Conference Highlights

Critical raw materials: an essential building block for the future of Europe
Over the past couple of decades, Europe has developed strong reliance on sources of critical raw materials in third countries. Moreover, our needs – and those of our systemic rivals and partners – are growing to sustain the ambitions of Europe’s green and digital transition. It is estimated, for example, that demand for rare earths could increase tenfold by 2050, with the European Union currently importing 98% of these materials from China alone. In recognition of these heavy dependencies, the Commission published its Action Plan on Critical Raw Materials in September 2020, identifying over 30 materials and 137 products that are essential to our industry and society.

In recent years, the European Economic and Social Committee (EESC) has carried out extensive work on topics linked to mining and raw materials, including its opinion CCMI 177, various follow-up meetings, a webinar, and several press and public publications. This involvement led to the participation of the
EESC in the European Raw Materials Alliance (ERMA) as an observer. The European Parliament adopted its report on this topic on 23 November 2021. The Updated industrial strategy as well as the Commission’s 2021 Strategic Foresight Report both put a strong spotlight on the importance of critical raw materials to achieve strategic autonomy for EU industry and society.

In short, the issue of critical raw materials is topical and gaining momentum. It also touches upon the question of strategic autonomy and there is a great need to continue the public discourse and civil society engagement on this subject to find concrete solutions to these acute challenges. The Conference on Critical Raw Materials was divided into two panels which followed the keynote speeches by the high-level speakers: 1) Securing EU’s open strategic autonomy: the role of critical raw materials in the EU industry’s green and digital transition calls for solutions to secure supply and ensure resilience; 2) The importance of circularity and of creating a market for secondary raw materials in Europe to secure the EU’s resilience.

Conclusions and Recommendations

1. In order to increase autonomy and reduce dependencies in supply chains, European extraction and processing capacities must be exploited, including the promotion of domestic raw material sourcing.

2. By relocating mining and production to Europe, social and environmental standards can be safeguarded. Thus, a set of criteria for responsible mining needs to be defined.

3. The success of the green and digital transition is highly dependent on the availability of raw materials. The circular use of critical raw materials is therefore crucial. This includes: recycling and re-use of materials as well as the creation of new solutions to extend the life of products. Finally, new business models that favour the circular economy need to be fostered.

4. Along with substitution, primary sourcing and diversification of trade relations, the development of secondary raw materials is essential to enhance Europe’s resilience in the domain. Therefore, the creation of a market for secondary raw materials in Europe must be facilitated.

5. Exploration is a high-risk activity which increases capital costs significantly. Therefore, fiscal incentives, including tax credits and State aid for mining and processing are needed. In addition, investments in research and development are essential as well as the existence of financing instruments that facilitate the green transition for the ore extraction and processing sectors. We also expect Member States to step up their investment efforts using the national recovery plans.

6. It is important to widen the definition and the paradigm of critical raw materials and envisage a wider and more frequent review of the critical raw materials list, increasing from once per year to once every two years. Additionally, the methodology of the list should include an ethical dimension.

1 These recommendations are a collection of key messages that emerged at different points during the event. Each recommendation may therefore reflect the view of only one or several of the speakers and should not be attributed to all listed speakers.
Welcome address

Pietro Francesco de Lotto,
President of the Consultative Commission on Industrial Change, EESC

This conference, as part of the Conference on the Future of Europe, is an important milestone for the issue of critical raw materials. The EESC is fully aware of the urgent need to address supply chain shortages and dependencies. The inter-institutional support the Commission has gained clearly shows that there is a unity of intent from all actors to secure Europe’s critical raw materials supply. Thanks to our joint actions, the critical raw materials issue is at the centre of the discussions on industrial policy. Moreover, the twin transition is a chance for our industry to become more competitive, more resilient and less dependent on third countries. These are realistic objectives, but we need to act now to accomplish them.

Keynote speeches

Christa Schweng
President of the European Economic and Social Committee

The European Union must have a leading role in demonstrating that the extraction of raw materials and production processes can be sustainable, particularly if they go hand in hand with digitalisation and robotics. We all value the smartphones we have in our pockets, we all call for wind energy to be part of the green energy mix and we all support the switch to e-vehicles. At the same time, the amount of critical raw materials needed for the digital and green transition is not often recognised. And Europe is heavily dependent on the rest of the world for most of these materials. If we do not act now, our dependency will increase proportionally to the increase in demand for these products, as European industry greens. By implementing best practices in Europe and by working with like-minded third countries, the EU can foster a global uptake of its high and exacting standards, for the benefit of our planet and its inhabitants. The circular use of critical raw materials will contribute significantly to the green transition. Each of us can contribute to achieving this goal. You can count on the EESC to continue raising awareness of the importance of critical raw materials for the future of our industry and society.

Thierry Breton
European Commissioner for Internal Market
European Commission

In the geopolitics of value chains, access to raw materials is a key element. Raw materials are essential to sustain the ambitions of our green and digital transition and for well-functioning and resilient industrial ecosystems. Our strategy to fulfil these goals has three pillars – diversification, recycling, and sustainable mining – which we pursue with three tools: stronger international partnerships with like-minded countries; investment in capacities, innovation and skills; and legislation. While we have just started
to explore the potential of the circular economy, I have no doubt that it will become the new modus operandi for raw materials and will strongly contribute to the security and resilience of our supply chains. We have already increased our use of secondary raw materials: more than 50% of metals such as iron, zinc or platinum are recycled, and they cover more than 25% of the EU’s consumption. Nevertheless, there is a large gap to fill for many critical raw materials. Moreover, Europe has a long tradition of mining and extractive activities and possesses deposits, some of which have not yet been exploited. Technologies such as automation, remote sensing and digital modelling, as well as renewables, are transforming these activities, and reducing their environmental and carbon footprint too. If we combine technological progress with strict rules and manage to agree on a set of criteria for sustainable mining, we can respond, at least partially, to our own needs without making unacceptable compromises on the protection of the environment, workers’ safety and participation of local communities. The opinion of the European Economic and Social Committee, following the adoption of our action plan on critical raw materials, shows we are on the same page.

Agnès Pannier-Runacher  
French Minister Delegate for Industry  
Ministry of Economy, Finance and Recovery

Raw materials are widely used in batteries or renewable energy production, and therefore key to ensuring EU autonomy in the context of the green and digital transition. This is why we need to secure our supply in these raw materials and rare metals, through three priorities: (i) sourcing outside Europe, (ii) recycling and innovating to keep within Europe the raw materials we already have, and (iii) developing domestic supply. We need to take several initiatives to reach these objectives, namely to increase our investments in recycling capacities and in projects to secure supplies outside and within Europe at a level commensurate with that of our competitors. It also calls for the establishment of strict traceability rules and, in particular, progress toward establishing a benchmark for responsible mining, as well as for sustainable sourcing from an environmental perspective. The French Presidency of the European Union is committed to moving forward on this issue, to reducing our strategic dependencies and achieving our energy transition. The informal competitiveness council in Lens a few weeks ago was an important milestone towards the definition of a European strategy on raw materials.

Hildegard Bentele  
Rapporteur of the European Parliament’s own-initiative report  
Member of the European Parliament

The green and digital transitions will prove impossible without a sharp increase in the use of raw materials. We are currently facing a raw material market which is quasi-monopolised. Therefore, diversification of raw material suppliers is of key importance to the European Parliament and should be included in the revised EU trade agreements. A particular focus should be placed on the recycling of raw materials and domestic mining. European industry must set new standards for responsible mining and ensure cooperation with local populations. In addition, local governments in Europe should work more efficiently and authorise mining projects more quickly. The own-initiative report of the Parliament aims to foster the debate within the European Union and Member States, in the context of the green and digital transition as well as strong dependency on third countries’ suppliers. In addition, this report highlights the need for the national recovery plans for Europe, together with green taxonomy, to encompass raw material supplies. It also outlines a better coordination of demand particularly when it comes to storage and purchase, in which the ERMA could also play an important role.
1st Panel – Securing EU’s open strategic autonomy: the essential role of critical raw materials in the green and digital transition of EU industrial ecosystems

Moderator: Monika Sitárová
CCMI Co-President
European Economic and Social Committee

I strongly believe that today’s discussions will give us the opportunity to bring both the institutional perspective and the voice of organised civil society together. It is now clear that the issue of critical raw materials will dominate the debate about the future of our industry and we have reached a point where actions must be developed and implemented. We can no longer wait to fully exploit Europe’s raw materials potential and we need to address this issue if we want to ensure that industry thrives in a competitive, responsible, environmentally-friendly and digital way, while leaving no one behind. It is therefore the responsibility of the EESC, and the CCMI in particular, to make the voice of organised civil society from the various industrial sectors heard on this matter.

Dumitru Fornea
Rapporteur, EESC opinion on Critical Raw Materials
European Economic and Social Committee

Europe’s dependencies on external actors are substantial but vary across different materials, which is why the list of critical raw materials has expanded and will continue to grow in the future. There is potential for lithium mining all over Europe, and especially in countries like Portugal and Serbia. However, Europe is still heavily dependent on third countries, for example for neodymium, which is crucial for wind turbines. In fact, 16,000 tonnes of rare earth magnets per year are imported from China. In addition, under current mining conditions, lithium mining comes with a large ecological and social cost. These include problems with authoritarian regimes, child labour, forced labour, water use, and more. Lithium reserves notably exist in countries like Greenland, Tanzania and South Africa. Europe should therefore insist on more and better raw material diplomacy, for example as has already been established with Canada. Finally, the new Global Gateway strategy can play a part in diversifying critical raw material supply chains.
At EIT RawMaterials, we are driving the transition of businesses towards circular economy models across the entire supply chain. Nevertheless, circular economy approaches and product innovation alone will not cover the demand for critical raw materials. We must acknowledge Europe’s significant mineral reserves and expand domestic raw material deposits. The potential for European industry to source raw materials domestically for the green transition is huge. In addition, the pursuit of these strategies will not only increase Europe’s autonomy but also create new jobs and facilitate recycling processes. Moreover, an immediate shift to responsible mining is essential, to avoid a severe crisis. European industries and research institutions are recognised leaders in everything from automation and digitalisation to best practices in mining. Europe will be taking its environmental, society and governance standards to unprecedented levels. It is within Europe’s reach to become the world’s leading producer of sustainably sourced raw materials.

A strategic approach to reducing supply chain dependencies and facilitating the green transition must include the mapping of mining potential and the streamlining of raw materials. The European Union shall therefore embrace the untapped potential of raw material deposits and end the outsourcing of raw material mining. Furthermore, sustainable mining needs to be promoted, for example via eligibility for green taxonomy. The European Union has the potential to become a global frontrunner when it comes to sustainable mining. The demonstration of sustainable leadership would, however, require a Raw Materials Investment Fund which is currently not in place. European mines have the world’s highest levels of sustainability performance which must be recognised across policy fields, either via diplomacy or sustainable finance. Last but not least, a level playing field must be guaranteed to address current market failures that go beyond trade policy.
I come from an industry that stands for the paradigm of circularity: the steel industry. However, taking into account scientific thermodynamic relationships, we have to realise that we cannot achieve a recycling rate of 100%. Nevertheless, in the framework of the circular economy, the market for raw materials is fundamental and constitutes the basis of the circular economy.

Michal Pintér
Co-rapporteur, EESC opinion on Critical Raw Materials
Member of CCMI Bureau
European Economic and Social Committee

In line with the objectives of the Green Deal, our priority must be to safeguard the competitiveness of European industry both during and beyond the transition to carbon neutral society. One of the main building blocks of the Deal is the Circular Economy Action Plan. Europe has moved into a decade that will be shaped by all aspects of sustainability, whether it is resource efficiency, reducing waste, re-use or recyclability. Steel as a permanent material is circular by design. It can be easily recovered from waste streams and recycled forever without any loss of quality. Once produced, if steel is properly collected and processed, it will become a valuable resource for endless production loops. Moreover, the universal presence of steel in many value chains makes it a critical raw material of strategic importance. Steel will therefore remain at the heart of a successful circular economy. To keep steel made in Europe, it is thus essential to reduce the EU’s dependency on third countries for raw materials, but, at the same time, to secure availability and support processing of secondary raw materials, such as ferrous scrap, in the EU and fully unlock the potential of EU recycling. The availability and quality of secondary raw materials and their improved collection represents a win-win situation as it helps to reduce greenhouse gas emissions, especially in the case of steel, and the dependency on raw materials imports, thus adding resilience.
Dr Wolfgang Trunk  
Policy Officer, DG Environment  
European Commission

The Green Deal and the new Circular Economy Action Plan set a clear commitment to “promote more circular business models by linking design issues to end-of-life treatment, consider rules on mandatory recycled content for certain materials, and improve recycling efficiency”. On our way forward, the recovery of secondary critical raw materials is key. The best market-based instrument to achieve this is to enforce Recycled Content in new products: first time done in EU legislation in the Single-Use Plastic Directive and Commission proposal for a Batteries Regulation. Equally important is to ensure that the Mining Waste Directive is fit for purpose, considering that we can anticipate a mining boom driven by de-carbonisation.

Sophie Grenade  
Policy Advisor  
IndustriAll Europe

A European strategy for critical raw materials and the circular economy is crucial for the success of the green transition. At the same time, it is important to ensure a just transition that leaves no one behind. What we need is to focus on the reparation, recyclability and the eco-design of products and materials. The main challenges to be addressed are local jobs, working conditions, skills, health, safety and social dialogue. Industrial policy should focus in particular on anticipating change, especially in coal regions in transition, and on a sustainable and affordable green energy supply for recycling. Last but not least, we call for a strong social dimension of the circular economy in EU policies such as the Waste Shipment Regulation and the Sustainable Products Initiative.

Julia Poliscanova  
Senior Director Vehicles and E-mobility  
Transport & Environment

Both sustainable sourcing of raw materials and ambitious recycling will be needed to meet the critical metals challenges for the Green Deal in Europe. Recycling has great potential, but European recycling capacities today are not sufficient to meet the upcoming demand in the battery market, so regulatory signals are needed to scale them up. In addition, ambitious recycling targets will not only reduce primary material demand and therefore provide a considerable metal supply, but also create new jobs in the long term. Policymakers should incentivise expansion through more ambitious lithium recovery targets when regulating batteries. Alongside circularity, strict environmental and human rights due diligence should apply to all extractive industries to ensure sustainable supply chains more widely.
The Participants

The broad interest in the conference once again underlines the relevance and priority accorded to the issue of critical raw materials. With over 200 participants, the event has been a resounding success. The diversity of the audience ranged from major stakeholders to civil society representatives and officials from the European Institutions. A selection of contributions from CCMI members and delegates who participated in the profound post-panel discussions are presented below, together with abstracts of the panellists’ responses.

Antonello Pezzini
CCMI Delegate Category 1
Represented Country: Italy

I grew up in Piedmont, Italy, where raw materials are abundant. What we lack is the political will to reinforce the mining sector. We need to strengthen social and workers’ rights while improving environmental protection. Our political commitment should be geared towards a cultural revolution in the mining industry.

“The potential of European mining is largely underestimated, which explains the lack of political will in this area. At the same time, there is a need to raise society’s awareness that mining is crucial for many of the commodities we enjoy today.”

(Rolf Kuby)

Péter Olajos
CCMI Delegate Category 3
Represented Country: Hungary

Raw materials are abundant in Europe. For example, there are three large lithium mines in Austria, the Czech Republic and Serbia, but they are all operated by Australians.

“Existing difficulties pertaining to reviving the domestic mining sector are essentially related to a lack of financing rather than a lack of expertise.”

(Bernd Schäfer)
Paul Rübig  
CCMI Member Group I  
Represented Country: Austria

Europe is spending between EUR 600-800 billion on the import of energy and raw materials. At the same time, we have heard today that EUR 10 billion could develop the mining sector.

“Europe is lagging behind with its investment opportunities. Third countries have developed capital markets for risk investment and are engaging in mining, which is the key distinction. The EESC will further explore external relations through opinions in the near future.”  
(Dumitru Fornea)

Kęstutis Kupšys  
CCMI Member Group III  
Represented Country: Lithuania

The ambition for environmentally-friendly and sustainable mining is not only a challenge, but can become a real advantage for Europe, setting new global standards. Nevertheless, this discussion should also focus on the social components, especially in relation to the long-awaited social taxonomy.

“By relocating mining and production to Europe, social and environmental standards can be safeguarded. I am convinced that, using the technology and know-how we have in Europe, we will be able to set a benchmark that can be emulated outside Europe when it comes to mining standards.”  
(Bernd Schäfer)

András Edelényi  
EESC Member Group I  
Represented Country: Hungary

Products and services are generally designed based on two considerations: they must serve and fulfil a purpose, but at the same time be technologically feasible. The demand for eco-design, reparability and chemical dissolvability poses a major challenge for industrial production.

“The technological feasibility is constantly evolving. What is most important to us is that politicians set the targets rather than technology standards. If the right environmental and social policies are in place, companies will innovate to achieve these objectives.”  
(Julia Poliscanova)