

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

Response by the UK Department of Business Innovation and Skills

POLICY AREA: DEFINING CRITICAL RAW MATERIALS

Major issues:

An expert group, chaired by Enterprise and Industry DG, recently released a report 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.

Questions:

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

We agree with the report that the best way to define a raw material as "critical" is when the risk of the supply shortage and their impacts on the economy are higher compared with the other raw materials.

However, it would also be important to look at some specific industries and analyse the relative importance of raw materials in their supply chain. This could take the form of a parallel work to the methodological approach.

The commission should also be considering the issues of raw materials in a wider sense not just restricting itself to minerals and metals, but including both biotic and abiotic resources, and resources used during processing or production (such as water). An appreciation of the reliance of the economy and business on a wide range of resources should be included. The report makes a reference to renewable resources but that is only in relation to demand for biofuel (as the reference to COM(2008)19 final¹ confirms). This limits the scope of the study and might pass the wrong message (i.e. that the current pattern of renewable resources consumption is not of concern). An explanation why the focus on the analysis and, indeed, of the initiative is only on mineral raw materials would be very useful.

¹ Proposal for a directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources

It would also be useful to know how data on economically viable resources and reserves were incorporated

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

There is a case for also considering Tellurium as a critical raw material. Tellurium is found as a by-product of other metal ores (typically gold and copper) and its supply is inelastic (i.e. it would be difficult to justify the major capital investment to exploit new reserves of gold, copper etc on the basis of the by-product tellurium alone). However, tellurium is used in some hi-tech applications (e.g. metal alloys, semiconductor devices such as phase memory chips and thermoelectric devices and optical media); an increase in demand in these or the development of new applications could drive a spike in prices of this metal.

We agree with the inclusion of cobalt and rare earths in the list of critical raw materials. The availability of cobalt (which is used in lithium-ion batteries) and rare earths (used in the motors and magnets used in electric-drive vehicles) will certainly be important in the move to lower carbon road transport.

There is a great deal of uncertainty around the demand for rare earths and cobalt in the automotive industry due to the range of uptake scenarios for Electric Vehicles (EVs) and Hybrid-Electric Vehicles (HEVs) which currently exist. High uptake scenarios of electric-drive vehicles combined with high uptake from other applications does risk a significant over-demand for Rare Earths. However, there is also uncertainty about how quickly conventional hybrids, such as the Toyota Prius, will switch to using Lithium-ion (Li-ion) rather than Nickel Metal Hydride (NiMH) batteries (the latter uses more REs per vehicle).

The focus of this particular exercise has been metals, but it'll be useful if the next review could look at all minerals. We consider that there may be a case to consider ball clay and china clay (or kaolin). High quality ball clay is relatively scarce globally and the UK is a leading exporter of the product. But there are significant environmental constraints on existing reserves.

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

We agree with the proposal to review the list of critical materials on a five yearly basis and recommend that separate funds be put in place to ensure this is done on a structured, rather than ad hoc, basis.

The report does not provide specific details on the action that EU will take to ensure that high social and environmental standards are in place in countries which supply raw materials to it. More information is needed to cover that gap and on the avoidance of environmental degradation.

We note that environmental country risk is also assessed in the report. If this means that a raw material could fall within the critical category due to

improved environmental protection in the country of origin, we would not want to discourage this from an environmental perspective. This points to the potential tensions arising in connection with securing EU access to raw materials which need more discussion.

It's also not too clear if the Commission envisages differences in approach for the 14 materials identified as critical – but it would be useful for this to be clarified. Particularly given that the report make clear small changes in the parameters may result in sudden changes, so the list may not be static.

There are recommendations in the "Critical Raw Material for the EU" report, namely Actions to improve access to primary resources including securing better access to land and "fair treatment with other competing land uses. UK strongly believes that Planning policy (and planning as a whole), and licensing requirements is and should remain an issue for Member States and not the Commission. We would not welcome any measures which seek to extend Community competence to these areas. The Commission should consider looking at those Directives which might be seen as restricting access to raw material reserves.

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 (Department for Environment, Food and Rural Affairs) currently has research underway looking at the future resource risks faced by UK business and an assessment of future viability. This research has 2 high-level aims:

1. To identify those resource issues which represent the greatest threats and opportunities for UK businesses; in the short, medium and long-term; and
2. To assemble data on the nature and scale of those threats and opportunities in order to provide a stronger evidence base for the business case for resource efficiency.

They are happy to provide the Commission with more details and to share the results when completed later in the year.

The Department for Transport has commissioned a report on the impact of rare earth metals for transport applications
<http://www.oakdenehollins.co.uk/material-security.html>

SEPA (Scottish Environment Protection Agency) and SNIFFER (Scotland and Northern Ireland Forum for Environmental Research) are carrying out an assessment on raw materials critical to the Scottish economy.

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?

We would support further analysis and evidence to help support policy development in this area. The Commission may particularly be able to help with issues around access to data. Commercial confidentiality concerns mean businesses are sometimes understandably reluctant to share information on their materials use and consumption. The Commission could usefully explore whether they could overcome these data sharing concerns, potentially through sectoral approaches with business.

We also think there is the need to understand the potential role that derivatives may play in respect of markets for critical raw materials.

On further analysis: what is happening with critical raw materials is that global demand is rising but supply is not adjusting. The supply-demand dynamic leads towards higher prices in the short-medium term (at least over the next decade). It would not be surprising to see a surge in financial derivatives developed to counterbalance risks related to prices volatility of rare earth materials. We believe this is an area where further analysis is required. A specific focus should be on rare earth materials where export restrictions have already been applied.

On transparency: establishing certification schemes for raw materials may be one way to increase transparency in the raw materials market. Clearly the costs to businesses will have to be carefully assessed in each Member State.

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.

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

We would not support stockpiling. This does not fit with the current approach to trade liberalisation and avoidance of protectionism. More considered action is needed at EU level to pursue issues with international partners and persuade them not to take this type of unilateral action. We would favour a more coordinated approach at international level to allow management of the risks and issues related to materials scarcity. A link needs to be made to the approaches to Sustainable Materials Management being developed by the Commission.

Planning policies in England seek to safeguard mineral resources (including the scarcer mineral resources) from being sterilised by non-mineral developments.

The EU is a net importer of these materials (in finished goods) and businesses should be encouraged to have greater material sufficiency through recovery of valuable materials at end-of-life.

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.

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?

The UK is broadly content with the approach the Commission is taking. The strategy positively seeks to remove such practices as export restrictions from the global market and is in line with the EU and UK approach to trade policy.

We would have concerns about any future proposals that favour an interventionist approach which are likely to create market distortion, or increase trade barriers in the global supply of raw materials.

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?

The UK would like to thank the Commission for its report and the work it has undertaken on this important issue.

The UK maintains its previous position on this issue namely that, the Commissions strategy and the activities it has taken forward, remain the right

way forward in ensuring the sustainable and transparent supply of raw materials from third countries and to deliver open and transparent markets.

The UK set out its priorities for the "Future of EU Trade Policy" in an information paper to Trade Policy Committee on 05 August 2010 (M.D. 460/10). Whilst these priorities cover the whole EU Trade Agenda, they are equally applicable to the Commissions "Raw Materials Initiative" objectives. In particular the UK would like to see the Commission:

- Secure its position as an ambitious global leader and champion for open and fair markets, rejecting calls for protectionism.
- Pursue the conclusion of the Doha Round, strengthening the Multi-lateral system and ensuring that FTAs play a complementary liberalising role. The Commission should also explore options for further market opening beyond the scope of the original FTA; for example, introducing ratchet clauses for moving towards full tariff liberalisation and addressing non-tariff barriers, and for further liberalisation upon successful completion of the DDA and future WTO rounds.
- Provide a modern and balance EU trade defence regime that recognises the realities of the global economy.
- Promote trade and growth in developing countries
- Build more effective relationships with major trading partners, especially through deeper regulatory cooperation.
- Place a greater strategic focus on larger economies. In particular, the UK would like to see the EU pursue the successful conclusion of an FTA with India that will liberalise export duties, and continue to strengthen EU-China relations; and
- Continue, and deliver on, the constructive work under the EU Market Access Strategy.

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

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

The Commission should look to address distortive measures applied to rare earth metals that essential for the manufacture of environmentally friendly technologies i.e. hybrid vehicles whose production is dependent on such raw materials.

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 comments.

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;

Scottish Government Response

Good governance is a critical issue to the working of raw materials in relation to protection of Scotland's natural environment which can work alongside the Scottish Government's purpose of sustainable economic growth.

Infrastructure / investments;

No comments.

Geological knowledge / skills.

No comments.

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 (EITI6)?

Corruption in the extractive industries sector remains a serious problem in many developing countries. It happens at different levels and at different stages. Whilst the EITI works reasonably well at the production stages, at the pre-investment stage, exploration licences, especially in the most prospective areas, are often only made available only as a result of bribing officials in the Ministry. Sometimes these bribes reach the highest levels. Further corruption can occur when requests are made to extend or delay exploration, or to convert exploration to production licences. The EU can do more to insist that its aid and investment budgets are conditional on both the cadastral and geological information remain open to public inspection and subject to good mining laws and regulations. The EuropAid SYSMIN programme not only made it possible for officials in beneficiary countries to be corrupt, by virtue of the way the programme was constructed, but it left the outputs of the programme entirely in the hands of those officials to use on a grace-and-favour basis. The EU should work with its partners to ensure that future programmes of this type avoid corrupt practices within the work itself and, more importantly, result in open and transparent outputs such as geological data and cadastral systems.

Moving on to the production stage, there is little the EU can do directly to intervene when resource country A wishes to sell minerals to purchasing country B, when neither invokes EITI principles. However, the EU can impose inhibitions on importing raw materials or manufactured products made from those materials, from country B where it is known or suspected that EITI principles have been set aside for corrupt reasons. Obvious examples are diamonds and other gemstones, for which technological advances are making it easier to trace provenance. Less easy to trace, but still possible, are rare earths and other high value minerals. The EU could lead with more comprehensive provenance certification requirements, building on established practices in the arts and pharmaceutical sectors.

As a matter of principle, we support greater transparency in the exploitation of raw materials as to support the effective functioning of markets to make raw materials more widely available.

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?

No comments.

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.

While there may be a case for a similar approach to consider a wider set of resources including wood, the current set of materials has the common factor of being linked to technology-based applications. We believe these are the materials that will drive growth in the UK/Europe, and are of particular importance in the drive to develop a low-carbon, sustainable economy. We therefore recommend the two sets of resources be considered separately.

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?

<http://eiti.org/>

No comments.

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 Environment⁷ 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.
- 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.

Agree. Environmental Impact Assessment in relation to minerals on and offshore is somewhat fluid.

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

No response

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.

The policy options provide a range of suggestions which Member States are able to consider when taking forward minerals policy. We can see grounds for sharing information and progress but not for new measures.

The benefits of transnational activities and knowledge standards are probably over stated, for the reason that most operations in the extractive industries sector are at a very local level.

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

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

http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index_en.htm

Yes – subject to:

- a) avoidance of duplication with what currently exists at EU member state level
- b) that it has a clear purpose and focus
- c) that it introduces economies of scale such that the cost of providing this service at a EU level is less than the sum of the costs of providing the service at member states level
- d) that it delivers measurable benefit to EU industry and society, as well as to developing countries and that its continuance depends on those benefits being delivered according to independent and regular audit
- e) that it is not run by, and reports to, existing member states geological surveys (eg through EuroGeoSurveys) who would have a vested interest in preserving their own roles whilst adding to them a potentially expensive EU dimension

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

There are already a number of relevant frameworks, plans and strategies in place which certainly need to be taken into account and borne in mind in the preparation of any new Communication:

The EU Forest Action Plan already provides a coherent framework for forest-related initiatives. The plan (adopted in June 2006) is centred around four objectives with 18 key actions to be implemented over the period 2007-11. Key Action 17 is to "encourage the use of wood and other forest products from sustainably managed forests". For more information on the Action Plan: http://europa.eu/legislation_summaries/agriculture/environment/l24277_en.htm

In 2008 the European Commission launched a Communication on innovative and sustainable forest-based industries in the EU - a contribution to the EU's Growth and Jobs Strategy, with a plan to address the challenges facing forest-based industries in the EU: http://europa.eu/legislation_summaries/agriculture/environment/l24285_en.htm

This aimed to develop a coherent approach to strengthening competitiveness and innovation in the forest-based industries, while integrating climate change and energy objectives. The Communication's priority areas were: access to raw materials, climate change policy, innovation, improved trade with countries outside EU, and improved communication, and these were complementary to the EU Forest Action Plan.

Forest-based industries have an important role to play in tackling climate change, providing a sustainable energy supply, promoting sustainable forest management, promoting efficiency in the use of raw materials and promoting innovation. The UK welcomed the Communication as a timely contribution to consideration of how the EU should respond to globalisation and the need for transition to a low carbon economy, while also providing a useful evidence base for wider policy-making.

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 July9.

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.

There is a need to foster better co-operation within the wider resources sector. This includes not only primary production but also reprocessing and recovery. The consultation document generally understates the importance of secondary resources as a means to mitigate supply concerns for primary raw materials.

Networking activities, ideally spanning key supply chains, are an important mechanism to understand how resources may be used more efficiently and productively. These should stimulate collaborative research projects at a European level to exploit this knowledge.

Sector Skills Councils (SSCs) work with industry to identify and forecast skill needs, develop National Occupational Standards and Apprenticeship Frameworks and provide a range of sector specific solutions, including careers and progression information. They also work with their sector employers to meet longer term skills needs, including higher level skills. The extractive industries are covered by Proskills SSC, which leads on skills for extractive industries. Lantra, the SSC for environmental and land-based industries, also has an interest."

On Higher Education, SSCs work with their sector employers to develop skills strategies and priorities to meet sector needs, including development of foundation degrees and working with HEIs to make provision more responsive to the needs of employers.

Minerals planning involves many skills which apply to all aspects of planning, such as management and negotiation skills. However, specific skills are needed for minerals planning which makes it unique in comparison to other specialisms. For example, an understanding of geological considerations and consideration of the business environment in which minerals companies operate. A Minerals Forum in the UK has set up a working group to look at specifically at minerals planning skills.

Scottish Government Response

Bespoke minerals planning training may not feature highly in academic undergraduate planning courses which is not to say that skills cannot be gained through other routes. Scottish planning authorities tend to have minerals expertise where opencast coal activity is highest but elsewhere it may be a skill that sits alongside planning professionals' other specialisms. Shared resources are a matter for the local authorities.

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 UK's Technology Strategy Board has held a number of competitions relating to the sustainable use and re-use of materials. Examples include

- Sustainable Materials and Products
- Zero Emissions Enterprise
- Materials for Energy
- Sustainable Design and Manufacture of Products

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.

There is a lack of available data around businesses and materials related resource efficiency issues which the Commission could usefully help fill, working with business sectors. (See the related point on access to data Q5).

There needs to be a major focus on improving the efficiency of use of resources/ retaining materials in the value chain, as well as improved methods for primary production.

There also needs to be research into substitution for raw materials similar to the EU's FP7 thematic NMP programme (M = materials) where there is a call open at the moment for proposals to develop replacements for platinum-group and rare-earth metals. There should also be research into innovative alternatives to the processes that use these materials.

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

While significant production activity as well as many reserves of critical raw materials lie outside of Europe, European companies have an important role to play in the design and specification of finished goods. A research and innovation action centred on making use of this role to make the recovery of CRM easier (and more economic) within the EU could have a major impact on raw materials security. This could include design of goods for disassembly, or in modules for remanufacturing within the EU.

The public sector potentially also has a major influence of the specification of goods (green public procurement) but few procurers are aware of this issue and fewer still have the technical competence (i.e. familiarity with materials and production techniques) or contacts to influence specifications at a technical level. This could be a fruitful area for networking and collaborative research.

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.

There is a significant and well-regarded research base in the UK in this sector. Two examples of innovative technologies are:

- The use of microwaves to reduce the energy intensity of ore crushing at (University of Nottingham)
- Improved hydrometallurgical processes such ligand design for improved and more selective metal recovery.

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.

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

No comments.

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?

There are two issues here. The export of waste is of course subject to the Waste Shipments Regulation, and related controls. MS are required to take action under the Regulation, including the allocation of sufficient resources and enforcement activity. In the UK we are targeting enforcement on the potentially illegal export of end-of-life vehicles and WEEE, including the shipment of waste under the guise of reusable products. An efficient and effective method is to use targeted, intelligence led inspections, which can be coupled with appropriate enforcement action, including as necessary using powers to seize waste shipments, or simply prevent waste leaving the country and requiring the waste to be dealt in an environmentally sound manner. Prosecutions have and can be taken out which sends a signal to the industry and removes illegal operators from the system. Overall the system of control is sufficient. The key is appropriate enforcement.

The second issue is that the export of genuine working second hand equipment is not subject to the waste shipment controls. However, it can and will happen that such non-waste will become waste in the receiving country, and this can often be a developing country where the management of the ensuing waste is not environmentally sound. Steps should be taken to enhance the possibility of such waste being properly collected and managed in developing countries, for example through the work of the Basel Convention, and the application of guidelines, pilot projects and assistance on the management of these waste streams. It can also include assisting developing countries with the export of such collected waste streams back to the EU so that the critical materials can be recovered, for example through recycling, including smelting of electronic wastes.

UK has been involved in the Waste Shipment Regulation Correspondents' work to develop Guidelines for shipments of waste vehicles and believe that, when finalised, these will provide helpful advice, both for persons arranging shipments and for enforcement authorities. In particular, they will provide a better means of distinguishing between end-of-life and second-hand vehicles, a matter which has been recognised as causing difficulty for Member State regulators in the past. Given the detailed nature of the Guidelines, we would not propose any further practical measures at the present time.

Scottish Government Response

SEPA (The Scottish Environment Protection Agency) considers the illegal export of waste electronics, municipal waste and tyres to be priorities for enforcement due to the risks to the environment and human health that the improper recovery or disposal of these wastes pose. SEPA does not consider the illegal export of end-of-life vehicles to be of a similarly high priority because the harm done in the receiving country has not yet been quantified.

However they recognize the importance of developing a secondary raw materials economy and therefore the need to encourage certain end-of-life streams to remain with Europe. To this end greater definitional clarity on what can be exported and what constitutes 'end-of-life' would enable more rigorous enforcement.

In their experience, the illegal export of WEEE is a greater priority due to the hazardous nature of these wastes and the conditions under which recovery is attempted in the country of destination.

SEPA feel that practical measures to improve enforcement of the illegal export of waste would include greater support (e.g. financial) for the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) group on Trans-Frontier Shipment (TFS) of Waste. This will enable the network to continue its enforcement projects on various priority waste streams. In addition, they urge the European Commission to refrain from setting minimum numbers of inspections on Waste Shipment Regulation. Instead, competent authorities should be urged to adopt an intelligence-led approach to regulation.

In order to implement this competent authorities throughout the European Union require sufficient funding as this is an issue that transcends national boundaries and requires coordinated efforts across Europe and beyond.

SEPA strongly support the reversal of the burden of proof within the recast of the WEEE directive such that exporters are required to demonstrate that they are shipping working goods and not waste.

SEPA feel that one of the barriers to the prevention of export of WEEE is the low value of certain end-of-life items compared to the high post-recovery value of the components, particularly hi-tech metals. There are two underlying causes of this:

1. there is a limited recovery industry within Europe;
2. there may be a low awareness within industry of the potential value of the components of WEEE, or a low uptake due to the lack of feasibility of recovery.

These two issues are in turn related to the balance of capital and labour intensity in the European economy. It would therefore be beneficial to understand through research:

1. whether it is possible to foster a recovery industry within the existing (capital intensive) economic and technological framework in Europe
2. what the likelihood is of the balance between labour and capital intensity in Europe shifting so that more manual recovery becomes possible – this is particularly important as miniaturization of electronics increases, leading to more dissipative losses of hi-tech metals.

A further issue is that of obsolescence: the point at which vehicles or EEE are deemed 'end-of-life' may shift as the price of such goods increases in response to the price increase of both oil and metals. Mechanisms for prolonging the perceived and actual life span of such products should be examined. Manufacturing solutions are necessary but not sufficient to increase product life span. Such solutions could:

- improve the durability of a good
- improve the ease demanufacturing or recovery.

Many products are discarded because newer versions are on the market. In some cases, a product can be technologically hobbled, so that the same product can be released later as an improved version. Mechanisms to restrict or discourage this practice should be explored.

With regards to ensuring that waste exports to third countries in a manner that does not endanger the environment or human health, SEPA's (strategic) perspective is detailed in depth in the draft Proposal by the IG Natural Resources of the Network of the Heads of Environment Protection Agencies regarding the detailed development of the European Raw Materials Initiative, to which SEPA has contributed, and which will be presented at the EPA Network plenary in September.

In addition greater emphasis should be given to verifying the site of recovery in the receiving country to ensure that the shipment and recovery takes place in an environmentally sound manner.

The UK is also in the process of developing a Publicly Available Specification (PAS) for the "processing for the reuse of waste and used electrical and electronic equipment". One of the stated aims of this PAS is to "deter the export of equipment misdescribed as being fit for reuse to developing countries that has led to the dumping of large amounts of non working and difficult to dispose WEEE with associated problems". Promoting the adoption of this standard (or something similar) throughout the EU would certainly help tackle illegal exports.

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

The five year cycle for assessing critical raw materials should include an analysis of the proportion of these supplied by recycling/reprocessing in Europe.

Scottish Government Response

To identify 'products containing secondary raw materials' in our recycling data, first we really need to know what products do in fact contain secondary raw materials. To obtain this type of information we suspect that statutory labelling or a requirement for some kind of product register would need to be introduced. Whatever mechanism was used would need to apply equally to importers into the EU as it would to EU product manufacturers.

However, it is questionable as to what value might be derived by asking for information on "products containing secondary raw materials". It might identify the uptake of secondary raw materials in product manufacturing and allow various tools to be put in place to encourage the use of secondary raw materials and stimulate recycling markets. If the EC was considering imposing minimum secondary raw materials content in products, then this might be understandable. However, with a global market in recycling and product manufacturing it would be difficult, if not impossible, to ascertain the provenance of the secondary raw materials used in any given product. On the other hand this type of information might be useful if the EC was considering imposing a "minimum secondary raw material content" on manufacturers supplying goods into the EU.

In terms of waste data, there is an identified need in Scotland to improve the accounting for secondary raw materials (whether these move as wastes or as fully recovered materials). Secondary raw materials which are used for manufacturing in Scotland should be easy to identify as they require an appropriate authorisation if they are still regarded as waste. However, if they are not regarded as waste (i.e. the relevant authority has agreed that they have ceased to be waste prior to the point they are incorporated into a manufacturing process), then processes would need to be introduced to account for this in waste management licence site returns (e.g. a site might identify that 100 tonnes of fully recovered scrap aluminium has left the site). Similarly, if materials are collected in Scotland and sent directly to a recovery site in another part of the UK, a mechanism needs to be introduced to identify and capture this. Also - If materials are exported to a recovery activity outside the UK, mechanisms would need to be introduced to capture the necessary data as movements of green list wastes are not currently captured as part of the normal transfrontier shipment of waste controls.

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

No real problems with “reducing consumption of primary raw materials by increasing resource efficiency and promoting recycling” in relation to waste paper. We have high collection rates in the UK (~70%), and although we export a large proportion of recovered paper (~55%, predominantly to China) this is principally because of the rapid decline in domestic production capacity of paper mills. The UK only imports a small amount of virgin pulp, principally from European sources.

That said, one possible issue is highlighted within a draft report from the Commission's Joint Research Centre (JRC) (Technical report for End of waste criteria on waste paper, IPTS):

“collection and apparent consumption of waste paper are getting closer, and stocks of paper are becoming increasingly tight in the EU. This “real time” operation mode is apparently in conflict with the logistics of international container shipping, contributing to price instability and encouraging broker speculation. Such speculation is fed additionally by the opportunistic behaviour repeatedly observed in some large buyers with large stock capacity, e.g. in China, which instead of supporting long-term purchase contracts prefer to follow prices and buy large amounts for storage when prices plunge. This ensures them short term production at a low price, but once operations are completed reverts in price peaks and preserved volatility for the rest of the market.”

Scottish Government Response

The past year has seen marked changes in the UK's patterns of consumption and production of paper. Some of these changes have been (probably temporary) responses to the challenging economic conditions posed by the recession, but some of them reflect long-term (structural) changes in paper usage.

There is likely to be some rebound in paper consumption as the UK emerges from recession, but the long-term trend in consumption is likely to be downward. With recovery rates likely to increase only slowly from now on, paper collection volumes may decline.

For some paper sectors – such as newsprint – declining consumption and increased production will mean that the UK will be more self-sufficient, meaning that there will be domestic end markets for more of the paper recovered from the UK waste stream. For others, the pattern is less obvious. Although there may be limited scope to increase domestic utilisation of paper, overcapacity – particularly in Europe and in the US – presents a continuing threat to the UK paper sector and hence domestic markets for recovered paper.

Recovered paper provides a cost advantage compared with virgin fibre. However, the use of recovered paper is not entirely about the relative costs and energy requirements: security, consistency and quality of supply of fibre

are important factors. Recovered paper supplied to the market is not a homogenous commodity and, while there are a number of quality definitions for recovered paper, a coherent standard does not exist. Accordingly, strong supply chain relationships are key. The solution for some UK paper mills has been to vertically integrate paper recovery and collection systems, rather than sourcing material from the market, in order to provide better quality control.

It is estimated that up to 1.5 million tonnes more paper could potentially be recovered from the waste stream. However, although some high quality paper (e.g. P&W paper from schools) remains uncollected, some of this residual paper (e.g. post-consumer packaging) is likely to be of lower quality. A key challenge for the recovered paper sector is to improve quality in order to continue to meet the needs of both domestic and overseas markets.

The market volatility seen at the end of 2008 highlighted the importance of building and supporting a diversified set of end markets – both domestic and overseas – for the UK's recovered paper.

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