sectors? Please specify.*

RHI has the strong believe that the education for young people in the area of engineering sciences - especially in the mining-sector - has a very high and professional standard within Europe.

Training for miners and foreman is also well established. We believe it is not the problem of the education's quality that exists in Europe; it is more a problem of shortcoming and lack of interest of young people. Europe has a need for young people in the engineering profession. Therefore RHI believes that companies, universities and public authorities should promote jobs within the mining sector. But the problem seems to be more general since there is a lack of young people within the technical studies anyway.

In this sense we consider it paramount that there is a continuous effort and aspiration to improve the image of the industry as a whole.

Young people could be attracted by advertising and e.g. by special days for engineers like the *girls' day* in Germany; on the occasion of this event young girls are able to meet and exchange views with women who work in jobs that are considered as 'men jobs'.

The contact between schools and companies should be improved e.g. young people could visit sites during 'open days'.

22. *Are you aware of any research, development and innovation programme(s) at national, regional or local level? Please specify.*

RHI has a longstanding relationship in research with the Montan-University of Leoben, which is involved in many of such programmes.

Research is done in many areas that touch the sector of raw materials including for example research on mineral based nano products or new mineral based products itself. For this question we will focus on research in the field of mining, which is undertaken by the University of Leoben. There are three main areas within mining in which research is currently done:

- 1) Sustainable production of minerals (this includes the safety of the workers in the mining sector, the impact on the environment as well as the efficiency of energy during the whole process)
- 2) Better use of mineral resources
- 3) Increase of the mining process efficiency

Following, you will find one programme example for each main area

1)

The first programme we would like to introduce is a cooperation between the University of Leoben, Universities of Madrid, Paris and Lulea in Sweden. The program is concerned with mining rock fragmentation. This programme studies the possible ways to extract rock with the highest safety for the workers, the least possible environmental impact and the most efficient way to use either with mechanical techniques or explosives. The programme is funded mostly by the industry.

2)

The second programme we would like to introduce is research on an increased recovery of minerals and on the use of waste rock as useful material. Mining activities produce typically ore and waste.. The research programme tries both to develop products from waste rock and to minimise waste material during ore production. Besides funding from the Sixth Framework Program this programme is financed by the industry.

3)

This area is supposed to develop new mining methods and mining systems. This includes automation, new machinery and faster processing.

Within one programme, which is financed by the industry and the Austrian Forschungsförderungsgesellschaft (FFG), the use of micro waves and other electromagnetic pulses for mining rock fragmentation is studied. Mobile mining and drilling equipment is developed based on a combination of mechanical mining and micro wave use.

If you have any further questions on the above mentioned research programmes do not hesitate to contact brussels@thecounselors.eu or 02/62751-64.

23. Where do you see the major gap / the urgent need for the raw materials sector related research, development and innovation at EU level. Please provide details.

In general RHI sees a lot of possibilities for research and innovation in the sector of mining engineering. There are especially four fields in our opinion that need to be improved: minerals processing, mining engineering, subsurface engineering and mineral economics.

To give a better overview of the possible improvements in the mining sector we ranged our suggestion according to the four fields.

Mineral Processing

- Investigation of processing-properties of mineral raw materials (suitability for upgrading)
- Processing of fine aggregates
- Development and optimization of process routines for the different raw materials
- Development of models for comminution and separation processes derived from proved physical interactions
- Basic research (sorting processes)
- Sampling and Homogenisation of bulk materials

Mining Engineering

- Improvement of Material laws for the rock mass to better plan and control the mining process (better understanding through research of physical laws during the process of blasting, comminution and mineral processing)
- Mine Automation (control of machine movement, take away people form hazardous work places)
- Integrated rock fragmentation approach – mine to mill (interaction of blasting / fragmentation / loading / hauling / milling)

- New Mining equipment (transport in steeply inclined drifts, new rock breaking machines – alternative for explosives and machines with cutting picks), continuous mining (since the 1950ies there has not been a groundbreaking innovation in the technology of the mining engineering. The only changes have been in the automation of the processes.)
- In-situ mining and in-situ fragmentation (increase recovery form oil deposits, recovery of geothermal energy)

Subsurface Engineering

- More research on the state of geological characteristics for example the long term impact on different rock formations after drilling and during the mining process. With more research a case like the San Jose Mine in Chile (5th August 2010) could have been avoided.
- Long term stability / short term stability of underground constructions
- Development of new (or improving of existing) rock support methods and equipment
- Development of solutions for problems with Mine water (acid, geo-thermy,)
- Developments for the usage of excavated rock as a construction material

Mineral Economics

- Developing a Raw Materials Policy (for Europe)
- Analyzing of developments on the raw material markets and developing new methods for prognosis (demand side)
- Develop new methods (approaches) for Sustainability and find ways for implementation in the mining industry
- Find further connections in the relationship Society – Mining – Raw Materials

24. *What is your idea of a major research and innovation action that would have the highest positive impact on the security of raw materials supply for the EU industries? Please specify.*

RHI believes that a ‘Minerals Plan’ following the Austrian example (the *Austrian Minerals Plan* is mentioned several times in the report of the working group ‘Best Practice’) would help Europe to secure the raw materials supply. This plan would show the deposits of different raw materials in the European Union. To complete such a plan a lot of geological research has to be executed and millions of soil samples need to be analyzed. Such undertaking cannot be reached within a short period of time; it would take several decades. A first step could be to analyze those European regions in which - following the current state of knowledge - possible deposits of raw materials maybe situated.

Another proposal is the establishment of a central geological agency that should be an equivalent to the *United States Geological Survey*. Such a European geological agency should integrate all European geological services (also national authorities). The agency should have the right and power to do research in the field of geology everywhere within the EU. E.g. it could explore and analyze the geology of a region anywhere in Europe without having to ask permission the according Member State.

25. *Are you aware of innovative exploration and extraction technologies, where project partners on a European level are needed to develop and implement the new technologies and which are the innovative technologies, which need to be developed further. Please provide details.*

Within the exploration process more technological development is needed. It is important to explore methods that help to identify the rock formations and the kind of stone up to a depth of 10 kilometres. Hereby it would be easier to define the resources that exist in Europe and help Europe to be more independent from raw material

26. *Are there any other aspects related to skills, R&D and innovation for other raw materials, such as wood, that need to be further promoted? Please, specify.*

(No comment)

POLICY AREA: RESOURCE EFFICIENCY & RECYCLING

27. *In your view, and beyond measures already being taken (e.g. the recast of the WEEE Directive), what practical measures can be taken by the EU and by Member States to prevent the illegal shipment of obsolete end-of-life vehicles and electronic equipment?*

RHI believes that definition of ‘waste’ should be reconsidered/reviewed. Currently any end-of-life product and any side-product within a manufacturing process, which cannot be used in any further way as product itself, is tagged as such. So even material that can be recycled and than be reused is defined as waste. Therefore we endorse a new definition and better differentiation of the kind of waste.

On the one hand RHI sees hazardous, radioactive and chemical substance waste that is potentially dangerous to people, animals and the environment. For that kind we support the existing strong requirements for enterprises, which handle that waste. We also support strong regulation on waste that cannot be reused and therefore needs a final disposal.

On the other hand we see waste that can be recycled and reused. Hence it is not waste in a ‘negative’ sense. Quite the contrary, this is waste that can help increase resource efficiency and save resources/raw materials. It does not deserve such a negative image as not-reusable waste. RHI favours a less intensive and complicated permission procedure for the allowance to handle such reusable materials. This could simplify the recycling process and increase the desirability of recycling for enterprises. Consequently illegal shipment would be less profitable and decrease.

A new definition of reusable materials could help to change the perception of such materials for the public and industry and make it overall more favourable to recycle.

28. *In what ways should statistics on trade in, and recycling of, products containing secondary raw materials be improved?*

(No comment)

29. *Have you identified major problems with recovered paper? What are the main issues that need to be further analysed?*

(No comment)