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Research Report

EU raw material partnerships: Mutual benefits or green extractivism? A critical analysis of the EU's strategic partnerships on raw materials, with a focus on Kazakhstan, Chile, and Rwanda

Research Report, No. 25/2025

Provided in Cooperation with:

Austrian Foundation for Development Research (ÖFSE), Vienna

Suggested Citation: Küblböck, Karin; Papatheophilou, Simela; Tröster, Bernhard; Ulrici, Leonhard (2025): EU raw material partnerships: Mutual benefits or green extractivism? A critical analysis of the EU's strategic partnerships on raw materials, with a focus on Kazakhstan, Chile, and Rwanda, Research Report, No. 25/2025, Austrian Foundation for Development Research (ÖFSE), Vienna, https://doi.org/10.60637/2025-rr25

This Version is available at: https://hdl.handle.net/10419/333404

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25/2025 RESEARCH REPORT

EU Raw Material Partnerships: Mutual Benefits or Green Extractivism?

A critical analysis of the EU's Strategic Partnerships on Raw Materials, with a focus on Kazakhstan, Chile, and Rwanda

Karin Küblböck, Simela Papatheophilou, Bernhard Tröster, Leonhard Ulrici Vienna, September 2025

DOI: https://doi.org/10.60637/2025-rr25





Acknowledgement

We would like to thank José Miguel Ahumada (University of Chile) and Herbert Wasserbauer (DKA) for their valuable comments on an earlier version of this report.

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EXECUTIVE SUMMARY

As part of its efforts to secure access to critical raw materials (CRMs), the EU has concluded Strategic Partnerships on Raw Materials with 14 non-EU countries. These partnerships aim to diversify supply sources and to deepen ties with resource-rich countries, thereby strengthening the resilience of CRM supply chains. They are part of the EU's partnership approach that has become a central feature of the EU's diplomacy efforts in the context of growing geopolitical competition, supply chain vulnerabilities, and China's dominance in the CRM sector.

This paper critically examines these partnerships and analyzes the nature, objectives, and implementation of the 14 Strategic Partnerships currently in place, focusing particularly on the cases of Kazakhstan, Chile, and Rwanda. These countries represent different regions, income levels, and resource endowments, offering insights into how the EU's partnership approach unfolds in different contexts.

The Strategic Partnerships are formalized through Memoranda of Understanding (MoUs) and roadmaps, though the latter are mostly not publicly available. Our analysis reveals that their stated goals – local value addition, ESG compliance, and mutual benefits – often remain vague and are formulated without civil society participation. Where legally binding treaties, such as Free Trade Agreements constrain partner countries' domestic policy space to generate greater local benefits of raw material extraction, the provisions of Strategic Partnership do not mitigate these constraints.

The impacts of the partnerships ultimately depend on the extent to which companies can be successfully engaged in the cooperation, which, in turn, crucially depends on funding opportunities. Yet EU funding structures are fragmented and heavily reliant on blended finance mechanisms and private sector alignment. This reliance limits the scope for achieving declared objectives such as industrial upgrading in the respective partner countries.

We conclude that, while the EU's Strategic Partnerships are framed as equitable and sustainable, in practice they risk reproducing extractive asymmetries under a new geopolitical logic. Without more concrete commitments, stronger transparency, and real incentives for inclusive development in partner countries, these partnerships fall short of delivering the promised mutual benefits on the one hand, and sustainable supply security on the other.

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ABBREVIATIONS

AA Association Agreement

AFA Advanced Framework Agreement

ASM Artisanal small-scale mining
BIT Bilateral Investment Treaty

CETA Comprehensive Economic and Trade Agreement

CHI Chile

CRM Critical Raw Material
CRMA Critical Raw Material

CRMA Critical Raw Material Act

DRC Democratic Republic of the Congo

EAC East African Community

EBRD European Bank for Reconstruction and Development

EC European Commission

EFSD+ European Fund for Sustainable Development Plus

EIB European Investment Bank
EIF European Investment Fund

EITI Extractive Industry Transparency Initiative

EPA Economic Partnership Agreement

EPCA Enhanced Partnership & Cooperation Agreement

ERM Chapter Energy and Raw Materials Chapter ESG Environmental, social, governance

EU European Union EV Electric Vehicle

FDI Foreign Direct Investment
FTA Free Trade Agreement
GDP gross domestic product

IDB Inter-American Development Bank

IEA International Energy Agency
ITA Interim Trade Agreement

KAZ Kazakhstan

MEP Member of European Parliament
MoU Memorandum of Understanding
MSP Minerals Security Partnership
NGO Non-Governmental Organization

NLS National Lithium Strategy

OACPS Organisation of African, Caribbean and Pacific States

OECD Organisation for Economic Co-operation and Development

REE Rare Earth Element

RINR Regional Initiative against the Illegal Exploitation of Natural Resources

RMB Rwanda Mines, Gas, and Petroleum Board

RRA Rwanda Revenue Authority

SRM Strategic Raw Material

SSU Code Subsoil and Subsoil Use Code

UAE United Arab Emirates
USD United States Dollar
USGS US Geological Survey

VAT Value Added Tax

WTO World Trade Organization

1. Introduction

The European Union's (EU) dependence on raw material imports is not new. Throughout history, securing access to raw materials has been a driving force behind economic expansion and colonization. Today, the strategic importance of raw materials is being shaped by the twin transition of digitalization and decarbonization, as well as by escalating geopolitical tensions and the resulting renewed focus on militarization. These dynamics are driving up global demand and intensifying competition, in particular for a set of critical raw materials (CRMs). For many of these materials, China has emerged as a dominant player in mining and processing, while resource-rich countries are increasingly asserting their interests by seeking to move beyond merely exporting unprocessed materials.

The EU continues to rely on imports for many CRMs that are essential for its strategic sectors, including renewable energy technologies, electric mobility, energy-intensive industries, information and communication technologies, aerospace, and defense. This reliance creates significant vulnerabilities, especially in light of recent global supply chain disruptions and the growing concentration of processing capacity outside the EU. To address these challenges, the EU has launched a range of policy initiatives aimed at reducing dependencies on the one hand by strengthening domestic capacities for extraction, refining, and recycling, and on the other by securing and diversifying external sources of supply.

A milestone in this context is the *Critical Raw Materials Act* (CRMA), adopted in 2024 (Regulation (EU) 2024/1252). It aims to reduce dependencies and diversify supplies, with a special focus on 17 raw materials designated as strategic (so-called Strategic Raw Materials, SRMs). Besides introducing provisions to expedite permitting procedures, the CRMA also sets targets to increase domestic extraction, processing, and recycling of CRMs (see for details on the CRMA Tröster et al. 2024). Yet even if the EU achieved its domestic targets, third country imports will remain the EU's main source of CRMs in the foreseeable future. To secure and to diversify its supply from third countries, the EU has adopted a suite of policy instruments, including trade measures, investment facilitation, strategic stockpiling, innovation funding, and diplomatic engagement. These instruments are outlined in a communication accompanying the CRMA (see an overview in Tröster et al. 2025).

Among these tools, one of the more recent and prominent approaches is the establishment of **Strategic Partnerships on raw materials** with resource-rich third countries. These are part of the EU's partnership approach that has gained importance in the last few years. Against the backdrop of current difficulties for multilateral cooperation, especially due to the trade war between the US and China, the partnership approach has become a central feature of the EU's diplomacy efforts (Carry et al. 2025). Since 2021, more than 30 partnerships have been signed, ranging from climate and energy agreements, to hydrogen, and CRMs (Van de Graaf/Díaz Gras 2025). The latter are particularly relevant, given the EU's high import dependency on CRMs and their strategic important for establishing new production capacities for products important in the twin transition (Koch et al. 2025). They were introduced by the European Commission (EC) as a new approach that will create "win-win situations" in providing opportunities for local value addition based on mining activities for resource-rich countries (Simon 2023).

This paper critically examines the emergence of these Strategic Partnerships, focusing on their objectives, content, and claimed mutual benefits. It first explains the content of the partnership agreements (Chapter 2), and then assesses their potential to contribute to a more secure and sustainable raw materials supply for the EU while scrutinizing the extent to which they reflect

the interests and development priorities of partner countries (Chapter 3). By doing so, the paper questions whether these partnerships genuinely mark a shift towards equitable cooperation – or whether they risk reproducing extractive asymmetries under a new geopolitical guise. In order to understand the partnerships in their contexts, the partnerships with three countries from three different parts of the world – Kazakhstan, Chile, and Rwanda – are assessed in more detail (Chapter 4), looking at how the mining sector is organized in the respective countries, the role that CRMs have on the economies, and to what extent the Strategic Partnerships reflect the idiosyncrasies of the partner countries, and have influenced the CRM sector in the partner countries.

2. THE EU'S STRATEGIC PARTNERSHIPS ON RAW MATERIALS

2.1. General Background

Formally, Strategic Raw Material Partnerships are non-binding agreements between the EU and third countries, focusing on extraction, processing and recycling of raw materials. They are concluded by the EC with non-EU countries. These partnerships do not require ratification by EU Member States. However, the CRMA and its accompanying Communication (COM(2023) 165 final: 11) call for coordination between the EC and the Member States to ensure that EU partnerships are consistent with each Member State's own bilateral agreements and that the Member States in turn support the measures set out in the Strategic Partnerships.

The partnerships are formalized through Memoranda of Understanding (MoUs), which serve as political declarations. MoUs do not create rights or obligations under domestic or international law on either side; rather, they signal a commitment. Within about six months, the MoU shall be followed by a 'roadmap': an action plan that may detail specific projects and outline concrete steps for implementing the agreed objectives stipulated in the MoU.

As a soft power instrument, the Strategic Partnerships resemble aspects of China's approach to international cooperation. According to the EC, these agreements shall allow the EU and its partner countries to advance trade and investments in secure, sustainable, and resilient raw materials value chains, which are essential for the transition to climate-neutral and digitalized economies (Directorate-General for International Partnerships 2024). This shall be achieved, amongst others, via improving regulatory frameworks, ensuring environmental and social protection, mobilizing infrastructure funding, cooperating on resilient and sustainable CRM supply chains, and advancing skills development (European Commission 2023).

Thus, in essence, Strategic Partnerships are designed to facilitate supply relations of EU manufacturing companies with existing and potential raw material projects in third countries. The supporting measures that are part of these partnerships – such as exploration initiatives, sustainability measures or infrastructure financing through the Global Gateway initiative – shall support this goal. In the mid- to long-term, these supply relations are supposed to lead to value chain upgrading in the respective partner countries, for instance into processing steps instead of mere raw material extraction and exports.

As of July 2025, the EU has signed 14 Strategic Partnerships (see graphic below). MoUs exist with Canada and Ukraine (both 2021), Kazakhstan and Namibia (both 2022), Argentina, Chile, Zambia, the Democratic Republic of Congo and Greenland (all in 2023), as well as Rwanda,

Norway, Uzbekistan, Australia and Serbia (all 2024) (European Commission 2024c), thus with partner countries located on all continents and with highly varying income levels.

2021 2022 2023 2024 Namibia 0 **Argentina** Canada Rwanda Ukraine 🔘 Kazakhstan 🔘 Chile Norway Uzbekistan DR Congo INCOME GROUP High Upper-middle Australia Zambia Lower-middle Greenland Serbia

Figure 1: Strategic Partnerships concluded by the EU

Source: own elaboration based on data from European Commission 2024a & World Bank 2023b

2.2 Content of the Strategic Partnerships

The Strategic Partnerships consist of a general Memorandum of Understanding (MoU) and a detailed roadmap developed by the EU and the partner governments.

Memoranda of Understanding

Even though the MoUs vary substantially in length, from one (e.g., Canada) to thirteen pages (e.g., Serbia), the overall structure and stated goals of the partnerships are very similar to one another. Typically, they consist of four pillars:

- the development and integration of raw material value chains,
- cooperation in research and development,
- > promotion of environmental, social and governance (ESG) criteria and standards,
- financial and investment instruments for raw material projects.

Differences exist in the level of details across these thematic pillars. Certain partnerships contain specific steps envisioned e.g., in research & innovation cooperation, while others merely state general goals. In the case of Serbia e.g., the goal of value chain integration is specified to include off-take agreements¹ which has materialized into commitments by public and private sector actors to invest in a lithium battery factory linked to the controversial planned Jadar lithium mine (DW 2024). In other cases, the term "value chain integration" remains vague and ambiguous.

agreements to purchase some or all of a producer's future output.

Skills and capacity building are not always named as goals but are often means to the overall end of building up raw materials projects and value chains. Where they are named, their focus differs: Depending on the circumstances, some MoUs have a focus on "skills for high quality jobs in these clean technology sectors" (MoU with Norway: 3), while other focus on "building of capacity to enforce relevant rules" (MoU with Zambia: 4). Sometimes, the development of infrastructure is named as a separate pillar. This is particularly the case in countries, where the non-existence of suitable infrastructure is a major hurdle to raw materials extraction, as in Greenland.

In other cases, e.g. in Namibia, regulatory alignment has been highlighted as a main objective of the MoU. What "regulatory alignment" means, remains unclear. According to estimates, 64% of raw material deposits are in countries "without sufficient legal certainty" (Mischler 2025). It should be borne in mind that expressions like "political stability" and "legal certainty" for investors are not clear-cut legal terms, but rather political terms denoting how favorable a country is to foreign investment. When Bolivia for example cancelled a partnership with a German company aiming to develop a lithium project due to environmental concerns, EU accusations of "political instability and the high degree of state intervention" in Bolivia arose (Jütten 2024: 4). In countries wishing to speed up the exploitation of their raw materials, Strategic Partnerships therefore sometimes entail legal reforms to the frameworks for foreign direct investment (FDI), such as in Greenland and Uzbekistan, making them more attractive to foreign capital by providing stronger guarantees of no state intervention (Creve et al. 2024; Daly 2024).

Roadmaps

A roadmap is an action plan that sets out the details of the agreements and the concrete projects to be implemented. Roadmaps to the MoUs must be finalized within six months following the conclusion of the MoUs. However, apart from the roadmap for the EU-Ukraine partnership agreement for the time period 2021-2022 and the EU-Kazakhstan agreement for the time period 2023-2024, none have been made publicly available (see EU-Ukraine Strategic Partnership on Raw Materials. Roadmap 2021-22 (2021); EU-Kazakhstan Strategic Partnership on Sustainable Raw Materials, Batteries and Renewable Hydrogen value chains. Roadmap 2023-2024 (2023)). Even in these two cases, the roadmaps were not published by the EU itself.

Both publicly available roadmaps state that they are living documents to be updated regularly. They contain a list of initial actions – e.g., the development of a low carbon strategy of the mining sector, digitalization and classification of data on mineral resources, the enhancement of Earth-observation programs and the identification of joint-venture projects. In the case of Kazakhstan, the roadmap foresees, for example "the review of possible trade and investment restrictions that could hinder (...) new foreign direct investment" (EU-Kazakhstan Strategic Partnership 2023: 4). Besides several EU Directorates Generals, numerous European institutions are included as actors in the different actions of the roadmap, such as the European Bank for Reconstruction and Development (EBRD), the European Investment Bank (EIB), and the European Space Agency.

3. Assessing Strategic Partnerships on Raw Materials

3.1. Challenges in assessing and delineating effects in practice

Since it is not possible to evaluate Strategic Partnerships based solely on their wording, one must look at how the agreements are put into practice. However, several factors complicate this effort: First, not all partnership refer exclusively to CRMs; and second, not all raw-material related projects of the EU take place in partner countries with Strategic Partnerships in place, and some initiatives span multiple countries, including countries that are part of a Strategic Partnership and those that are not.

With respect to the first point, only five of the 14 Strategic Partnerships refer exclusively to CRMs (see Table 1 below). Two Strategic Partnerships cover materials considered essential for the twin transition. While those two do not use the same terminology as the CRMA and therefore do not formally refer to CRMs, it can be inferred they, too, focus exclusively on CRMs. By contrast, the other half of MoUs cover, in principle, all raw materials and include only a general provision that there should be a focus on CRMs. As a result, projects under those partnerships can also target other raw materials beyond CRMs.

Table 1: Scope of the Strategic Raw Material Partnerships

Partner Country	Scope of the MoU	
Canada	'Minerals and metals critical to the transition to a climate-neutral and digitalized economy'	
Ukraine	Raw materials, focus on CRMs & batteries	
Namibia	Raw materials, focus on CRMs & renewable hydrogen	
Kazakhstan	Raw materials, focus on CRMs, batteries & renewable hydrogen	
Argentina	CRMs	
Chile	CRMs	
Democratic Republic of the Congo (DRC)	CRMs	
Zambia	CRMs	
Greenland	Raw materials, focus on CRMs	
Rwanda	'non-energy and non-agriculture raw materials for the green and digital transition as well as other minerals of strategic relevance to the twin transition'	
Norway	Raw materials, focus CRMs & batteries	
Uzbekistan	non-energy and non-agriculture raw materials, focus on CRMs	
Australia	CRMs	
Serbia	Raw materials, focus on CRMs for electric vehicle (EV) supply chains, EVs & batteries	

Source: MoUs for Strategic Raw Materials Partnerships (2021-2024)

With respect to the second point, not all projects related to infrastructure, raw materials governance and mining sector policies fall under the scope of a Strategic Partnership – they may be implemented in a country where no such partnership exists. This is best illustrated by the Lobito Corridor project, which envisions a trade route (mostly for CRMs) through Zambia, the DRC and Angola. The EU leads the project through Global Gateway (European Commission

2023a). While Strategic Partnerships are in place with Zambia and the DRC, Angola is currently not involved in any Strategic Partnership on raw materials with the EU, while also being affected by this project. Similarly, in Latin America, EU investments in the mining sector made together with the Inter-American Development Bank include Argentina and Chile (with Strategic Partnerships), and Brazil, Bolivia and Ecuador (without) (Alvarez-Rodriguez/Garcia 2024).

Indeed, the fervor with which the EU seeks to secure global access to CRMs has resulted in a complex web of measures that co-exist alongside its Strategic Partnerships. As another example, a few days after concluding the Strategic Partnership MoU with Serbia, the EC co-founded a new investment fund together with the EBRD for exploration projects. The list of potential beneficiary countries includes Serbia and Ukraine (with whom Strategic Partnerships exist), but also some EU Member States (namely those where the EBRD is active) as well as some third countries, which are not part of a Strategic Partnership but of the Horizon Europe program (European Commission 2024a).

Furthermore, Strategic Partnerships are not the only instrument the EU uses to increase raw materials trade with third countries. Free Trade Agreements (FTAs) remain crucial instruments and increasingly incorporate specific provisions guaranteeing EU access to CRMs (see the Energy & Raw Materials Chapters in EU Trade Agreements with Mexico, Chile, and New Zealand). While Strategic Partnerships are mere political declarations of intent, FTAs are legally binding. As shown below in Chapter 4.2. in the example of Chile, in theory the two different instruments can complement one another, but in practice, they can also contradict. Some have pointed out that FTAs, especially those with investment chapters, limit the policy scope of the parties, thereby making it more difficult to achieve some of the goals outlined in Strategic Partnerships, such as greater local value creation or more stringent ESG requirements (Koch et al. 2025).

3.2. Fragmented and insecure funding structures

Funding for raw materials projects and related infrastructure remains a crucial issue. A survey among 70 CRM producing countries in Africa, Asia-Pacific and Latin America showed that most countries that have joined global initiatives related to mining and minerals do so for the prospect of investments in raw material projects (Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development 2024). Even if CRM projects may be strategically important, insecurities about future technological developments and volatile raw materials prices often make these investments financially challenging (see e.g. the development of prices for cobalt, lithium, and graphite in dpa 2025). All MoUs include elements related to financial support and investment de-risking instruments to stimulate and facilitate investments in raw material projects. The partnerships with the DRC, Zambia, Greenland and Rwanda also include the facilitation of financing for related infrastructure.

However, neither the CRMA nor the accompanying Communication establish a dedicated fund for financing raw material projects, despite initial considerations to do so (European Commission, SWD(2023) 161). Instead, a fragmented web of different financial actors and instruments is mentioned, ranging from the European Fund for Sustainable Development Plus (EFSD+), the Global Gateway Strategy, and export credit agencies, to development banks of EU Member States, as well as the potentially to-be-established EU Export Credit Facility (COM(2023) 165).

In March 2025, the Board of the EIB adopted a CRM strategic initiative to enhance its role as key provider of finance for mineral projects across the entire value chain with an expected € 2

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billion financing for CRM investment in 2025 (European Investment Bank Group 2025) – a sum that had already been allocated in its 2024-2027 strategic roadmap (European Investment Bank Group 2024). The EIB also announced a new CRM Task Force, a one-stop shop to build and manage CRM operations and advisory activities and increased technical expertise and partnerships. This initiative follows the EIB's decision in 2023 to resume financing raw materials projects after a 10-year pause due to their poor human rights and environmental record (Counter Balance 2025).

Some of the EU's partners can also access other funding mechanisms that the EU uses for domestic raw material projects, such as InvestEU, the EBRD or the European Investment Fund (EIF). Table 2 gives an overview over the various funds that exist at a European level and indicates which partner countries can access them. This overview is non-exhaustive, especially considering the significant role of Member State funding and de-risking through national export credit agencies.

Table 2: Eligibility of partner countries for potential sources of funding (as of July 2025)

	InvestEU	EIF	EBRD	EFSD+	Global Gateway	EIB	Horizon Europe ²
Canada							✓
Ukraine	✓	✓	√	✓	✓	✓	✓
Namibia				✓	✓	✓	
Kazakhstan			✓	✓	✓	✓	
Argentina				✓	✓	√	
Chile				✓	✓	✓	
DRC				✓	✓	✓	
Zambia				✓	✓	✓	
Greenland	✓			(✓) ³	(✓)4		✓
Rwanda				✓	✓	✓	
Norway	✓	√				✓	✓
Uzbekistan			√	✓	✓	✓	
Australia							
Serbia	√	✓	✓	(√) ⁵	(✓) ⁶	✓	√

Sources: EBRD undated; EIB undated; EIF undated; European Commission 2025b; InvestEU undated; Regulation 2021/947/EU (NDICI-Global Europe Regulation); Regulation 2021/1529/EU (IPA III Regulation)

² Funding only for research projects.

Only concerning thematic programs and rapid responses.

Only concerning thematic programs and rapid responses.

Different scope than other eligible countries, as Serbia is eligible according to IPA III Regulation (Regulation 2021/1529/EU), while other countries listed are eligible according to NDICI-Global Europe Regulation (Regulation 2021/947/EU).

Different scope than other eligible countries, as Serbia is eligible according to IPA III Regulation (Regulation 2021/1529/EU), while other countries listed are eligible according to NDICI-Global Europe Regulation (Regulation 2021/947/EU).

The EU consequently adopts a de-risking approach which relies on providing public money to mobilize private capital, i.e. blended finance (Küblböck/Grohs 2019). However, political economists emphasize that the effectiveness of de-risking instruments depends on how well they align with the goals of private investors (Gabor 2023; Kampourakis 2024). So far, there is only limited expertise with financing raw material projects in third countries via these European financial instruments. Underfunding has been identified as a key weakness of the EU's Strategic Partnerships (Koch et al. 2025; Carry et al. 2025). That the EU does not have an agency with a funding mandate for CRM projects comparable to the ones established e.g., by Japan or South Korea, is seen as a hindrance for European investments in the sector, especially in the light of the relative scarcity of European companies familiar with the sector in the first place (Carry et al. 2025). Projects that offer local value addition can only take place if conditions such as the availability and affordability of infrastructure, proximity to the end market, governance, political and economic stability, a skilled labour force, are met (Carry et al. 2025). Where these conditions are not met, the European funding framework offers little incentive for private-sector actors.

Germany's experience is illustrative in this regard: The first generation of German Raw Material Partnerships (signed between 2011 and 2014) were seen as largely unsuccessful, largely due to the lack of incentives for German companies to invest in partner countries – especially when raw material prices decreased (Korn et al. 2024; Rüttinger et al. 2016). Based on these lessons, Germany's second generation of Raw Material Partnerships was implemented alongside a dedicated fund for raw material projects managed by the state-owned investment and development bank KfW, with a focus on countries with good governance (Korn et al. 2024; Carry et al. 2025).

While it is possible that the partnerships are "flanked by public investment commitments or specific projects financed by public fund to implement their agreed goals" (Koch et al. 2025: 6), the examples provided in Chapter 4 suggest that this is the exception rather than the norm.

3.3. Lacking transparency

One major criticism of the partnerships relates to the lack of transparency – both related to the *content* of many MoUs, as well as the *process* surrounding their formulation and implementation.

Regarding *content*, most MoUs include only minimal transparency obligations – besides also failing to address illegal and irresponsible mining practices (fern et al. 2023). While some MoUs, for example with Zambia, the DRC, and Rwanda contain provisions on traceability and transparency standards due to concerns over smuggling and artisanal mining, other partnerships remain vague on these issues. As the example of Rwanda illustrates (see Chapter 4.3.), even where traceability or transparency standards are mentioned, this does not automatically mean that such standards will be implemented in the partner country. Regarding process, civil society actors argue that the MoUs' promises of "transparency" and "cooperation with civil society" have not been upheld (Lobacheva/Sedova 2024). The non-publication of roadmaps is just one illustration of this gap. Other shortcomings include (1) a lack of consultation during partnership negotiations, (2) no involvement in decisions about which projects (under the scope of the partnership) receive financial support, and (3) the limited role of civil society in planning potential future partnerships (Koch et al. 2025).

Regarding the overall framework of the partnership approach, the EU Critical Raw Materials Board (Regulation 2024/1252) is tasked with discussing existing as well as potential future

Strategic Partnerships (Art. 37 CRMA). The Chair of the Board, a member of the EC, has the power to invite representatives of civil society "where appropriate" (Art. 36(3) CRMA). So far, the Chair of the Board has only deemed it appropriate to invite civil society and trade union representatives to sessions on public knowledge about CRM supply chains (Koch et al. 2025). Moreover, financing projects under the Partnerships often happens via Global Gateway, which has itself also been under critique for lacking transparency (Buhigas Schubert/Costa 2023).

The lack of transparency about Strategic Partnerships has spurred fears that they could be employed as a tool to sideline civil society opposition to mining. This is illustrated by the Serbia MoU: Serbia has become the latest 'strategic partner' of the EU. While the wording of the MoU does not mention lithium in particular, media called the partnership agreement a "lithium deal", as the main project that led to the signing of the agreement, was the Jadar lithium mining project (DW 2024). While the local population in Jadar is staunchly against the mining project, the Serbian government views the deal as highly lucrative, and so does the German government which pushed for the deal (DW 2024). The Serbian case has become an example used by critics to show how Strategic Partnerships enable regimes to use their raw material deposits as a tool to buy off criticism from Europe (Rhotert 2025) – even before the EC declared the Jadar lithium mining project a 'Strategic Project' (EC 2025, Decision C(2025) 3491).

Another example of potential adverse local effects of the Strategic Partnerships is Rwanda (see in more detail Chapter 4.3.). The country finances the paramilitary M23 rebel group, which is waging war in the DRC bordering Rwanda. The smuggling of raw materials from Congolese mines to Rwanda, from where it is sold to the rest of the world, is a wide-spread phenomenon. In 2024, Rwanda-backed rebel groups smuggled at least 150 tons of coltan from the DRC to Rwanda (Eulerpool News 2025). Critics argue that the Strategic Partnership with Rwanda is legitimizing this (ibid.; Kopp 2024) and call for the EU to exit the MoU (Global Witness 2025).

3.4. Value chain integration and value addition – elusive "mutual benefits"

A survey among 70 CRM producing countries in Africa, Asia-Pacific and Latin America conducted in October 2023, showed that most countries have a critical minerals strategy or are planning to have such a strategy for the purposes of increasing beneficiation and achieving higher revenue (Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development 2024), with the measures included in such strategies taking on various forms (Carry et al. 2025). It was clear to EU policy makers that in order to be competitive partners compared to competing raw material importers (e.g., China, the US, UAE), partnerships needed to tap into the demands of CRM producing countries for more linkages and local processing (ibid.).

Generally, the communication accompanying the CRMA relies on the vague terms "value addition", "mutual benefits", and "facilitation of trade and industry linkage", yet does not state any concrete benchmarks, obligations or policies. One particularly illustrative example of the EU's lack of concrete commitments can be found in the Communication accompanying the CRMA. There, the claim is made that helping the EU in strengthening its access to critical raw materials is in the partner countries' own interest, because "in the case of disruptions in partner countries, an increased capacity of [the] EU would allow it to better support its partners and mitigate global supply challenges" (EC, COM(2023) 165: 3). In other words – without making concrete commitments to supply CRMs to partner countries in case of supply shortages – the EU argues that partner countries should supply the EU with CRMs, on the grounds that the EU's greater stockpiles would ultimately serve the partner countries' interests.

The aim of generating mutual benefits for both partners is not just stated in the Communication but also prominently featured in all MoUs. Several MoUs specify objectives, such as promoting local value addition (e.g., MoU with Argentina: 1; MoU with Kazakhstan: 2; MoU with Chile: 2), industrialization (MoU with Argentina: 1) and upgrading (MoU with Kazakhstan: 2) and domestic revenue mobilization (e.g., MoU with Argentina: 1, MoU with Chile: 2). Others, however, only mention commitments to the general policy goal of more local value added and local transformation capacities (e.g., MoU with Zambia).

As a result, it remains unclear what "mutual benefits" actually entail in practice and how they are to be achieved. This ambiguity is problematic, given that the development of extractive projects risks deepening commodity-dependence, a condition associated with depressed economic and human development outcomes (Tröster/Küblböck 2020). Furthermore, evidence suggests that upgrading in mining global value chains remains highly challenging (Pietrobelli et al. 2024).

4. CASE STUDIES

To give a more in-depth analysis of the Strategic Partnerships and the contexts in which they exist, this chapter looks at three of the EU's Strategic Raw Materials Partners: Kazakhstan, an upper-middle income country in Asia, with which the EU concluded an MoU in 2022; Chile, a high income country in Latin America, with which the EU concluded an MoU in 2023; and Rwanda, a low income country in Africa, with which the EU concluded an MoU in 2024. For each country an overview of the country's CRM resources, reserves, and current production is given. Furthermore, the country's mining and export landscapes are described, especially where they export CRMs to, and the regulations and agreements the country applies to the CRM sector. The MoU (and where applicable: the Roadmap) is analyzed to understand the focus of each partnership and how the specificities of each country are reflected therein. Lastly, an overview of new strategies and CRM projects in each country is given.

4.1. Kazakhstan

4.1.1. Resources, reserves, and production

Being the 9th largest country in the world by area, Kazakhstan has abundant natural resources including large reserves of oil, natural gas, and minerals. Exporting oil and gas has been an integral part of the Kazakh economy since the 1960s. Since the early 2000s, the country has increasingly positioned itself as a key supplier of minerals to meet growing global demand. The country still relies heavily on natural resource exports as the rents (i.e. revenues above the costs of extracting resources) account for almost 27% of its gross domestic product (GDP) in 2021 (World Bank 2023) mainly due to oil and gas. Mineral rents accounted for 9.1% of the GDP. In 2023, the mining and metallurgical sector accounted for 14.1% of the country's GDP and 17.5% of its exports (Kazakh Invest undated). While the early 2000s saw Kazakhstan mainly profiting from the extraction of uranium, the country has since experienced a mining boom driven by the energy and digital transitions involving a broader range of raw materials. The following table shows the production volumes of the most important CRMs produced by Kazakhstan in 2022 and 2023, and their respective shares of global production in 2023. In addition to CRMs, the table also includes uranium, chromium and gold, which are mined in large quantities in Kazakhstan.

Table 3: Kazakhstan's production and reserves of CRMs and other minerals

Raw Materials	Production (in metric t.) (2022)	Production (in metric t.) (2023)	Share of global pro- duction (2023) (country rank)	Estimated reserves (in mio. metric t.) and global share
CRMs				
Aluminium/	249,141 /	260,877 /	0.4% (23) /	280 (0.97%)
Bauxite	4,175,900	4,559,900	1.2% (10)	
Antimony	467	400	0.4% (11)	N.A.
Baryte	650,000	650,000	7.30% (5)	85 (N.A.)
Bismuth	101	100	1.0% (5)	N.A.
Boron/Borate	30,000	0	N.A.	N.A.
Coking Coal	7,627,000	6,819,900	0.6% (11)	N.A.
Copper	594,050	614,416	2.7% (11)	20 (2%)
Manganese	136,600	138,500	N.A.	N.A.
Phosphate	388,540	511,120	0.7% (18)	260 (0.35%)
Titanium	22,000	13,000	0.2% (21)	N.A.
Others				
Uranium	25,031	24,895	37.0% (1)	56 (12%)
Chromium	1,833,900	1,803,200	12.4% (2)	320 (26%)
Gold	129,794	131,204	4.0% (7)	0.0023 (3.6%)

Sources: Reichl/Schatz 2025 (Production); US Geological Survey Mineral Commodity Summaries 2025 (Reserves); World Bank Mining Sector Diagnostic Report – Kazakhstan (2023) (Reserves Uranium)

According to the World Mining Data (Reichl/Schatz 2025), Kazakhstan is already extracting at least 10 of the 34 materials defined as CRMs by the EU (Table 3). The US Geological Survey (USGS) also lists fluorspar and silicon metals among Kazakhstan's production. In addition, deposits of 9 more CRMs such as cobalt, tungsten and lithium are expected to be identified through further exploration (Minex Kazakhstan 2024). The more detailed trade data reveal that an even broader range of CRMs is extracted and exported (see 4.1.2.).

Most geological data predate Kazakhstan's independence in 1991. As a result, Kazakhstan's mineral resource potential remains underexplored. Significant additional reserves are expected to be found through future exploration efforts, for which Kazakhstan seeks investment partners (World Bank 2023). New exploration efforts are already ongoing and reserve estimates are constantly evolving. For example, in March 2024, the Korean Institute for Geoscience and Mineral Resources announced the discovery of a new large lithium deposit in the East Kazakhstan region, potentially valued at € 13.3 billion (AIFC 2024). Additionally, at the EU-Central Asian Summit in April 2025, the discovery of a major rare earth elements (REE) deposit was announced, with potential reserves of up to 20 million tons – a volume that could place Kazakhstan among the world's top three countries in terms of REE reserves (Khassenkhanova 2025). As a result, Kazakhstan is increasingly positioned to provide the EU with a wide range of raw materials and contribute to the ambitions to reduce the supply dependency on individual countries, particularly China.

Currently, Kazakhstan exports only part of its mineral resources in processed form and is heavily reliant on foreign supply for extraction and refinement technology (Observatory of Economic

Complexity 2024). Despite access to cheap energy from domestic coal and gas and comparatively low labor costs, the extensive privatization following independence did not revitalize the industry. As a result, Kazakhstan lost much of the competitiveness it had during the Sovietera, due to low operational efficiency and limited update of modern technologies (World Bank 2023: 4). Consequently, the country captures only a small share of the benefits generated from its resource extraction (Lobacheva/Sedova 2024).

Today, a few dominant players prevail in Kazakhstan's mining sector, with several of the most significant Kazakh companies being partly state owned. Key companies in the mining sector are Kazakhmys Corporation, Eurasian Resources Group, and Kazatomprom, which lead copper and uranium production as well as other central mining and refinement operations (Mark-Wide Research 2025). Alongside partially state-owned companies, large transnational mining conglomerates such as RioTinto, BASF or Areva Group also operate in Kazakhstan. In 2023, the World Bank reported a total of 230 mining and metallurgical enterprises, employing around 230,000 people (World Bank 2023).

4.1.2. Export landscape, regulation, and agreements related to CRMs

The EU is Kazakhstan's most important trading partner, receiving 37% of the country's total exports, primarily in the oil and gas sector, minerals, chemicals and food products (EEAS 2023). The general minerals trade of Kazakhstan is dominated by gold, chromium and uranium, which are not CRMs. However, UN Comtrade data record trade in 26 CRMs and Eurostat shows imports of 18 CRMs from Kazakhstan. The EU is already a major importer of CRMs, with a share of 50% of CRMs that are traded in lower volumes (compared to high-volume CRMs such as copper, aluminum and coking coal) and except for copper and REEs, which mainly go to China. In 2023, the EU sourced 20% of its tantalum, 18% of its phosphorus, 15% of its titanium and 13% of its beryllium imports from Kazakhstan (Eurostat).

Table 4: Main CRM exports of Kazakhstan (2023)

	CRMs	Total exports (in `000 USD)	Share of KAZ exports to EU	Share of EU im- ports*
1	Copper	6,658,443	2%	1%
2	Coking coal	1,146,924	65%	5%
3	Aluminium	927,611	36%	2%
4	Phosphorus	271,067	54%	18%
5	Titanium	173,496	45%	15%
6	Manganese	96,538	52%	3%
7	Platinum Group Metals	29,914	92%	1%
8	Tantalum	39,026	19%	20%
9	Beryllium	17,110	2%	13%**
10	Nickel	14,886	95%	0%
11	REEs	13,113	1%	0%
12	Tungsten	4,849	100%	4%

Notes: Exports as mirror data via imports of other countries; *based on Eurostat data; ** RMIS data (Eurostat data show a share of 91%)

Sources: UN Comtrade, Eurostat

By providing € 55 billion in FDI, the EU is also Kazakhstan's largest foreign investor (EEAS 2023). As in other post-Soviet states, the country's independence in 1991 was followed by an extensive liberalization of the economy. Since 1992, Kazakhstan has signed 53 bilateral investment treaties⁷ (BITs) of which 43 are in force, out of which 17 are with EU Member States (UNCTAD undated). So far, Kazakhstan was involved in 20 cases as a respondent state (ibid.).

In 2021, Kazakhstan introduced a new type of investment agreements, i.e. treaties directly between the state of Kazakhstan and investors investing in priority sectors. Those treaties offer a wide array of protection and support measures to attract FDI. Investors are e.g. exempt from land tax, while property tax and other taxes are reduced. In addition, the underlying legislation provides for a 25-year stabilization clause in case of a legislation change (UNCTAD Investment Policy Hub 2021). However, mining and mineral sales are excluded, and manufacturing is included, indicating that these agreements aim to promote processing industries rather than raw material extraction (Kazakh Invest 2025).

Kazakhstan is furthermore a party to trade agreements with many other ex-Soviet states and through its membership in the Eurasian Economic Union (comprising Russia, Belarus, Armenia, Kazakhstan, and Kyrgyzstan) and also with Serbia, Iran, and Viet Nam. Furthermore, FTAs have been signed – albeit not in force yet – with Singapore and China.

Kazakhstan's high degree of economic liberalization is also in part owed to the requests the EU made for Kazakhstan to become a member of the World Trade Organization (WTO) in 2015, which included a limitation of export taxes and forbidding state-owned enterprises from favoring domestic over foreign customers (Crochet/Zhou 2023). Concerning raw materials policy, this means Kazakhstan had to ensure that a public company selling raw materials would offer those raw materials to foreign buyers at the same conditions as to domestic buyers.

The EU's requests for liberalization are also reflected in the overarching framework for the relations between the EU and Kazakhstan, the Enhanced Partnership & Cooperation Agreement (EPCA), which entered into force in 2020. The EPCA also serves as framework for the Strategic Partnership, as its Cooperation Committee in trade configuration is named in the MoU as one of its monitoring bodies. With EPCA also having a "business platform", i.e. a forum for the respective governments to talk about trade and investment matters, it is evident that there is room for synergies with the Strategic Partnership. While EPCA is not an FTA, it includes an Energy and Raw Materials (ERM) Chapter. This chapter allows parties more policy space concerning price regulations compared to the ERM Chapters found in some recent EU FTAs, but other than that has comparable content to other ERM Chapters, e.g. prohibiting trade monopolies, restricting the use of local content requirements, and guaranteeing access to energy infrastructure for enterprises of the respective other party.

Kazakhstan's mineral wealth has long attracted the attention of industrial nations, resulting in numerous partnerships in this sector. A notable example is the "Partnership in the Fields of Raw Materials, Industry and Technology" that Kazakhstan and Germany signed already in 2012. Interestingly, it took the form of a binding treaty, which obliged Kazakhstan e.g., to offer administrative support for German enterprises in Kazakhstan in obtaining work permits and obliged Germany e.g., to offer financial instruments to promote foreign trade (Rüttinger et al. 2016). However, the partnership has fallen short of delivering on the ambitions initially proclaimed, including investments by German companies such as Siemens, ThyssenKrupp or

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These are agreements between countries that establish legal protections for investors from one country when investing in the other. They include protection clauses such as fair and equitable treatment (FET); direct or indirect expropriation protections; most-favored-nation (MFN) treatment; non-discrimination/national treatment.

Metro, as well as plans to explore 250 Kazakh mineral deposits. Most of these promises never materialized, hindered by limited financial support for investors from German financial institutions and by persistent shortcomings in transparency and the rule of law in Kazakhstan (Rüttinger et al. 2016, Korn et al. 2024).

In terms of domestic legislation, Kazakhstan's primary law regulating domestic mineral exploration, extraction and use is the Subsoil and Subsoil Use Code 2017 (SSU Code). It recognizes state ownership of all subsoil resources and includes provisions such as export license requirements for certain materials, such as radioactive elements, precious metals and unprocessed ores, "strategic subsoil areas" where the state holds a priority right to acquire subsoil use rights. It also outlines obligations related to local value addition and processing. A novelty in the SSU Code is the "first-come-first-served" principle based on the Australian model to attract FDI by awarding exploration licenses to the first qualified applicant. Since the implementation of the SSU Code in 2018, more than 1,900 new exploration licenses have been granted (World Bank 2023).

In December 2023, Kazakhstan adopted its Comprehensive Plan for the development of its REE industry for 2024-2028. The plan envisions an increase of investments and production volume by 40%, in part through increased FDI, including from the EU (Omirgazy 2024a). In this plan, Kazakhstan announced it would invest around \$ 5.3 million into the development of REEs and other CRMs (AIFC 2024).

Like other resource-exporting countries, Kazakhstan too, has stepped up its efforts to increase domestic value addition in the raw materials sector. In 2023, the government imposed an export ban, covering among others ferrous and non-ferrous scrap to promote higher local processing and value addition. This regulation was extended in 2024 to include semi-finished products made of iron or non-alloy steel (Minex Forum 2025). Yet compared to other countries, Kazakhstan continues to have relatively low export restrictions on CRMs. The country imposes no export prohibitions or taxes on CRMs and requires licensing agreements only for a limited group of CRMs, namely bismuth, copper, magnesium, and platinum group metals (OECD 2024). It relies largely on FDI and commitments to local value addition through the SSU Code reflecting a broader adherence to a liberalization-oriented approach to resource governance.

4.1.3. Kazakhstan's Strategic Partnership with the EU

The Strategic Partnership between the EU and Kazakhstan was signed in November 2022 and demonstrates the EU's ambitions to further engage in the extraction and trade of CRMs in Kazakhstan. The MoU follows the typical structure of Strategic Partnerships of the EU. Apart from CRMs, the agreement also covers other "metals and industrial materials necessary for the twin transition" - which are not further specified - as well as renewable hydrogen, showing the importance of Kazakhstan as a general resource supplier not only for CRMs (European Commission 2022a). Only one other MoU explicitly references hydrogen in the title (the MoU with Namibia, which was signed in the same month as the MoU with Kazakhstan). The MoU emphasizes the manufacturing of battery components for the use in Europe (as do the MoUs with Ukraine, Norway, Serbia and with less details the MoUs with Uzbekistan and Zambia), aims at the modernization of mining and refining processes and technologies (as mentioned in the MoU with Ukraine) and establishes the mutual obligations to warn the respective other party of the MoU of potential supply disruptions (as established also in the MoUs with Greenland, Norway and Serbia). Horizon Europe, the EU's research and innovation funding program, is explicitly referenced in the MoU, as it is in the MoUs with Ukraine, Greenland, Norway, and Serbia.

Apart from Ukraine, Kazakhstan is currently the only country in which the roadmap for further cooperation has been published. A roadmap for the period of 2023-2024 has been issued by the Kazakh government, with a new roadmap being endorsed in the framework of the first EU-Central Asia Summit in Samarkand, Uzbekistan for the upcoming period of 2025-2026. The roadmap for the period of 2023-2024 contains concrete steps such as the identification and implementation of joint projects, exchange of experience in the exploration of resources and access to mining data, support in amending the legislative framework for investment projects in the production of "green" hydrogen and harmonizing the regulatory framework in the CRM industry. It emphasizes the mobilization of financial instruments of the main financial organizations, such as the EBRD, the European Battery Alliance, and Kazakh Invest to mobilize private capital for the exploration and establishment of joint projects. With new CRM reserves being continuously found, it makes sense that the 2025-2026 Roadmap again envisages "enhanced cooperation on geological exploration, research and innovation" (Khassenkhanova 2025).

While the Partnership explicitly mentions transparency to the public and the integration of civil society in the extractive industry sector, the MoU and the Roadmap were both developed without comprehensively informing the public or incorporating critique from civil society organizations. The MoU with Kazakhstan also does not require environmental impact assessments and public participation in the development of mining projects as it is promoted by the EU to ensure alignment with international standards and is part of some other MoUs, such as the one concluded with Chile. The lack of transparency and opportunities for participation and monitoring is especially problematic as Kazakhstan has well-documented issues of lacking transparency: Many mining licenses of large transnational mining conglomerates remain confidential, which often leaves the public in the dark about their true profits and who benefits from the extraction of resources (Lobacheva/Sedova 2024). As the Strategic Partnership is not a legally binding agreement but merely a declaration of intent, it remains to be seen whether the partnership can contribute to better public involvement in decision-making and combating corruption.

As Alimbaev et al. (2020) point out, a major risk of expanding mining operations in Kazakhstan through international corporations lies in the lacking enforcement of environmental regulations. Already today, the country faces severe problems with mining and metallurgical waste, with hazardous waste increasing by around 1 billion tons annually. In parts of eastern Kazakhstan, where many large mining projects are located and new deposits are estimated, surface and water pollution is already extremely high (Alimbaev et al. 2020). Since the Strategic Partnership does not require environmental impact assessments, it risks further accelerating environmental degradation caused by the mining industry.

4.1.4. Announcements of new projects and strategies

Kazakhstan's economic relations to the EU have been closely tied to raw material extraction, even before the MoU was signed. Since the signing of the MoU in 2022, European companies and consortia have intensified their investments in Kazakhstan's CRMs and energy sector (Verbeeck 2024). Germany and Kazakhstan, for instance, signed 23 agreements worth \$ 1.7 billion in June 2023. This included among others a \$ 200 million investment agreement between HMS Bergbau AG and Creada Corporation LLP regarding the exploration, extraction and processing of rare earth ores, the development of an investment framework to provide export credit guarantees to German companies and further joint venture projects (Kazakh Invest 20238). In November 2024, France signed 14 commercial agreements valued at \$ 2.2 billion with Kazakhstan with a focus on CRMs and the participation of large French companies

The platform Kazakh Invest gives a comprehensive overview of the investment incentives and possible projects.

like TotalEnergies, Alstom and Vicat. Additionally, France and Kazakhstan signed a dedicated roadmap for closer collaboration on critical resources and materials (Verbeeck 2024).

As part of the Strategic Partnership and the Global Gateway strategy, but on a comparatively small scale, European financial institutions are also directly investing in Kazakhstan. In March 2025, the EBRD has acquired a 17% stake of the Australia-based company Sarytogan Graphite which is exploring the graphite deposits in Kazakhstan's Karaganda region (Peachey 2025). At the same time, the EIB has signed a € 200 million loan with the Development Bank of Kazakhstan supporting investments in sustainable transport infrastructure made by public and private entities especially in the context of the Trans-Caspian Transport Corridor project as well as projects focused on renewable energies (European Investment Bank 2025).

Within the Global Gateway Initiative, the EIB signed MoUs with multiple Central Asian countries including Kazakhstan, Kyrgyzstan and Uzbekistan to allocate nearly € 1.5 billion in cofinancing transportation projects for supply routes between Central Asia and Europe. The EU presents its involvement in the project as a contribution to "sustainable transport and broader socio-economic goals, including job creation and gender equality. In contrast, other investing parties (including China and the World Bank) emphasize the nature of this project as an alternative trading route from China (and from Central Asian countries such as Kazakhstan) towards Europe, bypassing Russia (Daly 2025; EEAS 2024; Mussayev 2024).

When the EC announced the first so-called Strategic Projects under the CRMA outside the EU in June 2025, notably one of the 13 selected projects was located in Kazakhstan (EC 2025). The selected project relates to graphite extraction and is led by Sarytogan Graphite Limited, an Australian company partly owned by the EBRD (see above).

However, the EU is not the only partner of Kazakhstan when it comes to critical minerals: For example, in the same year as the MoU with the EU was signed, Kazakhstan also signed the US-Kazakhstan Critical Minerals Agreement. Since then, exploration licenses have been given to a US company, while another US company launched a mining project as a joint venture with a subsidiary of Kazakhstan's national mining company (Peachey 2025). A year later, the first US company received licenses for critical minerals and REE exploration in Kazakhstan. In 2024, the "C5+1 Critical Minerals Dialogue" between the US and the five Central Asian nations of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, was initiated. The US outlook on Kazakhstan's crucial role for diversifying critical raw materials' sources away from China has remained unchanged under the Trump administration (Peachey 2025). In the same year as the US, the UK and Kazakhstan also signed a roadmap for strategic cooperation on mineral processing and the circular economy. Since then, they have actively cooperated in a framework similar to that between Kazakhstan and the EU to advance CRM value chains (Haidar 2025). In parallel, talks with Japanese government agencies and mining companies on increased cooperation and potential new projects in the CRM sector are ongoing (MINEX Eurasia 2025).

4.2. Chile

4.2.1. Resources, reserves and production

Chile has a long history in both mining and mineral processing and has established itself as a key player in the global competition for CRMs, particularly in the production of lithium and copper. Minerals rents accounted for 16.2% of Chile's GDP in 2021. The mining sector is

Chile's largest industry, contributing 14% to the country's GDP in 2024. Of this, 11% is attributed to copper production (Banco Central de Chile 2024). Given its rising global importance, copper production has been a major driver of the country's economic growth over the last thirty years (Guzmán et al. 2023). The following table presents Chile's production volumes of the most important CRMs for the years 2022 and 2023 (based on Reichl/Schatz 2025). The table also includes the share in world production for 2023, the ranking of Chile among producing countries and available data for estimated reserves (based on the US Geological Survey 2025).

Table 5: Chile's production and reserves of CRMs

CRMs	Production (in metric t.) (2022)	,	Share of global production (2023) (country rank)	Estimated reserves (in mio. metric t.) and global share
Boron/Borates	421,935	450,239	9.40% (3)	35 (N.A.)
Copper	5,330,400	5,250,400	23.38% (1)	190 (19.3%)
Lithium	110,350	113,200	22.64% (2)	9.3 (31%)

Sources: Reichl/Schatz 2025, US Geological Survey Mineral Commodity Summaries 2025

As shown in Table 5, the production of CRMs in Chile is concentrated in a few minerals that are highly relevant for the twin transition (most notably lithium and copper, see IEA 2023), and in which the country holds leading positions in global markets. In 2023, the country produced almost a quarter of the global copper supply and accounted for more than one fifth of the global lithium production. As part of the South American "lithium triangle" with Argentina and Bolivia, the Atacama salt flats in Chile are expected to hold the world's largest lithium reserves (31%), whereas the northern region of Chile possesses the largest global copper occurrences (19%). Molybdenum and rhenium are usually obtained as by-products of copper and are therefore also abundant. Given Chile's longstanding mining tradition, extensive exploration has already been conducted and data on reserves is available. Yet, the emergence of new mining and exploration techniques continues to reveal additional resource deposits. Most recently, the national mining company ENAMI announced the discovery of additional 3 million tons of lithium reserves in the La Isla and Aguilar salt flats, resulting in a 28% increase in Chile's estimated lithium resources (Solomon/Cambero 2025).

Chile is seeking to leverage the global demand for critical raw materials (CRMs) by expanding value-adding production steps and downstream activities within its borders and national companies. The degree of domestic processing, however, varies considerably between different CRMs. Copper is a case in point: in 2023, around 40% of Chile's mined copper was further processed into refined copper, making the country the world's third-largest refined copper producer (US Geological Survey 2025). A decade earlier, though, almost twice as much of the extracted copper was refined locally (IEA 2024). This decline in domestic refining has gone hand in hand with growing exports of copper concentrates, particularly to China (ibid.).

A closer look at the composition of copper ores helps to explain this trend. Roughly one fifth of Chile's copper output consists of oxides, which are always refined domestically and exported as cathodes. The remaining majority are sulfides, which first require smelting before they can be refined. Because Chile's smelting capacity is limited, only a small portion of these sulfides

is processed within the country, while the bulk is exported as copper concentrate. This structural imbalance shows why, despite Chile's prominent role as a copper producer, a significant share of value-adding activities still occurs abroad.

On the other hand, there are materials such as lithium, which only recently experienced a mining boom driven by a rising demand from the high-tech sector. The Chilean state development agency CORFO has used its contractual conditions for projects in the Salar de Atacama to restrict the export of unprocessed lithium brines, thereby ensuring that production advances at least to the stage of lithium carbonates or hydroxides. As a result, almost all of Chile's lithium exports correspond to this second step of the value chain. Strictly speaking, projects in other salt flats could still export brines, although in practice this is unlikely due to environmental concerns and permitting hurdles. Moving further up the value chain, however, is far more challenging as over the past decades, China has strategically invested in lithium battery production and today controls around 85% of the global market. Its large-scale production capacities, cost advantages, and proximity to downstream industries make it difficult for Chile to attract higher value-adding steps such as battery manufacturing (Dünhaupt et al. 2025).

The production of molybdenum concentrates is a by-product of refining copper and paints a similar picture to the exports of refined lithium. Chile is exporting its molybdenum resources mostly as roasted concentrates or refined metal alloys and is missing the advanced technology production that these materials are used for (Observatory of Economic Complexity 2024).

The **mining sector** in Chile is characterized by some of the largest mining projects in the world and a strong presence of foreign companies such as Albemarle Corporation, BHP, Glencore, Rio Tinto and many others that control major shares of the production of CRMs. Multinational corporations dominate the lithium production in the Atacama salt flats. The previously state-owned mining company Sociedad Química y Minera de Chile (SQM) is currently owned by international investors such as the Chinese company Tianqi Lithium and the US-based Albemarle Corporation; each of them being a major lithium producing company. Lithium in Chile is extracted through sun evaporation of the large salt lakes in the Atacama Desert. This method is less expensive and more environmentally friendly but also involves high water usage in one of the driest regions on earth and entails unpredictable effects on the ecosystem (Carry 2025). In the copper sector, despite strong international participation and a high degree of FDI through major mining companies such as BHP and Rio Tinto, Chile has managed to maintain sizeable shares of copper production in the hands of the state-owned corporation CODELCO, which remains the largest copper producer in the world.

4.2.2. Export landscape, regulation, and agreements related to CRMs

Chile's economy relies on the export of natural resources as they represented at least 85% of its exports in 2023, accounting for over a quarter of the country's GDP (Observatory of Economic Complexity 2024). Copper ores, raw copper and refined copper alone account for 45% of the value of total exports, showing the importance of copper production specifically for the Chilean economy (Observatory of Economic Complexity 2024).

Beyond copper, lithium from Chile is relevant for the EU, as shown in its share of EU imports. However, as for copper and most other CRMs, the large majority of total exports goes to China. CRMs with higher shares in Chilean exports have relatively low values and almost no relevance in the EU imports of these minerals (see Table 6).

Table 6: Main CRM exports of Chile (2023)

	CRMs	Total exports (in '000 USD)	Share of CHI exports to EU	Share of EU im- ports*
1	Copper	45,855,783	7%	15%
2	Lithium	10,341,611	4%	44%
3	Boron/Borates	102,740	6%	5%
4	Aluminium	79,356	5%	0%
5	REEs	52,922	1%	0%
6	Ge/In/Hf/Ga**	32,673	0%	0%
7	Platinum Group Metals	9,015	44%	0%
8	Antimony	2,272	39%	2%
9	Nickel	1,762	61%	0%
10	Hafnium	1,803	0%	0%
11	Tungsten	526	20%	0%

Notes: Exports as mirror data via imports of other countries; *based on Eurostat data; ** HS 811292 Germanium, vanadium, gallium, hafnium, indium, niobium (columbium), rhenium, & articles of these metals, incl. waste & scrap, powder, unwrought. Sources: UN Comtrade, Eurostat

As Chile has a long history in the mining sector and the mineral production industry has become an integral part of the country's economy, the state is trying to navigate between taking control over its own resources and applying to international trade regulations. In 1971, against pressure from the US, the government nationalized its copper mines and established the state-owned Corporación Nacional del Cobre de Chile (CODELCO), which is now one of the largest copper producers in the world (Carry 2025: 2). Additionally, lithium was made state property in 1979 and licenses for the extraction are since only issued by the National Corporation for the Promotion of Production (CORFO). Furthermore, Chile uses tax incentives and state subsidies to encourage technology transfer and training. These measures have led to the establishment of local companies specialized in technologies and services for mineral extraction (Carry 2025: 3). Chile effectively banned the export of raw lithium brine by requiring its main producers, SQM and Albemarle, to process it into lithium carbonate domestically (Dünhaupt et al. 2025). Other than that, there are no export restrictions or special export tariffs on CRMs in place. The timelines for receiving permits are stringent compared to many EU countries and reforms have recently been promised to further shorten permit procedures (Zadeh 2025).

Regarding its trade policy, Chile has a far-reaching network of FTAs, among others with the EU, the US, Canada, Mexico, Australia, China, Türkiye, Viet Nam, and several South and Central American states. Chile is also a party to the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which also includes countries such as Singapore, Malaysia, or New Zealand (US Department of Commerce undated).

The EU-Chile Association Agreement (AA), originally signed in 2003 as an FTA framework, was revised in 2023 through the Advanced Framework Agreement (AFA) and the Interim Trade Agreement (ITA), which among others removed the remaining trade tariffs on goods. Both agreements also include an Energy and Raw Material Chapter (ERM). This chapter prohibits export and import monopolies for energy and raw materials (Article 8.4) and restricts preferential pricing (Article 8.5) for the domestic market compared to exports. According to EU negotiators, these provisions were introduced in explicit response to concerns about China's influence in the mineral sector, as China had sought to secure preferential pricing arrangements in its own negotiations.

Both articles together with the general prohibition of any kind of export restrictions in the FTA aim to secure the EU's access to CRMs, especially to lithium. Even though ERM Chapters are also part of some other FTAs of the EU, Chile is the only country that has agreed on an ERM Chapter in an FTA as well as a Raw Materials Strategic Partnership with the EU. The relationship between the two policy instruments – the Strategic Partnership on one hand and the FTA on the other hand – is one of hierarchy: The FTA is legally binding. Breaches of its provisions can trigger the dispute settlement procedure of the FTA and lead to substantial trade sanctions. The Strategic Partnership on the other hand is a merely declaratory document, reflecting political rather than legal intent. If Chile e.g., decided to pursue the goal of the MoU of "developing an internationally competitive and sustainable industry for processing and adding value in mining" through the means of export taxes on unprocessed raw materials, those measures would need to be in alignment with the specifications of Annex II of the ERM Chapter in the Chile-EU FTA (Interim Agreement on Trade between the European Union and the Republic of Chile, OJEU L 2024/2953). The FTA thus restricts the policy space countries can make use of to further their own goals, including the goals stated in the Strategic Partnership.

With regard to investment policy, Chile has concluded BITs with 33 countries, 14 of them with EU Member States. Under the new EU–Chile agreement, the BIT framework is being replaced by an Investment Court system. The reform replaces ad hoc arbitration with a permanent court-like system, with pre-appointed judges and an appeals mechanism, while the core rights of investors remain largely the same.

Already in 2013, Germany and Chile signed a Strategic Raw Materials Partnership, which – in contrast to the German Partnership with Kazakhstan – did not take the form of a binding treaty, but of a non-binding MoU. Rüttinger et al. (2016) argue that this reflected the more stable investment climate in Chile, which did not require a binding treaty to safeguard German investments. The 2013 Partnership already included a focus on the utilization of mining waste, along-side cooperation on water management and renewable energy (ibid.). In 2023, Germany and Chile concluded a second Raw Materials Partnership, which went further than the previous generation of agreements by including business cooperation in environmental technology, provisions to support of an energy-efficient, circular economy and a clearer focus on the build-up of local industry (Korn et al. 2024). The renewal of the Partnership was accompanied by the

Both AFA and ITA were signed in 2023. The ITA has entered into force in 2025 and will be repealed and replaced by the AFA, when the AFA enters into force after completing the ratification processes.

German copper producer Aurubis and the Chilean national mining company CODELCO announcing joint projects relating to copper extraction, production, and recycling (Handelsblatt 2023).

4.2.3. Chile's Strategic Partnership with the EU

In July 2023, Chile and the EU signed their MoU on the Strategic Partnership on Sustainable Raw Material Value Chains. Similar to others, the MoU focuses on the integration of the entire value chain, the joint development of projects, ESG standards, cooperation in research and development, facilitation for trade and investment linkages for CRMs, and the deployment of infrastructure (European Commission 2025c). Currently, no roadmap has been made publicly available.

As the EU-Chile Association Agreement, the MoU is also part of a broader strategy regarding the development of value chains around CRMs. Under the EU's Global Gateway Investment Agenda, there are currently multiple projects in Chile that target investments around CRMs and especially collaboration around the production of renewable hydrogen as well as the development of lithium and copper value chains in Chile. With the Regional Copernicus LAC Chile Centre in Santiago, the EU invested € 4 million in a research collaboration with Chile on the availability of satellite data to ensure better forecasting and monitoring of environmental gradients and exploring potential lithium reserves (EEAS undated). In 2025, as part of the Global Gateway initiative, the EIB announced a € 110 million credit to the Bank of the State of Chile , designated to support private sector investments in clean energy and energy efficiency. Mining and CRM-processing companies were explicitly named as intended recipients of this credit line (EIB 2025).

4.2.4. Announcements of new projects and strategies

Chile aims to strengthen its position in the global competition around CRM extraction and refinement and to attract FDI in downstream activities of the CRM industry. Among other measures the government adopted the National Lithium Strategy (NLS) in 2023 to regain some of the control over the resources that it had lost in the previous decades of market liberalization and to ensure the country would benefit from the expected rise in demand for CRMs (Carry 2025).

The NLS envisions public-private partnerships where the state assumes a regulatory and directive role and private companies provide capital investment. The newly established National Lithium Company should lead the international public-private partnership agreements (Government of Chile 2023). The salt flat areas should be classified as either strategic, protected or open for the private sector with the state being the majority shareholder in the areas classified as strategic, i.e. those areas containing more than 90% of the national lithium resources. The NLS further envisions preferential pricing agreements to encourage downstream activities in the lithium-ion battery supply chain, the establishment of a new research institute with a focus on lithium, and accompanying measures for environmental protection and technological development (Carry 2025).

Since the establishment of the Strategic Partnership in 2023, several major European firms have announced plans to invest in Chile's lithium sector. However, some of these have been withdrawn due to the low market prices for lithium and the weakening sales market for Electric Vehicles (EVs). German BASF and the French mining company ERAMET announced an € 800 million joint venture to build a lithium refining plant for battery-grade lithium hydroxide from which BASF recently withdrew (Rani 2024). ERAMET is still planning to further invest into

Chilean lithium exploration and has announced a collaboration with the CODELCO to exploit new resources (Reuters 2025a). Under the Horizon Europe program, the EU launched the OPTIMINER project to strengthen joint research in the exploration and processing of CRMs in Chile (ibid.).

None of the projects assigned Strategic Project status by the European Commission so far are located in Chile. In fact, the only project in Latin America that has been recognized as Strategic Project is in neither of the two Latin American states with Strategic Raw Material Partnerships, but in Brazil.

4.3. Rwanda

4.3.1. Resources, reserves and production

Despite its small size, Rwanda has significant reserves of CRMs and of all four so-called conflict minerals – tin, tantalum, tungsten and gold (Regulation 2017/821/EU) – out of which tungsten and tantalum are also classified as CRMs. Many of these reserves remain untapped, which is why Rwanda is trying to attract investments for their exploration and extraction. Currently mining and minerals export contribute approximately 3% to the country's GDP but account for 70% of its export value, having increased substantially in the last decade, particularly due to gold exports (Rwanda Development Board undated). The table below shows the production volumes for 2022 and 2023 of Rwanda's most important CRMs (based on Reichl/Schatz 2025) along with tin and gold, which are classified as conflict minerals, and are major sources of revenue for the country. It also includes each mineral's share of world production for 2023 (with Rwanda's ranking in brackets) and, where available, estimated reserves data (Dusengemungu, Zhou, and Liu 2023).

Table 7: Rwanda's production and reserves of CRMs and other metals

Raw Materials	Production (in metric t.) (2022)	Production (in metric t.) (2023)	Share of global pro- duction (2023) (country rank)	Estimated Reserves (in metric t.)
CRMs		, ,		
Beryllium	20	20	0.26% (6)	N.A.
Niobium	195	310	0.26% (5)	N.A.
Tantalum	300	475	22.51% (2)	N.A.
Tungsten	1,610	1,370	1.64% (6)	N.A.
Other				
Gold	2	2	0.06% (65)	N.A.
Tin	3,115	3,210	1.11% (13)	14,000

Sources: Reichl and Schatz 2025; Dusengemungu, Zhou, and Liu 2023

As the data show, Rwanda is a particularly significant producer of tantalum, supplying almost 25% of the world's total in 2023. This mineral has a variety of applications in the high-tech sector and is used as a material for capacitors for laptops, smartphones, and cars, for medical implants, radiographic contrast agents, turbine blades, the coatings of reactors, heat exchangers and pipelines (Trento 2025). Concrete data on Rwanda's total estimated raw material reserves remain relatively scarce; according to the Rwanda Mines, Gas, and Petroleum Board (RMB), the mineral reserves in Rwanda have an economic potential of approximately \$ 150 billion (Olodun 2023). These data are difficult to verify, as other sources such as the US Geological Survey (2025) do not provide any reserve estimates for Rwanda. In addition, data on

Rwanda's mineral production vary substantially between different sources. For example, the Rwandan Development Board reports that the country produces 8,000 to 9,000 tons of 3T minerals annually, figures that differ markedly from those reported by the World Mining Data and the US Geological Survey (Reichl/Schatz 2025; Rwanda Development Board undated; US Geological Survey 2025).

In contrast to Chile and Kazakhstan, Rwanda's **mining industry** is dominated by Artisanal Small-scale Mining (ASM) that accounts for around 80% of the country's mining production (Dusengemungu et al. 2023). ASM is mostly conducted through subcontracting agreements with holders of mineral licenses that employ miners, but retain responsibility for compliance with all regulatory obligations, including taxation, occupational health and safety, and environmental standards (Plus 2021). As of 2023, the RMB issued 132 active licenses, thereof 20 for large-scale mining, 71 for medium-scale mining licenses and 41 for small-scale mining (Nuwamanya 2023). ASM operations mostly rely on manual techniques, which are associated with a range of challenges, including limited capacity for strategic explorations, a lack of long-term investment and insufficient monitoring (Heizmann/Liebetrau 2017). In addition, ASM projects predominantly employ a low-skilled workforce and are highly vulnerable to global economic shocks as shown in the sharp decline of employment rates in Rwanda's minerals sector during the Covid-19 pandemic (Kamanzi 2025).

Very limited processing takes place within the country: Rwanda hosts a gold and a tantalum refinery, as well as a tin smelter (de Schoutheete/Ngabire 2025). In March 2025, the EU imposed sanctions on the country's sole gold refinery, citing its involvement in the illicit trade of gold from the DRC (Gahigi 2025).

4.3.2. Export landscape, regulation, and agreements related to CRMs

Currently, the country exports all of its mined minerals as raw mineral concentrates, primarily to the United Arab Emirates (UAE), Hong Kong and China (Dusengemungu, Zhou, and Liu 2023: 10618, see Table 8). As with reserve and production data, export statistics should also be interpreted with caution, as there are significant discrepancies in the reported volumes and values. According to the *World Mining Data* 2025 (Reichl/Schatz 2025), Rwanda mined minerals (excluding diamonds) worth approximately USD 350 million in 2023. However, Rwanda's National Development Board reports export revenues of USD 1.1 billion for the same year. This discrepancy raises questions, as Rwanda itself states that it exports nearly all of its raw materials in an unprocessed form, meaning that no significant value-adding steps occur after extraction (Dusengemungu et al. 2023). Notably, mineral export revenues appear to have increased again in 2024, reaching an estimated USD 1.7 billion (Wachira 2025).

The availability and reliability of trade data of Rwanda are also limited, with the latest data from 2022. UN Comtrade as well as Eurostat data show no imports of the major CRMs niobium, tantalum or tungsten. However, export data include trade flows to EU countries, with a share of 8% in ores and concentrates of Niobium, tantalum and vanadium and tungsten (see Table 8). The major export destination are however China and the UAE.

Table 8: CRM exports of Rwanda by destination

Exports 2022	World (`000 USD)	China	Hong Kong, China	United Arab Emirates	EU
Niobium, tantalum and vanadium ores and concentrates	63,699	22%	22%	38%	8%
Tungsten ores and con- centrates	54,524	14%	30%	32%	8%

Source: UN Comtrade

In Rwanda, the export of goods have to be documented to ensure compliance with the regulations set by the Rwanda Revenue Authority (RRA), including export permits, data reporting and the fulfilment of international standards set by trading partners (Intelligence 2024). However, the body in charge of overseeing mining regulations and issuing mining licensing, the Rwanda Mining, Petroleum and Gas Board, is itself accused of being involved in illicit exploitation of conflict minerals (Council of the EU 2025). Earlier this year, the agency's head, Francis Kamanzi, was sanctioned by the EU (Tossou 2025).

While comprehensive tax regulations are in place — including royalties on the gross value of mineral exports payable to the RRA — the sector's actual contribution to total tax revenues remains low, largely due to difficulties in tracing the origin of minerals (Plus 2021: 11). Tax revenues from mineral exports represent only a fraction of what the state should collect, given the officially reported figures for gold and other mineral exports (Plus 2021).

Investments into minerals-related projects (including exploration, mining, processing and export) benefit from incentives under the national Investment Law (Law No 006/2021 of 05/02/2021 on Investment Promotion and Facilitation). Those benefits include preferential corporate income tax rates, exemptions from capital gains tax and customs duties, VAT exemption for exploration and equipment costs, facilitated access to the water and electricity networks, facilitated land acquisition and simplified visa and work permit procedures for foreign workers (de Schoutheete/Ngabire 2025).

To discourage the export of unprocessed raw materials and promote local processing and value addition, Rwanda is currently seeking to revise its mineral export taxation policies. While currently, the same taxation scheme applies to unprocessed and processed materials, the government intends to create tax incentives and exceptions for local refinement and processing facilities to increase value-addition (Kudzawu-D'Pherdd 2024).

In 2016, Rwanda signed an Economic Partnership Agreement (EPA) negotiated between the EU and the East African Community (EAC), of which Rwanda is a member. However, since Rwanda has not ratified the agreement, it has not yet entered into force (European Commission 2025a). In the absence of an in-force EPA, the European Commission refers in the MoU with Rwanda to an overarching framework – namely the Partnership Agreement between the EU and the Organisation of African, Caribbean and Pacific States (OACPS). This so-called Samoa Agreement, which replaced the older Cotonou Agreement, does not constitute an FTA.

Rwanda is part of multiple regional customs or trade unions, such as the East African Community, the Common Market for Eastern and Southern Africa and the Africa Continental Free Trade Area (Trade Union Centre of Workers of Rwanda 2024). Furthermore, Rwanda has ratified bilateral investment treaties with Germany, Belgium and Luxembourg, Korea, Singapore, UAE and the US (UNCTAD undated).

4.3.3. Rwanda's Strategic Partnership with the EU

Rwanda and the EU signed the MoU of their Strategic Partnership on Sustainable Raw Material Value Chains in February 2024. It focuses on "non-energy and non-agriculture raw materials as well as minerals of strategic relevance for the twin transition". As with many other Strategic Partnerships, the scope goes thus beyond the materials defined by the EU as CRMs. Two aspects are particularly noteworthy: Firstly, the agreement emphasizes the development of infrastructure. Lacking infrastructure has been identified as one of the main hurdles for mining and processing endeavors in Rwanda (Mitchell 2024). This emphasis is also found in the MoUs with Namibia, Argentina, Chile, DRC, Zambia, and Greenland. Indeed, Rwanda is currently undertaking major infrastructure projects, including the construction of international railways and a new airport (de Schoutheete/Ngabire 2025).

Secondly, due diligence and traceability of CRM exports as well as cooperation in fighting against illegal trafficking of raw materials are emphasized. Whereas ESG standards are mentioned in all MoUs, in the case of Rwanda, the MoU is more precise. It particularly supports Rwanda's engagement in the Extractive Industry Transparency Initiative (EITI) in publishing mining data and proving origin of conflict minerals to contain smuggling. In addition, the OECD Guidelines for Multinational Enterprises are endorsed. The MoU urges the "domestication" (i.e. application in domestic law) of "various tools operation under the International Conference on the Great Lakes Region (ICGLR) Regional Initiative against the Illegal Exploitation of Natural Resources (RINR)".

None of these hortatory provisions urge Rwanda to do anything that Rwanda has not been urged to do before. As a member of the International Conference on the Great Lakes Region, the country should have already implemented the EITI standard and domesticated the tools of the Regional Initiative against the Illegal Exploitation of Natural Resources (Executive Secretariat International Conference on the Great Lakes Region 2020). However, the implementation of these standards and tools remains inconsequential (The Voice of Africa 2025).

In response to recent developments, Members of the European Parliament (MEPs) and international NGOs have urged the European Commission to suspend the Strategic Partnership with Rwanda due to the occupation of Goma and other areas in the eastern DRC by Rwandan-backed M23 rebels and the Rwandan defense forces (European Parliament 2025). All parties to the conflict face allegations of war crimes, sexual violence, forced labor and recruitment. The scramble for minerals such as cobalt and coltan has significantly fueled the conflict, with militias profiting from illicit mining and thus having a vested interest in its continuation (Farmer and Townsley 2025). MEPs have called for the immediate suspension of the EU-Rwanda Partnership and a freeze on direct budget support until Rwanda halts its interference in the DRC, including the export of minerals extracted from M23-controlled areas such as the Rubaya coltan 1 mines. Recently, the EU imposed sanctions on key M23 leaders and on Kigali's Gasabo Gold Refinery mines (Matabaro 2025).

With regard to the EU Conflict Minerals Regulation (Regulation 2017/821/EU, OJEU L 130/1) which establishes due diligence obligations for importers of the above-mentioned conflict minerals into the EU, Rwanda is currently not listed among conflict-affected and high-risk areas (CAHRAs) that are covered by this regulation. Although Rwanda is an important transit country for these minerals and despite allegations by international sources of smuggling from the DRC through Rwanda (see e.g. Global Witness 2025; Levinson, Lewis, and Rolley 2025; Vulotwa Hervé 2023), the regulation has no significant impact on the mining and reporting practices (European Commission 2024). This is partly because Rwanda barely exports any of these

minerals directly to the EU. Especially the sharp increase in the share of gold in the country's exports from 1% in 2014 to 47% in 2020, without corresponding increases in Rwanda's own gold production and the reports on gold smuggled by the Rwandan supported M23 rebel group from DRC point to Rwanda's role as a transit country for products of illegal and irresponsible mining (CRG 2023). Against this background, critique against the EU-Rwanda MoU for potentially supporting the smuggling of conflict minerals from the DRC appears increasingly justified.

4.3.4. Announcements of new projects and strategies

Before the MoU was signed, the EIB and Rwanda already signed a Joint Declaration "to enhance investment in CRM value chains" in December 2023, within the framework of the CRMA. This is the first agreement of this kind between the EIB and an African country. Through this partnership, the EIB intends to increase cooperation with CRM partners and facilitate access to project financing (European Investment Bank 2023). In the same year, a cooperation between Rwanda and Germany was announced to improve compliance with ESG standards and vocational education and training (Delegation of the EU to Rwanda 2023).

Despite recording a stable GDP growth at an average of 7% in the last years and a substantial decrease in poverty rates over the last decade, the country still experiences a persistent trade deficit, large regional income disparities and is classified as one of the poorest countries in the world (Bird 2020). Rwanda's second National Transformation Strategy (NTS2), which was adopted in August 2023 for the next 5 years, aims to overcome this trade deficit. The overarching goal is to become a high-income nation by 2050 (Republic of Rwanda 2024). Regarding the minerals sector, Rwanda aims to extensively increase mining revenues from \$ 1.1 billion in 2023 to \$ 2.17 billion in 2029 through extending exploration, the professionalization of mining and greater value addition in the country (Republic of Rwanda 2024: 19).

In order to achieve the goal of more value addition, Rwanda tries to attract investments for upgrading the value chain. The country is aiming to attract FDI for additional processing facilities (Mitchell 2024). To identify potential alliances, the Rwandan administration has been expanding its diplomatic relations. In addition to its partnerships with regional and Western actors, the country concluded several cooperation agreements with Kazakhstan in 2025, including one in the mining sector (Nsimenta 2025). Discussions are reportedly underway about prospects of Rwanda exporting raw materials directly to Kazakhstan for processing (Akhmetkali 2025).

In 2024, Rwanda announced a joint venture with the Australian-based mining company Rio Tinto to collaborate in mineral exploration and the development of potential mining operations of lithium, tungsten, tin, and tantalum (Rwanda Development Board 2024).

So far, no mining projects in Rwanda have been designated Strategic Project status by the European Commission.

In July 2025, after months of the US and Qatar mediating in the war that the DRC and Rwanda were fighting via proxy militias in the eastern DRC, an upcoming peace deal was announced. The US stated that once a peace deal was reached, it would conclude separate negotiations for minerals deals with both the DRC and Rwanda (Ford/Sanchez 2025). According to media reports, "US officials had engaged with 'probably up to 30' US investors about 'doing business in Rwanda in the mining space'" (Reuters 2025b).

5. CONCLUSIONS

As part of the CRMA, the EU is increasingly extending its market-shaping approach to securing the supply of raw materials beyond its borders, aiming to support the twin transition, alongside broader industrial and geopolitical objectives. Strategic Partnerships with resource-rich third countries have become a key instrument in this effort. These partnerships are designed to foster stable, sustainable, and transparent supply chains by facilitating the involvement of EU companies in extractive and processing projects abroad.

In principle, the EU positions these partnerships as mutually beneficial, highlighting commitments to value addition, skills development, and the promotion of high environmental and social standards in partner countries. However, the practical implementation of this vision faces significant challenges.

The examples of three different countries – Chile, Kazakhstan, and Rwanda – highlight how different starting conditions – such as geographic location, raw material endowment, state and private sector capacities, infrastructure, data availability, security risks, and existing trade routes – shape the cooperation with the EU more than the provisions of the partnerships themselves. This is in line with previous analyses of Strategic Raw Material Partnerships that found that the partnerships cannot substitute favourable investment conditions hinging on factors such as political and economic stability (Carry et al. 2025).

While Kazakhstan has seen substantial European investment, including the designation of a Strategic Project, Chile, despite being a key supplier of lithium and copper, has seen more limited investment from European companies, mostly due to price volatility of the raw materials it hosts. Rwanda, although being a key provider of critical minerals like tantalum, has also attracted minimal EU investment, partly due to geopolitical concerns and instability in the region.

All three countries are actively seeking foreign direct investment (FDI) from a wide range of international actors, not just the EU. This has also been observed for other partner countries (Carry et al. 2025). At the same time, all of them face barriers to expand domestic refining and processing capacity, including lack of capital, technology, and expertise. In response, each country is pursuing a range of targeted national strategies to enhance local value creation and capture more benefits from increased extraction and processing: Chile has established a relatively strong regulatory framework, Kazakhstan is taking a more cautious and tentative approach, and Rwanda has just announced reforms to enhance fiscal benefits. Yet in all cases, EU agreements may actually disincentivize such efforts. For example, the EU-Chile Free Trade Agreement's Energy and Raw Materials (ERM) chapter or the restrictions on local content requirements in Kazakhstan's Enhanced Partnership and Cooperation Agreement (EPCA) limit the policy space available to partner countries to implement value addition strategies. Hence, while Strategic Partnerships promote cooperation on sustainable value chains and industrial development, FTAs remain legally binding and may constrain countries' ability to implement precisely those policies that Strategic Partnerships encourage (Koch et al. 2025).

While the EU in principle promotes ESG principles, the commitments in the MoUs remain vague and non-binding. In Kazakhstan, for instance, the opportunity to include robust transparency obligations in the MoU was missed. In Rwanda, the commitments included are weak and largely replicate existing obligations that have previously gone unenforced. However, across all three countries, our cases reveal persistent environmental degradation, marginalization of civil society, and heightened conflict risks associated with mining activities. Yet it

remains unclear how the EU intends to mitigate these risks or ensure effective oversight and accountability within its raw materials diplomacy.

In sum, the EU's external raw materials strategy risks falling short of its stated objectives unless it reconciles its trade and investment frameworks with the developmental priorities of its partners and actively supports domestic value creation. One important step in this regard is the alignment of FTAs with Strategic Partnerships. This could be achieved by incorporating mandatory and enforceable provisions into the Trade and Sustainable Development (TSD) chapters of FTAs and by ensuring adequate policy space for industrial policy instruments, including local content requirements, technology transfer obligations, and export taxes (see Koch et al. 2025 for a more detailed overview)

Without concrete measures to enable policy space for local industrial development and a clearer focus on ensuring local benefits of the cooperation – such as local value addition and improving environmental and social standards – the EU's efforts are unlikely to translate its commitments into meaningful outcomes for partner countries. In the absence of EU support for upstream investments or policy flexibility there is a strong probability that raw materials will continue to be exported for processing in China – ultimately reinforcing the EU's dependency on Chinese industrial capacity.

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ABOUT THE AUTHORS

Karin Küblböck is an economist and Senior Researcher at the Austrian Foundation for Development Research, working on raw materials policies and stakeholder engagement for a just energy transition.

Simela Papatheophilou is a legal scholar and Junior Researcher at the Austrian Foundation for Development Research, with a focus on international and EU law, particularly in relation to raw materials and trade.

Bernhard Tröster is an economist and Senior Researcher at the Austrian Foundation for Development Research, spezialising in international trade and global production networks in the commodity sectors.

Leonhard Ulrici is a Master's student at the Institute for International Development at the University of Vienna. He completed an internship at the Austrian Foundation for Development Research in the first half of 2025.

ANNEX: Comparative Overview of EU MoUs on Raw Materials Strategic Partnerships

EU with	Canada	Ukraine		Kazakh- stan	Argen- tina	Chile	DRC	Zambia	Greenland	Rwanda		Uzbeki- stan	Aus- tralia	Serbia
Signed	June 2021	July 2021	Nov. 22	Nov. 22	June 2023	July 2023	Oct. 2023	Oct. 2023	Nov. 23	Febr. 2024	Mar. 2024	Apr. 24	May 2024	July 2024
Pages	1	6	6	9	4	5	3	5	7	4	8	9	3	13
Strategic Partner- ship on 	Raw Ma- terials		Materials Value Chains & Renewa- ble Hydro-	Sustaina- ble Raw Materials, Batteries & Renewable Hydrogen Value Chains		Sustainable Raw Mate- rials Value Chains	Sustainable Value Chains of Critical & Strategic Raw Materi- als	Sustainable Raw Materials Value Chains	Sustainable Raw Materials Value Chains	Sustainable Raw Materials Value Chains	based Raw Ma-	Sustaina- ble Raw Materials Value Chains	able Critical & Strate- gic Min-	Sustainable Raw Materi- als, Battery Value Chains, & Electric Ve- hicles
	CETA (EU-Can- ada FTA)	Associa- tion Agree- ment &	Agreem & EU-SADC	Enhanced Partnership & Coopera- tion Agree- ment (EPCA)	Frame-	EU-Chile Association Agreement	none	Political Dialogue between the EU & Zambia + suc- cessor Partner- ship Agreement between the EU & members of the Organisation of African, Carib- bean & Pacific States	Territories with		Agree- ment		tralia	Stabilization & Associa- tion Agree- ment (SAA)
	Minerals & metals critical to the tran- sition to a climate- neutral & digital- ized economy	cus on CRMs & batteries	value chain, fo- cus on CRMs &	Entire value chain, fo- cus on CRMs, bat- teries & re- newable hydrogen		non-energy & non-agri- cultural SRMs & CRMs nec- essary for the clean energy & digital tran- sition	non-energy & non-agri- cultural SRMs &CRMs necessary for the clean en- ergy & digi- tal transi- tion	non-energy & non-agricultural raw materials with a primary focus on SRMs and CRMs	raw materials, with special focus on CRMs	non-energy & non-agriculture raw materials for twin transition + other minerals for twin transi- tion	rials & batteries, as a prior- ity CRMs			primary & secondary raw materials as well as batteries & EVs, with a priority of CRMs for EV supply chains



	Canada	Ukraine	Namibia	Kazakhstan	Argentina	Chile	DRC	Zambia	Greenland	Rwanda	Norway	Uzbekistan	Australia	Serbia
Focus & overarching goals of the MoU														
Value chain development/integration														
Increased value chain resilience					(□) ¹⁰	(□)	(□)	(□)	(□)	(□)	(□)		(□)	(□)
Research & Innovation														
ESG Standards				(□)										
Regulatory framework/alignment	(□)			(□)	(□)	(□)					(□)	(□)		(□)
financial & investment instruments	(□)		(□)		(□)	(□)	(□)	(□)	(□)	(□)				
Infrastructure (investments)														
Skills & capacity		(□)												
Key Instruments mentioned in the MoU														
facilitation of investments/business opp.														
Resource mapping/exploration coop.														
Joint ventures														
Off-take agreements														
De-risking														
Industry dev.														
Research and innovation funding														
Capacity/Skills building														
Horizon Europe														
Early-warning system														
Transparency measures														
Circular economy promotion														
Minimization of environmental footprint														
Rules enforcement														
Traceability														
Technology transfer/modernization														
Resource classification best-practice sharing														
Cooperation regarding third countries														

¹⁰ Blue = Mentioned, but not as an overarching goal.

	Canada	Ukraine	Namibia	Kazakhstan	Argentina	Chile		Zam- bia	Green- land	Rwanda	Norway	Uzbeki- stan	Aus- tralia	Serbia
menta- tion &	dialogues on RM under CETA	Working Group (WG) on RM under EU-Ukraine High-Level Industrial & Regulatory Dialogue (HLID)	between the EU & Namibia		meeting	meeting + EU- Chile Ad-	to mee	WG to meet annu- ally	at least 2/y + annual ministerial meeting + EU RM Supply Group + European Raw Mate- rials Alli- ance	EU- Rwanda Political Dialogue, later to partners dialogue under succes- sor EU-			Minerals Dialogue under the EU-Aus- tralia Frame- work Agree- ment	Annual WG meeting + ministerial meeting + EU RM Sup- ply Group + EU RM Alli- ance + Euro- pean Battery Alliance + Western Balkans In- vestment Framework
eration & Key Pro- jects	promote ESG standards in Strategic Adv Group on Critical Minerals of Intern. Organis f Standardization, Conf. on Critical Materials & Miner. MSP & Working Party on Critical Minerals under	gets for 2030/40/50 from raw ma- terial mining & processing in Ukraine; digitalize & strengthen data man- agement of Ukrainian mineral re- sources, use Europe's Co- pernicus Pro- gram & other	bio € in roadmap to MoU; EU supported study findustrial dev. of Port of Walvis Bay; EU pledged 50 mio € to Namibia's & SA green hydrog invest. funds under Global Gat.; plans of EIB to partner w EU companies to invest	under Global Gateway for Trans-Caspian Intern. Transport Route; dozens of agreements with German & French compa- nies in 2023, incl. for REE ex- ploration, extrac- tion, processing & lead benefi- ciat; German companies	in mining sector gov- ernance, ge- ological knowledge, & sustaina- ble extraction of CRMs in Arg.& 3 other	& cop- per supply chain integra- tion via Global Gate-	dor a Zaml DRC gola, alia f expo deve	& An- inter or CRM rts to be loped ly by EU	EU com- mitted € 22.5 million to Green Growth Program (in which CRMs are included); EC opened new office in GL in 2024; GL announced FDI Act to become more at- tractive to FDI	of Rwanda in EITI	ing RM & battery projects in EU & Nor- wayTrac-	CRM sector; EBRD. assisted drafting new legal framework for investm.	EU un- success- fully pushed for more favorable legal frame- work for European invest- ments in	Jadar lithium mine rein- statement; investments promised by Mercedes, EBRD & KfW for lith- ium battery

Sources: 14 MoUs; Roadmaps where available; Alvarez-Rodriguez/Garcia 2024; Creve et al. 2024; Daly 2025; DW 2024; European Commission 2023b, 2023a, 2022b, undateda, undatedb; Innovation News Network 2024; Jackson 2024; Joint Cooperation Committee under the Strategic Partnership Agreement (EU-Canada) 2023; Kyllmann 2024; Omirgazy 2024b; Onsat 2024; Saglam 2024; Verbeeck 2024.