



Strategic Security and Critical Raw Materials: The Role of the European Investment Bank



by Max Münchmeyer



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1. Introduction: The strategic importance of CRMs for the EU and investment in African countries

Critical raw materials (CRMs) are essential for the achievement of the EU's long-term Green Deal flagship initiative.¹ This is primarily because the realisation of the Green Deal, and its headline target of achieving EU carbon neutrality by mid-century,² relies on a rapid increase of the share renewables in the Union's energy mix and the electrification of transport. The EU's response to the Russian energy crisis, the REPowerEU Plan, has led to a further increase in the ambition of these policies, since domestically produced renewable energy, aside from its environmental benefits, also lessens the Union's reliance on fossil fuel imports.³ The mounting speed of the European and global energy transition is projected to lead to steep rise in demand for CRMs.⁴ The European Union's ability to guarantee an adequate and secure supply of CRMs is thus a key determinant of the success of the European Green Deal.⁵ However, the

1 European Commission, *The European Green Deal* (COM/2019/640), 11 December 2019, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52019DC0640>.

2 European Parliament and Council of the European Union, *Regulation (EU) 2021/1119 of 30 June 2021 Establishing the Framework for Achieving Climate Neutrality ... ('European Climate Law')*, <http://data.europa.eu/eli/reg/2021/1119/oj>.

3 European Commission, *Council and Parliament Reach Provisional Deal on Renewable Energy Directive*, 30 March 2023, <https://europa.eu/!hR6Q7K>; Giulia Sofia Sarno and Lorenzo Colantoni, *A Changing Energy Diplomacy: The External Dimension of the REPowerEU Plan*, Rome, IAI, March 2023, section 2.2, <https://www.iai.it/en/node/16690>.

4 International Energy Agency (IEA), *World Energy Outlook 2022*, October 2022, p. 318, <https://www.iea.org/reports/world-energy-outlook-2022>.

5 The Commission considers a supply of sustainable raw materials "one of the pre-requisites" for the

EU is acutely reliant on third countries for CRM imports, and CRM extraction and processing is dominated by only a few key players, especially China, as highlighted by a March 2023 study by the Joint Research Centre (JRC).⁶

CRMs are defined by the EU as non-energy, non-agricultural raw materials which are of high economic importance, and for which there exists a significant supply risk.⁷ The Commission considers a secure supply of CRMs crucial for the successful execution of the “twin transition” of decarbonisation and digitalisation.⁸ The perhaps best-known example of a CRM important for the energy transition is lithium, which is used to manufacture the batteries for electric vehicles. However, many other technologies needed to decarbonise the energy sector are reliant on CRMs. For example, permanent magnets are used in wind turbines and EV motors require rare earths, while the manufacture of solar PV panels involves several CRMs,⁹ the principal of which is silicon. Worldwide demand for CRMs is set to rise exponentially over the coming years.¹⁰ By 2030, the JRC projects that, in a high-demand scenario in which current regional and national policy objectives are met,¹¹ global 2030 demand increase for CRMs will range from 16 per cent for magnesium to 12,221 per cent for phosphorus.¹² Regarding CRM demand increase in the in the European

delivery of the Green Deal. See European Commission, *The European Green Deal*, cit., p. 8.

⁶ Samuel Carrara et al., *Supply Chain Analysis and Material Demand Forecast in Strategic Technologies and Sectors in the EU. A Foresight Study*, Luxembourg, Publications Office of the European Union, 2023, <https://doi.org/10.2760/386650>. See also Guillaume Ragonnaud, “Securing Europe’s Supply of Critical Raw Materials. The Material Nature of the EU’s Strategic Goals”, in *EPRS Briefings*, March 2023, [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2023\)739394](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2023)739394).

⁷ For more details on the methodology for defining what constitutes a CRM, see Milan Grohol and Constanze Veeh, *Study on the Critical Raw Materials for the EU 2023. Final Report*, Luxembourg, Publications Office of the European Union, 2023, p. 17-18, <https://doi.org/10.2873/725585>.

⁸ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition* (COM/2023/165), 16 March 2023, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023DC0165>.

⁹ while current solar PV manufacturing capacity in the Union is low, the proposed Net-Zero Industry Act would introduce a benchmark of 40 per cent for 2030 manufacturing capacity in the EU for so-called “strategic net-zero technologies”, including solar PV. See Article 1(2)(a), in conjunction with the Annex to the proposal, in: European Commission, *Proposal for a Regulation on Establishing a Framework of Measures for Strengthening Europe’s Net-Zero Technology Products Manufacturing Ecosystem (Net Zero Industry Act)* (COM/2023/161), 16 March 2023, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023PC0161>.

¹⁰ IEA, *The Role of Critical Minerals in Clean Energy Transitions*, Revised version, March 2022, <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>.

¹¹ This scenario draws on the IEA’s Announced Pledges Scenario (APS) used in the World Energy Outlook. See IEA, *World Energy Outlook 2022*, cit.

¹² Calculations based on data from Samuel Carrara et al., *European Commission - 2023 Foresight*

Union,¹³ lithium is perhaps the most striking example. The JRC projects that the EU's 2020 demand for lithium of 4,891 tonnes in 2020 will increase by between 765–1,090 per cent by 2030, and by 1,343–1,983 per cent by 2050.¹⁴ This means that, in a scenario compliant with the objectives of current EU policy such as the European Green Deal, the EU alone would require approximately 175 per cent of current global lithium supply in 2050.¹⁵

Meeting rapidly rising global demand for CRMs will require massive amounts of investment as CRMs are a highly capital-intensive industry. On the global level, the IEA estimates that 360–450 billion US dollars will need to be invested in mining,¹⁶ and 90–210 billion US dollars in refining and processing¹⁷ of CRMs over the period 2022–2030 in a net-zero compatible scenario. In the EU, for batteries alone, the Commission estimates that an investment of 27.9 billion euro by 2030 and 52.2 billion by 2040 would be needed for the EU to extract 100 per cent of its lithium demand domestically and to then meet 100 per cent of its battery raw materials demand through refining and recycling. These figures drop to 7 billion euro by 2030 and 13.1 billion by 2040 if the EU were to set the goal of 25 per cent production of raw materials needed for batteries.¹⁸ Assuming the public/private split of these investments is similar to that foreseen by the American Battery Materials Initiative, the Commission estimates that around 32 per cent of this investment will need to be public money.¹⁹

To meet rising CRM demand in a sustainable and secure way, the EU's current CRM strategy involves specifying (non-binding) benchmarks and putting in place an enabling governance framework to rapidly scale up domestic

Report on Raw Materials and Strategic Supply Chains [Data Set], 16 March 2023, <https://doi.org/10.5281/zenodo.7736781>.

¹³ Samuel Carrara et al., *Supply Chain Analysis and Material Demand Forecast*, cit., p. 10.

¹⁴ Calculations based on data from Samuel Carrara et al., *European Commission - 2023 Foresight Report on Raw Materials and Strategic Supply Chains [Data Set]*, cit.

¹⁵ Samuel Carrara et al., *Supply Chain Analysis and Material Demand Forecast*, cit., p. 10.

¹⁶ IEA, *Energy Technology Perspectives 2023*, January 2023, p. 164-165, <https://www.iea.org/reports/energy-technology-perspectives-2023>.

¹⁷ *Ibid.*, p. 176.

¹⁸ European Commission, *Impact Assessment Report Accompanying the Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials* (SWD/2023/161), 16 March 2023, p. 183, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023SC0161>.

¹⁹ *Ibid.*

capacity for the extraction, processing and recycling of CRMs.²⁰ However, there are several factors that limit the EU's ability to meet its CRM demand domestically. One of these is the simple fact of the geographic distribution of CRM deposits. While new such deposits are being discovered, even in Europe,²¹ it is unlikely that enough resources of all CRMs exist on EU soil. Secondly, the cost associated with exploration, extraction and refining of CRMs in the EU may be too high to make it commercially viable, which is why European companies have often outsourced the earlier steps of the CRM value chain.²² Thirdly, lengthy permitting procedures for CRM projects, which are regulated and administered at member state level, have been identified by the Commission as "a major deterrent" to greater investment in CRM exploration and extraction in the EU.²³ Finally, social acceptance constitutes another important barrier to domestic sourcing. Extraction projects in particular could face obstacles in this regard.²⁴ An instructive example are Portugal's attempts to vastly increase its CRM extraction capacity by setting up Europe's largest lithium mine near the small village of Covas do Barroso. The project has met with fierce resistance from residents which could significantly delay the project's implementation.²⁵ The latter two issues in particular impact the time to market of CRM projects.

It is important, however, to look beyond mining, which often dominates public discourse on CRMs. Processing and refining of CRMs also has a considerable environmental impact.²⁶ These activities, however, are geographically more concentrated than extraction,²⁷ and the EU is likely to face difficulties in

²⁰ See the following section for details on the EU's CRM objectives.

²¹ "Swedish Mining Company Discovers Europe's Largest Deposit of Rare Earth Elements", in *Euronews*, 13 January 2023, <https://www.euronews.com/green/2023/01/13/swedish-mining-company-discovers-europes-largest-deposit-of-rare-earth-elements>.

²² Marie Le Mouel and Niclas Poitiers, "Why Europe's Critical Raw Materials Strategy Has to Be International", in *Bruegel Analysis*, 5 April 2023, p. 5, <https://www.bruegel.org/node/8941>.

²³ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 1.

²⁴ Oliver Noyan, "Local Resistance, a Major Stumbling Block for EU's Critical Raw Materials Plan", in *Euractiv*, 13 January 2023, <https://www.euractiv.com/?p=1864380>.

²⁵ Filipa Soares, "Portugal Wants to Exploit Its Lithium Reserves. But at What Cost to the Environment?", in *Euronews*, 9 June 2023, <https://www.euronews.com/2023/06/09/portugal-wants-to-exploit-its-lithium-reserves-but-at-what-cost-to-the-environment>.

²⁶ See, for example, a recent study assessing the environmental impacts of the extraction and processing of CRMs used in batteries: John Bachér et al., *Environmental Aspects Related to the Use of Critical Raw Materials in Priority Sectors and Value Chains*, Mol, European Topic Centre Waste and Materials in a Green Economy, 15 December 2020, p. 33-37, <https://doi.org/10.5281/zenodo.4423278>.

²⁷ IEA, *Energy Technology Perspectives 2023*, cit., p. 89.

relocating processing capacity into the European Union from China, which has a significant edge over Europe in this area.²⁸ For example, as per IEA data,

China [...] holds a share of around 30% of global processing for nickel (the figure is higher if the involvement of Chinese companies in Indonesian operations is included), 60-70% for lithium and cobalt, and as high as 90% for REEs [rare earth elements] (to convert them into oxides, metals and magnets).²⁹

As Le Mouel and Poitiers argue, the high degree of supply chain integration that China has achieved demands a comprehensive EU approach, which takes into account the interconnected nature of global trade in CRMs, meaning that “addressing CRM dependencies requires an international approach that seeks to diversify the supply of CRMs going directly into the EU and also to reduce the exposure of the EU’s main trading partners to CRM concentration”.³⁰

Among several potential global partners for the EU in diversifying its imports of unprocessed and processed CRMs, African countries have significant potential. Africa possesses large shares of known reserves of several CRMs.³¹ For example, according to the Natural Resource Governance Institute,³² over 90 per cent of platinum group metals,³³ approximately 80 per cent of phosphate,³⁴ and

²⁸ Oliver Noyan, “Critical Raw Materials: China 15 Years Ahead, Expert Says”, in *Euractiv*, 9 June 2023, <https://www.euractiv.com/?p=1936794>. However, Kalantzakos et al. warn that too adversarial an approach to China could be counterproductive: Sophia Kalantzakos, Indra Overland and Roman Vakulchuk, “Decarbonisation and Critical Materials in the Context of Fraught Geopolitics: Europe’s Distinctive Approach to a Net Zero Future”, in *The International Spectator*, Vol. 58, No. 1 (2023), p. 3-22, <https://doi.org/10.1080/03932729.2022.2157090>.

²⁹ IEA, *Energy Technology Perspectives 2023*, cit., p. 89.

³⁰ Marie Le Mouel and Niclas Poitiers, “Why Europe’s Critical Raw Materials Strategy Has to Be International”, cit., p. 5.

³¹ IEA, *Africa Energy Outlook 2022*, Revised version, May 2023, p. 146-147, <https://www.iea.org/reports/africa-energy-outlook-2022>.

³² Papa Daouda Diene et al., *Triple Win. How Mining Can Benefit Africa’s Citizens, Their Environment and the Energy Transition*, Natural Resource Governance Institute, November 2022, p. 12, <https://resourcegovernance.org/node/6207>.

³³ According to the US Geological Survey, Zimbabwe and South Africa combined have 64,200,000 of an estimated world total of 70,000,000 kg of platinum group metal reserves. See US Geological Survey (USGS), *Mineral Commodity Summaries 2023*, January 2023, p. 135, <https://doi.org/10.3133/mcs2023>.

³⁴ According to the US Geological Survey, African countries (Algeria, Egypt, Morocco, Senegal, South Africa, Togo, Tunisia) have a combined total of 59,180,000,000 of an estimated world total of 72,000,000,000 metric tons of phosphate rock reserves. The vast majority of these (50,000,000,000 metric tons) is located in Morocco. *Ibid.*, p. 133.

55 per cent of manganese reserves³⁵ are in Africa. Some African countries are already significant exporters of CRMs. For example, the Democratic Republic of the Congo (DRC) accounts for 63 per cent of global production of cobalt, while South Africa provides 71 per cent of platinum.³⁶ Regarding the future development of extraction in African countries, Wouters states that “Africa’s mineral potential remains largely unknown”.³⁷ In fact, Africa “has the lowest concentration of known mineral wealth in the world”,³⁸ meaning that further exploration and mapping is likely to reveal significantly more mineral deposits. Investment in these exploration efforts, however, is currently not forthcoming.³⁹

Investment difficulties are even greater when it comes to the downstream aspects of the CRM value chain. A recent study investigating barriers to the development of processing capacity in four African countries⁴⁰ identifies inadequate energy infrastructure and political and policy instability as barriers to investment.⁴¹ Concerns over how other environmental, social and governance (ESG) standards can be guaranteed further complicate the investment situation for both mining and processing.⁴² Hendrix points to the additional challenge that while extraction activity must necessarily take place

³⁵ Note that the Natural Resource Governance Institute uses an average of USGS and S&P data. According to USGS data alone, the share of African countries’ manganese reserves is slightly lower at around 42 per cent, with Gabon, Ghana, and South Africa having a combined total of 714,000,000 of an estimated world total of 1,700,000,000 metric tons of manganese reserves. The vast majority of African manganese reserves (640,000,000 metric tons) is located in South Africa. *Ibid.*, p. 115.

³⁶ Samuel Carrara et al., *Supply Chain Analysis and Material Demand Forecast*, cit., p. 29.

³⁷ Ludivine Wouters, “Key Players: Why Mining Is Central to the EU’s Critical Raw Materials Ambitions in Africa”, in *ECFR Commentaries*, 24 March 2023, <https://ecfr.eu/article/key-players-why-mining-is-central-to-the-eus-critical-raw-materials-ambitions-in-africa>.

³⁸ Papa Daouda Diene et al., *Triple Win*, cit., p. 11.

³⁹ Daniele La Porta et al., *The Growing Role of Minerals and Metals for a Low Carbon Future*, Washington, World Bank, June 2017, p. xiii-xiv, <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/207371500386458722>; Zainab Usman, Olumide Abimbola and Imeh Ituen, “What Does the European Green Deal Mean for Africa?”, in *Carnegie Papers*, October 2021, especially p. 23, <https://carnegieendowment.org/publications/85570>; Ludivine Wouters, “Key Players”, cit.; IEA, *Africa Energy Outlook 2022*, cit., p. 148.

⁴⁰ Guinea, the DRC, Madagascar and Mozambique.

⁴¹ Cullen S. Hendrix, “Building Downstream Capacity for Critical Minerals in Africa. Challenges and Opportunities”, in *PIIE Policy Briefs*, No. 22-16 (December 2022), <https://www.pii.com/node/16134>. See also a contribution which, importantly, also takes into account the legacy of resource extraction practices in Africa when assessing the obstacles to scaling up CRM processing capacity with a focus on the DRC and Zimbabwe: Clapperton Chakanetsa Mavhunga, “Africa’s Move from Raw Material Exports toward Mineral Value Addition: Historical Background and Implications”, in *MRS Bulletin*, Vol. 48, No. 4 (April 2023), p. 395-406, <https://doi.org/10.1557/s43577-023-00534-3>.

⁴² See, with an emphasis on mining, IEA, *Africa Energy Outlook 2022*, cit., p. 149.

where critical minerals are located, their processing can be much more easily relocated to countries where investment conditions are more favourable. This seems to be reflected in current investment projections.⁴³ The IEA estimates that ca 10 per cent of the anticipated 180–200 billion US dollars investment in mining over the period 2022–2030 will be in Africa, compared to ca 4 per cent in China.⁴⁴ However, ca 70 per cent of the anticipated global 70–160 billion US dollars investment in refining and processing will be in China, with Africa's share of such investment being minimal.⁴⁵ The risk is a repeat of extractivist practices, whereby African raw materials are mined and exported by foreign companies with little local value addition, and potentially with little regard for ESG standards. The question of how investment in the entire CRM value chain in Africa can be de-risked thus becomes important, with the European Union and multilateral development banks such as the European Investment Bank (EIB) having the potential to contribute to a solution through the current CRM strategy.

2. The EU's CRM objectives

To understand how exactly this question could be approached, it is important first to gain an understanding of the EU's most recent enhancement of its CRM strategy. This approach marks the latest development in fifteen years of EU policy on CRMs: already in 2008, the Union established an EU Raw Materials Initiative,⁴⁶ and in 2011, the Commission published its first Communication on raw materials, which included the first list of CRMs, and which has since been

⁴³ Cullen S. Hendrix, "Building Downstream Capacity for Critical Minerals in Africa", cit., p. 7.

⁴⁴ IEA, *Energy Technology Perspectives 2023*, cit., p. 165.

⁴⁵ Note that the IEA does not provide a separate figure for Africa's share in anticipated refining and processing investment, including it in the ca 10 per cent share of investment that will take place in "rest of the world" countries, i.e., those that are not China or located in the Asia Pacific, North America or Middle East regions. See *ibid.*, p. 176.

⁴⁶ European Commission, *The Raw Materials Initiative. Meeting Our Critical Needs for Growth and Jobs in Europe* (COM/2008/699), 4 November 2008, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52008DC0699>.

updated every three years.⁴⁷ In 2020, the EU published a CRM Action Plan⁴⁸ and announced the establishment of an Industrial Alliance for CRMs, the European Raw Materials Alliance (ERMA),⁴⁹ aimed at achieving strategic autonomy⁵⁰ in the CRM space.⁵¹

The most recent (March 2023) update of the list of CRMs is exceptional in that it was accompanied a proposal for a dedicated Critical Raw Materials Act (CRM Act).⁵² This legal foundation for coordinated EU action to increase European strategic autonomy along the entire CRM supply chain is an initiative which had been announced by European Commission President Ursula von der Leyen in her 2022 State of the Union Address,⁵³ and in the February 2023 Green Deal Industrial Plan.⁵⁴ Together with the Net-Zero Industry Act,⁵⁵ the CRM Act is designed to maintain or even increase EU competitiveness in the global energy transition.

In addition to updating the list of CRMs, the CRM Act creates a hierarchy *within* the critical raw materials identified by introducing the category of *strategic* raw materials (SRMs). SRMs, according to the Communication accompanying

⁴⁷ European Commission, *Tackling the Challenges in Commodity Markets and on Raw Materials* (COM/2011/25), 2 February 2011, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52011DC0025>; European Commission, *On the Review of the List of Critical Raw Materials for the EU and the Implementation of the Raw Materials Initiative* (COM/2014/297), 26 May 2014, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52014DC0297>; European Commission, *Critical Raw Materials Resilience: Charting a Path towards Greater Security and Sustainability* (COM/2020/474), 3 September 2020, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52020DC0474>.

⁴⁸ European Commission, *Critical Raw Materials Resilience*, cit.

⁴⁹ European Critical Raw Materials Alliance (ERMA) website: *About Us*, <https://erma.eu/?p=152>. Not to be confused with the CRM Alliance: <https://www.crmalliance.eu>.

⁵⁰ For a definition and more detailed discussion of this term, see: Nathalie Tocci, *European Strategic Autonomy: What It Is, Why We Need It, How to Achieve It*, Rome, IAI, February 2021, <https://www.iai.it/en/node/12819>.

⁵¹ Following through on the commitment in the Commission's Industrial Strategy: European Commission, *A New Industrial Strategy for Europe* (COM/2020/102), 10 March 2020, p. 14-15, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52020DC0102>.

⁵² European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials* (COM/2023/160), 16 March 2023, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023PC0160>.

⁵³ European Commission, *State of the Union Address by President von der Leyen*, 14 September 2022, https://ec.europa.eu/commission/presscorner/detail/ov/SPEECH_22_5493.

⁵⁴ European Commission, *A Green Deal Industrial Plan for the Net-Zero Age* (COM/2023/62), 1 February 2023, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023DC0062>.

⁵⁵ European Commission, *Proposal for a Regulation on Establishing a Framework of Measures for Strengthening Europe's Net-Zero Technology Products Manufacturing Ecosystem (Net Zero Industry Act)*, cit.

the CRM Act, 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”.⁵⁶ The Commission’s report identifying the materials that are to be considered critical and/or strategic adds that SRMs are “[r]aw materials important for technologies that support the twin green and digital transition and defence and aerospace objectives”.⁵⁷ The 16 raw materials identified as strategic (Table 1) are a subset of the 34 CRMs and include copper and nickel, which according to the metrics of supply risk and economic importance technically do not clear the threshold to be considered critical.

Table 1 | Strategic raw materials

Bismuth	Lithium – battery grade	Rare earth elements for magnets
Boron – metallurgy grade	Magnesium metal	Silicon metal
Cobalt	Manganese – battery grade	Titanium metal
Copper	Natural graphite – battery grade	Tungsten
Gallium	Nickel – battery grade	
Germanium	Platinum group metals	

Source: European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Annex I.

For raw materials identified as “strategic”, the CRM Act foresees special EU-internal and external objectives and measures.

Inside the EU, the CRM Act introduces a set of ambitious 2030 objectives for EU capacity regarding the entire SRM value chain (Table 2). The CRM Act also aims to speed up the permitting process for CRM projects. To do so, it would introduce an obligation on member states to set up a “one-stop shop” for CRM project permitting.⁵⁸ For projects pertaining to SRMs, the Commission is proposing a maximum duration of the permitting process of 24 months for extraction and 12 months for processing and recycling projects.⁵⁹

⁵⁶ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 3.

⁵⁷ Milan Grohol and Constanze Veeh, *Study on the Critical Raw Materials for the EU 2023*, cit., p. 46.

⁵⁸ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 8.

⁵⁹ *Ibid.*, Article 10(1). In the context of the social acceptance issues discussed above, concerns have

Table 2 | 2030 SRM value chain objectives

Extraction capacity	≥ 10 per cent of EU annual consumption of SRMs
Processing capacity	≥ 40 per cent of EU annual consumption of SRMs
Recycling capacity	≥ 15 per cent of EU annual consumption of SRMs

Source: European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 1(2)(a).

However, even if the Union's 2030 targets are realised,⁶⁰ most of the SRM value chain will still be located outside the Union. While recycling and resource efficiency can help reduce the amount of CRM imports that the EU is likely to require in the future,⁶¹ the Commission acknowledges the impossibility of the Union meeting this remaining demand through domestic extraction and processing alone, concluding in its 2020 CRM Action Plan that "[t]he EU's open strategic autonomy [...] needs to continue to be anchored in well-diversified and undistorted access to global markets for raw materials".⁶² Therefore, the CRM Act includes a target for diversification: no single country should provide more than 65 per cent of the Union's annual consumption of any SRM at any stage of the value chain by 2030.⁶³ This could be considered an implicit reference to China. It is in the realisation of this diversification objective that a skilful CRM diplomacy approach that facilitates investment in a sustainable CRM value chain in third countries, including in African countries, will be needed.

also been voiced that the expedited permitting process could come at the expense of a thorough environmental impact assessment and stakeholder consultation, which could threaten to undermine the sustainability ambition of the European Green Deal. See Oliver Noyan, "Critical Raw Materials Act: Can Europe Achieve Its Ambitious Goals?", in *Euractiv*, 17 March 2023, <https://www.euractiv.com/?p=1895368>.

⁶⁰ Some criticism has been voiced as to how realistic the targets are. See *ibid.*

⁶¹ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Articles 25-28.

⁶² European Commission, *Critical Raw Materials Resilience*, cit., p. 15.

⁶³ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 1(2)(b).

3. The EU's toolbox for CRM collaboration with African countries

While the 65 per cent diversification target is not legally binding, failure to reduce import dependencies carries the risk of reputational damage in addition to the supply security implications of overreliance on single suppliers. For SRMs, a JRC study found there to be significant EU reliance on third countries.⁶⁴ Among the sixteen raw materials considered strategic, there are only two for which EU member states provided the largest share of EU consumption: copper and nickel. These materials are the two strategic raw materials that nonetheless technically do not clear the threshold to be considered critical due to their relative abundance and wide geographical distribution.⁶⁵ For the remaining fourteen SRMs, the EU accounts for a minuscule amount of global production and thus remains overwhelmingly reliant on third countries.⁶⁶ For five SRMs, the EU currently has an import dependency on a single country that is higher than the proposed 65 per cent benchmark, and which would thus need to be drastically reduced until 2030 should the CRM Act pass in to law: China supplies 71 per cent of gallium, 97 per cent of magnesium and 100 per cent of rare earth elements for magnets. Meanwhile, Chile supplies 79 per cent of lithium and Turkey supplies 99 per cent of the EU's boron demand.⁶⁷

Given this challenging starting position, the CRM Act proposal introduces, or builds on, several tools and strategies to diversify the Union's CRM imports. Four of these are particularly relevant (Table 3).

The first, and most straightforward of these tools is joint purchasing. The CRM Act proposal introduces a mechanism by which the Commission, through the use of a service provider, would aggregate the demand of undertakings across the Union consuming SRMs at the extraction or processing stages of the

⁶⁴ Milan Grohol and Constanze Veeh, *Study on the Critical Raw Materials for the EU 2023*, cit.

⁶⁵ 19 per cent of the EU's annual supply of copper is met by Poland while Finland provides 38 per cent of the Union's Nickel supply.

⁶⁶ Milan Grohol and Constanze Veeh, *Study on the Critical Raw Materials for the EU 2023*, cit., p. 29.

⁶⁷ *Ibid.*, p. 26.

value chain.⁶⁸ The service provider would then seek to match this aggregated demand. This mechanism is thus similar to that which was recently set up for natural gas demand aggregation under the REPowerEU Plan,⁶⁹ though in the case of SRMs, such aggregation is not mandatory. While the CRM Act does not explicitly provide that joint purchasing should be aligned with the SRM diversification objective, the Commission would retain a significant degree of control and oversight over the operation of the joint purchasing mechanism and could set the terms of the contract with the service provider in a manner conducive to this aim.

Table 3 | CRM import diversification tools of the proposed CRM Act

Joint purchasing	Demand aggregation at European level, purchasing of CRMs through a service provider appointed by the Commission
Strategic Projects	Projects deemed important for SRM security of supply benefit from accelerated facilitation of investment and administrative assistance. Project promoters will receive assistance on obtaining investment from the standing sub-group on finance of the CRM Board
Strategic Partnerships	Comprehensive, win-win capacity building along entire CRM value chain. CRM projects in countries with strategic partnership agreements will be considered with priority for funding and investment under the Global Gateway Strategy
CRM Club	Forum for collaboration between the EU and likeminded countries seeking to collaborate on the development and diversification of CRM supply chains in a sustainable manner

Aside from encouraging the joint purchase of SRMs from third countries with already established SRM extraction or processing capacity, the other tools available to the European Union are aimed at channelling investment towards building such capacities. This, in turn, would benefit the Union's diversification agenda by creating new partners for the trade in (processed or unprocessed) SRMs. One way the Commission is proposing to achieve this is by identifying

⁶⁸ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 24.

⁶⁹ Council of the European Union, *Council Regulation (EU) 2022/2576 of 19 December 2022 Enhancing Solidarity through Better Coordination of Gas Purchases, Reliable Price Benchmarks and Exchanges of Gas Across Borders*, <http://data.europa.eu/eli/reg/2022/2576/oj>.

certain, individual projects as strategic. As per the CRM Act, these Strategic Projects can be located within or outside the EU, as long as they are deemed to make a “meaningful contribution” to the Union’s security of supply in SRMs.⁷⁰ The CRM Act further adds a condition for Strategic Projects in “emerging markets or developing economies”, stating that such projects should be “mutually beneficial for the Union and the third country concerned by adding value in that country”. Once a project has been designated as strategic, it will be considered a priority for the Union’s security of supply. The Commission and the member states are obliged to accelerate and encourage private sector investment in such projects and may provide administrative assistance in their realisation.⁷¹ A European Critical Raw Materials Board,⁷² composed of a high-level representative from every member state,⁷³ will monitor the progress of these projects. Meanwhile, a standing sub-group of the Board, which includes representatives from national promotional banks, the EIB and “other international financial institutions”, would advise and assist the promoter of a strategic project with obtaining the investment needed for completion.⁷⁴

The third, and most wide-ranging, of the tools available to the Commission are so-called Strategic Partnerships. Reference to these partnerships were already included in the 2020 CRM Action Plan,⁷⁵ which identified “resource-rich developing countries and regions such as Africa” as fertile ground for the conclusion of these agreements. As with Strategic Projects, the Commission emphasises that Strategic Partnerships should be mutually beneficial, stating that “[t]he EU can help our partner countries’ to develop their mineral resources sustainably through supporting improved local governance and dissemination of responsible mining practices, creating in turn value added in the mining sector and drivers for economic and social development”.⁷⁶

The 2023 Communication on CRMs re-emphasises the importance of Strategic Partnerships for the EU’s CRM strategy and shifts the emphasis to the entire

⁷⁰ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 5.

⁷¹ Ibid., Article 14.

⁷² Ibid., Article 34.

⁷³ Ibid., Article 35.

⁷⁴ Ibid., Article 15 in conjunction with Article 35(6)(a).

⁷⁵ European Commission, *Critical Raw Materials Resilience*, cit., p. 17.

⁷⁶ Ibid., p. 16.

value chain as opposed to focusing on extraction. It specifies seven aims of these partnerships (Table 4).⁷⁷

Table 4 | Aims of strategic partnerships

1	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, extraction, processing and recycling of CRMs, substitution of CRMs and monitoring of supply risks;
2	to improve EU's and partner country's regulatory frameworks, as well the capacity to enforce relevant rules;
3	to promote mutual industrial and economic benefits through an increase in value added in the production in third countries;
4	to develop and improve international standards, including to ensure that they provide an elevated level of environmental and social protection and support their climate and environment related commitments;
5	to mobilise funding for development of infrastructure required for the raw material value chain;
6	to work together on enhancing the resilience and sustainability of CRM supply chains;
7	to increase training and skills related to the CRM value chain.

The EU sees this comprehensive approach to Strategic Partnership as rendering Europe a more attractive partner compared to its global competitors.⁷⁸ The objectives read as an explicit rejection of the extractivist practices which an increased attention to Africa's CRM wealth risks reproducing. Under the functions conferred on it by the CRM Act, the European Critical Raw Materials Board would discuss how well the EU's Strategic Partnerships are contributing to import diversification and security of supply.⁷⁹ The Board would further decide on which countries should receive priority in the Union's efforts to conclude new such partnerships. Since the introduction of the CRM Strategic Partnership Initiative by the 2020 CRM Action Plan, partnerships have been established with Canada (as part of CETA), Ukraine, Kazakhstan, Namibia, and

⁷⁷ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 10-11.

⁷⁸ On the advantages of this value-driven, win-win approach to CRMs, see also Sophia Kalantzakos, Indra Overland and Roman Vakulchuk, "Decarbonisation and Critical Materials in the Context of Frught Geopolitics", cit.

⁷⁹ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 33(1).

most recently with Argentina.

Strategic Partnerships are not just important indicators of the European Union's political intent to establish or increase trade in CRMs with a certain country. The Commission states that "some CRM-related projects will be defined as priorities under the Global Gateway strategy", with Strategic Partners being considered first for investment in such projects.⁸⁰ The Global Gateway is an EU external action strategy that aims to make available up to 300 billion euro in investments until 2027 to further development in partner countries across five key areas: digital; climate and energy; transport; health; and education and research.⁸¹ CRMs are part of the climate and energy priority of the Global Gateway. In its strategy document for the Global Gateway, the Commission states that "[w]e will also work with partner countries to invest in infrastructure for developing sustainable and resilient raw materials value chains".⁸² The total sum of planned investment is a combination of grants, loans and private funding that will be mobilised through the EU's so-called Team Europe approach, which foresees collaboration between EU institutions, member states and multilateral and national development finance institutions in making investments available.⁸³ In the 2023 CRM Communication, the Commission emphasises the importance of "paying particular attention to ESG [environmental, social and governance] standards and local value addition" in projects funded through the Global Gateway.⁸⁴

A dedicated Africa–Europe Investment Package under the umbrella of the Global Gateway aims to mobilise 150 billion euro in investments, including in CRMs.⁸⁵ Of this, 2.4 billion and 1.08 billion will come in the form of grants in sub-Saharan Africa and North Africa, respectively.⁸⁶ Notably, the EU recently

⁸⁰ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 12.

⁸¹ For an overview, see European Commission website: *Global Gateway*, https://commission.europa.eu/node/5445_en.

⁸² European Commission, *The Global Gateway* (JOIN/2021/30), 1 December 2021, p. 6, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52021JC0030>.

⁸³ *Ibid.*, p. 2.

⁸⁴ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 12.

⁸⁵ For an overview, see European Commission website: *EU-Africa: Global Gateway Investment Package*, https://commission.europa.eu/node/5525_en.

⁸⁶ European Commission, *EU External Energy Engagement in a Changing World* (JOIN/2022/23), 18 May

announced that, as part of the Global Gateway, it will invest 50 million euro in the DRC's CRM sector.⁸⁷ The Union is planning to greatly increase the number of its CRM Strategic Partnerships with African countries. This was already mentioned as a priority for the EU's 2022 energy diplomacy strategy.⁸⁸ In addition to the existing partnership with Namibia, further partnerships "in the pipeline" include Uganda, South Africa, Rwanda, Senegal, the DRC, Zambia, Burundi, Morocco and Algeria.⁸⁹ Strategic CRM Partnerships, in conjunction with the Global Gateway, are thus particularly relevant instruments to strengthen collaboration with African countries in building reliable CRM value chains.

While not an import diversification tool per se, the Commission also proposes the formation of a Critical Raw Materials Club. This forum would enable cooperation between the EU and other countries interested in diversifying and strengthening CRM supply chains. These partners would work together to "foster sustainable investment in producing countries and allowing them to move up the value chain".⁹⁰ The ongoing negotiations on a Critical Minerals Agreement between the EU and the United States are seen by the Commission as a foundational step for the Club.⁹¹ Significantly, the Commission also envisages that the members of the Critical Raw Materials Club will develop a set of "international ESG principles [... which] could then pave the way to the development of international ESG norms".⁹² The CRM Club could thus be complementary to Strategic Partnerships by facilitating ESG-compliant investment in SRM value chains, including in Africa.

2022, p. 16, <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52022JC0023>.

⁸⁷ Leo Komminoth, "EU Pledges €50m Investment in DRC Infrastructure and Minerals", in *African Business*, 6 March 2023, <https://african.business/?p=130683>.

⁸⁸ European Commission, *EU External Energy Engagement in a Changing World*, cit., p. 16.

⁸⁹ European Commission, *EU-Africa: Global Gateway Investment Package – Green Energy Initiative* (Factsheet), November 2022, https://ec.europa.eu/commission/presscorner/detail/en/fs_22_1120.

⁹⁰ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 8.

⁹¹ On the latest state of EU-US negotiations on CRMs, see European Commission, *EU Moves Forward with Critical Minerals Agreement Negotiations with the US*, 14 June 2023, https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3214; Council of the EU, *Trade with the United States: Council Authorises Negotiations on EU-US Critical Minerals Agreement*, 20 July 2023, <https://europa.eu/!wJwTft>.

⁹² European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 17.

4. The EIB and the European Union's CRM diplomacy

Realising the EU's ambitious CRM strategy will require the mobilisation of substantial amounts of investment, both within and outside the European Union.⁹³ However, no dedicated funding instruments are foreseen by the CRM Act proposal.⁹⁴ The financing framework for investment in African countries included in the Commission's proposal thus principally relies on the use of existing financing instruments at Union level, mainly the European Fund for Sustainable Development Plus (EFSD+) for the mobilisation of investments under the Global Gateway strategy.⁹⁵ Another important prong of the Commission's strategy to encourage investment is to increase coordination between development financial institutions and export credit agencies through the development of an EU export credit strategy.⁹⁶ The EFSD+, through the provision of guarantees to de-risk investment and blended finance, can go some way towards alleviating the difficult CRM investment conditions discussed at the beginning of this paper.⁹⁷ Given, however, that the funds and investment instruments under the Global Gateway are not explicitly earmarked for the development of CRM supply chains, they are unlikely to deliver all the needed investment by themselves. Private sector investment will be a core part of this equation, and indeed ERMA has recently committed to support investment in a rare earth separation plant in Poland that will be supplied with raw materials from Malawi.⁹⁸ However, the EU's ambition to also strengthen

⁹³ As mentioned in section 1 above.

⁹⁴ In fact, the establishment of a dedicated CRM Fund was considered by the Commission as a policy option, but ultimately not included in the final proposal for the CRM Act, see European Commission, *Impact Assessment Report Accompanying the Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., p. 44-45.

⁹⁵ Ibid., p. 44. See, generally, the website of the European Commission DG for International Partnerships: *European Fund for Sustainable Development Plus (EFSD+)*, https://international-partnerships.ec.europa.eu/node/1364_en.

⁹⁶ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 13.

⁹⁷ The Commission expects the EFSD+ to raise up to 135-billion-euro worth of investments across the spectrum of Global Gateway priorities. See European Commission DG for International Partnerships: *European Fund for Sustainable Development Plus (EFSD+)*, cit.

⁹⁸ ERMA, *Diversifying the Rare Earth Value Chain for Europe's Green Transition*, 11 March 2022, <https://erma.eu/?p=4759>.

the downstream parts of the value chain in third countries is likely to remain challenging, meaning that the Union will be reliant on the mobilisation of dedicated CRM funds and investment by member states, and additional efforts by multilateral institutions such as the European Investment Bank, to facilitate speedy and substantial influx of investments into these crucial capacities.

EIB support holds an important signalling value. This means that, once a project is accepted, signed and supported with EIB monies, this may be a sign to other investors that the project is a viable investment. Attracting additional investments is also crucial since EIB support usually constitutes up to about 50 per cent of the total financing needed for a project. In the CRM space, the investment products that the EIB relies on chiefly for the support of CRM projects are project finance loans, supporting larger undertakings with projects that are already at a mature stage of planning and execution,⁹⁹ as well as, importantly, venture debt for the support of smaller, innovative companies.¹⁰⁰ To determine whether EIB investment in a certain project has the potential to have the desired signalling effect, the Bank has developed an Additionality and Impact Measurement (AIM) framework, which is used to assess every project.¹⁰¹ *Additionality* is defined by the bank as the “difference between the EIB contribution and market alternatives” and thus is primarily designed as a concept to make sure that EIB investment improves “sub-optimal” investment conditions.¹⁰²

To maintain the value of its signalling effect, however, investment by the EIB is subject to a rigorous assessment of the projects proposed to it and only possible under certain conditions, some of which may pose a hurdle to the EIB being an effective supporter of the EU’s external CRM strategy. First, it is important to recall that the EIB is a bank rather than an institution for the distribution of development aid. This means that a basic condition for investment by the EIB is that the projects proposed are bankable.¹⁰³ For a project to be considered for

⁹⁹ European Investment Bank (EIB) website: *Loans for the Private Sector*, <https://www.eib.org/en/products/loans/private-sector>.

¹⁰⁰ EIB website: *Venture Debt*, <https://www.eib.org/en/products/equity/venture-debt>.

¹⁰¹ EIB website: *Additionality and Impact Measurement*, <https://www.eib.org/en/projects/cycle/monitoring/aim.htm>.

¹⁰² *Ibid.*

¹⁰³ EIB website: *Our Priorities*, <https://www.eib.org/en/about/priorities>.

investment, it must thus return a positive economic appraisal, which seeks to project the future returns of a given project.¹⁰⁴

This economic component constitutes an important, but not the only, part in the Bank's overall appraisal of a proposed project. For example, a project also undergoes assessment of whether it complies with the EIB's Environmental and Social Standards.¹⁰⁵ These standards are a set of criteria on which a project promoter must provide detailed information to the Bank. Projects located outside Europe must comply with national legislation, but will also be held to European procedural requirements under the Environmental Impact Assessment Directive where deemed appropriate by the Bank.¹⁰⁶ While the EIB is established by the European Treaties,¹⁰⁷ it is independent from the European Commission, and European Union itself is just one of the Bank's shareholders (along with all 27 member states). Nonetheless, the EIB seeks to align itself with European Union policy in assessing its investments. In recent years, this alignment has been particularly pronounced regarding the European Union's ambitions under the European Green Deal and its objective to achieve EU carbon neutrality by 2050. Within the EU, the Bank aims to contribute up to 250 billion euro to the European Green Deal Investment Plan's objective of mobilising 1 trillion euro of sustainable investment in the period 2021–2030.¹⁰⁸ Outside the EU, the Commission and the EIB aim to boost global decarbonisation through facilitating green technology transfer, research and development and circular economy initiatives.¹⁰⁹ Already in 2019, the EIB launched an initiative to transform itself into the European Union's "Climate Bank".¹¹⁰ The EIB's December 2020 Climate Bank Roadmap for the years 2021–2025 rests on the principles of stopping support for fossil fuel energy projects, focusing on renewable energy,

¹⁰⁴ EIB, *The Economic Appraisal of Investment Projects at the EIB*, 2nd ed., March 2023, <https://doi.org/10.2867/076767>.

¹⁰⁵ EIB, *Environmental and Social Standards*, 2 February 2022, <https://www.eib.org/en/publications/eib-environmental-and-social-standards>.

¹⁰⁶ *Ibid.*, p. 2.

¹⁰⁷ See articles 308 and 309 TFEU.

¹⁰⁸ EIB website: *EIB Climate Action Explained*, <https://www.eib.org/en/about/priorities/climate-action/explained>.

¹⁰⁹ See Ursula von der Leyen and Werner Hoyer, "A Global Green Deal", in *Project Syndicate*, 22 March 2021, <https://prosyn.org/XTQnh8V>.

¹¹⁰ The EIB posits that it has been the EU's climate bank for a while. The change is framed by the *EIB Group Climate Bank Roadmap 2021–2025* as a transformation from "an EU bank supporting climate" into "the EU climate bank".

and the alignment of the Bank's activities with the Paris Agreement.¹¹¹

The EIB's environmental and climate commitment currently sits somewhat uneasily with the support for the extraction and processing parts of the CRM value chain that seems to be required by the CRM Act. The EIB's current energy lending policy,¹¹² does include a commitment to "support the development of a sustainable supply of critical raw materials",¹¹³ but the EIB's latest operational plan seems to slightly skirt the issue of mining and processing, further specifying the Bank's commitment to furthering the CRM supply chain by stating that

We will invest in projects that contribute to the availability of strategic inputs for the European single market and reduce Europe's strategic dependencies. This includes investing in sustainable critical raw material value chains with a focus on innovation, resource efficiency and the recovery of raw materials and their recycling, respecting our environmental and social standards, as a prerequisite for the twin transition and building a resilient European economy.¹¹⁴

While, as mentioned above, recycling and resource efficiency will play an important part in increasing EU strategic autonomy, the exponential increase in demand described in section 1 will also necessitate more mining and processing activities, whose strategic autonomy benefits are more difficult to weigh against their environmental and social impacts. Here, the Bank may wish to provide more clarity as to the precise standards that it will apply when considering investments in these types of projects. This is an issue that may be related to the non-inclusion of mining and processing in the EU's Green Taxonomy.¹¹⁵ When advising on the sustainability criteria to be included in the Delegated Acts to the EU's Green Taxonomy, the Commission's advisory body for this task, the Technical Working Group of the Platform on Sustainable Finance, was unable to come to a conclusion regarding mining, stating that

¹¹¹ EIB, *EIB Group Climate Bank Roadmap 2021-2025*, November 2020, <https://doi.org/10.2867/178546>.

¹¹² EIB, *EIB Energy Lending Policy. Supporting the Energy Transformation*, Version with updated technical annexes, May 2023, <https://www.eib.org/en/publications/20230164-eib-energy-lending-policy>.

¹¹³ *Ibid.*, p. 2.

¹¹⁴ EIB, *The EIB Group Operational Plan 2023-2025*, February 2023, p. 35, <https://www.eib.org/en/publications/20220289-eib-group-operational-plan-2023>.

¹¹⁵ For an overview, see the website of the European Commission DG for Finance: *EU Taxonomy for Sustainable Activities*, https://finance.ec.europa.eu/node/212_en.

further work would be needed due to the “particularly challenging” nature of this activity.¹¹⁶

Another potential hurdle to effective EIB investment may be that the Bank is not involved deeply within the CRM Act proposal and its accompanying Communication. In the CRM Act proposal, the only instance where the Bank is given a role in law, as opposed to the recitals, is as part of a standing subgroup of the Critical Raw Materials Board mentioned above, which brings together national, European and international financial institutions “to discuss and coordinate financing for Strategic Projects”.¹¹⁷ In the Communication, multilateral Banks are mentioned only as part of the Team Europe approach to development financing discussed above.¹¹⁸

Beyond the EIB, national efforts in several EU member states have recently resulted in individual initiatives to invest more money into the strengthening and diversification CRM value chain. The most concrete example is France, which aims to make an initial 2 billion euro available for CRM investment, with 500 million of these being provided by the state and the rest from the private sector and managed by the private equity firm InfraVia.¹¹⁹ The French government has stated that its national investment strategy will be coherent with the Critical Raw Materials Act and with similar investment mobilisation in other member states, and has committed itself to applying high environmental and social standards to the projects that will be supported.¹²⁰ Germany is working on a similar fund.¹²¹ Italy, meanwhile, plans to strengthen CRM supply

¹¹⁶ European Commission, *Platform on Sustainable Finance: Technical Working Group. Part A: Methodological Report*, March 2022, p. 19-21, https://finance.ec.europa.eu/system/files/2022-04/220330-sustainable-finance-platform-finance-report-remaining-environmental-objectives-taxonomy_en.pdf. Though steps may be underway to include mining of CRMs in the taxonomy, though details are unclear at the time of writing. See John Ainger and Pronina Lyubov, “EU Courts Further Controversy by Adding Mining to Green Rulebook”, in *Bloomberg*, 18 July 2023, <https://www.bloomberg.com/news/articles/2023-07-18/eu-courts-further-controversy-by-adding-mining-to-green-rulebook>.

¹¹⁷ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 35(6)(a).

¹¹⁸ European Commission, *A Secure and Sustainable Supply of Critical Raw Materials in Support of the Twin Transition*, cit., p. 12.

¹¹⁹ Paul Messad, “France Presents ‘First Step’ €2bn Fund for Critical Metals”, in *Euractiv*, 11 May 2023, <https://www.euractiv.com/?p=1922392>.

¹²⁰ French Ministry of Economics and Finance, *France 2030 : le Gouvernement annonce le lancement d’un fonds d’investissement dédié aux minerais et métaux critiques*, 11 May 2023, <https://presse.economie.gouv.fr/?p=110909>.

¹²¹ “Bund Tüftelt an Staatsfonds Zur Rohstoffsicherung”, in *n-tv.de*, 20 April 2023, <https://www.n-tv.de>.

chains as part of its “Made in Italy” sovereign fund.¹²² All three countries are planning to cooperate and coordinate in leveraging these financial resources.¹²³ This presents an opportunity for the EIB to interact and exchange best practices with these national funds, and to find further funding for the CRM projects it supports. However, as more and more such national funds emerge, a challenge may be to determine how precisely coherence between these national efforts, the EIB, and the Commission’s priorities will be ensured, both regarding the projects that will be most useful for pan-European efforts to increase CRM strategic autonomy and the standards that will be applied in the appraisal of these projects.

5. Policy recommendations

With the CRM Act proposal, the European Union has taken a decisive step in enhancing previous strategies in the CRM space by instituting a CRM governance framework anchored in law and by specifying ambitious targets for increased domestic capacity and diversification along the entire CRM value chain. The Commission’s proposal makes it clear that it intends to render the energy transition resilient to future supply shortages and bottlenecks. Given that complete European autonomy in the CRM space is not achievable, investment beyond the EU’s borders will be important. The CRM Act will now enter interinstitutional trilogues, but even at this stage, three policy recommendations can be formulated that will enable the effective and coordinated channelling of investments into reducing import dependencies for SRMs, especially for the EIB: first, the speedy implementation of the CRM Act’s governance structure; secondly, the clarification of ESG standards as they pertain to mining and processing; and thirdly, the expansion of CRM Strategic Partnerships.

tv.de/wirtschaft/Bund-tuefelt-an-Staatsfonds-zur-Rohstoffsicherung-article24067442.html; Julian Olk, “Rohstoff-Fonds kommt wohl doch noch – Habeck erhält Rückendeckung aus dem Ausland”, in *Handelsblatt*, 27 June 2023, <https://www.handelsblatt.com/29227958.html>.

¹²² “Dalla pasta al fondo sovrano, che cosa c’è nel Ddl Made in Italy”, in *Il Sole 24 Ore*, 1 June 2023, <https://www.ilsole24ore.com/art/dalla-pasta-fondo-sovrano-che-cosa-c-e-ddl-made-italy-AE4yeeZD>.

¹²³ Paul Messad, “France, Germany, Italy Pledge Close Cooperation on Critical Raw Materials”, in *Euractiv*, 27 June 2023, <https://www.euractiv.com/?p=1945457>.

First, as the analysis above shows, coordination among member states and the EU, as well as among national and multilateral development banks will be important in the absence of dedicated EU funds for sustainable CRM value chain development. To facilitate such coordination, it is important to mobilise the governance structure foreseen by the CRM Act swiftly. This pertains particularly to the establishment and operationalisation of the Critical Raw Materials Board and its standing sub-groups, principally that on investment and financing. This sub-group is likely to be an important forum for the coordination of the various national funds and efforts in the CRM space. It will also help actors such as the EIB and other development banks to determine their additionality more easily. Another important part of the overarching governance structure is the joint purchasing mechanism, which could constitute a vehicle for coordinated member state action in CRM diversification. In the implementation of this mechanism, lessons could be drawn from the process of joint purchasing of gas under the EU Energy Platform as part of the REPowerEU Plan, whose political foundations were laid even before formal legislation was adopted.¹²⁴

Uncertainty surrounding which ESG standards to apply to mining, but also to processing of CRMs constitutes an investment barrier and risks resulting in extractivist practices. This is why, secondly, and complementarily, the EU and EIB should in a timely manner address head-on how to approach these activities from an ESG standard perspective. While this is also likely to cause political controversy issues inside the EU and may be one barrier to the implementation of the obligatorily expedited permitting procedures for projects along the SRM value chain,¹²⁵ it is also important to clarify the standards that will apply to investment in extraction and processing activities by EU entities beyond the European Union's borders. Not addressing this issue is likely to lead to uncertainty, though the process of defining these parameters is likely to be difficult given the heated EU debate on the issue of mining, with metal industry associations¹²⁶ and environmental NGOs¹²⁷ at opposite ends of the spectrum of

¹²⁴ Website of the European Commission DG for Energy: *EU Energy Platform*, https://energy.ec.europa.eu/node/5060_en.

¹²⁵ Oliver Noyan, "Critical Raw Materials Act", cit.

¹²⁶ Eurometaux website: *Sustainable Finance - EU Taxonomy*, <https://eurometaux.eu/eu-policy/resource-efficiency/sustainable-finance-eu-taxonomy>.

¹²⁷ Meadhbh Bolger et al., *'Green Mining' Is a Myth: The Case for Cutting EU Resource Consumption*, Brussels, European Environmental Bureau and Friends of the Earth Europe, October 2021, <https://eeb.org/?p=105241>.

opinions. Particularly regarding the extraction and processing parts of the value chain, which currently fall outside the EU's Green Taxonomy, it is important that environmental standards are still guaranteed and that such standards can have an influence on investment decisions and guide the EIB's assessment. The CRM Act proposal foresees a scheme of Commission recognition of governmental or organisational sustainability certification schemes,¹²⁸ as well as the option for the Commission to establish rules for the verification and declaration of the environmental footprint of critical raw materials that are likely to have a significant environmental impact.¹²⁹ These measures, if adopted, may also be helpful in establishing and uniformising environmental standards.

The EU's work on global ESG standards that all members of a future CRM Club would apply may also be helpful in this regard, with the recent proposal for an ESG Regulation a promising foundation for such sharing of best practice between the EU and likeminded partners.¹³⁰ Cooperation with the EIB, national development banks and financial institutions, and international organisations is also important in facilitating the development of these standards and preventing fragmentation, with the CRM Board's sub-group having the potential to serve as a useful platform for part of these exchanges. In the banking sector, cooperation between multilateral and national (development) banks on lending policy may also be useful in sending uniform and ethics-based investment signals along the entire CRM value chain.¹³¹

Relocating some of the processing and manufacturing parts of the CRM value chain to African countries is likely to be a particular investment challenge due to the incentive to ship raw materials to countries with existing processing capacity, and with lower governance and infrastructural risk. This is why the EU must pursue its win-win collaboration with African countries with speed and rigour. Hence, thirdly, the conclusion of further Strategic Partnerships is likely to be crucial. The holistic approach taken to Strategic Partnerships has a better

¹²⁸ European Commission, *Proposal for a Regulation Establishing a Framework for Ensuring a Secure and Sustainable Supply of Critical Raw Materials*, cit., Article 29.

¹²⁹ Ibid., Article 30.

¹³⁰ European Commission, *Proposal for a Regulation on the Transparency and Integrity of Environmental, Social and Governance (ESG) Rating Activities* (COM/2023/314), 7 July 2023, [https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023PC0314R\(01\)](https://eur-lex.europa.eu/legal-content/en/TXT/?uri=celex:52023PC0314R(01)).

¹³¹ See Annex, which collects policy developments on CRM in several multilateral and national development banks.

chance of success to attract the necessary investment than the individual Strategic Projects that are proposed by single developers. As mentioned above, projects that are part of Strategic Partnerships also benefit from priority funding through the Global Gateway. Intensified diplomatic efforts by the External Action Service are thus needed to conclude the remaining partnership agreements with African countries currently still “in the pipeline” as soon as possible. Linked to the first recommendation on governance, rigorous monitoring by the CRM Board or another dedicated body of whether these Partnerships are actually mutually beneficial will be important to maintain the EU’s value-driven approach to CRM diplomacy.

Capacity-building is likely to be a lengthy process. Nonetheless, actions by the European Institutions to put into place conditions that will allow the EIB to exercise its signalling effect and thus to open the door to further CRM investment beyond the EU’s borders must start now to guarantee long-term resilience.

Annex: CRM lending policy

The cross-sectoral nature of the CRM value chain (extraction, refining, production, recycling) renders it challenging to discern the CRM-specific policy of financial institutions. The list below is the result of an initial, exploratory survey of CRM-related policy statements in the publicly available documents of select multilateral and national (development) financial institutions.

AfDB, December 2022

.....
*Approach Paper towards preparation of an African Green Minerals Strategy*¹³²

Policy paper

“The vision for the strategy is to guide Africa to strategically exploit the continent’s green mineral resources for industrialisation and to assert control over its destiny to create an African presence in emerging green technologies. Four pillars support the strategy to deliver this vision:

1. Advancing mineral development by increasing geological knowledge, conducting feasibility studies to attract investment, establishing the infrastructure to create an enabling environment and aligning mineral resource management with the African Mining Vision (AMV).
2. Developing people and technology capabilities by identifying the skills needed to capitalise on opportunities and building the institutions ready to generate them.
3. Building key value chains to achieve resource-based industrialisation and access wider regional and continental markets through the African Continental Free Trade Area (AfCFTA). The case is made for establishing battery and electric vehicles value chains as a priority, starting with two and three-wheeled vehicles and commuter buses.
4. Promoting mineral stewardship to responsibly guide the environmental, social and governance aspects of green minerals, together with increasing material reuse and recycling.” (p. 9)

¹³² Africa Natural Resources Management and Investment Centre (ANRC), *Approach Paper towards Preparation of an African Green Minerals Strategy*, Abidjan, African Development Bank, December 2022, <https://www.afdb.org/en/node/59118>.

EBRD, December 2017

*EBRD Extractive Mining Industries Strategy*¹³³

Lending policy

“Key success factors [in the CRM sector]:

- Resource control
- Supply chain control
- Supply risk mitigation
- Material and metal stewardship

Typical EBRD finance:

- Exploration finance

Supply risks are higher for a number of industrial minerals (eg: magnesia, graphite, fluorspar) and rare earth metals. These are key to many industries and renewable energy technologies. The [European Commission] is facilitating supply to EU. This is an emerging opportunity for miners in the EBRD region.” (p. 17)

EIB, 2019

*EIB Energy Lending Policy – Supporting the Energy Transformation*¹³⁴

Lending policy

“The Bank will reinforce its technical and financial advisory services to project developers and public authorities seeking to scale up investment programmes. Finally, it will look to support the development of a sustainable supply of critical raw materials needed for the transformation.” (p. 2)

“The Bank will support the competitiveness of EU industry in low-carbon technology, including by strengthening the sustainable supply of critical raw materials.” (p. 23)

¹³³ European Bank for Reconstruction and Development (EBRD), *EBRD Extractive Mining Industries Strategy 2018-2022*, 13 December 2017, <https://www.ebrd.com/policies/sector/draft-mining-strategy.pdf>. The EBRD has no dedicated strategy for the downstream aspects of the CRM value chain. Note that the bank is currently in the process of revising its extractive mining strategy.

¹³⁴ European Investment Bank, *EIB Energy Lending Policy. Supporting the Energy Transformation*, Version with updated technical annexes, May 2023, <https://www.eib.org/en/publications/20230164-eib-energy-lending-policy>.

EIB, February 2023

*The EIB Group Operational Plan 2023-2025*¹³⁵ Strategy

“We will invest in projects that contribute to the availability of strategic inputs for the European single market and reduce Europe’s strategic dependencies. This includes investing in sustainable critical raw material value chains with a focus on innovation, resource efficiency and the recovery of raw materials and their recycling, respecting our environmental and social standards, as a prerequisite for the twin transition and building a resilient European economy”. (p. 35)

World Bank, 2019

*Climate-Smart Mining: Minerals for Climate Action*¹³⁶ Policy initiative

“The Climate-Smart Mining Initiative will help resource-rich developing countries benefit from the increasing demand for minerals and metals, while ensuring the mining sector is managed in a way that minimizes the environmental and climate footprint.”

[The Climate-Smart Mining Framework has the principal building blocks of decarbonisation, resilience, circular economy and market opportunities. Climate-Smart mining takes into account citizen engagement and gender, and must be founded on strong governance and adequate regulation.]

¹³⁵ European Investment Bank, *The EIB Group Operational Plan 2023-2025*, February 2023, <https://www.eib.org/en/publications/20220289-eib-group-operational-plan-2023>.

¹³⁶ World Bank, *Climate-Smart Mining: Minerals for Climate Action*, 1 May 2019, <https://www.worldbank.org/en/topic/extractiveindustries/brief/climate-smart-mining-minerals-for-climate-action>. These principles were developed further in the following report: Kirsten Hund et al., *Minerals for Climate Action. The Mineral Intensity of the Clean Energy Transition*, Washington, World Bank, July 2020, <https://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition>.

CDP, June 2022

*Circular Economy: Sectoral Strategic Guidelines*¹³⁷ Strategy

“• Now that raw materials are becoming increasingly scarce and more expensive, promoting a more responsible use of these materials while increasing their recycling relieves pressure on manufacturing systems.

• Partly to compensate for structural scarcity of raw materials, over the years Italy has developed a relative advantage in terms of resource efficiency. [...] The same virtuous dynamics must be undertaken to recycle critical raw materials that are essential for the ecological transition, such as lithium, cobalt and rare earths, used in batteries, electric vehicles, wind turbines and whose production is totally absent in Italy. Indeed, the decarbonisation and climate neutrality objectives will increasingly require the spread of green technologies, and therefore the use of these minerals and metals, whose demand is expected to grow substantially in the coming years.

• Improved recycling of these materials would make it possible to reduce dependence on third countries, often a source of tension in the international geopolitical arena. In this sense, a significant contribution comes from the recycling of technological products through modern hydro- and bio-metallurgy techniques, which have a recycling potential close to 98%.” (p. 14-15)

[The CDP highlights the recovery of CRMs from waste from electrical and electronic equipment (WEEE) and the use of innovative recycling technologies to recover phosphorus and rare earth metals as priorities (p. 15, 21).]

¹³⁷ Cassa Depositi e Prestiti (CDP), *Circular Economy. Sectoral Strategic Guidelines*, 2022, https://www.cdp.it/resources/cms/documents/CDP_CIRCULAR_ECONOMY_ENG.pdf. See also CDP, “Transizione ecologica e digitale: il punto sulle materie prime critiche”, in *CDP Briefs*, March 2023, https://www.cdp.it/resources/cms/documents/CDP_Brief_Transizione_ecologica_e_digitale_il_punto_sulle_materie_prime_critiche.pdf.

Bpifrance, January 2022

France 2030 Appel à projets «Métaux critiques». Cahier des charges¹³⁸ Call for projects

A call put out by the French government and Bpifrance for projects that reduce France's strategic dependence on CRMs. The call, open until January 2024, specifies that

"Investment projects may take the form of:

- the creation of new production units;
- investments in existing production units to significantly transform their processes or production capacities, while making them more productive and flexible;
- the development and implementation on an industrial scale of innovative technological processes that save raw materials and energy.

[...] All projects must demonstrate that they will cumulatively make it possible to:

- reduce dependence on critical metals [...]
- ... to secure the supply of strategic value chains for France;
- to use the best available technologies and, more generally, to be state-of-the-art in terms of technology, economics, the environment, etc.;
- while being located on national territory, in mainland France or in the overseas territories and collectivities, and to contribute to the attractiveness of the area in which it is located." (p. 4, author's own translation)

Société Générale, November 2021

Mining Sector Policy¹³⁹ Lending policy

The mining sector policy recognises the role of CRMs in the green energy transition. (p. 3) It defines exclusion, priority and "other" ESG criteria for the

¹³⁸ Bpifrance, *France 2030 Appel à projets «Métaux critiques». Cahier des charges*, January 2022, <https://www.bpifrance.fr/download/media-file/76755>.

¹³⁹ Société Générale, *Mining Sector Policy*, November 2021, <https://www.societegenerale.com/sites/default/files/documents/CSR/mining-sector-policy.pdf>. See also Société Générale, *3 Questions to... Christophe Roux*, 27 March 2023, <https://wholesale.banking.societegenerale.com/en/news-insights/all-news-insights/news-details/news/questions-christophe-roux-critical-minerals>.

assessment of clients, acquisition transactions, products and services, and dedicated transactions. In particular, the client ESG criteria include:

“Priority criteria

When conducting a corporate E&S assessment of a client involved in this sector, the Group considers the following criteria:

- Whether the client company has E&S risks measures in place, commensurate to its impacts, and addressing in particular:

- Health and safety.

- Tailings management.

- Impacts on biodiversity.

- Impacts on human rights, with specific consideration of child and forced labour as defined in the International Labour Organization (ILO) Conventions, and, where applicable, management of impacts on indigenous people.

- Engagement with local stakeholders.

- When operating in conflict-affected and high-risk areas, whether the client company has implemented measures to ensure responsible management of the relationships with public or private security forces.

Other criteria

When conducting a corporate E&S assessment of a client involved in this sector, the Group also considers the following criteria:

- When operating client company discloses material payments to local governments and authorities (including taxes, royalties or license fees), taking into account in conflict-affected and high-risk areas, whether the confidentiality undertakings.

In addition, Société Générale encourages its clients to join best practice initiatives of the Mining sector for E&S risk management, such as:

- The ICMM.

- The EITI to support transparency and good governance.

- The Voluntary Principles on Security and Human Rights.

- Mineral-specific sustainability initiatives where applicable.” (p. 7-8)

Strategic Security and Critical Raw Materials: The Role of the European Investment Bank

A secure supply of critical raw materials (CRMs) is crucial for the realisation of the European Union's energy transition. To increase domestic production and diversify imports of these materials, the European Commission published its proposal for the first-ever European Critical Raw Materials Act in March 2023. The proposed legislation would put in place several measures to strengthen security of supply along the entire CRM value chain. This paper analyses the Commission's proposal, focusing on its supply diversification tools and how these may contribute to sustainable, mutually beneficial relations with African countries in the CRM space. The paper further discusses the opportunities and obstacles for financial institutions, and especially the European Investment Bank, to support this governance framework by helping to mobilise the substantial amounts of investments that are required for to increase supply security against the background of an exponential rise in global CRM demand over the coming decades.



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