

Emerson contribution to Raw Materials 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.**

N/A

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

In addition to the list of 14 critical raw materials developed by the European Commission, Emerson considers the following materials as critical:

- Chromium
- Copper
- Lithium
- Molybdenum
- Nickel
- Selenium
- Titanium
- Vanadium

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

Emerson agrees with the European Commission's general assessment in the report on critical raw materials. As a producer of innovative technologies which feed into the renewable energy products, Emerson appreciates the Commission's understanding for raw material requirements. We believe that 20/20/20 targets will be impossible to meet without a stepped-up raw materials policy. Emerson therefore suggests an increase in priority given to the raw materials policy.

Other policy areas should therefore be coordinated with raw materials data to ensure that targets are actually feasible.

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

In the United States, the Special Programmes Office of the White House has initiated a programme on raw materials scarcity earlier this year. The policy area was previously headed out of the Department of Defence.

- 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?**

An understanding of the European raw materials markets is of great importance. Only with an understanding of existing stocks and internal EU dynamics, can the EU make a reliable assessment for future policy.

Only reliable data collection can determine how big a problem the raw materials challenge actually is.

- 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 State level.**

Emerson supports the idea of stockpiling strategic raw materials. Shortages of certain strategic raw materials occur already and may appear on a more regular basis in future. Stockpiles will then be able to smooth out the effect of shortages on industry in Europe.

With reference to question 5., it is importance to understand the European raw materials market before investments are made that could do more harm than good. Before stockpiling decisions are taken, it must be determined who uses what, where and when.

Emerson would like to underline the importance of correct timing to set up a stockpile of scarce raw materials. Large orders of raw materials for the purpose of setting up stockpiles have the potential to upset markets in the short term.

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?**

N/A

- 8. Do you have any comments regarding the main findings of the 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?**

Emerson would like to underline the importance for the EU to cooperate closely with its partners. This includes the United States and Japan, which are in a similar situation to that of the European Union, and other partners such as Australia and Canada which are reliable sources of raw materials.

Importantly, the European Commission should concentrate on ensuring that third countries refrain from signing exclusivity agreements with countries like China.

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

Emerson has identified rare earths as a particularly scarce material, where disruptions to supply chains occur. China remains one of the only exporters of rare earths, until extraction in other locations is developed.

China has started to tightly control the export of rare earths outside its territory. Access to rare earths has been made subject to investment and production in China, making it extremely difficult for European companies to access the materials. In its 2009 Materials Strategy China compares its raw materials wealth to that of the Middle East and oil, wanting to ensure it becomes rich from selling raw materials.

In Emerson's opinion, the EU has done the right thing in focussing on extracting rare earths from recycling. Waste streams may provide the most reliable source of scarce raw materials to European industry.

In addition, Emerson suggests the European Commission strengthens its trade ties with countries that have deposits of scarce, strategic raw materials but are unable to extract them to date.

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.

The United States has developed a policy which is similar to that of the European Union. Raw material considerations have an impact on trade and development negotiations of the United States.

Policy Area: Development

11. What specific actions would you consider most relevant needed in the following areas: Good governance, infrastructure / investments, geological knowledge / skills.

Emerson believes that all of the above areas are related and of great importance.

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)?

N/A

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 partnership?

The European Commission should strengthen the role of raw materials policy in such international negotiations. Fair access to raw materials should become a central part to negotiations. As explained above, Emerson believes that the combined approach of all the factors in question 11. should be addressed.

The EU should ensure that trade relationships with developing countries maintain a mutual benefit for both the EU and the third country. As such, the EU should support the sustainable economic development of partner countries, and ensure that remediation of mining sites is ensured.

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

N/A

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?

Emerson is aware of programmes by the United States government which address raw materials access in development policy.

Emerson believes that European-coordinated approaches are the most beneficial with non-EU partners. Increased negotiating power of the EU is the only way that exclusive negotiations by China with developing countries can be matched.

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.

Emerson agrees with the assessment by the European Commission. Emerson also agrees that the topics are major challenges.

The EU will have to find an approach to balance the different policy areas. Coordination of different interests, such as environmental protection, the development of renewable energies and economic competitiveness, will become necessary.

With raw materials for renewable energy technologies, such as rare earths and lithium being particularly scarce, even different environmental objectives will have to be weighed up against each other. Wind power turbines require high tech magnets which are produced from rare earths. Balancing clean energy against extraction activities in protected nature reserves will become a major challenge.

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

Emerson underlines the role of reclamation as one of the most important solutions to the raw materials challenge.

Emerson appreciates the efforts made in the review of the WEEE Directive but believes that reclamation of scarce raw materials must become more ambitious.

At current, large volumes of strategic raw materials leave the European Union in form of waste at the end of a product's life time. This process restarts the entire problem of access to raw materials, when third countries then make conditions or limit the EU's access to raw materials at a later stage.

Emerson believes that the engineering and waste industry must develop to accommodate the need for reclaiming materials through recycling.

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.

N/A

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

Emerson believes that coordinating European geological services could improve the understanding of raw materials availability. Greater cooperation at EU level of these services could harmonise standards and improve services member states where geologic surveys are of a lower standard.

Importantly, Emerson suggests coordinating the EU's efforts with those of its partners in third countries. In particular, the United States' Geological Service should be considered a partner in this process.

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

N/A

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 material sectors? Please specify.

Emerson supports the coordination of industry, academia and public authorities by the European Commission. Emerson believes that the model used in the SET-Plan for energy technologies could be adopted for the raw materials sector, as it leaves flexibility for innovation to industry.

Emerson believes that there is a lack of experts with an understanding of the raw materials sector. This includes traditional engineers and experts with a strategic view on the raw materials challenge for European industry. This is reflected in the lack of courses on raw materials at universities. Emerson believes that such courses should be promoted financially, to ensure Europe has the necessary skilled labour to manage the raw materials challenge in future.

Strong cooperation between industry and academia should be envisaged both at the educational, academic stage, as well as at the R&D stage. For this purpose, the European Commission should strengthen its FP7 focus on raw materials.

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

In the United Kingdom, Cambridge University is setting up courses on raw materials.

In the United States, Yale University is setting up a programme on reclamation.

In Canada, McGill University is setting up a programme on low yield sources and old mines.

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.

Emerson sees the greatest need for research in the area of reclamation and substitution:

Reclamation of raw materials from existing products bears great potential for the European economy. While Europe has little potential for extraction of raw materials left within the EU, recycling of raw materials could make up for this lack. In terms of research, three aspects are of importance:

- a) Product design must be reorganised to incorporate raw materials considerations and consider reclamation of strategic raw materials at end of use phase.
- b) Recycling facilities must be able to reclaim strategic raw materials from waste, even for small products at small quantities.
- c) Reclaimed raw materials must be brought back to virgin material quality.

Another important field for research is substitution of strategic raw materials. European industry must find ways to substitute materials that are in short supply, uncompetitively priced or even depleted. Research activities should focus on two main areas:

- a) Substitution of materials for alternative substances.
- b) Coating and surface treatment of materials as a compromise solution.

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.

See above (23).

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.

N/A

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.

N/A

Policy Area: Resource efficiency and 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?

Emerson welcomes the recent review of legislation and initiatives of the European Union in this area. As a manufacturer of electronic equipment and components, Emerson closely follows the review of the WEEE Directive and has an interest in the Shipment of Waste Regulation. Emerson is particularly interested in the proposal by the European Parliament's Environment Committee to include raw material considerations to the recycling obligations under the WEEE Directive.

Emerson believes that the financial incentive to ship waste with strategic raw materials abroad must be removed. This could require a reorganization of the waste treatment industry – turning it into a raw materials actor. This should open up potentials for new markets, increasing the value of the industry from necessary evil to a great opportunity.

As a manufacturer of such products, Emerson believes that producers also have an increased role to play. Emerson believes that product legislation, such as the Ecodesign Directive should incorporate waste treatment and reclamation, as well as raw materials efficiency. Producers must learn to design products to ensure that strategic materials can be reclaimed easily at the end of life of the product.

Finally, Emerson believes that the European Commission should strengthen the implementation and better enforce existing legislation. An increase of resources to this end should be justified by the strategic importance that raw materials have to the European economy.

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

Emerson is a strong believer in the need for data to make any strategic decision. Concerning raw materials, this means that the EU must learn about all aspects of raw materials cycles, including import data, shipment of waste figures, strategic raw materials tied up on products, potential for extraction within the EU, potential for extraction in third countries, stockpiling data and projections of use.

Product databases based on Ecodesign legislation could provide a good starting point for raw material data collection.

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

N/A

Emerson

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