

POLICY AREA: DEFINING CRITICAL 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.

The method presented is logical and available for verification. The question that might be asked is critical for whom? Often the end user of products and services is unaware of the materials that are required to deliver them. Not many citizens are aware of the cost/value of tungsten, nor where it is used. They buy products or services not materials.

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

I am sure that there are arguments that could be made for the inclusion of other specialist materials (e.g. zirconium for nuclear applications) but for me the important point raised by the report is that products and services should be designed on the basis of LCA considerations.

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

- *improve the availability of reliable, consistent statistical information in relation to raw materials;*
 - *This is not an easy task for primary or secondary materials – values quoted in existing sources can be estimates and/or benchmarks many traders do not want transparency!*
- *encourage more research into life-cycle assessments for raw materials and their products on a “cradle-to-grave” basis;*
 - *These can be complex and must be standardised and refereed.*
- *With regard to Primary raw materials the approach to the management of by-products must promote appropriate use and be managed on the basis of risk assessments.*
- *With regard to trade in Raw Materials it would appear difficult to secure supplies from outside the EU without some form of investment (private consortiums?) in the development and management (through shared ownership) of resources – as practised by Japan & China.*
- *The Group recommends that policy actions are undertaken to make recycling of raw materials or raw material-containing products more efficient, in particular by:*
 - *Promoting product designs that take end-of-life recovery for re-use/recycling into account.*
 - *By looking ways of extending service life through repair/up-grades*
- *by minimising raw material losses into residues from where they cannot be economically recovered.*
 - *Yes but how? Should fiscal policy target net material & energy consumption in some way? Then minimising loss would be economically beneficial.*

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

DEFRA has commissioned a study that is currently being completed.

The Department of Transport commissioned a study on REE

www.oakdenhollins.co.uk/pdf/dft-01_205_issue2.pdf

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?

The managers of the LME would say that their system promotes transparency. It does provide a sort of safety valve and form of stockpile but it does not eliminate speculation.

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. If we manage the materials in our 'technosphere' correctly this can act as a reserve or stockpile for secondary materials.

⁴http://ec.europa.eu/enterprise/policies/raw-materials/critical/index_en.htm

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](#)⁵ 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:

1. Do you think that the importance of trade is adequately reflected in the work carried out so far in the Raw Materials Initiative?
2. 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?
3. Please identify trade distortive measures (i.e. export restrictions) concerning raw materials that in your view should be tackled.

I don't know how it could be managed but low cost production of magnesium in China has put high technology plants in Canada and Norway out of business – in the US one producer has survived through the imposition of import duties by the US.

4. Are you aware of any initiatives in your country that have one of the above-goals in mind such
5. 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.

⁵http://trade.ec.europa.eu/doclib/docs/2010/june/tradoc_146207.pdf

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.

Promotion of sustainable production of primary minerals in the EU.

Promoting the recovery of secondary materials in the EU – developing a strategy for establishing suitable recovery facilities in the EU – ensuring efficiency and avoiding the development of over capacity.

Promoting research on 'distributed' pre-concentration/recovery/refinery units for minerals and the development of recovery systems improving the efficiency of production of secondary materials

1. 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)?
2. 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?

Development of equitable trade arrangements – this really depends on whether the mineral trade is controlled by private companies or government organisations. However if special relationships are established could other regions of the world object to these as being unfair? This is related to the wider question of making the aims of creating short term shareholder value compatible with promoting sustainable development.

Resource rich countries such as Zimbabwe could benefit from EU investment.

3. 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.
4. 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?

⁶<http://eiti.org/>

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 before summer break.⁷
- 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.⁸
- **Ⓢ** 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:

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

There is also a need to make citizens aware of the social value of materials – without this it will be difficult to secure their engagement or understanding of the need for mineral extraction nor secure their co-operation to move towards sustainable materials management.
2. Do you think of any other avenues which should be followed by the Commission? If yes, please specify.

If the development of primary sources in the EU is to be promoted this must be supported through R&D and policy instruments for the management of by-products generated from primary operations.
3. 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.
4. Do you consider it useful to establish an EU geological service based on a network of Member State geological services?

It would make sense for extending collaboration and co-operation between the

established centres of excellence – some of which have extensive global knowledge that could be valuable to developing countries.

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

⁷<http://ec.europa.eu/environment/nature/natura2000/> ⁸http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index_en.htm

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 .⁹

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.

The initial problem is for new graduates to get their first exposure to working within the minerals industry. An EU programme that would support the first two years employment in companies offering experience in the industry would be beneficial. This could be extended to providing support for expert secondments to the extractive industry in the developing countries.

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 Technology Strategy Board and DEFRA promote programmes for innovation in resource efficiency and sustainable development in the UK; the regional funding arrangements are being re-structured. There are EU programmes that support developments in this area.

FP7

Eco-Innovation, ETAP

ETP – Sustainable Mineral Resources

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.

The critical requirements are: -

Change the emphasis in product design to ensure that LCA issues are given adequate weighting and ensure that products are designed to facilitate end-of-life management.

To ensure that the necessary expertise and facilities are created in the EU to ensure that the 'inventory' of secondary resources that are available in the 'technosphere' can be harvested efficiently. These materials should be recovered and processed in the EU and not exported unless the importer can demonstrate 'world class' processing facilities.

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.

Promote research on the recovery of the 14 materials identified as critical to the EU economy.

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.

The use of nano-materials is developing in a wide range of applications – research on the direct production of nano-particles from raw materials should be promoted.

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.

⁹<http://cordis.europa.eu/fp7/dc/index.cfm>

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:

1. 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?

The most important thing is to change the way products are designed for use in the EU – this must facilitate end-of-life recovery. Otherwise the answer would appear to be to ensure that it is economically viable to recover secondary materials.

Technologies and businesses have developed to recover high value components from end-of-life products and equipment and these can be very efficient. This would suggest increased tax on net material consumption (rewarding reduction in waste).

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

The LME has a secondary Aluminium market but since some secondary materials contain multiple elements it could be difficult to keep track of all elements. The Japanese have conducted detailed Substance Flow analyses for a number of important elements – this is a useful way of observing the different uses and flows and could highlight the principal markets that could be monitored.

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