

## **Public Consultation on the preparation of a new Communication on Raw Materials**

### **Objective**

The Commission intends to adopt a Communication on the subject above by end of this year. It will highlight the recent economic developments on the global raw material markets, show the progress made in the implementation of the Raw Materials Initiative (adopted in 2008), but also highlight remaining challenges and draw conclusions in terms of the way forward.

The goal of this consultation is to gain an understanding of stakeholders' views on both the implementation of the Raw Materials Initiative (RMI) as well as gather opinions and suggestions on the potential avenues the Commission should explore in order to further progress and strengthen the Initiative, including actions at the level of EU, Member State and/or other stakeholders to address the key issues in relation to non-energy raw materials. For the purpose of this consultation "raw materials" cover all industrial raw materials including materials such as minerals, ores, aggregates, and also wood, hide and skins and other industrial raw materials with the exception of energy and food related raw materials.

### **State of play**

In November 2008 the Commission adopted the Communication (2008) 699 "The raw materials initiative - meeting our critical needs for growth and jobs in Europe" which proposed an EU integrated strategy as a response to the different challenges related to access to non-energy raw materials. As such it tied together various EU policies, both external (e.g. external relations, trade, development) and internal (e.g. environment, competitiveness, innovation), and promoted further cooperation between the Member States where appropriate. The proposed strategy is based on 3 pillars:

1. ensure a level playing field in access to resources in third countries
2. foster sustainable supply of raw materials from European sources, and
3. reduce consumption of primary raw materials by increasing resource efficiency and promoting recycling.

In May 2009, the Competitiveness Council endorsed the major objectives set out by the RMI and invited the Commission, Member States and stakeholders to act swiftly in the implementation of various lines of action outlined by the RMI. It also welcomed the Commission's intention to report back on the implementation of the RMI by the end of 2010.

The launch of the RMI coincided with the full onset of the financial and economic crisis. The evolution of the international raw material markets has confirmed the structural nature of the issues at stake and thus reinforced the need to further pursue the objectives of the RMI.

Meanwhile the RMI has gathered extra momentum with adoption of the Europe 2020 Strategy that includes as one flagship "An industrial policy for the globalisation era" and that foresees the setting up of a framework for a modern industrial policy that will "address all elements of

the increasingly international value chain from access to raw materials to after-sales service". Other related flagships are "Innovation Partnership" and "Resource Efficiency".

Work is ongoing to implement the different lines of action outlined by the RMI. On top of a series of actions undertaken in the framework of the RMI, three major deliverables have recently been released:

- Report on defining "critical raw materials at EU level"<sup>1</sup>;
- Report on "exchange of best practices in area of land use planning and permitting"<sup>2</sup>;
- Trade activity report 2009 on raw materials<sup>3</sup>.

Another one is the Guideline document on "Non-Energy Extractive Industry and Natura 2000" aimed to provide clarification. The Guideline document is foreseen to be published by end of July and will be also available via the web site of Environment Directorate General. Finally, regarding the external angle of the strategy, a first milestone was achieved with the publication of DG Trade's 2009 activity report on raw materials.

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<sup>1</sup> [http://ec.europa.eu/enterprise/policies/raw-materials/critical/index\\_en.htm](http://ec.europa.eu/enterprise/policies/raw-materials/critical/index_en.htm)

<sup>2</sup> [http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index\\_en.htm](http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index_en.htm)

<sup>3</sup> [http://trade.ec.europa.eu/doclib/docs/2010/june/tradoc\\_146207.pdf](http://trade.ec.europa.eu/doclib/docs/2010/june/tradoc_146207.pdf)

# QUESTIONS

## POLICY AREA: DEFINING CRITICAL RAW MATERIALS

### Major issues:

An expert group, chaired by Enterprise and Industry DG, recently released a report<sup>4</sup> the presented a methodology to measure the criticality of raw materials at EU level. A raw material is labelled “critical” when the risk of supply shortage and their impacts on the economy are higher compared with most of the other raw materials. The report provides an analysis of 41 different minerals and metals, and concluded on a list of 14 critical raw materials. It also contained two sets of recommendations: recommendations for follow-up and further support, and policy-oriented recommendations to secure access to and material efficiency of raw materials.

### Questions:

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

For primary raw materials the methodology is an exact approach and the results can be exactly calculated, which is a major progress, compared to e.g. the approach of the USA. Establishing three groups of critical raw materials (critical, potentially critical, not critical) is also appreciated.

Concerning secondary raw materials, however, the situation differs: The chosen methodology does not allow the type of material to elect itself as potentially critical, when, in fact, this could be relevant e.g. in the case of scrap material.

As regards e.g. non-ferrous metals, scrap and access to scrap play a major and ever growing role in the shaping of the EU non-ferrous metals industry and the metal user sectors as well. “Secondary” raw materials have indeed an intrinsic “sustainability” value because they enable to save energy and natural resources as well as to avoid polluting disposal. In addition, any policies aimed to address the sustainable and efficient use of resources ultimately enhance the value of scrap as a raw material.

However, it is a fact that the scrap markets for many materials (be it non-ferrous metals, ...) are generally and increasingly affected by operating distortions which are destroying level playing-field to access these materials at EU and international level.

Thus, scrap in itself is a critical raw material.

Furthermore the methodology combines a quantitative and a qualitative approach. However, the list of critical materials is exclusively based on the results of the quantitative approach. Even though the materials profiles allow to highlight one or the other aspect which cannot be taken into consideration in the quantitative assessment of the criticality of a material, these

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<sup>4</sup> [http://ec.europa.eu/enterprise/policies/raw-materials/critical/index\\_en.htm](http://ec.europa.eu/enterprise/policies/raw-materials/critical/index_en.htm)

aspects have not been analysed with a view to eventually adjusting the criticality list. It would however make sense to do this.

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

The 41 primary raw materials which were the basis for the criticality assessment have been chosen due to expert knowledge, but important mineral raw materials have been disregarded so far, e.g. lead as well as coking coal (as main constituent of steel production).

For secondary raw materials we refer to the above comments on scrap and on the impact that the qualitative assessment should have on the selection of “critical” materials.

It is furthermore very important to stress that the actual development of emerging technologies, industrial development in emerging economies and operating conditions of the raw materials global markets are all having a direct impact on future demand for raw materials as well as on the terms and conditions under which this demand can be satisfied. It is therefore essential neither to freeze the list of critical materials nor to consider this list as the exclusive target for policy initiatives. Problems may arise –even in short time - that should require special attention in order to ensure a level playing field in access to certain raw materials that are currently not on the list. These problems must be addressed equally diligently. A recent example is the development of tantalum world supply during the past months. The latter is considerably hampered and destabilized by production stoppage at the main production site in Australia and the unreliable status of production in the Democratic Republic of Congo (conflict minerals issue, see question 9).

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

The recommendations presented in the report generally concur with our expectations about EU policy lines and objectives that could help to secure access to raw materials on a level playing-field.

However, as regards recommendations for substitution, it should be stressed that substitution is not “per se” the solution to criticality in access to raw materials, all the more so in that, for most of the materials identified as “critical”, substitution possibilities have been identified already as very limited or non-existent.

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

No.

Austria had a similar approach, but stopped working on it with regard to the initiative of the Commission.

**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 World trade report 2010 with a focus on “Trade in natural resources”.

Nevertheless the Commission can play a very useful role, however, to increase and improve the level of information on market distortions by mobilizing the Delegations and the national embassies on any regulatory developments that affect trade in raw materials in particular. The Commission and the Member States can play a very useful role also by creating awareness of the problems and calling for transparency on their systemic causes at international level (e.g. the project of an inventory of trade restrictions on raw materials at OECD level). All this is already done in DG Trade-Market Access and should be reinforced.

Within the Union, the Commission can certainly promote transparency by means of better statistics on trade flows of sensitive materials such as scrap.

In general it has to be stated that industry is the most effective and accurate source of information about the functioning of its raw materials markets, meaning that the monitoring and the assessment of market problems by the institutions should rely on the expertise of the industries concerned and their representative bodies. Experience shows that analytical work commissioned to external consultants is generally unsatisfactory and goes together with a lack of focus on, and knowledge of, the actual problems as well as a considerable loss of time for industry experts called for peer review.

**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.**

Stockpiling is not an effective option, particularly in today’s context of global economy. Stockpiling could only solve the problem of short term price hikes but it is not a sustainable solution for the real problem (= the dependency from certain countries which clearly want to take unreasonable advantage out of their dominant market position for certain raw materials). Resulting market disruptions, notably price impacts, and loss of market transparency are likely to give rise to additional distortions in the free play of market forces as well as biased business decisions and policy initiatives.

In addition, stockpiling would mobilize considerable financial resources and would require delicate arbitrages whose costs will ultimately fall on the industrial community at large.

Therefore we do not see much sense in a stockpiling system neither at Community level nor at Member States Level.

Companies should be encouraged to stockpile, instead, raw materials according to their own demand with financial subsidies or privileged taxation, as different companies e.g. use different qualities of commodities. These requirements could never be met by stockpiling neither on Member States nor on EU level.

## **POLICY AREA: TRADE**

### Major issues:

One pillar of the Raw Materials Initiative consists in developing a European external strategy in order to guarantee the sustainable supply of raw materials from global markets at undistorted conditions. In this, trade policy plays an important role.

DG Trade has recently completed its 2009 activity report<sup>5</sup> on raw materials, which summarizes the progresses accomplished along the three axes of the trade raw materials strategy:

- Include, as appropriate, the relevant trade disciplines on sustainable supply of raw materials in bilateral and multilateral trade agreements.
- Identify illegitimate trade distortive measures taken by third countries and tackle them using all available instruments, including through bilateral consultations, the Market Access Partnership process or, if necessary, the WTO dispute settlement; while delimitating more clearly permissible exceptions for e.g. development purposes.
- Reach out to third countries to show that the question of sustainable raw materials supply is an issue relevant to all countries, developing or developed, resource-rich and resource-poor alike as the uncontrolled, unregulated multiplication of trade restrictions can lead to a generalized beggar-thy-neighbour policy detrimental to most countries; while recognising the importance of respecting internationally agreed rules on the subject.

### Questions:

#### **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.

Especially, but not only, for the EU non-ferrous metals industry's it has to be stated that only a marginal share of the total feed supplies is secured through upstream integration (i.e. captive supply of raw materials). The market, and therefore trade, plays a key role in securing raw materials for the sector. It is consequently of vital importance to ensure undistorted operation of the EU and international markets for raw materials, to promptly challenge the causes of trade distortions, to prevent the arising of such causes as much as possible and to promptly remedy their injurious impact.

These objectives are properly taken up by DG Trade strategy in respect of access to raw materials. This strategy must be pursued and reinforced. In view of the extent, importance and increasing complexity of the challenges, more resources should be dedicated to it, in fact.

#### **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?**

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<sup>5</sup> [http://trade.ec.europa.eu/doclib/docs/2010/june/tradoc\\_146207.pdf](http://trade.ec.europa.eu/doclib/docs/2010/june/tradoc_146207.pdf)

The weakness of the regulatory framework within which trade action must be carried out in this field is a hindering factor. Indeed, the causes behind competitive distortions in access to raw materials are increasingly sophisticated and complex. They are not pertaining anymore to trade policies only, even though the impacts are ultimately perceived in terms of lack of level playing field in trade.

In spite of this, industry needs the Commission to deliver in terms of

- effective rules setting at bilateral and multilateral level (including development and endorsement at WTO level of new disciplines on export restrictions),
- effective enforcement of rules,
- effective coherence of policies (e.g. in the GSP (generalised system of preferences), in the implementation of trade defence at EU and WTO level, in external relations, etc).

More results should be delivered in particular in case of lack of enforcement of their commitments by trade partners. Industry must be given the means to exert its rights of defence with unrestrained political support. This would mean, among others,

- a more offensive recourse to dispute settlement,
- the review of the Trade Barrier Regulation in order to make it more operational, and
- the rehabilitation of the Regulation on Common Rules for Exports as an effective temporary safeguard instrument against massive export flows of raw materials.

In view of the above mentioned complexity of the causes of trade distortions in access to raw materials, the pursuit of DG Trade strategy in this domain would certainly benefit from enhanced synergies with DG TAXUD and DG Environment. More deliverables should be identified in this enlarged frame of action in respect of, notably,

- customs control on illegal trade of secondary raw materials and
- compliance with the WSR (Waste Shipment Regulation) provisions as well as
- the review of the thematic strategies on resources and recycling, which should thoroughly integrate a market and trade dimension as well as consider market and trade impacts of policy options taken.

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

EU enterprises are confronted on the international and EU markets for raw materials with competitors which derive a significant purchasing edge on raw materials which they need to import from the fact that their domestic market is closed and protected by various trade and industrial policy measures that provide them with an actual subsidy on imported raw material or enable them to secure domestically a higher revenue from their production.

EU enterprises are also confronted with the predatory policies of certain countries rich in natural resources which have imposed themselves as major or eventually dominant world supplier of certain raw materials. These are now restricting their supplies in order to gradually move up their market dominance to the next products in the value chain. As a result, they are not only imposing dual prices and scarcity of inputs on their competitors but also confronting the latter with exports at dumping prices of value added products.

Above mentioned situations are arising from the operation of a variety of policy measures, eventually combined in a sophisticated manner. This includes export restrictions (taxes, quotas, bans, licensing systems, limited number of clearance points, etc), differentiated import

and export incentives (e.g. VAT rebates on export), domestic preferential tax treatments, State interference in local commodity exchanges, etc.

Over the years, the mechanisms which are distorting competition in access to raw materials have become not only increasingly complex but also increasingly pervasive in terms of materials concerned and countries taking advantage of them. In the meantime however, international trade rules, designed to address unfair selling practices, are remaining totally helpless to address unfair purchasing practices and the World Trade Organization has not acknowledged yet the fact that disciplines are urgently needed to ensure free and fair trade in raw materials.

### Magnesia

Since mid of 2010 Chinese restrictions on raw material export became an inevitable problem. License pricing for magnesia 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, 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.

### Rare Earths

As another example the problem of Rare Earths exports from China can be mentioned: China is producing around 95 % of the Rare Earth demand of the whole world. In the last 5 – 10 years China introduced an export license system for Rare Earth products. Over the years the export quantity was limited by this system. While in the past years the quantity of export licenses could at least nearly fulfil the demand of the industry outside China the quantity of export licenses was reduced sharply during this year (2009: 50.000 tons, 2010: only 30.000 tons - this means that the industry outside of China will have a supply gap of about 20.000 tons or more!). Further it is a common practise that the exporters of Rare Earth add a license fee to the price of each kg which is exported. Due to the reduction of export licenses this license fee is now in some cases 5 – 15 times higher than the domestic Chinese product prices. This means, that end users outside China has to pay 5 – 15 times more for the same raw material than their competitors in China.

### Molybdenum

One more example is that China is endowed with the largest reserve base of molybdenum-bearing minerals in the world (44 % of world resources, whilst the USA and Chile account for 28 % and 13 % respectively). A sizeable mine production developed on this reserve base over the years and China became top ranking world molybdenum producer in 2007, ahead of the USA and Chile.

Several measures are however affecting China's exports of molybdenum:

Exports are operated under a system of export quota and licences – the quota and licences concern raw materials and unwrought molybdenum products whilst wrought products (wire, rods, shaped parts) are free of any constraint on export (i.e. not included in the export quota).

In addition, the differentiation of the taxation regime on export (VAT refund on export and export tax) according to the type of material/product provides a very effective support to the development of downstream products production for export. In this respect, molybdenum wrought products, including wire, benefit from the most favorable treatment along the value chain with a VAT rebate on export of 5 percentage points and no export tax whilst there is no VAT rebate on export for most molybdenum raw materials a 5% to 20% export tax applies. This means that China has put in place a system whereby there is dual pricing on raw materials to the benefit of its domestic producers and there is a clear encouragement to the export of value added mill products whose market is far more narrow than the metallurgical market (steels, alloy steels and alloys).

### Tungsten

China has a dominant position in raw material supply for tungsten as it has the largest tungsten deposits in the world (> 70 % of all reserves worldwide) and holds the main share in production (> 75 % of the world W-production). By means of State policy measures such as export restrictions (ban on ore exports, export duties and quotas) the Chinese government is restricting the exports of tungsten raw material (price and quantity distortions) which leads to dual-pricing raw materials. Chinese operators do not only benefit from a domestic purchasing edge on raw materials but also benefit domestic incentives to export valued added products as the Chinese government also operates a differentiated VAT refund policy on exports of value added products. This leads to situations where value added products are eventually sold by Chinese competitors on the international market, including the EU, at prices eventually lower than the input costs.

Another concern relates to the recycling of tungsten carbide scrap. The latter is complementing EU tungsten industry's primary feed supplies in increasing proportions and is purchased from both EU and international market. However, terms of competition for purchasing these materials are deteriorating rapidly as a result of the above mentioned Chinese policy measures which also secure a purchasing edge for scrap to domestic producers while preventing the export of domestic scrap by means of export taxes.

Concerning China, we encourage the Commission to actively pursue and rigorously enforce fair trade and competition also on a short-term basis. Nevertheless mid- and long-term solutions as the composed WTO Dispute Settlement Panel DS395 are very welcome as important steps to establish equal trade requirements.

### Conflict Minerals

Another problem present the so-called conflict minerals. Raw materials as for example coltan are subject to illegal mining in the Democratic Republic of Congo. Coltan production in Congo is indeed affected by illegal mining to the benefit of armed groups operating in this politically unstable region.

Even if Western companies clearly refrain from the illegally and unethically extracted raw materials, it is important that measures are implemented that prohibit the circumvention by countries such as China who often "whitewash" illegal raw materials.

Moreover, in view of the loss of major reliable suppliers (Australia), several tantalum processors are already confronted with a lack of supplies from ethical and lawful sources.

**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, not yet.

## **POLICY AREA: DEVELOPMENT**

### Major issues:

The 2008 RMI Communication highlighted that development policies play a relevant role in at three 'levels':

- 'Strengthening States'
- Promote a sound investment climate that helps increase sustainable supplies of raw materials
- Promote sustainable management of raw materials

In 2010, within the context of the EU-African Union partnership, the European Commission and the African Union Commission recently agreed to develop a bilateral co-operation in the field of raw materials and to work together, taking fully into account the Africa Mining Vision of February 2009 and the EU Raw Materials Initiative of December 2008, in particular on issues such as governance, infrastructure and investment and geological knowledge and skills.

### Questions:

**11. What specific actions would you consider most relevant needed in the following areas:**

- **Good governance;**
- **Infrastructure / investments;**
- **Geological knowledge / skills.**

**12. Regarding transparency, what measures do you believe the EU should take to foster revenue transparency in the mining industry in raw material resource-rich countries? What are your views regarding existing initiatives currently being taken in this area, namely by the Extractive Industries Transparency Initiative (EITI<sup>6</sup>)?**

**13. Concerning the recent agreement between the European Commission and the African Union Commission, in your view, what concrete objectives, targets and deliverables should be included in such a partnership?**

The partnership should include among others a project to ensure sound collection and recycling operations of materials/products reaching the end of life in Africa. We are aware of the large volumes of post-consumer materials that are shipped to non-OECD countries as second-hand products rather than waste! However these countries have no or not enough infrastructure to recycle these products – as well as the new products - when they reach the end of their life. Recycling takes place at a very local level with virtually no control. The regrettable consequences are a loss of valuable material – the total gold recovery can be as low as 25% while it reaches 95% in modern refining plants – deterioration of the local environment and of local health conditions. The fast growing waste flows in developing countries need to be addressed and a win-win solution can be developed.

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<sup>6</sup> <http://eiti.org/>

The main objective is to encourage international co-operations between European recycling companies and SMEs in developing regions like Africa to achieve a better supply of secondary raw materials for Europe and the global economy as well as better protection of health and environment and a fair share of the value added chain in developing countries. The project would consist in converting those engaged in inappropriate or illegal collection and backyard recycling activities in developing countries into collectors, improving both their economic circumstances and their health and local environment. This model has been successfully employed by the lead industry in Senegal for example (where scrap batteries are exported to France) and similar projects are being supported by UNEP or in partnership between EMPA, Umicore and other companies in India.

Implementation should build on ongoing experiences such as the EU-funded project “e-waste in Africa: from Waste to Resource Efficiency”<sup>7</sup>. A necessary pre-condition would be development funding from EU institutions (e.g. European Investment Bank) to help establish such schemes in various developing countries, to improve access to global raw materials, and enhance health and environmental conditions in developing countries, along with the image and sustainability of EU industry. Development funding initiatives by the EU are crucial to minimising the particular risks and burdens for European companies, which have already been encountered in developing countries especially in the initialising phase of business co-operations.

Besides, the EU-African Union Commission should provide a platform to address issues such as “conflict minerals”. The EU should formally engage in consultations on this matter to support the African countries in securing good governance in the exploitation of their resources and to enable fair competition in the trading of, and access to, these resources.

**14. Do you consider that wood should be addressed in the framework of development policy? If yes, please specify what are the main issues to be analysed.**

Definitely no, as the RMI should be focused on mineral raw materials only.

**15. Are you aware of any initiatives in your country that contribute to promoting exploration and exploitation of mines in developing countries? Should such initiatives be better coordinated or promoted at the EU level?**

No, we are not aware of any initiative as minerals supply (incl. exploration of deposits) is primarily a matter of companies.

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<sup>7</sup> The project is implemented by the Basel Convention Coordinating Centre based in Nigeria and the Basel Convention, Regional Centre based in Senegal in co-operation with partners including Swiss EMPA, Öko-Institut, IMPEL, UNESCO and the Partnership for Action on Computing Equipment (PACE).

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

### Major issues:

- The Commission has proposed in the Raw Materials Initiative adopted in 2008 to provide clarity on how to reconcile non-energy extraction activities in or near Natura 2000 areas with environmental protection. In consultation with stakeholders a guidance document has been finalised and will be available on the web site of DG Environment<sup>8</sup> before summer break.
- As regards ways to improve the regulatory framework within the EU by promoting the exchange of best practices in the area of land use planning and administrative conditions for exploration and extraction, a report has been delivered by the relevant ad hoc Working Group<sup>9</sup>.
- This report covers the following topics:
  - Minerals Policy
  - Land use planning policy for minerals
  - Authorisation and permitting procedures
  - Achieving Technical, Environmental and Social Excellence
  - Improving the EU's geological knowledge base
  - Better networking between the national Geological Surveys
  - Need to integrate terrestrial sub-surface information into the GMES Land Service

### Questions:

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

Yes!

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

For the topics mentioned above, it will be important that Member States now implement the proposed elements as far as applicable.

Furthermore the integration of the aspect of impact on the accessibility to raw materials in any EU legislative proposal is a must if further sterilisation of available deposits is to be prevented.

Additionally, instruments have to be developed at EU and national level in order to facilitate investment in exploration and extraction within the EU as well as for non-EU-countries. Such instruments would be for example supporting loans or failure liabilities.

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<sup>8</sup> <http://ec.europa.eu/environment/nature/natura2000/>

<sup>9</sup> [http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index\\_en.htm](http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index_en.htm)

**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.**

Yes.

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

We consider it useful to establish a European Geological Survey as a separate institution that resembles the USGS (United States Geological Survey). If the implementation of such a Survey should not be possible, we are at least supporting the enforcement of networking, based on existing organisations (e.g. Eurogeosurveys).

**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, not within the Raw Materials Initiative (see question 14).

## **POLICY AREA: PROMOTING SKILLS AND RESEARCH, DEVELOPMENT AND INNOVATION**

### Major issues:

- Promote **skills** not only in the mining sector but also in other raw materials sectors is a matter of concern. The Commission is currently supporting this challenge via programmes such as ERASMUS MUNDUS with the specific Minerals and Environment Programme (EMMEP).
- Focussed **research** on innovative exploration and extraction technologies, recycling, materials substitution and resource efficiency. The Commission has recognised the European Technology Platform on Sustainable Mining (ETP-SMR) to catalyse excellent research and development collaborative projects between the industry and research organisations. In addition, via the 7th framework programme for research, development and innovation the next call for proposals in the area are expected to be public in July<sup>10</sup>.

### Questions:

#### Skills:

**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.**

PR and information activities for the raw materials sector are necessary to attract more young people to start their studies in this field on the one hand and to raise the awareness and knowledge of the broad public on the other hand.

#### Research, Development and Innovation:

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

The Mining University of Leoben is active in this area.

**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.**

R&D should make the mining & processing steps (all the processes from deposit to the final product describable, controllable and steerable being the basis for a sustainable use of resources through Process improvement (safety, productivity, costs), control of side effects (environment) and more efficient resource utilization.

Research fields should be:

- Mineral processing
- Extraction of critical minerals from old mine dumps
- Mineral exploration in general

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<sup>10</sup> <http://cordis.europa.eu/fp7/dc/index.cfm>

- Mineral extraction from deep deposits.

Concerning minerals prospection / exploration by companies:

- the prospection and exploration activities besides the development of particular methods or techniques have to be completely acknowledged as R&D, in order to stimulate the cost intensive and risky activities. A change in the FRASCATI Manual will be necessary.

**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.**

For the mining industry the following actions are paramount:

- Experimental work and development of conceptual models rather than a simulation approach; understanding the physics
- Combination of model experiments in laboratories and full scale experiments in mines
- Combination between fundamental and applied research work
- Strong need for field sites to carry out experiments under realistic field conditions

Non-ferrous metals play a major role for numerous modern high tech and clean tech applications such as dentistry, magnets, photovoltaic, batteries, fuel cells, catalysts, low emission vehicles zero emission buildings and different kinds of electronic devices as well as opto-electrics. Therefore the demand for many precious and specialty metals (gallium, indium, ruthenium, platinum, tantalum, rare earths metals, tungsten, molybdenum etc.) as well as many base metals (nickel, copper, aluminium etc.) has boomed in the recent decades. For Europe this increasing metals stock in the technosphere is an opportunity to secure valuable resources via an extended and profitable circular economy in the future.

The position of the European non-ferrous metals industry as a technological leader in the field of the recycling of non-ferrous metals should be further strengthened by well-directed research programs and projects funded by the EU Commission. The research activities should focus on:

- interdisciplinary research regarding end-of-life product collection, pre-treatment processes and optimisation of the interfaces between several steps and stakeholders involved along the recycling chain,
- optimised treatment of process slags, effluents, etc. (both from primary and from secondary processes), enhanced recovery of by-products,
- in-depth data collection concerning selected relevant products (e.g. sales numbers, composition, product lifetimes, stock data etc.) and transparency of end-of-life material flows,
- innovative new recycling technologies to address non-ferrous metals like rare earth metals, tantalum with "thermodynamical and chemical constraints",
- recycling of critical metals under economic constraints,
- investigations on the likelihood and feasibility of systematic waste deposits as sorted, intermediate stocks for EoL products that cannot be recycled economically today but might become interesting in future.

**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.**

**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, not within the RMI (see question 14!)

## **POLICY AREA: RESOURCE EFFICIENCY & RECYCLING**

### Major issues:

The 2008 RMI Communication identified that the increased use of secondary raw materials contributes to security of supply and energy efficiency. However, today many end-of-life products do not enter into sound recycling channels, resulting in an irremediable loss of valuable secondary raw materials. This mainly concerns exports of end-of-life vehicles and electronic equipment, which leave Europe as reusable products but end up being dismantled abroad. To counter these trends, the need to reinforce the Waste Shipment Regulation and related legislation was identified. Furthermore, prices of some recovered materials have reached record levels due to the high demand from third countries.

The Waste Shipment Regulation also contains requirements on exporters of waste to third countries to ensure that this waste will be treated in an environmentally-sound manner. However, compliance with this principle is not always respected.

Finally, stakeholders have identified the need for an improvement in statistics on secondary raw materials. This includes actions to be taken to measure the extent of illegal trade in products containing these secondary materials.

### Questions:

**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?**

Harmonised implementation and enforcement of existing legislation is essential to guarantee their effectiveness in ensuring that actors operate according to the same rules. Unfortunately, the requirements of the Waste Shipment Regulation (WSR), including the export of wastes only to sites able to treat them in an environmentally sound manner, have not been successfully implemented over the past 15 years. This jeopardises the level playing field principle with regard to access to secondary raw materials - a principle that is key to the competitiveness of EU industry, that is one of the objectives of the RMI and that jeopardises human health and environmental protection in some countries.

Some of the actions that would help a better enforcement of the WSR include

- Strengthen and expand IMPEL network and activities against illegal shipment of waste.
- Encourage (national) efforts to conduct road or ship spot checks by police or customs raid. A minimum number of special inspections for exports to non-OECD countries are required as well.
- Boost cooperation between national customs/enforcers, including an extensive and systematic exchange of information on illegal shipments and setting-up a collective mechanism to inform authorities on illegal shipment flows.
- Make the correspondents' guidelines for WEEE legally binding (as envisaged in the Annex IC of the current Council proposal of the WEEE Directive) and provide for effective enforcement.

- Speed up the finalisation of the correspondents' guideline on ELV, make it legally binding in the next revision or by a separate regulation such as new Annex of the ELV-Directive. Provide for effective enforcement.
- Introduce a similar requirement to Art 6 (5) WEEE Directive in the ELV Directive<sup>11</sup>, unless this requirement is already dealt with in other sectoral legislation.
- Support the “Solving the E-Waste Problem (StEP) Initiative”<sup>12</sup>.
- Enhance awareness (at national level and public level) of illegal streams / channels of (waste) materials which have a potential of environmental harm or loss of valuable material, to avoid illegal shipment.
- Make intra-EU shipment less burdensome (having waste treated within EU is as difficult as shipping waste to non-OECD countries) e.g. by using a “certification number”, which identifies the certified treatment facility involved, in combination with periodic declarations.
- Ensure greater harmonisation of pre-/post-notification systems (notification via flexible electronic systems 24 h before arrival in an EU port and forwarding of information to Customs Authorities)

We believe that action needs to be taken as soon as possible to address the side effects of the lack of enforcement and level playing field. We therefore propose to develop a scheme for the certification of pre-processors, refiners and recyclers of waste and secondary raw materials aimed at ensuring level playing field conditions. The certification scheme would contribute to an effective enforcement of the ESM (environmental sound management) provision of the Waste Shipment regulation. The certification scheme would include simple and possibly graded requirements covering

- environmental aspects,
- process efficiency
- operational excellence standards and (non-energy) resource efficiency

The obligation for certification of pre-processors and refiners would apply to all shipments of waste and secondary raw materials between EU-Member States and exported from the EU to third countries. Exports may only be authorised if such final processor is duly identified and certified - thus providing an effective tool for export authorities to enforce the WSR.

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

The harmonisation of statistical terms is essential.

Detailed knowledge of the material streams entering the use phase, the amount of metals existing in society as stock as well as the amount of metals bearing waste leaving the “society stock” at the end-of life stage help to identify trends, enabling industry to tailor its processes to future qualities, and to adjust its capacities to quantities expected in the future.

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<sup>11</sup> According to Art. 6 (5) of the WEEE Directive, green listed WEEE waste exported out of the EU shall only count for the fulfilment of the recovery targets if the exporter can prove that the recycling operation took place under conditions that are equivalent to the requirements of this Directive. Export authorities currently have no instrument at hand to implement Art. 6 (5) effectively. For providing evidence for the equivalent requirements, please refer to our Proposal on “Certification”.

<sup>12</sup> <http://www.step-initiative.org/index.php>

However, there is a lack of information on important phases of metal flows throughout the life cycle. The missing information has to be replaced by models or best assumptions which involve a high level of uncertainty.

Industry therefore suggests that the EU ensures collection of the following statistical data:

- General Information on scrap flows: Official statistical data bases in combination with the data collection of the International Metal Study Groups provide an overview of metals production, their flows (imports and exports) as well as of some raw materials for primary metals production. However, structured information collection is lacking on secondary raw materials such as scraps.
- Information related to materials in stock: Massive amounts of metals are in use in society (stock). Reliable data on the amounts of these metals are, however, not available. They are important since they define, on the one hand, the new raw materials qualities that will arrive after their use in the recycling installations. On the other hand the information on both quality and quantity of materials hoarded will be a crucial information basis for the amount and qualities of materials – and when these materials can be expected to enter a recycling scheme.
- Information related to waste disposal: A number of metals and metal bearing articles leaving the use phase do not reach the recovery processes. They are either disposed of in landfills or escape from EU recovery processes through export. Data on these material streams which are lost would allow an assessment of the economic viability of i) extracting metals from historic mining ii) extracting metals from waste destined for landfill, indicate where metals bearing materials can be collected iii) or how their disposal in the future can be prevented and instead be forwarded to a collection scheme.

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

No, none within the scope of the RMI.