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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

**A secure and sustainable supply of critical raw materials in support of the twin
transition**

I. Introduction

The EU has embarked on an ambitious industrial transformation to achieve a green and digital transition. Ensuring secure and sustainable supply of critical raw materials (CRMs) is at the core of EU's political priorities for the twin transition. It is also essential for increased security capabilities in the defence, space sectors¹.

The Foresight study, published by the Commission, assesses the EU's future needs for CRMs and the potential supply chain bottlenecks in key strategic technologies and sectors. It forecasts **an unprecedented increase in demand for the key materials necessary to a successful twin transition**. For onshore and offshore wind turbines, for example, demand for rare earth metals is expected to increase 4.5 by 2030 and 5.5 times by 2050, respectively, while the batteries powering our electric vehicles is forecasted to drive up demand for lithium 11 times by 2030 and 17 times by 2050, respectively. The analysis also reveals the EU's heavy dependence on a very limited number of suppliers for all the strategic technologies in several stages of their supply chains and, for some technologies, throughout the complete value chain.

While demand for CRMs has never been higher and could increase ten-fold in the next decade, their supply is confronted with greater geopolitical, as well as environmental and social risks and challenges.

The CRM industry is complex and certain types of projects are considered **high risk investment**, in particular projects at the exploration and extraction stages. In addition to geological factors, there are high entry barriers, high capital costs and corresponding risks. Above all, lengthy and uncertain permitting procedures are a major deterrent. The time between the start of a project and the materials being available in the market can be very protracted.

For most CRMs, production is heavily concentrated in a few suppliers, and the EU relies heavily on imports. **Excessive dependencies on single suppliers** could disrupt entire supply chains, particularly as export restrictions and other trade restrictive measures are increasingly used amid intensifying global competition. Russia's illegal aggression against Ukraine showcased how untrustworthy suppliers can exploit and weaponize such dependencies to their advantage.

The EU is not alone in facing these challenges. Moving towards a net-zero and digital economy is a shared interest of the global community. Countries like China, Japan, the United States or South Korea have taken steps to secure their supplies, to process and refine CRMs in order to reduce their strategic dependencies. Resource-rich, CRM-producing countries are also working at attracting partners with whom they can work to locally develop their CRM value chains sustainably.

¹ This was highlighted notably by the Communication from the Commission to the European Parliament, the Council, the European Economic And Social Committee and the Committee of the Regions - Roadmap on critical technologies for security and defence (COM(2022) 61 final)

The Commission's 2008 raw materials initiative² already set out a strategy for tackling the issue of access to raw materials in the EU. Building on this, the 2020 Action Plan³ put forward concrete actions to increase the EU's resilience and open strategic autonomy⁴. In the REPowerEU plan, the EU external energy engagement proposed concrete actions to ensure access to critical raw materials to advance its energy transition⁵.

But the game has changed and we need to do more. The Commission is therefore proposing today a comprehensive approach, scaling up and speeding up primary and secondary raw materials supply in the EU. Through strengthened international engagements, we will work with our partners to diversify and integrate sustainable supply and value chains. With a view to building mutually beneficial long-term relationships with resource-rich countries, the EU will seek **win-win partnerships in full complementarity with the Global Gateway strategy**. While these partnerships should contribute to the diversification of the EU's raw materials supply chain, they should equally enhance the sustainability and value addition in the production of these resource rich developing and emerging countries.

The **EU should make the most of its reserves** and develop exploration, extraction, refining, processing and recycling activities at home in full respect of our environmental ecosystems. It will allow Europe to boost industrial capacities in an open and trade friendly manner, with high environmental and social standards, creating quality jobs and boosting growth while increasing our open strategic autonomy.

In line with the 2020 Circular Economy Action Plan⁶, the EU is stepping up action to boost resource-efficiency and move from linear to circular economy, focusing on eco-design, recycling and substitution in order to make products as resource and energy efficient as possible. This will help to reduce the need for critical raw materials without compromising availability, performance and affordability of products, and to enable critical raw materials to be recycled and used again in new products.

However, the EU will never be self-sufficient in supply of CRMs and will continue to rely on imports for a majority of its consumption.

Consequently, the EU needs to strengthen its **global engagement**, to develop and diversify investment, production, and trade with reliable partners while working to reduce its dependence on highly concentrated supplies and address the vulnerabilities that result from it. The EU will pursue these objectives in cooperation with third countries to ensure mutually

² Communication from the Commission to the European Parliament and the Council - The raw materials initiative: meeting our critical needs for growth and jobs in Europe (COM(2008) 699 final)

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Critical Raw Materials Resilience: Charting a Path towards greater Security and Sustainability (COM(2020) 474 final)

⁴ See also COM(2021) 750 "2021 Strategic Foresight Report – The EU's capacity and freedom to act", where "Securing and diversifying supply of critical raw materials" is listed as one of 10 pillars of Europe's open strategic autonomy.

⁵ Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – EU external energy engagement in a changing world (SWD(2022) 152 final)

⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A new Circular Economy Action Plan: For a cleaner and more competitive Europe (COM(2020) 98 final).

beneficial partnerships, with a view to promoting their own economic development in a sustainable manner while also creating secure, resilient, affordable and sufficiently diversified value chains for the EU. This is also in the interest of EU's partners as it strengthens EU's added value in the partnership. For instance, in case of disruptions in partner countries, an increased capacity of EU would allow it to better support its partners and mitigate global supply challenges.

Our CRMs initiatives reflect this ambition and are based on 3 pillars, which work together in a mutually supportive manner:

- (1) **Developing the critical raw materials value chain in the EU**
- (2) **Boosting the diversification of supply and partnering in a mutually beneficial manner in support of global production**
- (3) **Fostering sustainable sourcing and promoting circularity**

II. Developing the critical raw materials value chain in the EU

II.1. A Regulation dedicated to CRMs

The proposed **Regulation**⁷ establishes the general objective of ensuring EU's access to a secure and sustainable supply of CRMs and contains measures to strengthen EU's capacities throughout the value chain. In order to ensure that the measures set out in the Regulation focus on the most relevant materials, a list of Strategic Raw Materials (SRMs) has been established. The Regulation contains measures throughout the value chain so that, by 2030, EU's capacity could approach or reach at least 10% of domestic SRMs demand for mining and extraction (where EU's reserves allow for this), at least 40% for processing and refining, and at least 15% for recycling. If these levels are attained, they would help significantly in the required diversification efforts, with a view to ensure that, by 2030, not more than 65% of the Union's annual consumption of each strategic raw material at any relevant stage of processing is from a single third country.

The proposed lists of **critical and strategic raw materials**⁸ annexed to the Regulation will be reviewed and if necessary updated at least every four years. The lists will guide EU action. A first step in developing an EU internal capacity, is to better understand what resources are available, by developing exploration programmes at least every 5 years in the EU and bringing geological knowledge up to date.

The EU's strategic raw materials value chain will be strengthened by selecting and implementing **Strategic Projects** which will cover the entire value chain including recycling, and which will contribute to increasing the EU's capacity. The Strategic projects will notably benefit from streamlined permitting processes. Such Strategic Projects could also take place in third countries.

⁷ Proposal for a Regulation of the European Parliament and of the Council establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) 168/2013, (EU) 2018/858, 2018/1724 and (EU) 2019/1020 (COM(2023) 160 final).

⁸ Strategic raw materials are of high strategic importance, characterised by a potentially significant gap between global supply and projected demand, and are materials for which an increase in production is relatively difficult.

Some Member States have already reviewed and modernised their raw material, mining and **permitting frameworks**. The Commission encourages all Member States to assess whether their national and sub-national frameworks need updating to support a secure and sustainable CRM value chain. The Member States are encouraged to increase their permitting efficiency for CRMs projects beyond those deemed Strategic Projects. Member States are also called upon to adopt national programmes designed to increase the circularity of the CRM value chains, including the recovery of CRMs from mining waste.

Member States may also take measures for **upskilling and training their administrative staff** capacities to deal with the streamlining permitting procedures, leveraging on EU support opportunities for administrative capacity such as the Technical Support Instrument⁹. Other measures for improving the administrative capacities, such as digital tools and streamlined workflows need to be also considered. To facilitate the exchange of information, the Member States could envisage setting up voluntary platforms for permit granting authorities by providing best practices or technical support.

Continued efforts are needed to address concerns related to **public awareness and acceptance**. Efficient and comprehensive public consultation processes and transparent and constant communication with those concerned, including with Indigenous Peoples and with the public at large when applicable, can contribute to addressing these challenges.

The Regulation also establishes a mechanism for coordinating the **monitoring** of CRMs supply chains. The Commission together with the Member States will perform **stress tests** on strategic raw materials supply chains.

The Regulation provides measures to **mitigate supply risks** that could impact the well-functioning of the Single Market, including by coordinating **strategic stocks of strategic raw materials** and facilitating Union undertakings, for example the joint purchase of strategic raw materials. These will be closely coordinated with the foresight analyses and detailed technology supply chain assessments of the Commission.

A **Board** bringing together the best expertise available in the European Commission and the Member States will have the responsibility to analyse and monitor markets, assess risks, advise on mitigation strategies, assist with strategic projects, facilitate strategic stockpiling, and to periodically discuss Strategic Partnerships.

II.2 Financial support

The Strategic projects will also need adequate **financial** means. In compliance with competition rules, the Regulation proposes to bring Member States and the Commission together with relevant financial institutions to discuss private sources of financing, existing financial instruments and EU funds, and to facilitate off-take agreements.

The Commission will work with **InvestEU** implementing partners to seek ways to scale up support to investment in line with the common objectives set out in Regulation (EU)

⁹ Regulation (EU) 2021/240 of the European Parliament and of the Council of 10 February 2021 (OJ L 57, 18.2.2021, p. 1)

2021/523¹⁰ and in the Regulation, including via the setting up of blending operations. The InvestEU Advisory Hub can contribute to the build-up of viable projects. Private investment by companies, financial investors and off takers is essential.

Under the **Taxonomy Regulation**¹¹, the Commission is empowered to compile a list of environmentally sustainable activities by defining technical screening criteria for each environmental objective through delegated acts. As a follow-up to the forthcoming environmental delegated act, which will cover recycling, the Commission will ask the Platform on Sustainable Finance 2.0 to develop taxonomy criteria for mining and refining, building on the work started under the Platform 1.0, to be considered and later adopted by the Commission.

Private financing alone may not be sufficient and the effective roll-out of projects along the critical raw material value chain may require public support, including in the form of **State aid**. As far as national resources are concerned, the State aid framework provides ample possibilities to leverage private investments and to effectively roll-out CRMs-related projects. In addition, the Commission has recently adapted State aid rules to allow further flexibility for the Member States to grant aid, including as regards production and recycling of critical raw materials related to key net-zero technologies. The aim is to further speed up and simplify the process, with easier calculations, simpler procedures, and accelerated approval, while limiting distortions to the Single Market and preserving cohesion objectives.

The Commission will:

- *work with EIB and other InvestEU implementing partners to seek ways to scale up support to investment in the critical raw materials supply chain, including via the setting up of blending operations, via encouraging them to build internal competences to foster funding for investments in raw materials and assessing investment barriers in this industry.*
- *ask the Platform on Sustainable Finance 2.0 to develop taxonomy criteria for mining and refining.*

II.3 Standardisation

The Commission has adopted in February 2023 Annual **Union Work Programme for European standardisation**. One of its strategic priorities is the development of European standards for the exploration, extraction, refining and recycling of CRMs, strengthening the EU value chain and EU resilience. Furthermore, the technical requirements for treatment, including recovery, recycling and preparing for re-use of CRMs need to be supported by standardisation actions. This would ensure that the technical rules are applied in a consistent way across the EU.

At **international level**, European standardisation operates within an increasingly competitive global context. The European experts and national standardisation bodies are already

¹⁰ Regulation (EU) 2021/523 of the European Parliament and of the Council of 24 March 2021 establishing the InvestEU Programme and amending Regulation (EU) 2015/1017 (OJ L 107, 26.3.2021, p. 30).

¹¹ Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (OJ L 198, 22.6.2020, p. 13–43)

important contributors to the work of the International Organisation for Standardisation (ISO) and should assume an even more active role in related international standards setting work in order to ensure that EU principles and values underlying relevant EU legislation, as well as international commitments, are reflected in international technical standards on CRMs. The Commission will facilitate the exchange and coordination between the Member States, EU standardisation bodies and EU industries to share resources in support of international standardisation processes.

In line with the EU Standardisation Strategy and the Union Work Programme for European Standardisation, the Commission will:

- *Ensure that the High-Level Forum on European Standardisation (HLF) includes also a specific work stream on CRMs as essential for a resilient Single Market.*
- *Support the development of European standards of CRMs-related industrial processes used in the twin transitions, including for circularity activities.*

II.2. Having the necessary skills

As set out in the 2020 Skills Agenda, to remain competitive, the EU needs a workforce equipped with the **right skills** for the green and digital transitions. The establishment of viable CRMs value chains in Europe cannot take place without the proper development of skills (geologists, metallurgists, mechanical engineers, mine workers, sorters, recyclers and also high-tech professions relevant for the sector etc). Considering skills transformation, where circularity will play a more dominant role in for example the battery value chain and processing, reskilling needs are becoming more and more prominent. In addition to the horizontal measures set out in the 2020 Skills Agenda, the success of the EU's CRMs value chains will require specific sectoral skills policies.

Member States are strongly encouraged to make use of **available EU funding instruments**, such as the European Social Fund Plus (ESF+), the European Regional Development Fund (ERDF) and the Just Transition Mechanism (JTM) to support education and training measures to upskill the workforce across the critical raw material value chain, addressing the talents gaps identified in EU regions¹² The Deep Tech Talent Initiative, budgeted in the context of the new European Innovation Agenda, will also contribute to the needed skills transformation with a pioneering programme that aims to train one million people within European deep tech fields over the next three years.

The Commission will:

- *Establish a large-scale skills partnership on CRMs with stakeholders and public authorities under the EU Pact for Skills with the objective of rolling out successful education and training activities across the entire value chain.*
- *Propose to establish a Raw Materials Academy as part of the Net Zero Academies, to develop and offer training and education programmes to reskill and upskill a workforce for the upscaling of the critical raw material value chain in Europe.*

¹² Harnessing Talent in European Regions – see https://ec.europa.eu/commission/presscorner/detail/en/ip_23_145

II.6 Research and innovation

Research and innovation (R&I) in the CRMs value chain is essential for developing knowledge, innovative solutions and highly sustainable processes, for exploration, extraction, processing, refining, recycling, resource-efficient design, use and substitution. For instance, in wind generators, rare earth permanent magnets could be substituted with other components such as multi-polar synchronous generators. Similarly, platinum group metals used as catalysts in fuel cells might be partially or totally substituted with other metals such as nitrides, carbide or chalcogenides. The development of advanced materials plays an important role notably in substituting CRMs. Research results in these areas should also be taken up in future standards.

Each of these parts of the value chain has its challenges related to geological occurrences, mineralisation characteristics, chemical properties, applications, and energy, environmental and social performance. Research in this regard is needed for critical and non-critical raw materials, in order to address challenges related to supply, as well as to mitigate demand growth in the EU. Actions in all of the above parts of the value chain will diversify EU sourcing and ensure its sustainability.

Under the Horizon Europe work programme (2021-2024), the EU has budgeted projects on exploration, extraction, processing and reuse, recycling and recovery amounting to 470 million euros.

The Commission will:

- *Strengthen deployment and uptake of existing and emerging R&I breakthroughs through the European Innovation Council and the European Institute for Innovation and Technology in line with the New European Innovation Agenda;*
- *Present a Coordinated Plan of Action with Member States on advanced materials, including substitution of critical raw materials, in order to secure R&I investment levels commensurate with the challenge;*
- *Develop a Strategic Implementation Plan via the existing stakeholder forum that will guide EU R&I priorities in the coming years.*

III. Boosting the diversification of supply and partnering in a mutually beneficial manner in support of global production

The EU will continue to rely on imports of raw materials to achieve its twin transition and for increased defence capabilities. It is already actively working on a broad range of tools to facilitate trade, investment and cooperation to open opportunities globally, thereby increasing the security and affordability of CRMs. Given the current challenges, to have a real impact the toolset should be deployed simultaneously with interested partner countries. Synergies must be sought between the various available tools to ensure a coherent approach and deliver effective results in the shortest timeframe possible, notably through the Global Gateway strategy and its implementation, leveraging the EU's and EU Member States' financial and policy instruments. The strengthened coordination of all EU international actions will be

ensured with the creation of a dedicated working group on external actions for CRMs in cooperation with existing relevant structures, notably those related to the Global Gateway.

III.1. The CRM Club: Working together with interested partners

Access to a secure, affordable, and sustainable supply of CRMs is a shared concern among many partners and a key theme in many intergovernmental fora (such as G7, G20, the International Energy Agency and the International Renewable Energy Agency) or initiatives such as the Mineral Security Partnership¹³ or strategic partnerships with third countries. Moreover, international cooperation is essential to counter the market dominance by some and address the challenge of sustainability.

The EU should complement and build on these various actions to **establish a Critical Raw Materials Club** bringing together consuming and resource-rich countries to promote the secure and sustainable supply of CRMs. The EU should join partners in promoting the reliable, commercially based, transparent and environmentally friendly supply of CRMs. In particular, the CRM Club should foster sustainable investment in producing countries and allowing them to move up the value chain.

The Club would be open to the like-minded parties interested and willing to develop the following actions, based on an agreed set of principles:

- Increasing market development monitoring and knowledge sharing
- Enhancing exploration efforts
- Enhancing an enabling environment conducive to sustainable investment
- Shortening the time needed to bring investment projects to the market
- Facilitating market access, through regulatory cooperation
- Working together on promoting labour rights and socially responsible practises in CRM supply chains
- Promoting a circular and sustainable economy that works across borders and boosting high quality recycling capacities
- Driving innovation in the sector to unlock new supplies
- Delivering an efficient and coordinated approach to crisis preparation and response

The Commission will engage in discussions with potential partners interested in setting up this club. Negotiations between the EU and US of a targeted critical minerals agreement, announced on 10 March 2023, provide a basis for working towards a broader and wider Critical Raw Materials Club.

The Commission will:

- *Establish a critical raw materials club with partners to strengthen supply chains and diversify sourcing and reach out to all potential partners to set up this alliance.*

¹³ The Minerals Security Partnership (MSP) was initiated by the US in 2022 as a grouping of like-minded countries to share information on CRM developments in third countries, identify investment opportunities and co-invest in mining, refining and recycling projects that respect high environmental, social and governance standards in partner countries as well as in ‘target countries’.

III.2. Trade and investment agreements providing the framework and launching of second generation Sustainable Investment Facilitation Agreements

Given the capital-intensive nature of extractive and refining activities, economic operators need a business environment in resource rich countries that is investor friendly, predictable and stable. Building on existing multilateral, plurilateral and bilateral frameworks, the EU will further develop measures to achieve this objective.

In December 2022, the EU concluded negotiations to modernise the existing EU-Chile Association Agreement on 9 December 2022. The Agreement contains a dedicated Energy and Raw Materials chapter, which will contribute to providing better access to sustainable investment in critical raw materials such as lithium, while supporting Chile in developing its green economy, in particular with regard to renewable energy and hydrogen.

First, the World Trade Organization (WTO) and its **multilateral and plurilateral agreements** set out the general framework as a baseline that guarantees transparency, predictability and legal certainty, for instance through provisions related to tariffs, non-discrimination, or the prohibition of export restrictions. A plurilateral agreement on “investment facilitation for development” is currently being negotiated. It will boost investment in developing countries including in the CRM sector, notably by making information on investment rules public and easily available, and reducing delays in obtaining government permits and approvals.

Second, the EU makes use of its **bilateral agreements** to deepen trade and investment links worldwide and diversify supply chains, including in the context of CRM supply chains, thereby enhancing the resilience of the EU’s economy.

The EU already has the largest network of **trade agreements** in the world. The recent agreements with Mexico, the United Kingdom, New Zealand and Chile¹⁴ contain a dedicated Energy and Raw Materials chapter. Negotiations are also on-going with Australia and Indonesia, both holding significant reserves of raw materials vital for the energy transition such as rare earth elements and nickel.

The Commission will explore together with partners how to support their ambition to develop extraction, processing and recycling capacities. The Commission will address raw materials related matters, such as predictable impact assessment procedures or non-discrimination treatment for investors in third countries in on-going negotiations and will consider whether to renegotiate some existing agreements with a view to strengthening disciplines on raw materials trade and investment. Special attention will be given to countries in Africa who have great potential to supply raw materials and integrate further in CRM value chains to the mutual benefit of the two sides, including those implementing Economic Partnership Agreements (EPAs).

The Commission will also pay special attention to sustainable investment and is committed to further developing Sustainable Investment Facilitation Agreements (SIFAs)¹⁵. **Second-**

¹⁴ Chile is one of the world’s major lithium producers

¹⁵ A SIFA covers facilitation of all types of investment, in all sectors of the economy, at every stage of the investment – from establishment to operation – and intends to benefit both EU businesses and local entrepreneurs by focussing on predictability and transparency of the regulatory framework, streamlining of

generation SIFA agreements will also include provisions on sustainable development and additional provisions on energy and raw materials and establish dialogues to support industrial projects and local value creation through the establishment of a set of sectoral priorities and modalities to involve the private sector. The EU has recently concluded its negotiations on a SIFA with Angola.¹⁶ Exploratory contacts are ongoing with Nigeria on such an agreement, and other countries may follow.

Finally, it should be recalled that the vast majority of EU CRM imports (92% in value) do not pay import duties, thanks to most-favoured nation (MFN) tariffs set at zero or to trade agreements in force. The remaining CRM imports are covered by a tariff ranging between 2-7% for unprocessed (e.g. unprocessed Magnesium: 5%) and 3-9% for a few processed goods (e.g. Processed Gallium: 3%). The Commission will follow closely the impact of tariffs on the ability to import CRMs and examine requests for **duty suspensions**, in light of the objectives of facilitating the diversification of critical raw materials and reducing our dependencies.

The Commission will:

- *Continue its efforts to sustain and strengthen the WTO, including in negotiating the plurilateral agreement on ‘Investment Facilitation for Development’.*
- *Use its expanding network of Sustainable Investment Facilitation Agreements and Free Trade Agreements to support the ambition of the EU’s trading partners to develop processing capacities and create win-win partnerships, such as with Chile and Australia.*
- *Follow closely the impact of tariffs on the ability to import CRMs, and examine requests for duty suspensions.*

III.3. Bilateral strategic partnerships to turn investment opportunities into economic realities

Given the urgency of enhancing CRM production worldwide, the EU will enhance its cooperation with third countries by stimulating sustainable investments in CRM value chains and other components down the value chain and **turning economic opportunities into mutually beneficial realities**. Strategic partnerships in raw materials value chains are an important tool to enhance such cooperation.

Strategic partnerships promote sustainable growth and contribute to resilient raw materials and industrial value chains. Ultimately, partnerships leverage integration of the industrial and materials value chains between the EU and the partner country. These Partnerships pursue the following **aims**:

- (i) to integrate EU's raw materials value chains with that of the partner country, including cooperation to identify Strategic Projects eligible under the Regulation, on research and innovation and sharing of knowledge and technologies related to sustainable exploration,

authorisation procedures, establishment of focal points as first points of contact between investors and the administration and involvement of stakeholders like non-governmental organisations, business and employers’ organisations and trade.

¹⁶ Available on https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6136.

extraction, processing and recycling of CRMs, substitution of CRMs and monitoring of supply risks;

(ii) to improve EU's and partner country's regulatory frameworks, as well the capacity to enforce relevant rules;

(iii) to promote mutual industrial and economic benefits through an increase in value added in the production in third countries;

(iv) to develop and improve international standards, including to ensure that they provide a high level of environmental and social protection and support their climate and environment related commitments;

(v) to mobilise funding for development of infrastructure required for the raw material value chain;

(vi) to work together on enhancing the resilience and sustainability of CRM supply chains;

(vii) to increase training and skills related to the CRM value chain.

For developing countries, the partnerships are built on in-country value-creation, supporting them to move up the value chain using the framework of the Global Gateway strategy.

Each partnership is guided by a **roadmap** with agreed upon concrete actions under each pillar. The implementation of the roadmap is monitored on an annual basis and can be updated with new actions as appropriate. The partnerships and respective roadmaps are developed and implemented within a "Team Europe approach", encompassing Member States and their industry and institutions.

The first strategic partnership was established in 2021 in the framework of the EU–**Canada** Comprehensive Economic and Trade Agreement (CETA). It has already resulted in EU investments in Canada in the areas of cathode active materials and offtakes for lithium, nickel and cobalt for batteries, as well as in Canadian CRM-related investments in the EU.

A partnership with **Ukraine** was also signed in 2021. Ukraine is a significant global supplier of titanium and is a potential source of over twenty CRMs for the EU. Under the framework of the partnership, a Memorandum of Understanding between the European Bank of Reconstruction and Development (EBRD) and the Ukrainian Geological Survey was signed in 2022.

In November 2022, the Commission has signed strategic partnerships with **Kazakhstan** and **Namibia**.

To date strategic partnerships have been agreed with countries with whom the EU has negotiated or concluded a trade and investment agreement. Such **agreements and strategic partnerships are in fact complementary**, offering a political framework and concrete bilateral cooperation in the specific field of CRMs. For countries that do not have trade and investment agreements with the EU in force, the Commission will promote the objective of undistorted trade and investment when negotiating the memorandum of understanding establishing the partnership. The Regulation provides for the CRM Board to periodically discuss Strategic Partnerships in cooperation with Global Gateway structures.

The Commission will:

- *Seek to expand the network of strategic raw materials partnerships*
- *Promote the objective of undistorted trade and investment in strategic raw materials partnerships*

III.4. Global Gateway – the mutually beneficial approach where the EU stands out

The EU will support investments in infrastructure projects relevant for our CRM supply chains, to increase global supply and international value chain integration and help diversification. The Global Gateway will be the vehicle to assist partner countries with **concrete projects in infrastructure and connectivity**, including by boosting and leveraging concrete private sector investments along the CRM value chain.

Many of the world’s richest sources of CRMs are found in emerging markets and developing economies. The raw materials sector is important for many EU partner countries from both economic and employment perspectives, and **the EU is committed to supporting our partner countries to move up the value chain**. Deploying a “Team Europe approach” between the EU, its Member States, and other relevant actors (such as Development Finance Institutions, the European Investment Bank, the European Bank for Reconstruction and Development) and creating synergies with the European private sector, some CRM-related projects will be defined as priorities under the Global Gateway strategy¹⁷. Working with these partners, raw materials projects will be designed in a way to enhance in-country value addition. This will provide the targeted partner countries with a high-quality and scaled-up EU offer, aligning partners’ interests with EU interests, and will contribute to narrowing the global investment gap in the global CRM supply chains while boosting competitiveness, sustainability, and security. The countries with which the EU has established strategic partnerships would be considered with priority.

In light of promoting sustainability and climate action in the raw materials supply chain, sustainable job creation and the promotion of decent work are overarching objectives of Global Gateway, to which investments must actively contribute. This includes attention for vulnerable groups that encounter specific challenges to enter the labour market as well as to serious issues like child labour. Given the known sensitivities and challenges in extractive industries, the EU will pay particular attention in providing the necessary support to the authorities of third countries hosting CRM projects in order to **reinforce the good governance capacity and transparent business practices in this sector**. In doing so, the EU will seek to help them reinforce the legislative and enforcement framework to ensure that mitigating measures are taken to minimise any adverse impact arising from extracting, refining and/or processing activities on the local communities or on climate and the environment. Orienting vocational education and training (VET) programs to develop skills needed to fulfil job opportunities that CRM interventions create is another important pillar of EU intervention.

The Commission will:

- *Support Global Gateway projects in sustainable raw materials value chains with partner countries, while paying particular attention to ESG standards and local value addition.*

¹⁷ See https://www.eeas.europa.eu/eeas/global-gateway_en.

III.5. Lowering the risk of investing abroad

Besides the investment guarantees provided under the European Fund for Sustainable Development Plus, the EU will also seek to simplify **access to trade finance for investment** in CRM supply chains globally. A number of Member State export credit agencies (“ECAs”)¹⁸ have de-risking schemes or tools to support investments abroad that secure imports of critical raw minerals for off-takers in the respective Member State.

Ongoing work towards a **comprehensive EU export credit strategy** can help to reinforce Member States’ action, by maximising EU influence and the effectiveness of official support provided, in particular where EU operators compete with third country actors.

This will enhance **coordination between external financial tools** managed at the EU level, most notably climate and development finance, and the tools of Member States’ relevant financial institutions including export credit agencies – in particular in the context of the Global Gateway.

A possible **EU Export Credit Facility** could complement the operations of the existing export credit agencies at Member State level, would increase the EU’s overall impact in this area and allow the use of official export credit support to leverage key EU policies, including in the field of CRMs. Finally, the EU is supporting work to create incentives in the international framework governing official export credit support within the ongoing process of modernisation of the rules of the Arrangement on Officially Supported Export Credits, embedded in the OECD. These incentives would allow ECAs to support with more favourable terms transactions involving CRMs used in technologies that significantly contribute to climate change mitigation.

The Commission will:

- *Foster enhanced coordination between Development Financial Institutions and Export Credit Agencies around raw materials projects to deploy new combined tools and ensure synergies, starting with pilots in strategic partner countries.*
- *Work in the OECD to improve arrangements and work with EU Member States to set up an EU Export Credit Facility for inter alia supporting CRM supply chains abroad.*

III.6. Combatting unfair trade practices and pushing harder on enforcement

Today, many governments have turned their attention to the development of the CRM sector, often driven by industrial as well as geopolitical objectives. More than 18,000 measures of concern have been identified by the OECD as affecting CRM trade at its different stages.¹⁹ As demand for CRMs will increase in the future, the frequency and impact of such measures will likely increase accordingly, in the absence of global efforts to improve the situation.

¹⁸ Known schemes are: Germany (<https://www.agaportal.de/en/ufk-garantien/grundlagen-ufk/grundzuege-ufk>); Sweden (<https://www.ekn.se/en/magazine/guarantees/sweden-secures-supply-of-strategic-raw-materials/>); France (<https://www.bpifrance.com/products/strategic-project-insurance/>); Finland (<https://www.finnvera.fi/eng/products/export-credit-guarantees/raw-material-guarantee>)

¹⁹ See <https://www.oecd.org/trade/topics/trade-in-raw-materials/>

This could threaten security of supply or create an uneven playing field that undercuts companies' competitiveness, not just for the EU but for all countries who depend on imports of these materials. But trade restrictions also create inefficiencies. For example, export restrictions as a tool for stimulating local mineral processing do not pay off²⁰.

The Commission is therefore making significant efforts to create transparency on distortive policies related to raw materials, by financing the OECD Database on export restrictions²¹. This is a key first step in raising global awareness on the policy concerns brought by this issue, especially related to CRMs necessary for the energy transition, with a view to addressing these issues in the WTO.

The EU has already made use of dispute settlement in the CRM field. For instance, in 2012, the EU succeeded in an arbitration case against China, who had to remove its export restrictions on rare earths²². More recently, the EU also won a WTO dispute settlement case against Indonesia against an export restriction on nickel²³.

The EU's track-record to address unfair practices is unambiguous. The Commission will intensify enforcement to tackle the growing challenges in this sector and will address export restrictive actions taken by trading partners on ore, secondary raw materials or CRM containing waste in a resolute manner. In addition, the Commission will also continue protecting the EU market by making use of its trade defence instruments where the facts justify it, in full respect of its international and internal legal obligations.

That may include, should the Commission receive duly substantiated complaints to that effect, initiating investigations to examine whether trade defence action should be taken to protect mining and processing industries which could be prevented from establishing themselves in the EU because of unfairly traded imports. In such cases, the wider economic interest of the EU would need to be carefully considered to ensure trade defence measures would not disproportionately harm the interest of other downstream industries or create distortions in the CRM supply chains.

Furthermore, in certain cases, foreign direct investments (FDI) by non-EU investors may pose a risk to security or public order in the EU precisely because they might impact the supply of critical inputs including raw materials. The EU's framework for screening FDI²⁴ provides an EU-wide framework through which the European Commission and the Member States can coordinate action to protect EU security and/or public order if these are threatened by FDI. This can include screening the potential effects of such investments on supply of critical inputs, including raw materials.

²⁰ Fliess, B., E. Idsardi and R. Rossouw (2017), "Export controls and competitiveness in African mining and minerals processing industries", OECD Trade Policy Papers, No. 204, OECD Publishing, Paris, <https://doi.org/10.1787/1fddd828-en>.

²¹ Available on https://qdd.oecd.org/subject.aspx?Subject=ExportRestrictions_IndustrialRawMaterials

²² See WTO DS431 China — Measures Related to the Exportation of Rare Earths, Tungsten and Molybdenum available on https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds431_e.htm

²³ See WTO DS 592 Indonesia — Measures Relating to Raw Materials available on https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds592_e.htm

²⁴ Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019 establishing a framework for the screening of foreign direct investments into the Union (OJ L 79I , 21.3.2019, p. 1–14)

Through the work of the Chief Trade Enforcement Officer, the Commission will:

- *Continue its enhanced implementation and enforcement efforts of the relevant WTO rules and of the EU's trade agreements, with particular focus on measures that restrict access to CRMs.*
- *Examine whether trade defense action should be taken to protect mining and processing/recycling industries.*

IV. Promoting sustainability and circularity across the value chain

Improved security and affordability of CRM supplies must go hand in hand with **increased efforts to mitigate any adverse impacts**, both within the EU as well as in third countries, with respect to labour rights, human rights and environmental protection. Efforts to improve sustainable development of CRM value chains also offers an opportunity to promote human rights, conflict-resolution and regional stability. This is part of the EU's commitment towards developing mutually beneficial solutions with partners and supporting their own sustainable transitions. Since most of critical raw materials are metals, they could be recycled. This offers the potential to move to a truly circular economy, in the context of the green transition. Recycling could become increasingly important, with substantial benefits in terms of security of supply, reducing negative impacts associated with extraction, and creation of economic value. Today, however, recycling rates of most critical raw materials remain low, while recycling capacities, systems and technologies are often inadequate to the specificities of these materials.

Internally, the EU should therefore accelerate resource-efficiency action, in particular through ecodesign requirements and swift adoption of the Ecodesign for Sustainable Products Regulation.

Efforts also need to be stepped up in assuring **circularity** of CRMs in the broad sense, again, both within the EU and internationally. Internally, the EU should aim at ensuring that its own recycling capacity is able to produce secondary materials covering at least 15% of its annual consumption, as defined in the Regulation.

IV.1. Pursuing ongoing EU sustainability work

Over the course of the last few years, the EU has played an increasingly important role in supporting and encouraging **companies to conduct their business responsibly**. The EU has introduced a comprehensive mix of voluntary and mandatory actions to promote Corporate Social Responsibility / Responsible Business Conduct (CSR/RBC) and implement the UN Guiding Principles on Business and Human Rights (UNGPs) and the UN 2030 Agenda for Sustainable Development.

To this end, in July 2021, the EU adopted Guidance on due diligence to help EU companies to address the risk of forced labour in their operations and supply chains, in line with international standards.²⁵ The Corporate Sustainability Reporting Directive²⁶ (CSRD)

²⁵ Guidance on due diligence for EU businesses to address the risk of forced labour in their operations and supply chains – available at https://trade.ec.europa.eu/doclib/docs/2021/july/tradoc_159709.pdf.

requires all large and all listed companies, as well as some non-EU companies that exceed certain thresholds for revenue generated on the EU, to report about their sustainability risks and impacts in accordance with EU sustainability reporting standards to be adopted by the Commission.

Another key examples of **relevant EU measures** are the EU Principles for Sustainable Raw Materials and the Batteries Regulation²⁷. Moreover, the Conflict Minerals Regulation²⁸ promotes mandatory supply chain due diligence as a tool to identify risks of contributing to armed conflict and other related severe human rights abuses in value chains of tin, tantalum, tungsten and gold (3TG). The Regulation builds on the international standards set by the OECD Due Diligence Guidance²⁹ and covers EU importers of 3TG. The due diligence requirements also indirectly affect (EU) smelters and refiners that are active in the supply chains of EU 3TG importers.

The Commission has also made several **legislative proposals** relevant to the sustainable sourcing of CRMs. These include proposals for a Directive on Corporate Sustainability Due Diligence³⁰, for a Regulation on forced labour³¹, for Ecodesign for Sustainable Products Regulation (ESPR), for a Batteries Regulation³², for a Directive amending the Water Framework Directive, the Groundwater Directive and the Environmental Quality Standards directive³³ and for a revision of the Industrial Emissions Directive (IED)³⁴.

At the multilateral and plurilateral levels, the EU recognises **the importance of internationally agreed standards** to ensure predictability for businesses. Responsible Business Conduct action is included in all Trade and Sustainable Development (TSD) chapters via reference to international standards. The EU is also active in the sustainability work of international bodies such as the WTO, OECD, International Labour Organisation

²⁶ Directive (EU) 2022/2464 of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting (OJ L 322, 16.12.2022, p. 15–80)

²⁷ Proposal for a Regulation of the European Parliament and of the Council concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020 (COM(2020)798 final)

²⁸ Regulation (EU) 2017/821 of the European Parliament and of the Council of 17 May 2017 laying down supply chain due diligence obligations for Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas (OJ L 130, 19.5.2017, p. 1–20).

²⁹ OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, <https://www.oecd.org/daf/inv/mne/OECD-Due-Diligence-Guidance-Minerals-Edition3.pdf>.

³⁰ Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 (COM(2022) 71 final)

³¹ Proposal for a Regulation of the European Parliament and of the Council on prohibiting products made with forced labour on the Union market (COM(2022) 453 final)

³² Proposal for a Regulation of the European Parliament and of the Council concerning batteries and waste batteries, repealing Directive 2006/66/EC and amending Regulation (EU) No 2019/1020 (COM(2020)798 final)

³³ Proposal for a Directive of the European Parliament and of the Council amending Directive 2000/60/EC establishing a framework for Community action in the field of water policy, Directive 2006/118/EC on the protection of groundwater against pollution and deterioration and Directive 2008/105/EC on environmental quality standards in the field of water policy (COM(2022) 540 final)

³⁴ Proposal for a Directive of the European Parliament and of the Council amending Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste. (COM(2022) 156 final)

(ILO) and the United Nations (UN). Through accompanying measures, the EU will support as much as possible the respect of EU sustainability legislation in our partner countries.

In the context of the **Critical Raw Material Club**, the EU will work with its members on the development of international ESG principles. These ESG principles could then pave the way to the development of international ESG norms, preferably through international bodies such as ISO, ILO, UN or the OECD and, wherever possible, building on existing international initiative. This covers human rights including labour rights as mentioned in UNGP 12.

There are also several **industry oriented international initiatives** targeting sustainable mining and raw material production.³⁵

For CRMs that have a significant environmental footprint, the Regulation foresees the possibility to introduce in the future requirements on transparency of the environmental footprinting of specific raw materials, if these are necessary to achieve the EU's environmental goals. These would be subject to a thorough assessment of impacts, including consultations of stakeholders and third countries, and take into account scientifically sound assessment methods, relevant international standards and possible negative effects on trade flows.

IV.2. Proactively using our trade agreements to support sustainable development

At bilateral level, all recently concluded trade and investment agreements have an ambitious **Trade and Sustainable Development (TSD) chapter**. These chapters aim to ensure that that economic growth goes hand in hand with the protection of human rights, decent work, the climate and the environment. TSD chapters bind trading partners to international agreements and standards and establish close cooperation amongst partners in the field of corporate social responsibility and accountability. The Commission has recently published a communication³⁶ setting out how to further enhance the contribution of trade agreements to sustainable development. Furthermore, some recently concluded Energy and Raw Materials (ERM) chapters of EU Free Trade Agreements contain specific sustainability provisions. Finally, as noted above, strategic partnerships also set sustainability as an objective.

IV.3. Circularity

For most CRMs, **recycling** rates are currently at very low levels. At least in the mid-term, increasing the recycling rates of waste containing CRMs, but also promoting efficient use and substitution of CRMs, offers a big potential to reduce dependencies, build value chains and create jobs locally (e.g. in the recycling industry, research on substitution, in repair shops).

Following the example of the emerging industry for the recycling of battery raw materials in Europe, other CRM **recycling technologies** need to be supported through Horizon Europe and in synergy with Member States R&I programmes and scaled up from lab to commercialisation.

³⁵ See an overview of further initiatives provided in IEA, I. (2021). The role of critical minerals in clean energy transitions. World Energy Outlook Special Report, p. 240.

³⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions The power of trade partnerships: together for green and just economic growth (COM(2022) 409 final)

While factors are specific to each raw material and its applications, there are some common **challenges**, such as the fact that products are often not designed to enable an easy removal of or access to CRM-rich components (such as rare-earth permanent magnets), and there is a lack information on the presence and chemical composition of their components. Moreover, the targeted collection, treatment and recycling of CRM-rich products and components is lacking. To address the challenges above, common solutions will be developed at the EU level.

Economic viability is a key challenge for certain recycling operations, in particular when it comes to CRM recycling, where separation processes are generally more complex and recoverable quantities smaller than for the base metals. The growing availability of recyclable waste, advances in recycling technologies and new business models should decrease costs over the coming decades, while rising prices of primary raw materials and a certain willingness to pay for lower environmental footprint should reduce the viability gap further. However, there is a need for substantial financial support to recycling projects, considering their innovative nature and the environmental externalities of primary raw materials consumption.

It is also important that **waste and secondary raw materials can be shipped** within the EU without undue burden. New rules on the shipment of waste, as proposed by the Commission in 2021, will facilitate the shipments of waste for recycling through digitalisation and streamlined procedures.

Circularity initiatives should increasingly be pursued **internationally**, together with our trading partners, in the framework of a strategic partnership or a free trade agreement for example. Areas of cooperation include regulatory cooperation and creating an integrated market for materials to be recycled.

The Commission will:

- *Propose in June 2023 a revision of the Directive on end-of-life vehicles to include specific requirements for the design and end-of-life treatment of vehicles, with a focus on CRM recovery.*
- *Provide recommendations to Member States on measures targeting small and CRM-rich consumer electronics, to improve the return and take-back of used and waste mobile phones, tablets and laptops.*
- *Propose in 2024 the inclusion of waste codes for Lithium-ion batteries and intermediate waste streams (“black masses”) under the European List of Waste to ensure their proper recycling within the EU.*
- *Systematically consider as part of the implementation of the EU legislation on eco-design³⁷, performance and information requirements in new products and equipment, which will promote the substitution of CRMs and make sure that they can be dismantled and recycled or re-used.*

³⁷ Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products and Commission proposal for Ecodesign for Sustainable Products Regulation (COM(2022) 142 final)

- *Harmonise applicable waste management rules for certain waste streams with significant CRM recovery potential and assess the integration of CRM rich products into the EU waste legislation, which are currently not covered, such as wind turbines.*
- *Review the Waste Electrical and Electronic Equipment Directive³⁸ to, inter alia, address CRM-rich equipment in provisions relating to information requirements and recovery targets.*
- *Mobilise up to 200 million euros to deploy ten additional Hubs for Circularity to substantially increase recovery and recycling of raw materials in the entire Union.*

V. Conclusion

The EU must secure a sustainable, affordable and diversified supply of CRMs to succeed in its green and digital transitions, which go hand in hand with just transition, as well as to ensure its security and defence. It needs to do so for its long-term competitiveness and to maintain its open strategic autonomy in a fast changing and increasingly challenging geopolitical environment.

This can only be achieved by concerted internal and external action: strengthening domestic measures as well as reinforced international engagement to develop win-win partnerships with third countries. It is only this way that the green and digital transition will become a reality for all.

³⁸ Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (OJ L 197, 24.7.2012, p. 38–71)