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Europe's Quest for Critical Raw Materials in Latin America: The Clash With China and Diversification Opportunities

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ABSTRACT.

This paper analyzes the evolving geopolitical dynamics surrounding critical raw materials (CRMs), with a focus on Latin America and the European Union's (EU) attempt to secure access to these resources amid intensifying competition with China. Drawing from trade statistics, foreign investment trends, and institutional strategies, the study assesses the EU's renewed interest in Latin America through the Global Gateway and the Win-Win Partnership frameworks. While China's economic footprint in the region is deeply entrenched through its South-South cooperation model, the EU seeks to reposition itself as a viable partner by leveraging environmental and governance standards. The analysis identifies key minerals—particularly lithium, copper, and lead—where dependency and vulnerability are highest, and where strategic diversification is urgently needed. Ultimately, the paper argues that the EU's success will depend on its ability to implement a more flexible and pragmatic strategy, balancing its normative approach with tangible development outcomes for Latin American partners.

Keywords: geopolitics, critical raw materials, EU-Latin America, energy transition

JEL codes: F14, F59, Q34, O13,

1. INTRODUCTION

In a momentous turnaround, the year 2022 witnessed a profound resurgence in the significance of Latin America within the European Union's foreign policy, marking a pivotal departure from decades of waning attention. Bringing the earlier *retreat policy* to a halt, Brussels signaled a resolute commitment to fostering high-level political rapprochement.² This transformation away from the retreat policy gained momentum, accelerated by several circumstantial international events that posed high geopolitical risks for the West. The break of the global value chains because of the Covid-19 pandemic and the scarcity of key resources following Russia's attack on Ukraine were powerful catalysts behind this shift.

Beyond these factors, a more structural driver underpins the EU's renewed policy, the energy transition. Observing its international agreements and following its ambitious environmental objectives, the EU has been taking serious steps in decarbonizing its energy matrix.³ "Simply put, these headline commitments for 2030, the aspirational goals for 2050 and the new legal framework mean that Europe as a continent has embarked on a clean energy transition based on an efficient use of energy and a progressive decarbonization of the energy supply."⁴ As the first region with a clear plan to move forward in the transition from fossil fuels to renewable energy, Europe is still confronted with the additional pressure for a renewed European foreign policy that can reassert its lost ground in the Global South.

At the core of the EU's rapprochement lies a key area of focus, natural resources (European Commission, 2023) which is the main subject of this brief. Although securing markets for EU's exports and foreign investment remains important, the bloc faces a daunting challenge in the face of the impending green revolution (Peng, G, et al., 2022): securing natural resources. This is indeed the main driver behind the EU's renewed partnership following a period of drifting apart. According to the New Agenda, the objective is clear: there are growing challenges for the EU not only in terms of the global competition for competitiveness, but also in navigating the impending energetic transition and LAC can be a valuable partner capable of providing the much-needed raw materials. Hence, it can be unequivocally argued that the above is the true essence behind the partnership (Nolte & Wehner, 2023).

However, this pursuit collides with China's already significant presence in the region, which extends not only to traded volumes, but also to the relevant political scenarios (Fornes & Mendez, 2018; Myers & Wise, 2016). The importance of LAC's resources is projected to intensify the growing struggle between China and the West. AS the EU's study on critical raw materials 2020 asserts: "global competition for resources will become fierce in the coming decade. Dependence of critical raw materials may soon replace today's dependence on oil... Global materials demand

² Besides public discourse by high-ranking authorities in the past year, in June 2023, the High Representative and the European Commission adopted a Joint Communication setting out the official 'New Agenda for Relations between the EU and Latin America and the Caribbean'.

³ The European Green Deal, the REPowerEU Communication, the Joint Communication on Defense Investment Gaps Analysis, the Way Forward and the Digital Strategy have all established objectives or targets to achieve the green and digital transitions and strengthen the EU's resilience and strategic autonomy, which depend on the availability of critical raw materials; while the European Commission has already began the implementation of the action plan set up in the 2020 Communication on Critical Raw Materials.

⁴ European Energy Transition 2030: The Big Picture Ten Priorities for the next European Commission to meet the EU's 2030 targets and accelerate towards 2050.

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will more than double from 79 billion tones today to 167 billion tones in 2060” (European Commission, 2020).

In light of the above, this policy paper seeks to first describe how this struggle is reflected in two competing development narratives, which ultimately stem from two different forms of economic and political organization: South-South Cooperation in the case of China and Win-Win Partnership in the case of the EU. Second, the paper will then present an in-depth quantitative analysis of the current raw-material trade flows to grasp the strengths and weaknesses of the EU vis-à-vis China.

2. THE NARRATIVE DISPUTE FOR SOUTH AMERICAN NATURAL RESOURCES: SOUTH-SOUTH COOPERATION OR WIN-WIN PARTNERSHIP

2.1 South-South cooperation: China’s win-win strategy for the Global South

China’s specific win-win diplomacy, also dubbed as south-south cooperation (SSC), needs to be understood as a far-reaching strategy that extends beyond the traditional notion of channeling of funds between peripheral countries to promote development. First of all, it is important to note that the concept of SSC, which refers to a cooperation scheme among developing countries, emerged at a particular moment of the world system and has evolved ever since. The idea of “South operated here not as a geographical term, but rather as a metaphorical or ideological concept speaking to the global divide between developed and developing nations” (McEwan, 2008: 13). The concept was shaped following the early postwar period of decolonization amidst rising Cold-war tensions. Cooperation from the North had been formally established through the global governance that resulted from the postwar negotiations and, through the decades, the importance of cooperation within Western power’s foreign policy simply increased. And despite the change in mechanisms, modernization continued to be the rationale. The West had already achieved modernity and wanted to lead developing countries in that direction.

SSC quickly emerged as a contestation. Acknowledging that economic backwardness was an issue of concern, developing nations made it clear that autonomy, independence and self-determination were also important pillars for the relations they wanted to have with world powers—not only in the West. The aim was to enhance their participation within the international system (Nonfodji, 2013). To this end, non-intervention and respect for national sovereignty were complemented by a pursuit for economic autonomy which sought to counter the Western notion of benefits to be derived from the international labor division (Amin, 1976; 1996).

The basis for China’s specific understanding of SSC can be found in the early years following the foundation of the PRC. The ambitious modernization objectives had to be merged with yet another chief aim: to secure independence and autonomy. The specific strategy for China’s relation with the Global South, besides from the guiding principle of non-intervention, was to establish the notion of a Third World solidarity (Hoogvelt, 1982). To this end, secondary principles such as cooperation for mutual gains and the promotion of world peace were also included. These can be best summarized by the Bandung Conference where China took the lead in promoting a strong voice against the two contending powers. Furthermore, “this emergent movement of Third World solidarity thereby sought to challenge the vertical relations between colony and metropole that were serving to inhibit relations between countries of the global South” (Gray & Gills, 2016: 558).

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In the 21st Century, despite the considerable economic power acquired by China, the guiding principles in its relations with developing countries remained the same. China's main foreign policy was to build a harmonious world order based on nation-state sovereignty and mutual benefits. This included the strong de-ideologization of its foreign policy, emphasizing "on the importance of nations preserving their own interests in the face of globalization, rather than acting on behalf of a socialist international agenda. It thus located solidarity in common economic interests (win-win relations) rather than political ideology" (DeHart, 2012: 1362).

Within this SSC framework, China designed a specific strategy for LAC. Based on its strategy published in 2009, prioritizing relationships with the Global South, China published two White papers on Latin America and the Caribbean, establishing its chief guidelines. The first paper published in 2008 cemented the ground for relations, by formally establishing that, in a world system heading to multi-polarity, China would seek to deepen relations with the region on the basis of peaceful development for the pursuit of mutual gains. The second one, published in 2016, reinforced that "its diplomacy in the region is still essentially economic, supporting its firmness in seeking access to resources, technology, and markets" (Fornes & Mendez, 2018: 60). The official strategy is dubbed as the 1+3+6 strategy as it comprises one plan, three axes (trade, finance, and investment), and six principal areas of engagement (energy and resources, infrastructure construction, agriculture, manufacturing, scientific and technological innovation, and information technologies).

In practice, the rising trade and capital flows have been accompanied by an active diplomacy that aimed at establishing strategic partnerships, which are defined by close cooperation and mutual dialogue. This mechanism reflects its desire to intensify economic cooperation and political relations with the region, but also reflects its strategic goal of enhancing Chinese hard and soft power there in order to elevate China's position in the global power hierarchy (Nye Jr, 2020).

2.2 The EU's win-win partnership: follow the leader?

The EU's aforementioned rapprochement to LAC aligns with its values-based foreign policy (Larsen, 2018). The factual bases can be found in the aims of the Common Foreign and Security Policy, as stated in official documents, namely "preserving peace, strengthening international security, promoting international cooperation and developing and consolidating democracy, the rule of law and respect for human rights and fundamental freedoms." The pursuit of these objectives, however, has followed the EU's specific view of how relations should be conducted and, more importantly, how societies should be structured (Keukeleire & Delreux, 2022). Specifically, the EU has firmly anchored its policies in certain values and their promotion abroad. As Lucarelli & Manners affirm, "this values-based policy has delineated an international actor that has two characteristics, rarely assigned to a traditional state actor: 1) a stabilizing effect in contemporary world politics that Europe derives from its history and its historically-developed and formed values and principles, 2) external relations inspired by an ethics of responsibility towards others" (Lucarelli & Manners, 2006: 16).

On this basis, the EU's new Win-Win partnership (WWP) approaches "raw material-producing countries in a bid to develop new mining projects across the globe and reduce the bloc's dependence on China" (Euractiv, 2023: 1). It is an attempt to counterbalance China's advance in the region, by trying to secure the critical raw materials it needs.⁵ For Latin America, the departure

⁵ In 2022, the European Council adopted the Versailles Declaration, which called to secure EU supply of CRMs, particularly by building on the strengths of the Single Market. Similarly, the European Parliament

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point of this New Agenda is that both regions are essential partners in today's challenging global context. The EU is giving new impetus to the bi-regional partnership with a forward-looking and positive agenda, including the EU and its Member States' renewed high-level political dialogue with the Community of Latin American and Caribbean States (CELAC).

Nevertheless, there is a significant weakness that the EU's policy hasn't yet quite solved and which, in the current times of Western power decline, gains importance. In its rapprochement to LAC, the EU is trying to replicate the mechanisms implemented by China's successful win-win diplomacy, which includes the famous Belt and Road Initiative as its spearhead. The core of the EU's foreign policy is completely opposed to China's and this casts doubt about the WWP's implementation feasibility. Specifically, while at the core of China's South-South cooperation rest non-intervention and respect for national sovereignty, the EU vouches for a values-based relation. Despite the consensus that the promotion of democracy and the respect for human rights should be a main pillar within the international system, in a time of disorder within the international system and in the midst of a sharp crisis the liberal world order is facing, there are rational doubts as to the EU actual possibilities for success with its rapprochement.

Critics from the Global South argue that the postwar international order was founded by Western powers and designed to pursue the latter's interests. Hence, the key values that the EU seeks to promote when conducting interstate relations are still regarded as neocolonialism. Although most nations in the Global South accept democracy as the best system for political organization, there is still a dissent towards Western liberal democracy. Economic dispute has even grown more pronounced in the first two decades of this century, as it is fueled by the significant resource extraction stemming from the commodity boom and the region's discontent with the Western notion of free-market since the late 1990s.

In sum, the 21st Century has seen the emergence of a new actor in town, China, whose approach to conducting relations is non-intervention in domestic affairs and respect for national sovereignty. Emphasizing decolonization and the recovery of the Bandung spirit, China clearly posits that the increase in economic and political relations should not imply the imposition of one's values over the others'. In contrast with the postwar period, today LAC is not exclusively bound to Western policies, as it holds a significant option in its relationship with China, which has become a major economic partner for the region.

2.3 China on the lead: the EU's late response

Just like the EU's renewed approach to LAC, China's main interest for LAC is securing the resources it needs (Shambaugh, 2013). The difference with the EU is that China has taken steady steps on this quest for the past two decades. The increase in China's economic and political presence in LAC has inverted the roles of world powers. Europe's retreat, and the US's to a lesser extent, paved the way for China's SSC. China "acts as a beacon for those who want to achieve independence from the influence of international financial institutions, if not simply the power of US financial sanctions" (Chen, 2017: 32). This subject acquires major importance for progressive or socialist governments, as one of their major objectives is to part ways with the IMF and the Washington Consensus policies.

called for an EU strategy for critical raw materials in its November 2021 resolution. The Conference on the Future of Europe also recommended for the EU to reduce dependence.

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Currently, given the aforementioned retreat policy, the EU can be labeled as a latecomer. Its rapprochement comes at a time when China is the one of the most important economic partners for most countries in the region. As a report from FDI intelligence sums up:

“Compared to the US and the EU, Latin America’s bilateral trade in goods with China grew dramatically in this period, from \$14.6bn in 2001 to \$315bn in 2020 — a 21.5-fold increase since Beijing joined the World Trade Organization... China is also expanding its financial footprint in Latin America. Since 2005, the country’s two main policy banks — China Development Bank and China-Export Import Bank — have provided more than \$141bn in loan commitments to LAC countries and state-owned enterprises; this is more than the World Bank, the Inter-American Development Bank or the Latin American Development Bank. These mainly concern four countries (Argentina, Brazil, Ecuador and Venezuela), which account for almost 93% of the total commitment. Most of these loans were spent on energy (69%) and infrastructure (19%) projects” (fDi Intelligence, 2023: 1)

This came hand in hand with increasing political ties. China’s potential engagement with LAC was originally triggered by competition for diplomatic recognition between China and Taiwan (Wise, 2020), which was then the core reason for China to begin its political involvement in LAC. Its growing global presence changed its objectives and also the forms of its interaction, however. Since the new millennium, political relations with the region grew deeper. Given such a diverse region, China’s engagement is not uniform. In fact,

“politically speaking, China gives priority to the main economic regional players, and this is reflected through its strategic partnerships and comprehensive strategic partnerships. Brazil was the first Latin American country to receive this status, in 1993. It was followed by Venezuela (2001), Mexico (2003), Argentina (2004), Peru (2008), Chile (2012), Ecuador (2015), Uruguay (2016) and Bolivia (2018)” (Bernal-Meza & Xing, 2020: 4)

Latin America’s rising profile in China’s governing councils has drawn its high officials closer to the region (Wise, 2020). This diplomatic policy of political dialogue has always been part of China’s foreign policy, but it has intensified with LAC over the past two decades through two complementary channels, which have seen China increase its participation in regional schemes, whereas most of the US-founded liberal organisations, such as the Organization of American States (OAS) and the Inter-American Development Bank (IADB), or the newly founded schemes such as the Community of States of Latin America and the Caribbean (CELAC), had originally sought to recover a more autonomous voice vis-à-vis the US.

Moreover, current data about economic relations show a clear Chinese advantage. In roughly two decades, in what has been called ‘El desembarco chino’ (the Chinese arrival) (Agramont & Bonifaz, 2018), this nation has managed to become one of the major trading partners for the majority of the countries in the region. Regarding minerals, China is the largest buyer of copper and iron, two minerals that are highly demanded for the EU and that will acquire.

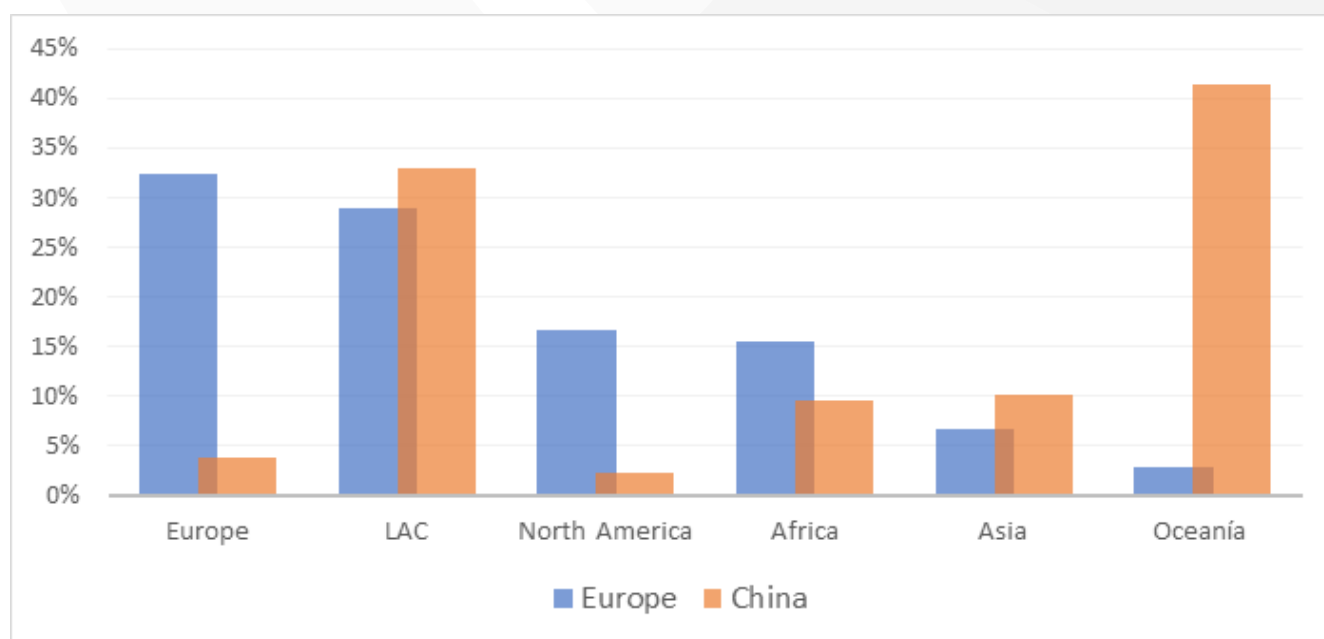
In light of the foregoing, it comes as no wonder that Europe, “has grown increasingly nervous as China tightened its stranglehold on global raw materials value chains and related green technologies such as solar panel manufacturing” (Euractiv, 2023: 1) Despite European nations still being the main investors in the region, their reputation as a trustworthy partner has been seriously questioned and constitutes a major obstacle that must be overcome. It can’t be neglected that it was not until Russia’s attack on Ukraine and the pressures that the EU is facing regarding key inputs for its industry, that the Global South regained importance for the EU.

3. THE STRUGGLE FOR LATIN AMERICAN NATURAL RESOURCES

Besides the dispute at the narrative level aforementioned, in practice, both the EU and China import vast quantities of minerals from all over the world. Still, the main aim of the current section is to understand the huge competition between both for Latin American natural resources. Specifically, this refers to the ores and concentrates, listed in section 26 of the Harmonized System, also known as large-scale mining. The methodology begins with a general overview of aggregated data and then focuses on specific products that are identified as the most contentious due to the rising demand for raw materials from both China and the EU.

As illustrated in Figure 1, imports of these ores and concentrates of both China and the EU are not geographically diversified but concentrated in a few regions. For China, Oceania is the most significant partner, accounting for over 40% of imports, while Asia and Africa each account for less than 10%. For the EU, the largest source of mineral exports is Europe itself, making up more than 30%, with North America and Africa each representing roughly 15% of the total.

Figure 1: purchases of minerals (section 26 HS) according to continent, average 2019-2023, in percentage



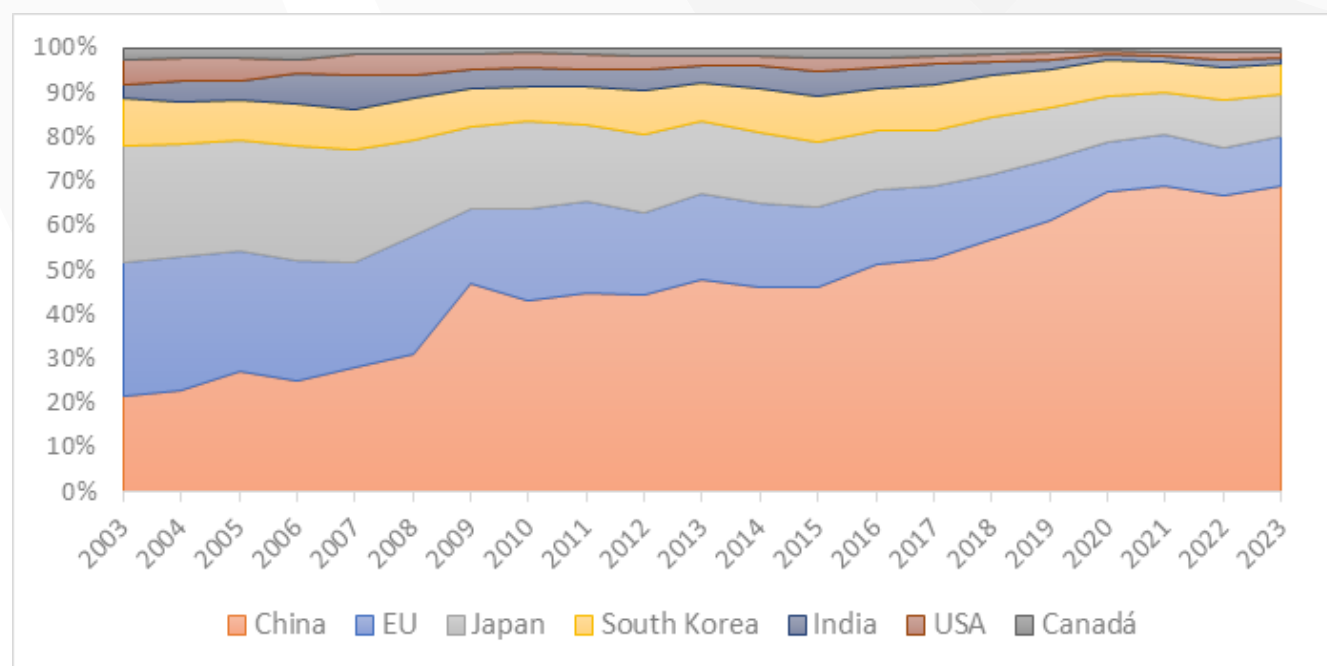
Source: author's own elaboration with data from wits.worldbank.org

The key point of interest in this analysis is the crucial role of Latin America. As Figure 1 clearly shows, this is the only region with a clash of interests given that both China and the EU heavily depend on its raw materials. Specifically, LAC accounts for 32% of China's total imports and 29% of the EU's, making it the second most important region for both.

Based on this, the next question is the extent to which China and the EU secure Latin American mineral exports. The results presented in Figure 2 are conclusive: China has secured the majority of LAC raw materials and enjoys a much more privileged position than the EU. Specifically, during the 21st century, China has significantly increased its share of Latin American and Caribbean (LAC) mineral exports, rising from 23% in 2003 to approximately 65% in 2022. This increase has come at the expense of two main trading partners, the EU and Japan. In 2003, both the EU and Japan each accounted for nearly 30% of LAC mineral exports, but by 2022, their shares had fallen to less than 10% each. Additionally, the US has never been a

major market for LAC minerals, and its share decreased further from less than 5% in 2003 to 1% in 2022. Notably, the 2008-2009 financial crisis had a significant impact, boosting China's share by more than 15 percentage points in just one year.

Figure 2: Latin America, most important partners for mineral exports, in percentage, average 2019-2023

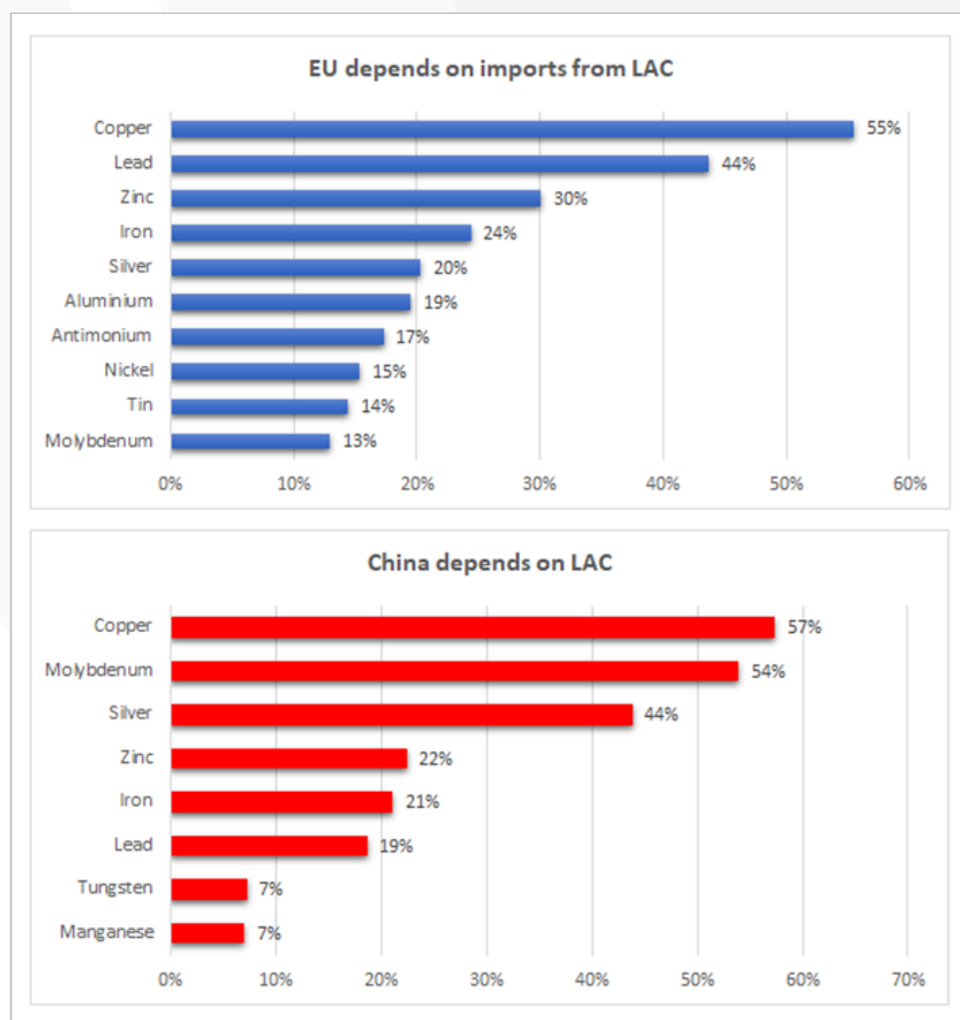


Source: author's own elaboration with data from wits.worldbank.org

To complement the analysis based on aggregated data, the next step is to identify the most sensitive products, i.e., minerals on which China and the EU have a strong dependence. As Figure 3 reveals, there are several products on which both largely rely, although it is also noteworthy that the EU has a far greater dependence on LAC minerals than China⁶. Given that LAC has the largest deposits of several minerals, it is unsurprising that China and the EU compete to secure these resources. For the EU, there are 10 products for which it has more than 15% import dependence, and four products for which this dependence exceeds 20%. Two products, in particular, show extremely high dependence: copper at 55% and lead at 44%. For China, while dependence exists, it is lower than the EU's, indicating that China sources these minerals from other regions as well. There are four products for which China has more than 20% dependence, with copper being the most significant at 44%.

⁶The complete list of products can be found in Annex 9

Figure 3: Import dependence and market share, EU and China with Latin America, in percentage, selected ores and concentrates, 2022.

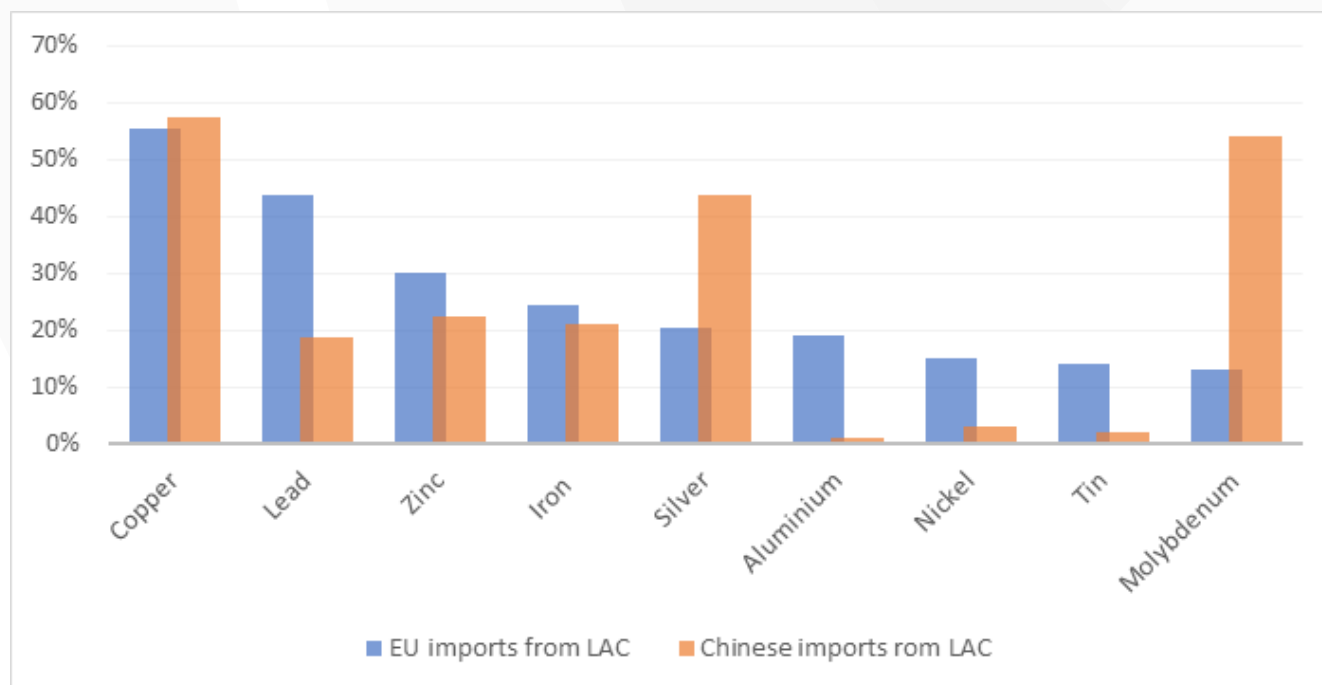


Source: author's own elaboration with data from wits.worldbank.org

Based on the foregoing, Figure 3 highlights the nine most critical mineral ores where the competition between the EU and China is most evident: copper (2603), lead (2607), zinc (2608), iron (2601), and aluminum (2606), nickel (2604), tin (2508) and molybdenum (2613). Copper stands out as the most significant mineral for future competition over LAC resources. Both China and the EU have a dependence on copper exceeding 50%, and this mineral is crucial for new green technologies.

When considering current imports from LAC, the EU's weaker position compared to China becomes evident. Figure 4 shows that China currently buys more than 60% of the available copper production from LAC, while the EU accounts for roughly 11%. This indicates that although both China and the EU rely heavily on LAC copper, China has secured the lion's share of production. This success results from a strategy implemented since the beginning of the 21st century, where China sources copper primarily from Chile and Peru (Annex 14). China has steadily increased imports from these nations.

Figure 4: EU and China import dependence from LAC, selected minerals, average 2019-2023, in percentage, according to value



Source: author's own elaboration with data from wits.worldbank.org

To avoid bias in the analysis, it is essential to consider the true size of China's and the EU's manufacturing bases. By 2019, China's manufacturing GDP was larger than that of the US, the EU, and Japan combined (Baldwin, 2024). A key question is how the EU's imports compare to China's relative to their sizes, particularly for the five products of interest. Table 1 shows that in 2023, the EU's imports of copper and iron ore were only 17% and 10% of China's imports, respectively. In terms of value, China imported \$60 billion worth of copper, while the EU imported only \$10 billion. For iron ore, China's imports reached \$133 billion, whereas the EU purchased \$12.7 billion, less than 10%. China secured \$89 billion worth of imports from Oceania alone, followed by \$32 billion from LAC.

This dominance is unsurprising given that China has become the largest manufacturer of low and medium-tech products, which are intensive in these minerals. Over the past two decades, China has consolidated a strong smelting industry, necessitating an aggressive geopolitical strategy to secure ore imports worldwide. Data in the annexes show that China's imports surpass those of the EU in every region, with the most significant differences in Africa and LAC, highlighting China's successful efforts.

Conversely, the EU's imports of lead and zinc ores are 74% and 88% of China's imports, respectively. While China has heavily invested in achieving efficiency in smelting, the EU still provides strong competition. Germany, Belgium, and the Netherlands are key players for lead, while Belgium, Spain, Finland, the Netherlands, and France are important for zinc.

Table 1: Imports of selected minerals, China and EU, in million \$us.

| Code | Product | China | EU | Difference |
|------|---------------------|-------------|------------|------------|
| 2603 | Copper ores | 60,671,040 | 10,327,912 | 17% |
| 2607 | Lead ores | 1,683,931 | 1,244,651 | 74% |
| 2608 | Zinc ores | 4,019,391 | 3,554,847 | 88% |
| 2601 | Iron ores | 133,756,306 | 12,735,726 | 10% |
| 2616 | Precious-metal ores | 9,515,482 | 2,708,309 | 28% |

Source: author's own elaboration with data from wits.worldbank.org

The EU's weak position is further confirmed by analyzing potential sources for diversification. Regarding LAC copper exports, China controls 70% of these exports. The next significant partners for LAC exports are Japan, South Korea, while Germany and Spain rank fourth and sixth, respectively. Besides LAC, the EU sources its copper from within the EU (11%), North America (11%), Asia (11%), and Oceania (3%), where China is also a major buyer. Although China's absolute copper imports are six times larger than the EU's, a percentage analysis is necessary to understand the EU's vulnerability in meeting its natural resource needs.

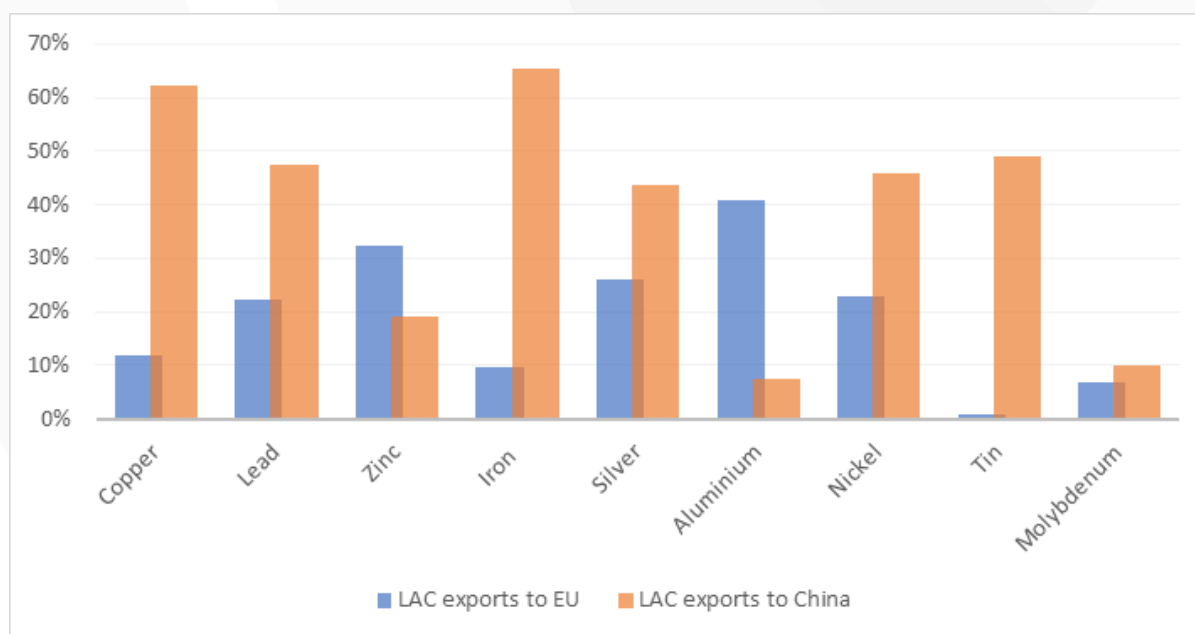
In complement, for other minerals in Figure 4, aluminum can be discarded, but the remaining, four of them show significant competition between China and the EU, warranting in-depth analysis. After copper, lead ore presents a high vulnerability for the EU. As Figure 5 indicates, China has already secured 61% of LAC lead exports, up from 50% in 2003. Additionally, besides China, several Asian nations such as Malaysia, Bahrain, Japan, and South Korea also have larger purchases from LAC than the EU.

For zinc ores (2608 HS) and iron, the competition is medium-scale, as both the EU and China have diversified their purchases, with each depending on LAC for about 25% of their supply. The EU sources its iron imports from within the EU (35%), North America (21%), and Africa (13%), while its zinc imports primarily come from within the EU (40%). However, China's share of LAC iron exports exceeds 60%, highlighting the EU's vulnerability in this area. In contrast, for zinc, China purchases less than 20% of LAC exports, mainly sourcing from Oceania and Africa, giving the EU a stronger position globally. The EU has diversified its zinc sources to regions that do not directly compete with China's main suppliers, securing 31% of LAC zinc exports compared to China's less than 20%. Aluminum shows low vulnerability for the EU. Although the EU relies on LAC for 20% of its aluminum imports, competition with China is low. The EU has secured 40% of LAC aluminum exports, while China sources its aluminum primarily from Africa and Oceania.

Finally, for the remaining four minerals it can be argued that they are important to the EU despite their low vulnerability for the EU. Aluminum, nickel and tin show a medium dependence by the EU (between 14% ad 20%) but with one specific characteristic: Chinese imports from the region are low, meaning a low future competition with this nation. However, if we add data from Figure 5 to the analysis, it can be seen that there are barely any possibilities to increase purchases of nickel and tin given that China has secured the majority of the production. In turn, aluminum shows a strong position of the EU given that it has secured 40% of LAC exports.

Molybdenum deserves a special analysis. As seen in Figure 5, China has a large dependence on imports from LAC (52%) but in turn has secured a low share of LAC exports (10%). Considering that the EU only buys 8% of LAC exports, it has to be noted that the main buyers of this product are the US, Japan, and South Korea. Regarding production, there are two main exporters: Chile with 62% of LAC total, and then Peru with 35%.

Figure 5: actual share of LAC exports, selected minerals, average 2019-2023, in percentage, according to value



Source: author's own elaboration with data from wits.worldbank.org

4. ENERGY TRANSITION AND THE NEW MINING: OPPORTUNITIES FOR A RENEWED PARTNERSHIP

4.1 Chapter 28 and chapter 25 HS

The global mining industry is becoming increasingly significant due to ambitious energy transition plans in Europe, the United States (US) and China, aimed at limiting global temperature rise. As these regions transition from fossil fuels to renewable energy, the demand for critical raw materials needed for green technologies is rising sharply. Both Europe's Green Deal and the United States' clean energy initiatives underscore the importance of securing a stable supply of these minerals, driving greater exploration, investment, and geopolitical interest in mining activities worldwide.

This renewed focus on mining is largely due to the resource-intensive nature of the green transition, which requires a diverse array of minerals. Renewable energy technologies, such as wind turbines, solar panels, and electric vehicles—central to achieving carbon neutrality—are heavily reliant on materials like lithium, cobalt, nickel, rare earth elements, and others for their production and operation. For example, lithium and cobalt are critical for high-capacity batteries, rare earth elements are vital for efficient wind turbine magnets, and silicon is essential for solar photovoltaics. These minerals offer unique properties that enhance the performance and efficiency of green technologies.

The demand for these previously underutilized or neglected minerals has surged, driven by the need to develop and deploy sustainable energy solutions at a large scale. This underscores the critical role these diverse minerals play in enabling the global transition towards a low-carbon economy, highlighting the intricate link between mineral availability and the advancement of clean energy technologies.

However, for these ‘new mining’ there are additional geopolitical risks for the EU that go beyond the quest for natural resources in the Global South. On this matter, one major issue is the dependence it has on China. It is a known fact that China is one of the leading producers and refiners of several critical raw materials that are essential for its industrial and technological sectors associated with the green transition and the key concern for European governments is its growing dependence (CITA). China has emerged as the dominant global supplier of key minerals such as rare earth elements, lithium, and cobalt, which are vital for the production of high-tech products, renewable energy technologies, and electric vehicles (Evans & Humphrey, 2019). The EU's reliance on China for these materials not only raises economic concerns but also strategic and geopolitical issues, as disruptions in supply chains could impact the EU's technological advancement and energy transition goals (European Commission, 2020).

To mitigate this dependence, the EU is taking efforts to diversify supply sources and invest in recycling and sustainable mining practices within the EU (Blengini et al., 2020). However, achieving self-sufficiency remains a significant challenge due to the complexity and capital-intensive nature of extracting and processing these critical raw materials (Binnemans et al., 2018) and one clear option to reduce its vulnerability is to diversify sources. This is where LAC acquires a renewed importance. Beyond the historical significance of this region for the provision of large-scale minerals, as analyzed in the previous section, there is a huge potential for the provision of a wide variety of raw materials to reduce dependence on China.

Accordingly, this section will focus on the other two chapters of the harmonized system (HS) that comprises products that are relevant to the energy transition:

- Chapter 25: Salt; Sulphur, earths and stones; plastering materials, lime and cement
- Chapter 28: Inorganic Chemicals; Organic Or Inorganic Compounds Of Precious Metals, Of Rare-Earth Metals, Of Radioactive Elements

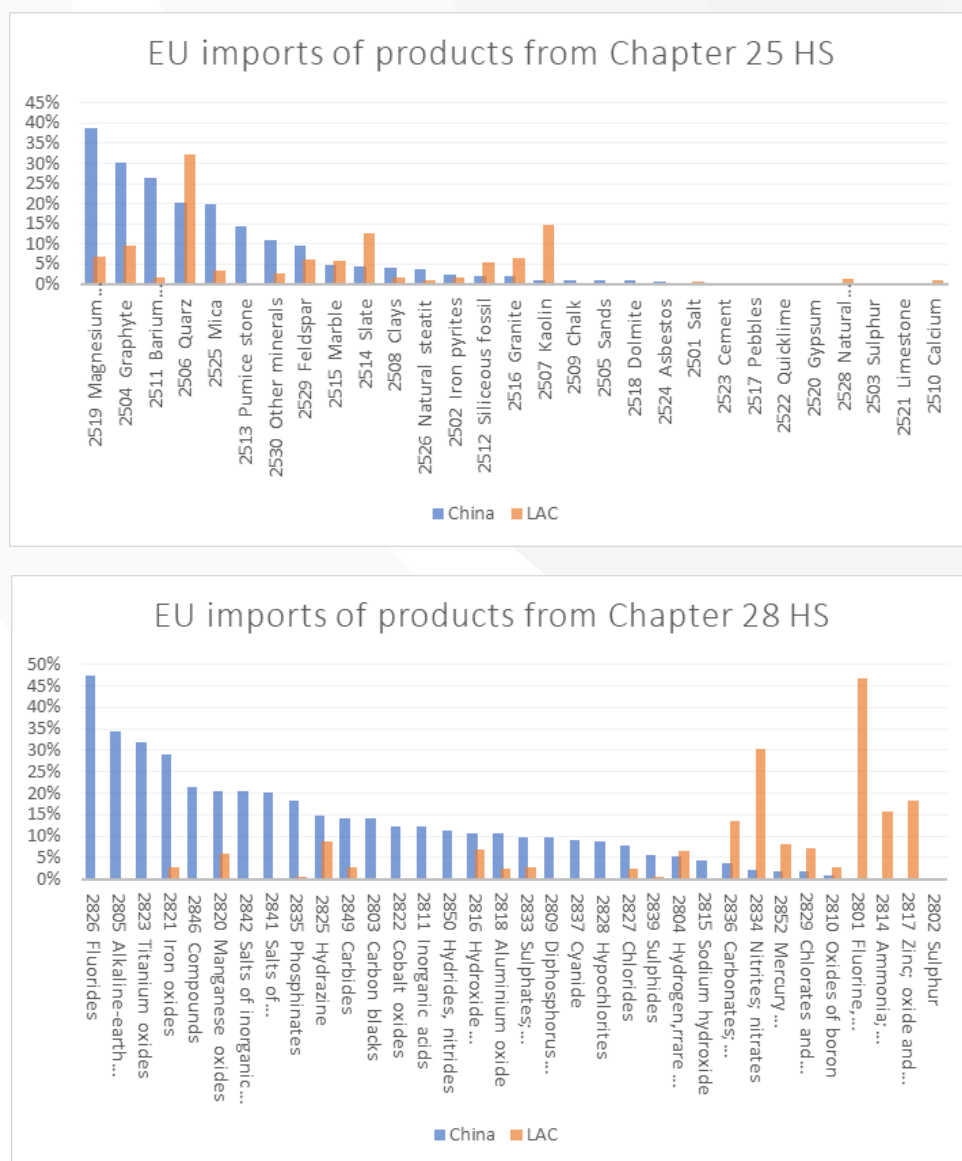
The data analysis suggests, as can be seen in Figure 6, that the EU has a significant dependence on China for the acquisition of several materials and natural resources included in both chapter 25 and 28. Still, deepening the scrutiny by including China and LAC as providers, depicts two noteworthy characteristics. First, for chapter 25, at a very large extent, the EU buys the same products from both China and LAC; while for chapter 28, there are only a few coincidences and the EU relies on specific products from each region. Second, the dependence on chapter 28 is larger than on chapter 25. There are only seven products with imports that have a dependence of 10% or more, while for chapter 28 they ascend to 20. In fact, there are 8 products in chapter 28 for which the EU has medium-high import dependence (more than 20%).

There are several reasons that explains the EU's larger dependence for materials in chapter 28.

- **Raw material availability:** Inorganic chemicals often depend on specific raw materials that may not be abundantly available within the EU.
- **Global Supply Chains:** The global chemical industry is highly integrated, and many of the chemicals in Chapter 28 are produced in countries with established chemical industries, such as China and the United States. These countries benefit from economies of scale and lower production costs, making it more efficient for the EU to import these chemicals
- **Environmental Regulations:** The EU has stringent environmental and safety regulations, which elevate the costs of the production of certain chemicals.

⁷ The complete list can be found in Annex 10

Figure 6: EU, imports of Harmonized System Chapter 25 and Chapter 28, including imports from LAC, according to value, 2023, in percentage, sorted by reliance on imports from China



Source: author's own elaboration with data from wits.worldbank.org

Given the above, the key question revolves around the diversification opportunities the EU can pursue in Latin America and the Caribbean (LAC). To explore this, the analysis examines not only EU imports from China and LAC (demand) but also LAC's current exports to both China and the EU (supply). The goal is to assess the EU's current position in LAC compared to China.

As shown in Table 2, the findings are starkly different for chapters 25 and 28. For chapter 25, the products on which the EU is heavily dependent—such as magnesium, graphite, barium, quartz, and mica—are being exported to China in significantly larger quantities. While the EU imports these materials, China's share is substantially higher, mirroring the trends seen with large-scale

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minerals in the previous section. For example, in the case of magnesium, the EU depends on China for 39% of its imports. If the EU aims to increase its purchases, it faces the challenge that China already buys 43% of LAC's exports, compared to the EU's 14%.

Table 2: EU dependence on China and LAC for products from chapter 25 and 28 HS, in percentage, 4-digit level HS, in value, average 2019-2023

| Chapter | Product | EU imports | | LAC exports | |
|---------|---------------------------|------------|-----|-------------|------|
| | | China | LAC | China | EU27 |
| 25 | 2519 Magnesium carb. | 39% | 7% | 43% | 14% |
| | 2504 Graphite | 30% | 9% | 18% | 7% |
| | 2511 Barium (barytes) | 26% | 2% | 12% | 3% |
| | 2506 Quartz | 20% | 32% | 55% | 11% |
| | 2525 Mica | 20% | 3% | 14% | 25% |
| | 2513 Pumice stone | 14% | 0% | 24% | 2% |
| | 2530 Other minerals | 11% | 3% | 16% | 53% |
| | 2529 Feldspar | 9% | 6% | 20% | 8% |
| 28 | 2821 Iron oxides | 29% | 3% | 0% | 21% |
| | 2820 Manganese oxides | 21% | 6% | 0% | 43% |
| | 2841 Salts of oxometallic | 20% | 0% | 9% | 27% |
| | 2825 Hydrazine | 15% | 9% | 5% | 26% |
| | 2849 Carbides | 14% | 3% | 0% | 29% |
| | 2833 Sulphates, peroxides | 10% | 3% | 45% | 5% |

Source: author's own elaboration with data from wits.worldbank.org

4.2 Critical raw materials

In complement to the general analysis of the previous section, it is also important to understand opportunities for diversification for specific products that are considered critical for the EU. The basis for this analysis is the Critical Raw Material report of the EU Commission⁸. This goes beyond classical minerals of chapter 26 and includes various products also from chapter 25 and 28⁹. The methodology used has two different steps in order to determine the importance of LAC for the EU:

1. The first step, just as in the previous section, aims to determine the products on which the EU has the largest dependence on China and for which LAC could constitute a medium-term option for diversification.
2. In complement the methodology aims to find the products on which the EU is highly reliant on LAC which constitute a main motive for closer relations.

⁸ The latest update was published in 2023

⁹ To understand how products were selected and why the EU considers them critical, refer to the Study on the critical raw materials for the EU 2023 published by the European Commission
<https://op.europa.eu/en/publication-detail/-/publication/57318397-fdd4-11ed-a05c-01aa75ed71a1>

4.2.1 EU's dependence on China and opportunities of diversification

In the first step of the analysis, shown in Table 3, only 8 out of the 33 critical raw materials (CRM) meet both criteria: the EU's dependence on Chinese exports and the availability of diversification opportunities from Latin America. The three most significant materials are magnesium, baryte, and graphite, with the EU's dependence on China at 36%, 33%, and 23%, respectively. For magnesium, Brazil offers a strong diversification potential, currently accounting for just 6% of EU imports, with Austria, Germany, and the Netherlands as primary buyers. As the world's second-largest exporter of magnesium, after China and the Netherlands, Brazil has significant potential for increasing its trade share. Similarly, for natural graphite, the EU could further reduce its reliance on China by boosting imports from Brazil, which currently makes up 12% of EU imports. Brazil, the third-largest global exporter of graphite, already supplies major markets like the US, Poland, Germany, and Belgium. Lastly, while the EU relies heavily on China, Morocco, and Türkiye for baryte sulfate, diversification opportunities exist in Latin America, particularly through Mexico and, to a lesser extent, Bolivia. Although Mexico's current exports to the EU account for only 1% of EU imports, there is potential for growth.

Beyond these three key materials, there are four other products where the EU's reliance on China is smaller but where Latin America still offers diversification opportunities. For example, 12% of the EU's lithium oxide imports come from China, while Chile contributes 8%, indicating room for diversification. Arsenic sulfides follow a similar trend, with the EU relying on China for 9% of its imports while Mexico provides 3%. Though small, these shares represent clear opportunities for reducing dependence on China. Similarly, the EU imports only 5% of its fluorspar from China, while 11% comes from Mexico. In the case of bismuth, China accounts for just 4% of EU imports, while Chile supplies a significant 33%. Vanadium oxides also emerge as critical, though for different geopolitical reasons. While the EU's dependence on China is low (4%), it remains highly reliant on Russia. Since 2023, the EU has been working to diversify its vanadium oxide sources, increasingly turning to Brazil.

Table 3: EU critical raw material imports, selected products, per value, in percentage.

| Category | Product | Partner | Dependence | Main trade partners |
|-------------|----------------------|---------|------------|--------------------------------|
| Industrial | 2511 Baryte | China | 33% | China, Morocco, Türkiye |
| | | Mexico | 1% | |
| | 2504 Graphite | China | 23% | China, South Korea, Madagascar |
| | | Brazil | 12% | |
| | 2529 Fluorspar | China | 5% | Türkiye, Mexico, China |
| | | Mexico | 11% | |
| Iron Alloys | 282530 Vanadium | China | 4% | Russia, Brazil, China |
| | | Brazil | 11% | |
| Non-ferrous | 253090 Arsenic | China | 9% | USA, China, Russia |
| | | Mexico | 3% | |
| | 2519 Magnesium | China | 36% | China, Türkiye, Brazil |
| | | Brazil | 6% | |
| | 282510 Lithium Oxide | China | 12% | China, South Korea, UK |
| | | Chile | 8% | |
| | 2834 Bismuth | China | 4% | Chile, Israel, Jordan, China |
| | | Chile | 33% | |

Source: author's own elaboration with data from wits.worldbank.org

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4.2.2 LAC strengths regarding CRM: opportunities for a renewed partnership

In complement, besides the opportunities for reducing dependence on China, this section addresses the importance of LAC as a source for several CRM, much needed by the EU. Specifically, there are 13 products out of the 33 of EU Commission's list that can be found in LAC. These products belong to three of categories of the CRM list and their export can be mainly explained due to:

1. Vast deposits found in their territory (hydrothermal veins associated with volcanic activity, granitic, pegmatitic and sedimentary rocks)
2. Low and medium-tech required to their processing

Then, following data on Table 4, it can be argued that Latin America holds a crucial place in Europe's efforts to obtain vital raw materials, which are necessary for various strategic industries, such as renewable energy, electronics, and defense. For instance, countries like Chile, Peru, and Brazil are among the top global exporters of essential materials like, lithium carbonate, and niobium, which are vital for batteries, electric vehicles, and other green technologies. Specifically, Chile and Argentina's leadership in lithium production aligns with Europe's push for electrification and energy storage, reducing its dependence on other regions.

Furthermore, Latin American nations are significant suppliers of other materials critical to the EU's industrial base, including fluor spar (Mexico), natural graphite (Brazil), and antimony (Bolivia). Brazil's dominance in niobium and tantalum production further strengthens Latin America's position as a critical partner, as these materials are vital for the aerospace and electronics industries. With the mounting global competition for these raw materials, forging strong trade relations with Latin American countries provides the EU with a more diversified and resilient supply chain, enhancing its strategic autonomy and reducing the risks associated with over-reliance on single suppliers like China or Russia.

| Category | Code | product | Main exporters in the world |
|--------------------------------------|--------|--------------------|---|
| Industrial and construction minerals | 252922 | fluorspar/Feldspar | South Africa, China, México, Mongolia |
| | 281000 | boron/borate | USA, Chile, Russia, Peru, |
| | 250490 | natural graphite | China, Tanzania, USA, Brasil, Mozambique |
| | 251010 | phosphate rock | Jordan, Morocco, Perú, Togo, Egypt |
| Iron and ferro alloy metals | 261590 | niobium | Rwanda, Brazil, Mozambique, Congo, |
| | 261590 | tantalum | Rwanda, Brazil, Mozambique, Congo, |
| | 261100 | tungsten | Bolivia, South Korea, Russia, Australia, US |
| Other non-ferrous metals | 260600 | aluminum/bauxite | Guinea, Australia, Brasil, Türkiye, Guyana |
| | 260600 | copper* | Chile, Perú, Indonesia, Australia, México |
| | 283691 | Lithium carbonate | Chile, China, South Korea, Argentina, USA |
| | 810411 | magnesium | China, Israel, Türkiye, Brasil, Russia, |
| | 280469 | silicon metal | China, Brasil, Canadá, Australia, Malaysia |
| | 261710 | antimony ores | Rusia, Australia, China, Bolivia, Türkiye |

Source: author's own elaboration with data from wits.worldbank.org

It is important to highlight that, out of the 13 products listed in Table 4, two stand out due to their current relevance given that the EU has already significant imports. The most important product is lithium carbonate, driven by large imports from Latin America. Purchases from Chile account for 65% of the EU's total imports of lithium carbonate, followed by Argentina at 6%, and China at 2%. The second key product is antimony, where imports from Bolivia represent 20% of the EU's total. This provides an opportunity for diversification away from Türkiye, the EU's primary supplier, which accounts for 72% of its antimony imports.

CONCLUSIONS

This paper has shown that the European Union's renewed rapprochement with Latin America and the Caribbean (LAC) is fundamentally driven by geopolitical imperatives and the urgent need to secure access to critical raw materials for the energy transition. The EU's dependency is particularly acute for minerals such as copper, lead, lithium, and zinc, where import reliance exceeds 40–50%, and LAC stands out as a region with abundant reserves. For instance, LAC supplies over 60% of the EU's lithium carbonate imports, and over 20% of its antimony—a material largely sourced from Bolivia. These figures underscore the strategic value of LAC for Europe's green industrial strategy.

However, the EU's effort to reposition itself in the region faces a structural disadvantage: China's longstanding and deeply institutionalized presence. Through its South-South Cooperation framework, China has not only secured the lion's share of LAC mineral exports (65% in 2022) but also built enduring political and financial alliances. In contrast, the EU's "Win-Win Partnership" remains largely aspirational and lacks the financial scale and ideological flexibility of China's approach.

Given this context, the EU's current engagement strategy falls short of matching the geopolitical depth and economic entrenchment of China in the region. If the EU seeks to reduce its vulnerability and secure a resilient supply of raw materials, it must significantly increase its commitment—politically, diplomatically, and financially. A transformative policy shift is necessary, one that includes substantial investment funds, long-term partnerships, and a more pragmatic diplomatic posture that resonates with the Global South's development priorities.

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