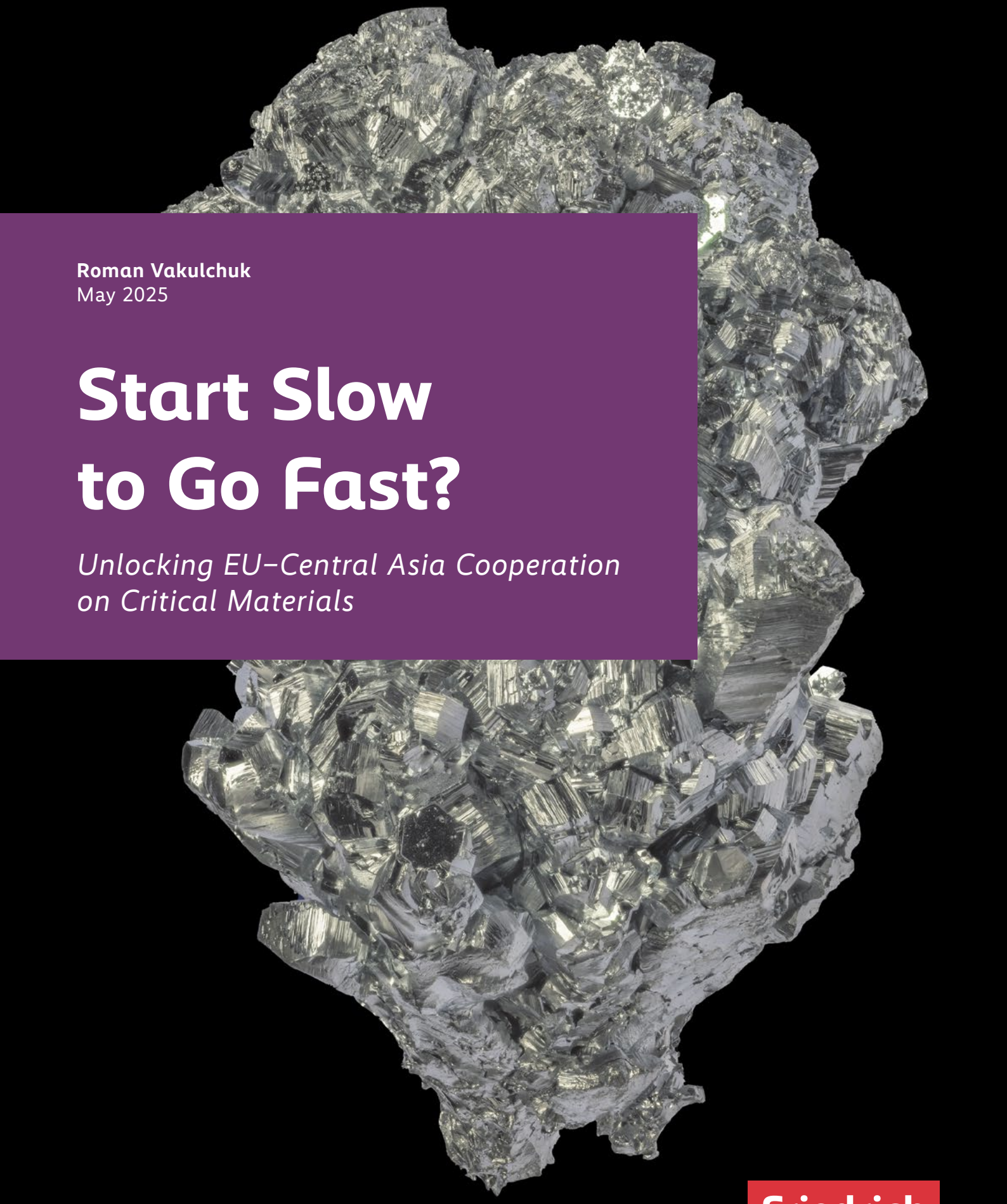
POLICY PAPER



Roman Vakulchuk
May 2025

Start Slow to Go Fast?

Unlocking EU–Central Asia Cooperation on Critical Materials

Friedrich Ebert Stiftung

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Summary

Context

This study conducts a stocktaking of the European Union (EU)–Central Asia cooperation on critical materials and explores the challenges, opportunities and progress made since strategic partnership agreements were signed by the EU with Kazakhstan and Uzbekistan, the two largest countries in Central Asia, in 2022 and 2024, respectively. It compares the EU with China and US investors operating in mineral industries across Central Asia.

Gaining access to secure a supply of critical raw materials has become a vital component of the EU's industrial base, as the EU remains heavily dependent on China for critical materials and rare earths. Since 2021, Central Asia has been a hotspot for the critical materials used in the production of clean energy technologies such as solar panels, batteries, wind turbines and others. After decades of unsuccessful attempts to stimulate economic diversification, the region is keen to enhance the value-added processing and recycling of minerals and move away from being a resource extraction hub. The EU is seen as an attractive partner that can help the region attain these goals.

Central Asia's endowment with minerals has attracted significant interest from China, Europe, the US and the Gulf states. The current race for Central Asia's critical materials is driven by China and the US, which started to engage with the region in terms of critical materials before the EU: China through its Belt and Road Initiative (BRI) and the US through the C5+1 Platform. This interest from external partners indicates that the trend towards investment in the region's minerals is likely to grow in the future.

Key findings

- **Slow start by the EU.** China and the US have been active in Central Asia, while investment from the EU has been limited despite ambitious high-level declarations. Since 2022, EU firms have invested in five projects in Central Asia. In comparison, China has invested in and currently manages 25 critical materials projects in the region. In 2024, China imported 70% of all the critical raw materials extracted in Central Asia. In order to catch up with China, the EU could greatly expand its investment and help the region strengthen its critical materials governance and economic diversification.
- **Ease of doing business.** Local stakeholders find cooperation with Chinese firms easier and less bureaucratic than with their European counterparts. According to an entrepreneur in Kazakhstan, 'going to Europe visa-wise and doing business with European partners are more challenging than with China'. The geographical proximity to China and ease of access to Chinese financial markets are further advantages of conducting business with Chinese investors. At the same time, EU investors may offer a model of creating joint ventures with local companies which is deemed attractive by Central Asian stakeholders.
- **Local content policies.** Chinese investors lag behind European and US investors in terms of promoting local content policies. Limited local content shapes local perceptions and is viewed as having an adverse effect. European firms hire 60%–70% of their workforce locally, while Chinese firms tend to hire less than 50% of local workers when conducting investment projects in Kazakhstan and Uzbekistan. This gives a comparative advantage to European and US firms.
- **Corporate reputation.** The reputational benefits of cooperating with European and US firms are assessed as attractive. Operational transparency and high environmental standards are regarded positively in business circles and often viewed as 'a sign of quality'. The perception of the reputational benefits gained from conducting business with Chinese firms is mixed.
- **Ease of travel for knowledge exchange.** The EU lags greatly behind China, Russia, the Gulf states and the US in how easily skilled workers from Central Asia can travel for knowledge exchange or conference visits. While EU citizens benefit from visa-free travel to the region, obtaining a Schengen visa by a skilled local professional – an engineer, university professor or private business representative – is perceived as complex and time-consuming. Individuals often obtain a single-entry visa only for the duration of a visit (e.g., a three-day single visa for a three-day conference).
- **Simplify the visa regime for skilled labour.** If the EU seeks to deepen its partnership with Central Asia in critical materials, renewable energy, science and technology, then simplifying the visa regime with the region is crucial. The EU recognises that to improve industrial competitiveness, it needs to cut red tape and adopt simplifi-

cation measures across various industries. In recognition of visa issues, the need to negotiate a visa facilitation agreement between the EU and Kazakhstan was raised during the EU–Central Asia Summit in 2025.

→ **Enhance interaction between epistemic communities.** There is a regular exchange between the EU and Central Asia at a high political level, including through the Minerals Security Partnership Forum (MSP Forum), but this interaction remains limited at the level of epistemic communities. There is a need to advance EU–Central Asia science-to-science, expert-to-expert, business-to-business and science-to-expert-to-business interaction. This will require facilitating the visa regime and institutionalising knowledge platforms on critical materials and broader energy transition issues.

1
Introduction: The global race for Central Asia's critical materials

Since 2022, the war in Ukraine and growing global geopolitical uncertainty have pushed the European Union (EU) to increase its strategic autonomy and align its resource acquisition strategies with climate goals. Gaining access to a secure supply of critical raw materials has become a vital component of the EU's industrial base, as it remains heavily dependent on China for critical materials and rare earths. China controls about 60% of the world's rare earth metal mining and over 85% of the world's processing capacity.[1]

Seeking to diversify supply, the EU has started actively searching for new partners. In just a few years, the bloc has signed strategic mineral partnerships with 14 countries, including Kazakhstan and Uzbekistan, the two largest countries in Central Asia, in 2022 and 2024, respectively. As the Central Asia region has vast critical materials resources, it was predicted in 2021 to become a hotspot in the future global race for critical materials.[2] The EU considers Central Asia an important partner that could mitigate supply risks. Metals and chemicals from Central Asia may help the EU advance the clean energy transition, space, defence and new technologies.

During his visit to Kazakhstan in 2024, Josep Borrell, the High Representative of the European Union for Foreign Affairs and Security Policy, stated that the EU and Central Asia should mutually benefit from cooperation on critical mineral commodities. On March 13, 2025, Jozef Sikela, the 1st Commissioner for International Partnerships in the European Commission, announced that '**over 40% of Europe's supply of strategic minerals could come from Central Asia**'.[3] The first ever EU–Central Asia Summit, which took place in Samarkand in April 2025, marked the parties' intent to enhance cooperation on critical materials to ensure secure, sustainable and diversified supply chains.[4] Central Asia, in turn, after unsuccessful attempts to stimulate economic diversification, is keen on enhancing the value-added processing and recycling of critical materials and moving away from being a resource extraction hub. The EU is seen as an attractive partner that can help the region attain these goals.

The EU seeks to cooperate with Central Asia through its Global Gateway Initiative, which aims to attract EUR 300 billion in public and private investment by 2027 and has four priority areas for the region: transport, with a focus on

Table 1

International development initiatives in Central Asia

Initiative	Launched by	Thematic focus	Development model
China's BRI launched in 2013 and C+C5 platform	China	Infrastructure, roads, natural resources, **critical materials**, finance, education, FDI, connectivity	Infrastructure development; a trans-continental passage; strengthen bilateral links
Eurasian Economic Union (EAEU) launched in 2015	Russia and Kazakhstan	Trade facilitation, cross-border trade, FDI, cooperation on **natural resources**	Trade cooperation drawing on the EU model
C5+1 Platform / the Economic Resilience Initiative in Central Asia (ERICEN) launched in 2023	The US	Connectivity, **critical materials**, FDI, security, education, and deepening diplomatic ties, critical materials in 2024	Regional integration
The EU Global Gateway and Critical Materials Partnerships initiated during 2023–2025	The EU	EU-CA connectivity, sustainable transport corridors, water, energy, climate change, FDI, **critical materials**, digital connectivity	Regional integration: 33 hard infrastructure needs and 7 soft connectivity needs

Note: The Gulf states have also expressed interest in expanding cooperation with Central Asia on critical materials and clean energy.

the Trans-Caspian International Transport Route; critical materials; digital connectivity; and water, energy and climate change.[5] However, the EU is not the only actor. The current race for Central Asia's critical materials is also driven by China and the US, which started to cooperate with the region on critical materials before the EU, China through the BRI and the US through the C5+1 Platform. For decades, Russia has also engaged with the region in critical materials production through the Eurasian Economic Union and beyond. **The interest from external partners indicates that the trend towards investment in the region's critical materials is likely to grow in the future** (Table 1).

This study takes stock of the EU's three years of engagement with Central Asia in critical materials and assesses the progress made. The purpose of this study is threefold. First, it explores the current speed of the EU's efforts and the prospects of securing a supply of critical materials from Central Asia. Second, it compares the EU's comparative advantages and weaknesses with those of China and the US from the perspective of local actors. Third, it examines the measures the EU could provide to help Central Asia improve the governance of its critical materials.[6]

2
Why are Central Asia's mineral resources important to the EU?

The Central Asian countries, particularly Kazakhstan, possess significant reserves of various minerals that are used in the production of clean energy technologies (Table 2). The region holds substantial proportions of global reserves of manganese ore (38.6%), chromium (30%), lead (20%), titanium (8.7%) and zinc (2.6%), among others.[7] It also has a significant potential for rare earth elements, such as scandium, yttrium and lanthanides. In Kazakhstan alone, which is the largest country in the region, 160 deposits of rare and rare earth metals have been discovered (out of 384 in the entire region), according to the US Geological Survey.[8] There are also 75 deposits in Kyrgyzstan, 60 in Tajikistan, two in Turkmenistan and 87 in Uzbekistan.

Table 2

Availability of 22 critical materials reserves by country in Central Asia

Critical material	Kazakhstan	Uzbekistan	Tajikistan	Kyrgyzstan
Copper (Cu)	●	●	●	●
Silver (Ag)	●	●	●	●
Zinc (Zn)	●	●	●	●
Aluminium/bauxite (Al)	●	●	●	●
Iron ore (Fe)	●	●	●	●
Lead (Pb)	●	●	●	●
Tin (Sn)	●	●	●	●
Lithium (Li)	●	●	●	●
Cadmium (Cd)	●	●	●	●
Selenium (refined) (Se)	●	●	●	●
Tellurium (Te)	●	●	●	●
Manganese (ore) (Mn)	●	●	●	●
Molybdenum (Mo)	●	●	●	●
Chromium (ore and concentrate) (Cr)	●	●	●	●
Titanium (Ti)	●	●	●	●
Silicon (Si)	●	●	●	●
Germanium (Ge)	●	●	●	●
Gallium (Ga)	●	●	●	●
Indium (In)	●	●	●	●
Cobalt (Co)	●	●	●	●
Nickel (Ni)	●	●	●	●
Graphite (C)	●	●	●	●

● *reserves available for extraction* ● *no reserves or further geological exploration is required*

Source: Vakulchuk and Overland (2021).[9]

3
Stocktaking of EU investment in critical materials in Central Asia

Kazakhstan has reserves of 21 of the 34 critical minerals and metals defined as strategic on the EU List of Critical Raw Materials in 2024.[10] It has the world's largest reserves of chromium as well as significant reserves of titanium, silver, lead, copper and uranium. In 2022, the EU signed a strategic agreement with Kazakhstan in the field of raw materials, batteries and renewable hydrogen that became operational in 2023. The agreement 'aims to jointly develop and better integrate EU and Kazakh strategic value chains related to raw materials, to batteries and to renewable hydrogen'.[11] The agreement also seeks to promote the modernisation and decarbonisation of the Kazakh mining industry and includes technology transfer and the deployment of renewable energy.[12]

Aside from Kazakhstan, the EU is also stepping up its engagement with Uzbekistan, with which it signed a memorandum of understanding (MoU) for a strategic partnership in 2024. These agreements may have transformative potential for Central Asia if they are supported by substantial investment, workforce training and technology transfer from the EU. Despite ambitious high-level statements and agreements, as of May 2025, there has been **only limited engagement by EU investors in Kazakhstan and Uzbekistan**. Table 3 summarises the projects launched by EU companies in the critical materials sectors since 2022. Two projects were initiated by German investors, one by French TotalEnergies and one by Danish FLSmidth, and one joint project was initiated by the European Bank for Reconstruction and Development (EBRD) and Australia. Four out of five projects focus on extraction and exports of critical materials and only one project aims at developing local processing infrastructure. The EU's investment pace has been slow, and this is puzzling, given the calls in Brussels to mobilise and fast-track the EU's resource independence. Many interviewed experts pointed out that European businesses could act and expand their presence in Central Asia faster.

Table 3

EU investment projects in critical materials in Central Asia

Critical material	Project name	Location	Project start	Project type	EU investor name	Country
Lithium, cobalt and nickel	German company HMS Bergbau AG acquired a controlling stake in Kazakh company Creada Corporation, which holds exploration licenses for adjacent documented lithium, cobalt and nickel deposits.	Kazakhstan	2022	Extraction and export	HMS Bergbau AG	Germany
Lithium	Construction of a mining and processing plant for the extraction and processing of lithium in the East Kazakhstan region for USD 500 million.	East Kazakhstan region, Kazakhstan	2024	Extraction and export	HMS Bergbau AG	Germany
Graphite	EBRD is acquiring a stake of approximately 17.4% in the mining company Sarytogan Graphite for the equivalent of EUR 3 million.	Karaganda region, Kazakhstan	2024	Extraction and export	Sarytogan Graphite and EBRD	Australia and EBRD
Lithium, copper and antimony	The MoU signed between the Danish firm FLSmidth and the Ministry of Industry and New Technologies of the Republic of Tajikistan.	Tajikistan	2024	Exploration and mining	FLSmidth	Denmark
Rare earth metals	Development of rare earth metal deposits needed for the production of solar panels in the Samarkand region.	Samarkand region, Uzbekistan	2023	Extraction/ processing in Uzbekistan	TotalEnergies	France

Although the EU is a major trading partner and investor in Kazakhstan, its presence in the region is still smaller than that of China. Yet, as many Chinese corporations invest in the mining sector in Central Asia through their subsidiaries in the Netherlands, the EU appears to be the largest investor in the region.[13] China had become a major player in Central Asia long before the EU signed the MoU with Kazakhstan in 2022. **In 2024, China imported 70% of all extracted critical materials from Central Asia**.[14] It has also invested in and currently manages 25 projects aimed at the geological exploration, extraction and production of critical materials in the region.[15] From 2010 to 2021, China grew to become the largest importer of critical materials, such as molybdenum, zinc, lead, copper and others, from Kazakhstan.

The US is also actively investing in new deposits. In September 2023, the US launched a C5+1 Critical Minerals Dialogue with Central Asia under the umbrella of the C5+1 meeting platform. The platform aims to catalyse domestic and foreign investments in critical minerals production and supply chains.[16] Similarly, since 1991, Russia has been one of the region's main trade and production partners in critical materials.

4
Comparing the EU with other investors: A local perspective

While the interest from China, the EU and the US in the region's resources is growing, the local perception of the advantages and difficulties of cooperating with investors from these three jurisdictions varies greatly. How do investors from China, the EU and the US differ, and how are they similar? The 22 interviews conducted for this study revealed various differences and similarities among investment partners.

Ease of doing business

Local stakeholders find cooperation with Chinese firms easier and less bureaucratic than with their European counterparts. According to an entrepreneur in Kazakhstan, 'often, Chinese investors do not require complicated procedures and documentation for establishing partnerships or signing contracts. Going to Europe visa-wise and doing business with European partners are more challenging than with China'. The geographical proximity to China and ease of access to Chinese financial markets are further advantages of conducting business with Chinese investors. At the same time, **EU investors may offer a model of creating joint ventures with local companies which is deemed attractive by Central Asian stakeholders.**

Local content policies

However, Chinese investors lag behind European and US investors in terms of promoting local content policies. Limited local content shapes local perceptions and is viewed as having an adverse effect, as it restricts the use of the local workforce and resources. For example, based on the interviews**, European firms hire 60%–70% of their workforce locally, while Chinese firms tend to hire less than 50% of local workers** when conducting investment projects in Kazakhstan and Uzbekistan. This gives a comparative advantage to European and US firms.

Corporate reputation

The reputational benefits of cooperating with European and US firms are assessed as attractive. Most of the respondents agreed that when a local company cooperates with an EU investor, its reputation improves in the domestic business community. The perception is that by managing to cooperate with a firm from the EU, the local company abides by high corporate standards. Operational transparency and high environmental standards are regarded positively and often viewed as 'a sign of quality'. The perception of the reputational benefits gained from conducting business with Chinese firms is mixed.

Ease of travel for knowledge exchange

One area where the EU lags greatly behind China, Russia, the Gulf states and the US is how easily skilled workers from Central Asia can travel for knowledge exchange or scientific conference visits. While EU citizens benefit from visa-free travel to the region, obtaining a Schengen visa by a skilled local professional – an engineer, university professor or private business representative – is perceived as complex and time-consuming. Individuals often obtain a single-entry visa only for the duration of a visit (e.g., a three-day single visa for a three-day conference). A visa is also required to travel to the US, but the process is perceived as less bureaucratic, and it can be issued for a longer period (up to 10 years, allowing multiple visits). China offers a visa-free regime to skilled professionals from Kazakhstan and Uzbekistan. Travel to Russia is visa-free for all four countries (Table 4).

If the EU seeks to deepen its partnership with Central Asia in critical materials, renewable energy and science, then **simplifying the visa regime for skilled workers from Central Asia is essential**. The EU recognises that to improve industrial competitiveness, it needs to cut red tape and adopt simplification measures across various industries. In 2025, the European Commission proposed the first two omnibus packages for simplification measures.[17] Moreover, a possible visa facilitation agreement between the EU and Kazakhstan was discussed during the first EU–Central Asia Summit in 2025, where both parties stated their interest in launching visa agreement negotiations.[18]

Interaction between epistemic communities

There is a regular exchange between the EU and Central Asia at a high political level, including through the Minerals Security Partnership Forum (MSP Forum), but this interaction remains limited at the level of epistemic communities. In 2022, the EU launched a four-year project, 'The EU Support to Sustainable Energy Connectivity in Central Asia (SECCA)', which aims to promote a sustainable energy mix

Ease of travel for knowledge exchange for skilled workers from Central Asia

Table 4

Country	Kazakhstan	Uzbekistan	Tajikistan	Kyrgyzstan
The EU states	🔴	🔴	🔴	🔴
The US	🟡	🟡	🟡	🟡
Saudi Arabia	🟢	🟢	🔴	🔴
China	🟢	🟢	🔴	🔴
The UAE	🟢	🟢	🔴	🔴
Russia	🟢	🟢	🟢	🟢

🟢 *visa-free access* 🟡 *visa is required but long-term visas can be issued* 🔴 *visa regime*

in Central Asia in line with EU best practices.[19] It serves as a platform for capacity building and scientific exchange on clean energy between the two parties. However, its thematic scope does not cover critical materials. There is a need for more SECCA-like platforms in critical materials to advance EU–Central Asia science-to-science, expert-to-expert, business-to-business and science-to-expert-to-business interaction. This will require facilitating the visa regime and institutionalising knowledge platforms on critical materials and broader energy transition issues.

5
How the EU can help Central Asia improve its governance of critical materials

This section discusses policy measures that can strengthen the governance of critical minerals. Table 5 lists existing policy measures in the EU and then presents an overview of the status in Central Asia.

Strategic plans: As of May 2025, more than 30 countries have adopted strategic plans for the development of critical materials. A strategic plan helps define priority areas for the processing and manufacturing of selected critical materials. The states of Central Asia could consider strategising critical materials in their national policy documents. The EU and individual countries (e.g., France) have advanced strategic plans and could help Central Asia develop a policy roadmap that outlines key priority actions for selected critical minerals.

Strategic mineral lists: Such lists indicate that certain minerals are of particular importance and outline related policy provisions. Strategic lists are not available in any of the Central Asian countries. The EU has created and regularly updates its lists of critical materials. Such lists help policymakers devise industrial policies and revise the criticality of minerals, which is subject to frequent changes. For example, the EU updates its list of critical materials every three years.[21] Updating the list helps policymakers monitor which minerals are less or no longer critical and need to be removed from the list or identify new minerals that have become critical and thus need to be added to the list.

Innovation funds: Measures designed to accelerate technological progress and innovation, generally through funding and information-sharing initiatives, may include direct funding through grants or subsidies for research, development, demonstration and deployment. According to the International Energy Agency, the Central Asian countries have yet to adopt measures and policies aimed at accelerating technological progress and innovation in critical materials through funding, information sharing and research and development activities.[22]

Financing incentives: Countries may use attractive tax schemes (e.g., tax deductions) or direct funding to support the development of domestic production. They can also

Table 5

Policy measures to improve the governance of the critical minerals sector

	Measures				
Countries	Strategic plans	Strategic mineral lists	Innovation funds	Financing incentives	Recycling support
The EU	●	●	●	●	●
France	●	●	●	●	●
Kazakhstan	●	●	●	●	●
Kyrgyzstan	●	●	●	●	●
Tajikistan	●	●	●	●	●
Uzbekistan	●	●	●	●	●

● *active ongoing measures* ● *measures are considered or at early stage* ● *no available measures*

Source: IEA (2025).[20]

apply financing mechanisms such as grants, preferential loans or loan guarantees to existing or new extraction projects. Some tax incentives are found in Kazakhstan, Kyrgyzstan and Uzbekistan,[23] but these are directed more towards incentivising extraction and less towards processing and recycling.

Recycling support: Policies that target the development of a secondary material supply market with adequate processing capability may include research and development funding, regulations to increase collection rates, and other support measures for new recycling facilities. In Central Asia, only Uzbekistan has launched recycling projects (two in 2024).[24]

6
Policy Recommendations

1. **The EU could increase its investment in Central Asia's critical materials.** Despite positive and ambitious rhetoric, the EU has been slower than China and the US to invest in Central Asia's mineral resources. The EU's Global Gateway Initiative presents an opportunity to increase the EU's investment presence in the region.

2. **The EU could assist Central Asia with the strategic prioritisation of selected critical materials, including the creation and maintenance of critical materials lists**. This can help local governments devise mineral policies and revise the criticality of minerals, which is subject to frequent changes. For example, the EU updates its list of critical materials every three years. Updating the list helps policymakers modify strategies to secure the supply of minerals and adjust industrial priorities.

3. **The EU could scale up investments in more science-intensive processing and recycling infrastructure in Central Asia**. Contributing to the local infrastructure for critical materials processing and recycling would help Central Asia boost economic diversification and could strengthen the EU's positioning in the region.

4. **The EU could help create Central Asia's own innovation funds for critical materials.** The EU could help develop measures aimed at accelerating technological progress and innovation via funding and information sharing through direct grants and subsidies for research, development, demonstration and deployment.

5. **The EU could make it far simpler for skilled professionals in critical materials, renewable energy and science from Central Asia to obtain a Schengen visa**. The current visa regime is cumbersome and complex. Other investment partners involved in the region's critical materials offer either visa-free or easier visa regimes to engineers, scientists, professors and business professionals from Central Asia. The need to negotiate a visa facilitation agreement between the EU and Kazakhstan was raised during the EU–Central Asia Summit in 2025.

6. **The EU could promote bottom-up collaboration in the energy transition between the EU and Central Asia**. There is a regular exchange between the EU and Central Asia at a high political level, but it remains limited at the level of epistemic communities. Promoting this type of collaboration will require facilitating the visa regime (see Recommendation 5) and institutionalising dialogue and knowledge platforms. This could be an important source of awareness raising about the EU in Central Asia and would strengthen scientific and people-to-people ties between the two sides.

Conclusion

Since 2022, the EU has engaged with Central Asia in critical materials. However, European businesses lag behind their counterparts from China and the US, which have been actively investing in new critical materials deposits and building production chains in the region. The EU has several comparative advantages in Central Asia on which it could capitalise to secure its own supply of critical materials. In turn, the region could benefit from active EU support and improve its critical materials governance and economic diversification.

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Start Slow to Go Fast? Unlocking EU–Central Asia Cooperation on Critical Materials

This study conducts a stocktaking of the European Union (EU)–Central Asia cooperation on critical materials and explores progress made since strategic partnership agreements were signed by the EU with Kazakhstan and Uzbekistan. It compares the EU with China and US investors operating in mineral industries across Central Asia. Since 2022, EU firms have invested in five critical materials projects in Central Asia. In comparison, China has invested in and currently manages 25 projects in the region. The EU has been slow to engage with Central Asia. The EU could expand its investment, help build value-added mineral supply chains and promote economic diversification in the region.

Further information on the topic can be found here:
↗ **fes.de**

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