

## **POLICY AREA: DEFINING CRITICAL RAW MATERIALS**

Major issues:

An expert group, chaired by Enterprise and Industry DG, recently released a report<sup>4</sup> that 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.

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

*Not relevant for RTD.*

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

*Not relevant for RTD.*

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

*The Group recommends that the list of EU critical raw materials should be updated every 5 years and that the scope of the criticality assessment should be increased.*

*The Group recommends that steps be taken to:*

- *Improve the availability of reliable, consistent statistical information in relation to raw materials;*
- *Promote the dissemination of this information, notably by preparing a European Raw Materials Yearbook with the involvement of national geological surveys and mining/processing industries. It should focus on improving the knowledge on the availability of resources and on their flow into products through the value-added chains of the EU economies;*
- *Establish indicators of competition to land in the Member States;*
- *Encourage more research into life-cycle assessments for raw materials and their products on a “cradle-to-grave” basis;*
- *Create a working group(s) to further analyse the impact of emerging technologies on demand of raw materials.*

*The Group recommends that a sub-group of the Raw Material Supply Group of the European Commission should be set up to ensure follow-up of this report on critical raw materials.*

*The Group recommends policy actions to improve access to primary resources aiming at:*

- *Supporting the findings and recommendations resulting from the work carried out by the ad hoc working group on "Best practices in the area of land use planning and permitting" with a view to securing better access to land, fair treatment of extraction with other competing land uses and to developing a more streamlined permitting processes;*
- *Promoting exploration, and ensuring that exploration by companies is regarded as research activity;*

*Suggested change:*

- *Promoting research on mineral processing to extract all valuable minerals and metals including critical, extraction from old mine and mineral processing dumps, old smelter slags, mineral extraction from deep deposits, and mineral exploration in general, notably under EU RTD Framework Programmes; looking for efficient and cheap separation and extraction technology of many metals from electronic scrap.*

*This recommendation is extremely important to improve the EU's raw materials access and efficiency in the longer term.*

- *Promoting good governance, capacity-building and transparency in relation to the extractive industries in developing countries, notably in the area of critical raw materials;*
- *Promoting sustainable exploration and extraction within and outside of the EU.*

*The Group recommends that the following policy actions, with regard to trade and investment as defined in the trade raw materials strategy, be pursued:*

- *maintain current EU policy choices in the negotiation of bilateral and regional trade agreements;*
- *consider the merits of pursuing dispute settlement initiatives at WTO level so as to include in such initiatives more raw materials important for the EU industry; such actions may give rise to important case law so long as existing GATT rules lack clarity and are limited in scope;*
- *engage without reservation in consultations with third countries whose policies are causing distortions on international raw materials markets in order to discourage certain policy measures and to request adherence with market forces;*
- *foster an effective exchange-of-views on certain policies made within the institutional framework of EU economic cooperation agreements (e.g. with China on the latter country's NFM recycling plan to year 2015);*
- *continue to raise awareness on the economic impact of export restrictions on developing and developed countries in various multilateral fora, such as WTO or the OECD;*
- *consider shaping a new EU-wide policy on foreign investment agreements in such a manner as to better protect EU investments in raw materials abroad and ensure a level playing-field with other foreign investors who benefit from the backing of State funds;*
- *continue to increase coherence of EU policy with respect to raw materials supply, for example in the assessment of injurious dumping and subsidies.*

*The Group recommends that policy actions are undertaken to make recycling of raw materials or raw material-containing products more efficient, in particular by:*

- *mobilising End of Life products with critical raw materials for proper collection instead of stockpiling them in households (hibernating) or discarding them into landfill or incineration;*
- *improving overall organisation, logistics and efficiency of recycling chains focus on interfaces and system approach;*

- *preventing illegal exports of EoL products containing critical raw materials and increasing transparency in flow;*
- *promoting research on system optimisation and recycling of technically-challenging products and substances.*

*The Group recommends that the overall material efficiency of critical raw materials should be achieved by the combination of two fundamental measures:*

- *by minimising the raw material used to obtain a specific product function; this covers every step from smart production with metals and minerals savings to substitution of potentially critical raw materials by less critical ones;*
- *by minimising raw material losses into residues from where they cannot be economically-recovered.*

*The measures should be evaluated with regard to impacts on environmental and economic performance over the entire value chain*

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

*Not relevant for RTD.*

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?

*Not relevant for RTD.*

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.

*Not relevant for RTD.*

## **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 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.

*Not relevant for RTD.*

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

*Not relevant for RTD.*

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?

*Not relevant for RTD.*

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

*Not relevant for RTD.*

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.

*Not relevant for RTD.*

## **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:  
**There is huge European experience in use of special procedures and geological data collecting, processing and using which are skills that could be transferred to developing countries.**

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)?

*Not relevant for RTD.*

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?

***Make use of many EU guidelines, good practices and suitable directives linked with environment protection caused by mining activity. There are a number of RTD and demonstration projects that could be realised in developing countries, for example with regard to exploration, water management, mineral characterisation and rehabilitation.***

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.

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?

*Not relevant for RTD.*

## **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>7</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 Groups.
- 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.

***It would be desirable if the European Commission could issue a recommendation that exploration was considered as RTD in the Member States and therefore would be granted tax exemptions.***

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.

*Not relevant for RTD.*

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

*No comment.*

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

*Not relevant for RTD.*

## **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.

***Support for an Era-Net programme or something similar would be desirable.***

***The ETP SMR endorses the idea with programmatic PPPs to set up long-term commitments from industry, academia and the public sector; such can be developed on regional/ national level as well as European level.***

***There is a need for a (specific) coordinated mineral resources research, development and innovation programme at EU level covering all minerals.***

***However, it also welcomes the future cooperation along the supply chain, for example with other ETPs, to take a more holistic approach to raw materials research and to progress to more advanced materials based on a consequently designed process and product life cycle chain .***

***Innovation Partnership projects would be welcome to enhance the transfer and implementation of RTD.***

***We would like EC to support grant offices for the minerals sector.***

***Continued Support for the networking of universities dealing with geology, mining engineering and mineral processing under the Erasmus programme would be needed.***

***Support for further education of engineers would be helpful.***

Research, Development and Innovation:

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

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 needs of the sector have been identified in the Strategic Research agenda of the ETP SMR.***

***In particular there are research needs in the area of***

- ***deep mining,***
- ***deep sea mining,***
- ***flexible small scale mining,***
- ***Mineral and metal processing,***
- ***Metal and mineral recycling,***
- ***implementing the hard rock breaking,***
- ***implementing automation and robotics of many mining operations based on new sensor, IT and embedded systems technologies,***
- ***higher energy efficiency,***
- ***no hazardous emissions.***

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.

***Three actions are necessary:***

- 1. Sustained R&D in exploration to find new reserves***
- 2. Transparent and logical R&D programmes to maintain the existing global technological leadership of the mining companies and the global European equipment suppliers. Many of these companies do not participate in EU-programmes for reasons of bureaucracy and protection of IPR.***
- 3. R&D in systems to increase recycling and recovery. Such systems are not only in technology but also in innovation of systems for logistics, taxation and incentives.***

***In particular research in the following areas is needed:***

- ***Intelligent deep mining,***
- ***new “look ahead” technologies based on sensors ,***

- *wider use of robotics and automation,*
- *biometallurgy,*
- *constant monitoring of mining environment inside and outside of the mine.*

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.

- *Promine project, FP7*
- *EO-miners project FP7*
- *Intelligent Deep Mine project to be submitted in FP7 in 2011,*
- *Water Management in Industry including mining – to be submitted in FP7 2011*

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.

*The use of CO2 creating raw materials such as crude oil, coal and other materials.*

## **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?

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

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