



## CONSEIL DE COOPERATION ECONOMIQUE

### **CRITICAL RAW MATERIALS ACT** CONSOLIDATED RECOMMENDATIONS FOR THE EUROPEAN COMMISSION

*Paper finalized on 3 March providing consolidated answers to the key questions after the working meeting with Anthony Whelan, Cabinet President von der Leyen, on 1 March 2023*

The CCE's dedicated Task Force has supported the European Commission in the preparation of the **Critical Raw Materials Act**, expected to be adopted on 14 March 2023, since June 2022 and produced a first paper following two working meetings with DG GROW (see Annex).

This consolidated contribution, finalised on 3 March, provides consolidated answers to the 9 key questions (*in italics below*) the CCE received from Anthony WHELAN, Senior Advisor of President Ursula von der Leyen, and which were discussed in the Task Force working meeting by videoconference on 1 March 2023.

This paper is based on the inputs from members of the dedicated Task Force on Raw Materials, which include high level experts selected within 30 leading European companies in the energy ecosystem, including energy, energy technological providers, chemicals, environmental services & recycling, aerospace & defence, automotive, non-ferrous metals, pharmaceuticals, cable producers, construction & civil works.

**The paper answers questions raised on the 9 following topics:**

1. The role of legislative targets in guiding investment decisions
2. Targets for common minimum benchmarks vs. targets for delta
3. Export control conditions linked to CRM status
4. Definition of objectives of reduction/replacement and efficient use of CRMs
5. Strategic stocks initiatives & attractiveness of joint purchasing
6. Common binding standards for CRMs along the value chain:
  - i. admin burden for necessary value-chain transparency
  - ii. security of supply levels to make product standards binding
7. Incentives to promote sourcing by market actors of CRMs from EU or other suppliers
8. Overall economic conditions and (special) energy tariff conditions for CRM value chain actors
9. Barriers to an efficient internal market in secondary CRMs (waste regulation, others)

## 1. The role of legislative targets in guiding investment decisions

*What role can legislative targets play in guiding investment decisions by market actors (industrial and financial actors)?*

We support legislative targets as they can incentivize private stakeholders to set up industrial facilities in Europe, promoting sustainable and diversified supply chains, recycling and supporting the reshoring of specific value chains.

- **Incentivizing private stakeholders** is important to find ways to incentivize private stakeholders to set up industrial facilities in Europe. Focus should be beyond critical raw materials, with targets on the whole value chain. While regulation can be a lever for change, it is not the only one. The EU needs to move faster and provide a simple incentivization system to accelerate the deployment of projects.
- **Providing regulatory clarity and predictability is key.** Legislative targets can provide clarity for investors. Minimum requirements or target values for supply chains will provide harmonized requirements for all companies alike to act on the concentration risk, especially from non-diversified supply chains.
- **Promoting sustainable and diversified supply chains can be achieved by legislative targets.** They can impose change on supply chains by quantifying non-financial criteria into sourcing decisions. Non-financial aspects with long-term financial impacts need to become a short-term decision factor. For sustainability, pricing mechanisms are introduced to monetize impacts and make them part of sourcing decisions. For supply chain diversification, minimum requirements or target values for supply chains will provide harmonized requirements for all companies alike to act on the concentration risk from non-diversified supply chains.
- **Supporting the reshoring of specific value chains is paramount.** The EU should provide a clear mid-term political commitment to support reshoring of specific value chains and production in Europe to limit supply chain shocks. It should highlight the relevance of a specific technology and a specific raw material and targeting related investments.

## 2. Targets for common minimum benchmarks vs. targets for delta

*The EU has an interest in developing its own activities (extraction, processing, refining) and in diversifying sourcing from over-concentrated third-country suppliers. The starting points for various CRMs are different. Is it **more important to develop targets towards common minimum benchmarks**, despite differing trajectories necessary, **or to focus more on the delta** (a level of ramp-up or diversification relative to a more or less strong current position)?*

The current economic context poses a risk today to existing CRM European capabilities. Generally, an approach that fosters independence, protecting and reinforcing capabilities, and free markets alike is recommended. As it may not be realistic or efficient to producing everything in the EU but creating resilience against supply chain disruptions must be a key objective.

- We would advise a **two-fold tailored approach focusing first on measures to maintain/reinforce existing capabilities at the same level playing field, then on the delta at all stages in the process** (extraction, processing, refining, etc) to close the gap with Europe's main competitors, for each strategic raw material within the scope of the regulation.
- Targets should focus first on **reshoring** and then on the **degree of diversification**. Low diversified supply chains with high concentration risks should be prioritized (where feasible).
- **The definition of a CRM is not unique and may change over time.** Besides, they represent widely different value chains. A common minimum benchmark would not be ambitious enough. Therefore, it is more important to have specific targets for each CRM and to focus primarily (or first) on key CRMs ranked according to their role for future EU industrial needs around the energy and digital transitions, on those that realistically will remain a high priority for a wide range of industries.

- **Each CRM and the needs of specific, strategic industries must be considered.** As an example, the main CRM currently needed for the aerospace & defence industries are Titanium, Nickel-based Superalloys, Aluminium, Rare Earths and Carbon Fiber.
  - To increase the EU's strategic autonomy, the EU needs to develop strategies combining sovereign defence CRM needs and civil CRM needs to generate economies of scale, at conditions for the European civil CRM remain globally competitive.
  - Industries focusing on batteries, with electrification needs (such as automotive and in the future other transport modes) need materials like lithium, nickel, cobalt, and gallium. For the solar PV sector polysilicon is key (a net-zero technology that should reach 600 GW of installed capacity by 2030 according to the EC's REPowerEU plan)

### 3. Export control conditions linked to CRM status

*What export control conditions do you have in mind, linked to CRM status (bearing in mind that for many CRMs, the EU is currently highly dependent on third countries and export controls by such suppliers could harm EU interests)?*

European industrial companies depend largely on raw material imports, and are therefore exposed to geopolitical, environmental and competitiveness risks. The current environment pushes companies to building collective resilience and to stepping up efforts to achieve a competitive and more autonomous access to raw materials.

- **Specific export control conditions or specific recycling obligations would need to be carefully assessed before being considered.** The CRM act should be supportive of investment and the competitiveness proofing of any proposal is of critical importance at the time the European industry is facing an unlevel global playing field (energy pricing, public support/subsidies, etc.)
- **CRM producers in EU could face risks for investment decisions, impacting their markets worldwide.** For EU CRM producers, EU markets may not be the priority (due to the impact of the US IRA, DPAS) or the EU market may currently be less attractive due to tariffs and higher energy prices.
- Therefore, **instead of export controls we recommend the EU CRM Act to focus on**
  - incentivizing EU (and third-country Western) CRM industries to create capacities in the EU in the short- and mid-term.
  - support indirect actions in this respect, such as increasing taxation on 'end of life' asset that are not recycled and recovered within EU.
  - help develop the regional supply chains and joint purchase initiative at the European level that can also have a clear strategy with non-EU partners.
  - implement dangerous waste export control (acknowledgement of export and acknowledgement of importing countries). Specific attention must be paid to the definition of the end-of-waste or used product. For instance: because of the fragmented implementation of the European Waste Framework Directive, this ambiguity creates a grey zone, which allows some countries exporting recycled intermediates while other European countries cannot, as they consider it as dangerous waste.
- In parallel, **coordination with trusted partners** will be needed to address potential blocking positions over the US IRA or DPAS, which can prevent European access to CRM sourced or transformed in the US. This should be high on the agenda in the Working Group 3 of the EU-US TTC "secure supply chains" or through other cooperation forums.

### 4. Definition of objectives of reduction/replacement and efficient use of CRMs

*You mention possible objectives of reduction/replacement and efficient use of CRMs – how would you define such objectives (per CRM, across the range of CRMs, by what benchmark)?*

Reduction and replacement and efficient use of CRMs for industrial applications are an important lever to reduce exposure. These strategies have been utilized already heavily in many industries and are already reaching physical boundaries.

- **Some CRMs can be replaced moving to alternative technologies** (e.g., alternative batteries options), **others have no alternatives today** (such as polysilicon for solar PV). We therefore suggest exploring all the replacement options available but **no mandatory reduction/replacement targets per CRM should be introduced**. Instead, the EU should provide a framework to promote innovation and R&D projects regarding potential material substitutions (e.g., rare earth-free magnets, bio-based carbon fibers) and best industry practices should be incentivized.
- **Developing recycling capabilities and R&D:** Materials such as Titanium, Super Alloys, and Aluminium have high level of recycling potentials (typically above 50% depending on materials and applications; up to close to 100% for Aluminium) but requires the stronger development of EU recycling capabilities and a deep transformation of the processing value chain to limit material pollutions and improve material segregation without adding significant costs to remain globally competitive. The EU strategy on recycling shall cover all domains from materials to process transformation through support to R&D, industrial investments, and incentives. Challenges in better sorting of scrap by alloys must be addressed so that flow of scrap can come back in closed loops to original products.

## 5. Strategic stocks initiatives & attractiveness of joint purchasing

*In light of recent experience with different types of supply-chain shocks, what sort of strategic stocks initiatives are taken by EU industrial actors which are heavy users of CRMs? Would joint purchasing (e.g., through an EU hub) be attractive for industrial users?*

- **Strategic Stockpiling is a lever for the EU to increase strategic autonomy, independence and avoid short-term disruptions.** By stockpiling a minimum of CRMs (at least on a temporary basis), and on case-by-case basis, short-term supply disruptions could be balanced out while developing other sources of supply or ramping-up own mining activities and other ways of sourcing. Several EU solutions could be designed for strategic stocks of CRM to build resilience at appropriate levels. However, stocks must be managed by the industry as stocks also increase cost (especially for SMEs further down the supply chain) and financial support may be needed with stocks being incentivized at adequate level (to relieve their financial burden).
- **Joint Purchasing would be a powerful tool for industrial users,** for all parties to benefit from better purchasing conditions at scale (especially as specific industries alone are only covering a relatively small market share). Thus, joint bundling activities would increase purchasing power and would be able to secure competitive pricing and drive sustainability improvements. Joint purchasing should nevertheless remain on a voluntary basis. In addition, CRM mining development initiative with third Countries could also be developed jointly.

## 6. Common binding standards for CRMs along the value chain

*You mention the need for common binding standards for CRMs, to be implemented gradually along the value chain. Two considerations regarding such possible standards are:*

- the necessary value-chain transparency could create significant administrative burden, well in advance of a binding obligation, and*
- it would be difficult to make such product standards binding before the EU had reached substantial security of supply from sources respecting such standards.*

*How would you see this playing out?*

- **Common standards should be developed for CRMs to meet the highest environmental and social standards,** but measures should be proportional and introduced step-by-step. EU companies face the challenge of highly complex multi-tier supply chains and are increasingly (required to) setting up due diligence track and tracing processes. Before setting any binding

standards, a thorough mapping/tracking of the value chain is a necessary first step. Subsequently, a clear road map could be adopted to drive the supply chain towards higher standards. Binding standards would therefore only be considered at the end of a longer process and without putting at stake security of supply.

- To **reduce the administrative burden for the necessary value-chain transparency**, instead of implementing many separated tracking focuses (e.g., raw materials, human rights, CO2 emissions, water consumption, etc.) a solution could be to implement the **digital material passport** (which is being developed for Ecodesign and now for the Batteries regulation) as a single repository of all the necessary information. The EU should take a leading role to define the criteria and requisites of the digital material passport, for a common EU architecture and ensuring coherent implementation.

## 7. Incentives to promote sourcing by market actors of CRMs from EU or other suppliers

*What types of incentives have you in mind to promote sourcing – by market actors – of CRMs from EU or other more diversified suppliers (thereby enabling scale-up and a more economic offer)?*

- **Criteria to level the playing field:** Dedicated measures levelling the playing field versus competitors in third countries, as the EU CRM demand is mainly driven by global markets, is key to contributing to European strategic autonomy. Level playing field criteria are also important in terms of environmental and social impacts of CRM value chain. Sustainable sourcing should be more competitive if a target is set in terms of water consumed, human rights, emissions, material efficiency, recycled material content, etc.
- **Diversified supply chains could become a decisive criterion in sourcing decisions:**
  - **Minimum sourcing requirements** could be implemented in specific sectors (where feasible). This would mean that all competitors in one market need to fulfil this criterion - so none of the competitors can diversify themselves by a pure low-cost supply chain.
  - **Monetization of diversified supply chains:** supply from diversified sources will gain a financial advantage compared to non-diversified sources. Here, information on the raw material origin would need to be traceable to quantify a certain degree of diversification.
  - **Enlarging current scope of raw materials to other raw materials that are equally vital to produce necessary goods:** these may be subject to limited suppliers or address geopolitical tensions - such as anthracite to produce pharmaceuticals and glass – which is fundamental for the competitiveness for the EU's industry.
- **Agreements with third Countries:** EU should also promote a European sustainability approach abroad, developing joint initiatives with other countries guaranteeing the respect of EU standards. This is linked to the point on joint purchase initiatives.
- **Sourcing is an aspect that should not be isolated from other levers**, such as replacing/reducing, enhancing life extension and reusability/recyclability. For some materials these levers are easier to implement in the short term by a clear set of rules to ease the implementation of circular business model and economic to provide incentives to them. To support this approach, it would be important to level the playing field also from the fiscal and subsidies point of view. Nevertheless, sourcing remains important as we will still need primary metal and it is preferable if this primary metal is produced in Europe.

## 8. Overall economic conditions and energy tariff conditions for CRM value chain actors

*Overall economic conditions for CRM value chain actors: You mention (special) energy tariff conditions for CRM industries supplying key strategic industries. How or why should such conditions go beyond the stability available for new renewable energy supplies under recognised tools such as long-term PPAs or CfDs?*

The creation of an EU CRM industry is a long-term strategy requiring major investments and knowhow developments to close the gap versus other regions and reduce dependencies. Any EU

industrial CRM strategy will be therefore conditioned by investors' long-term visibility on EU “local” CRM demand:

- **Support should not focus on just a specific aspect** (e.g., energy tariffs) but, on a case-by-case basis, assess the key challenges and define the most effective tools. Energy tariffs are indeed a key point for some steps of the value chains of some CRM, but not the only challenge and they could be considered as part of an overall strategy.
- To provide **long term visibility to the sector** it is critical to have long term visibility on costs to **reduce uncertainty, risks and ultimately encourage investments**. EU should create a **favorable environment to develop business** with affordable and competitive energy prices and **encourage companies to invest in renewable energy**.

## 9. Barriers to an efficient internal market in secondary CRMs (waste regulation, others)

*What are the barriers to an efficient internal market in secondary CRMs – do you refer to the various specific legislative tracks (ELV, WEE, etc) mentioned on the framework for waste regulation, or there are also others?*

- What is recycled in Europe is what we do not need to mine outside of Europe. Therefore, a **fast-track approach for waste, whose destination is a pre-authorized facility for waste processing is needed**.
- While we are not promoting export control of critical raw materials (see above) **the export control of CRM-containing waste** for which the exporter could not demonstrate that the waste will be treated in social, environmental, and technological conditions standards like those in place in Europe should be considered as a key element.
- **Secondary markets react differently depending on the material involved, and their uniqueness should be considered in the CRM Act**; we can identify 3 main issues that limit their development:
  - First, the application of the “end of waste criteria” is often too broad and hinders valorisation of some materials. For instance, sewage sludge rich in phosphorus—which is a critical raw material essential in agriculture for fertilization—is recovered from the water sewage process. Yet, sludges and biochar derived from it are still considered as a waste, which restrain its commercialization and full valorisation. An evolution of the application of end of waste criteria would participate in fostering a secondary market. Such application of the end of waste criteria is also necessary for Titanium metal for instance.
  - Second, the lack of opportunities for selling some recycled raw materials also hinders the development of secondary markets. Integrating minimum recycled content (such as planned in the battery regulation for instance) would create business opportunities and therefore encourage recycling. Favouring recycled material in the strategic stocks that are constituted also creates opportunities for selling recycled raw materials, whose price is often higher than virgin materials.
  - Third, the closed loop material for Battery is not the preferred route. Tendency to give privilege to downcycling (stainless steel, enamels, etc.), does not prevent high value imports and hampers the investment consideration or new facilities of high-quality recycling for battery grade material. Therefore, an EU export/import balance could be considered to incentivize sourcing of secondary high-value materials.
- **The current EU regulatory (waste) framework can be considered as a potential barrier to create an efficient internal market in secondary CRMs**, and this can be partially addressed by the CRM Act. Here are some examples of legislation that may be amended to remove barriers:
  - Waste Framework Directive 2008/98/EC
  - WEEE 2012/19/EU
  - Batteries and accumulators and waste batteries and accumulators Directive 2006/66/EC (and future Regulation incoming)
  - Ecodesign Directive 2009/125/EC (and future ESP Regulation incoming)
  - Shipment of waste 1013/2006/EC

- Furthermore, **EU-wide harmonization is needed** when it comes to waste management as fragmentation is today a barrier to the development of CRM secondary sources.
- **Key barriers are time and industrialized recycling capacity.** Meaningful quantities for recycling of CRMs will only re-enter value streams in 5-10 years. Thus, this will not be a short-term solution, but long-term to promote a true circular economy for CRMs. Next to that, industrialized recycling capacities need to be further developed in the EU, notably large-scale industrial recyclers to foster economies of scale and reduce transaction costs for companies upstream and downstream the recycling value stream.
- **An EU led secondary raw materials platform would be a powerful tool** to accelerate the development of sourcing. Currently many micro platforms are launched (generally without success this situation is limiting the development of an effective secondary raw material market

## ANNEX



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### **Preparatory Notes for the drafting of the Critical Raw Materials Act**

*Finalized 20 November 2022, after two plenary working session  
with DG GROW on 24 June and 8 November 2022*

This consolidated contribution is based on the inputs from members of the dedicated Task Force on Raw Materials, which include high level experts selected within 30 leading European companies in the energy ecosystem, including energy, energy technological providers, chemicals, environmental services & recycling, aeronautic & space, automotive, non-ferrous metals, cable, construction & civil work.

The Task Force, strong of 37 highly specialized experts, has worked since Q2 2022 till year end and has had two plenary working sessions with Peter HANDLEY, HoU Energy Intensive Industries, Raw Materials DG GROW, before producing the present document.

#### **I. Assessment of the Commission's approach and the four building blocks for an EU legislative initiative on Critical Raw Materials**

##### **1) Transforming the Commission's current criticality work on raw materials into a legally binding and strategic capacity building and preparedness tool**

The Commission's current work on Critical Raw Materials (CRM) and intention to table a legally binding and strategic capacity building and preparedness tool is a crucial step forward, to both strengthen Europe's strategic autonomy and implement the Green Deal, securing reliable, competitive, and sustainable raw materials value chains.

Given the current geopolitical uncertainties and the increasing demand for new materials, an overall strategy that defines expected needs, challenges and priorities and key lines of action to build the necessary framework for common EU action. At the same time, a legally binding instrument is *a priori* the right tool to respond to the needs and accelerate the implementation of the required transformations. Nevertheless, more background and clarity from the Commission's side is required on the legal form and scope of such an instrument, and the impact it would have. Proper and timely consultations with all stakeholders are paramount, as with all new legislative initiatives.

What a common European strategy on raw materials and a legally binding instrument should include:

- The definition of common binding standards on sourcing (including highest environmental and social standards), life extension and reuse, to be implemented gradually and respected along the whole value chain.

- The enforcement of CRM legal status (definition, critical stocks, export control conditions, etc.) to boost recycling opportunities inside Europe.
- Specific objectives of reduction/replacement for the use of critical raw materials, efficiency, reuse, and recycling, while maintaining highest environmental and social standards to ensure sustainable development. It is also important that the initiative is specific and identifies clear priorities for industry with associated strategies along the whole value chain.
- With strategic capacity building and preparedness at the core of the initiative, the creation of strategic stocks to secure about 12 months resilience should be considered
- End-to-end raw materials traceability (mapping to identify single points of failure in CRM value chain for key industries and uses) to support preparedness while protecting confidentiality
- Alignment with EU policies to strengthen key strategic industries through incentives on EU CRM sourcing vs global markets (as key sectors, such as aerospace & defence, rely on commercial business competitiveness to enable a sovereign EU industry)
- Enlarging the focus: the CRM definition is too narrow (as the current methodology for CRM assessments just looks at historic data). Current developments e.g., in context of e-mobility/batteries, H2 and renewable energy generation are very dynamic, triggering significant new raw material needs. So, in addition to CRM also such trends and related “strategic metals” ideally would need to be considered.
- Instruments to support research, development, and dissemination of know-how across the EU.

### **Link with the Circular Economy Action Plan (CEAP)**

It is important to integrate the raw material strategy with the objectives already contained in the CEAP. As a fundamental element of the Green Deal, the CEAP gives to the circular economy a crucial role in reducing the EU's greenhouse gas (GHG) emissions and achieving the EU's climate targets. At the same time, circular economy is a key lever to succeed in the raw material challenge as circular economy does not limit to close the loop but encompasses the whole value chain in an ‘end to end perspective’. In this respect, it is important to:

- include renewable energy technologies among strategic value chains as governed by the CEAP
- gradually introduce quantitative targets/ limits for the reduction in the use of primary raw materials and environmental impacts in the CEAP, considering also setting medium- and long-term targets to reduce the consumption of resources, increase efficiency and minimize impacts on the environment, in line with EU carbon neutrality objectives.

Furthermore, the new initiative needs to be fully integrated in the Green Deal vision, linking CRM not only with the Circular Economy but the larger decarbonization agenda.

### **2) Identifying and supporting strategic projects serving to increase capacities along the value chain, in particular refining and recycling**

This is another fundamental point, that should be included in the new CRM Strategy. Once the key priorities have been identified, it is important to define effective related support measures to avoid that joint efforts are wasted on too many small (partial) initiatives. The development

of strategic projects / competitive industrial capacities will probably need availability of State aid (e.g., IPCEIs) or financial incentives (such as tax breaks, etc.)

The following elements may need to be considered:

- Address ramp-up speed: supporting high growth investment in high capacity to tackle the long-term needs, by de-risking finance investments in new capabilities (e.g., for batteries recycling: subsidies, consortium support, frame of number of plants to be built). In 2021, European capacity reached 20kt/y, but the future expected needs will be 140kt in 2025, 900 kt in 2030 and beyond 1.5Mt in 2035. Capacity upscaling will therefore require a coordinated widespread financing among existing and new actors.
- Acknowledgement of the importance of a strong metallurgical infrastructure in Europe (both for primary and secondary streams), as this is the backbone for EU circular economy and supply security.
- What is needed are quick permitting processes, secure outlet channels for metallurgical slags, secure feed to such plants (see below on waste exports/imports). Facilitate intra-EU shipments to and between such metallurgical plants to make use of synergies and specialisation.
- Specifically build up EU infrastructure for Lithium refining at various stages:
  - from concentrates/intermediates to Li-Hydroxide/Li-Carbonate
  - conversion capacity from Li-Carbonate to Li-Hydroxide
- Install sufficient refining capacity for nickel (and cobalt) in the EU which would allow to import primary Ni-concentrates. Ni-refining (battery grade) and precursor production need to be close by
- Facilitation and acceleration of permits to expand and build up capacities for industrial facilities for production of battery materials (incl. refining and pre-cursor production) and battery recycling activities, with focus on the metallurgical part.
- Consider investment support to bridge the start-up phase of such plants (overcome competitive disadvantages in the ramp-up phase)
- To become carbon neutral, metallurgical facilities in the EU need to invest in tech transfer for renewable fuels plus carbon capture technologies (even with 100% renewable fuels and energy a recycling smelter still would emit CO<sub>2</sub> which is embedded in the feed, e.g., organics in circuit boards). This will require huge investments, support to be considered on a case-by-case basis.

### **3) Setting conditions that re-establish the level playing field and drive the change of global raw materials value chains towards becoming more sustainable, circular, and socially responsible**

To create the necessary favourable conditions for a level playing field, the EU should provide support and incentives to structure an EU CRM industry with an equivalent cost structure, at least like Western competitors (as the CRM industry requires volumes to be competitive).

All EU policies could include energy tariff conditions for CRM industries supporting key strategic industries to ensure security of supply and competitiveness. Titanium and steel super alloys are, for example, the key specific CRM for the aerospace industry, with significant contribution to product performance and competitiveness at export level. Aluminium and Rare Earths are CRM used by other industries as well with the specificity of high-quality standards.

Furthermore, it will be important to introduce criteria and target on environmental and social performance and related metrics and KPIs, similarly to what is already being proposed with the Sustainable Product Initiative.

Suggested initiatives could include:

- **Ad hoc incentives and simplified licensing** to encourage the development of local and more sustainable supply chains. This would also create also new jobs at local level and mitigate potential social related to energy and digital transitions. At the same time, **high environmental and social standard** are necessary for these new activities as well as the **ban of harmful environmental subsidies**.
- Furthermore, supporting **an efficient internal market** for raw materials is an essential step, making the rules for trading transparent, clear, and homogeneous. A well-functioning internal market for secondary raw material would also facilitate the implementation of recycling and reuse activities in strategic value chains (e.g., PV), contributing to minimize environmental impacts and enabling the development of local specialized hubs.
- Support for **faster permit granting processes** for newcomers and potential greenfield sites for waste treatment permitting and dangerous goods manufacturing for new sites. Today, the estimated time to obtain a permit for a new site in France is up to 3 years, for example. The objective would be to obtain permits in 1.5 years which corresponds to the time of construction.
- Setting the conditions to allow – along the full value chain – a transfer of product in kind rather than LME-dependent (trading market reference) price formula.
- To support these activities, **a clear and homogeneous framework of waste regulation** is also necessary, to encourage reuse and recycling, in line with the EU waste hierarchy:
  - Ensure the Waste Framework Directive harmonisation to clarify the ambiguous definition of the “end-of-waste” criteria, excluding industrial intermediates which require further industrial refining (such as the black mass) from attending the end-of-waste status.
  - New battery regulation could serve as a blueprint for other “waste” legislation, e.g., ELV. As in the battery regulation, turning waste legislation into a “lifecycle regulation” secures its enforcement.
  - Prevent illegal and dubious exports of waste from the EU, specifically ELV, WEEE and batteries by creating more transparency on real flows at EoL and strictly enforcing legal compliance of involved stakeholders.
  - Mandatory treatment standards for high quality recycling for WEEE, ELV, batteries (e.g., for WEEE the CEN standard 60625 exists but it is not mandatory)
  - Facilitate intra-EU shipments between certified high quality recycling plants and waste imports from outside the EU to such plants and speed up significantly the notification process.
  - Make use of the new battery passport (BP) to implement the foreseen “no-loss policy” of the draft EU battery regulation.

#### **4) Exploring sustainable mining in the EU as, in terms of social, environmental and climate footprint of raw materials, the EU probably has the highest standards world-wide**

Defining a sustainable mining approach in the EU, next to partnerships with like-minded third countries, should be part of the overall CRM strategy. As the development of new mining

projects has long development and permit granting times (which need to be speeded up), it is important that it is carried out according to a consistent approach.

Furthermore, it is key to define what are the real needs of Europe in terms of mining, provided the overall needs, the contribution from replacement/substitution, the role of reuse/recycling, as well as the level of risk in the supply chains.

Applying in the EU the highest worldwide standards shall be supported by policies accordingly. The focus of sustainable mining in Europe could be, for example, on battery metals Li, Ni, (Co).

## **II. Actions the EU should take to better support the current needs of industry, to anticipate and avoid future shortages**

Apart from the suggestions made in Part I of this discussion paper, the following (complementary) actions are suggested:

- An important aspect of an overall strategy will be to define key hub/initiatives on the key value chains, according to state of the art and potential, to be scaled up. The objective should be to avoid many small initiatives/competitions within/between states but to have an integrated and coherent development strategy to more efficiently allocate resources.
- The CRM initiative should address CRMs for today's industry needs and products, but also for future platforms. The CRM industry's competitiveness being volume driven, the EU CRM initiative should be developed in partnership with the main consuming industries. Each leading industry could encompass other industries' requirements in the strategy:
  - The main Critical Raw Materials (CRM) for Aerospace & Defence, for example, that the industry would support to develop, are Titanium and Superalloys.
  - The EV and energy industries would develop Silicon, Aluminium and Rare Earths.
  - Additional CRM will be of growing importance for the decarbonisation and will require huge quantities of CRMs in the coming decades, to enable the production of H<sub>2</sub> and PtL via renewable electricity; these CRMs include Platinum, Cobalt, Neodymium, Nickel.
- Boosting the collection of portable electronics (including portable batteries) is key. The introduction of a deposit scheme for e.g., smartphones and tablets (as all other measures so far have not been successful) should be considered. These devices contain portable batteries with in total significant Co and Li content which could be recycled/refined in Europe.
- IPCEIs and subsidies should be considered to de-risk immediate investment for long-term expected flows of recycled batteries, among other.

## **III. Pros and Cons for a legislative approach compared to the current situation which is based on monitoring and leaving procurement of CRMs to the market**

As this paper discussed in Part I, a legislative approach is a priori a good way forward. In this section we discuss the various pros and cons:

'Pros' – a legislative approach would:

- Ensure the implementation of a unique strategic approach across the EU, instead of a fragmented, national strategies and schemes, guaranteeing a consistent approach and achieving ambitious objectives, providing a coherent direction for Europe's industry
- Encompass global planification considering the long time needed to build such a competitive EU CRM Industry. Such an approach can also mitigate major challenges: geopolitical exposure, environmental and competitiveness risks.
- Secure the definition of an end-to-end value chain strategy across different industries with the main objective to build the same level playing field than global competitors for EU products' exports.
- Facilitate the creation of an effective internal market, by eliminating cross-border differences and legal obstacles, allocating resources in an effective way

To mention a few 'Cons':

- Any legal obligation to source CRMs is difficult, as an alternative supply chain including buying conditions / pricing conditions must be available first and a prerequisite for the success of a European based industry is that it can be competitive
- Risk of slower implementation in national legislation and (potential) resistance from countries that have strong strategies in place at national level
- A binding context to a more rapid transformation could raise question marks and complains
- Incumbent players announcing short-term investments based on their current visibility. High metal prices make recycling short term profitable.

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