Securing Europe's Critical Minerals:

Leveraging the EU-Ukraine Partnership Amidst US Competition

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Contents

1. Overview

The European Union (EU) is currently at a critical juncture in shaping its strategic autonomy regarding critical minerals and rare earth elements (REEs). Following the 30 April 2025 signing of the US-Ukraine minerals deal that formalises the United States' (US) access to Ukrainian critical minerals, the EU must urgently respond to ensure its strategic and economic interests are safeguarded rather than sidelined.[1] The EU's 2021 partnership agreement on raw materials with Ukraine remains a significant tool for boosting collaboration and aligning investment and regulatory considerations between both parties.[2]

Ukraine has untapped reserves of REEs and minerals vital to diverse economic sectors, particularly defence, automotive, and renewable energy.[3] Before the Russian invasion in 2022, significant reserves of iron, coal, uranium, and REEs were identified across Ukraine.[4] Nevertheless, these resources have been predominantly underexploited due to limited foreign investment, outdated infrastructure, and persistent administrative and legal obstacles.[5] These factors are further exacerbated as some of these REEs and minerals are located in contested or occupied territories.[6]

Critical minerals are crucial for Ukraine's economic recovery and can support the EU's energy independence and its transition towards a climate-neutral economy by 2050.[7] There is an increasing demand for minerals, mainly graphite (26-fold), lithium (21-fold), and REEs (7-fold), driven by the shift to renewable energy sources (RES) technologies and higher demand in electronics, aerospace, and defence applications.[8] Ukraine's ability to provide these minerals is vital for the EU, which is striving to diversify its supply chains and minimise reliance on countries like China.[9]

The European Commission (EC) highlighted Ukraine as one of the EU's top promising suppliers of titanium and a potential source of over 20 critical raw materials.[10] Although

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[1] The Cabinet of Ministers of Ukraine, *Agreement between the Government of Ukraine and the Government of the United States of America on the Establishment of a United States-Ukraine Reconstruction Investment Fund*, (April 2025), https://www.kmu.gov.ua/storage/app/uploads/public/681/33c/e8f/68133ce8f2e82842702204.pdf

[2] European Commission, *Memorandum of Understanding between the European Union and Ukraine on a Strategic Partnership on Raw Materials*, (July 2021), https://ec.europa.eu/docsroom/documents/46300;

[3] Dentons, *Ukraine's Critical Minerals: A Strategic Asset for Global Supply Chains*, (August 2024), https://www.dentons.com/en/insights/articles/2024/august/20/ukraine-critical-minerals, N. Katser-Buchkovska, *The Future of Critical Raw Materials: How Ukraine Plays a Strategic Role in Global Supply Chains*, World Economic Forum, (July 2024), https://www.weforum.org/stories/2024/07/the-future-of-critical-raw-materials-how-ukraine-plays-a-strategic-role-in-global-supply-chains/

[4]. A. Liepins, *Ukraine's Resources. Critical Raw Materials*, NATO Energy Security Center for Excellence (December 2024), https://www.enseccoe.org/publications/ukraines-resources/

[5] European Commission, *Ukraine 2024 Report*, https://enlargement.ec.europa.eu/document/download/1924a044-b30f-48a2-99c1-50edeac14da1_en?filename=Ukraine%20Report%202024.pdf; G. Kantchev, *Extracting Ukraine's Minerals Won't Be Easy. Getting Near Them Will Be Even Harder*, Wall Street Journal, (February 2025), https://www.wsj.com/world/europe/extracting-ukraines-minerals-wont-be-easy-getting-near-them-will-be-even-harder-e98cad54

[6] J. Steinlein, *Ukraine's Resources Mostly Hard to Access or Needed at Home,* Euractiv (February 2025), https://www.euractiv.com/section/eet/news/ukraine-raw-materials-rare-earths-minerals/

[7] European Parliament, *Securing Europe's Supply of Critical Raw Materials*, (2023), https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/739394/EPRS_BRI(2023)739394_EN.pdf

[8] E. Onstad, *In Race to Regain Rare Earth Glory, Europe Falls Short on Mineral Goals*, Reuters, (June 2024), https://www.reuters.com/markets/commodities/race-regain-rare-earth-glory-europe-falls-short-mineral-goals-2024-06-27/; European Commission, *Supply Chain Analysis and Material Demand Forecast in Strategic Technologies and Sectors in the EU – A Foresight Study*, (March 2023), https://publications.jrc.ec.europa.eu/repository/handle/JRC132889

[9] European Union, *Critical Raw Material Act*, (2024), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202401252

[10] European Commission, *Questions and Answers on the European Critical Raw Materials Act*, (March 2023), https://ec.europa.eu/commission/presscorner/detail/en/qanda_23_1662

the country still lacks a practical regulatory framework that complies with stringent EU standards, the 2021 partnership agreement can be enhanced to deepen mutually beneficial cooperation for the EU and Ukraine.

This renewed focus on leveraging Ukraine's rich mineral resources also aligns with the EU's objective of minimising its reliance on China and other countries for critical raw materials required for a sustainable energy transition and their use for defence and aerospace applications.[11] The EU should emphasise the importance of collaborating with Ukraine on mineral extraction and processing, as the demand for critical minerals has become increasingly crucial.

This approach could provide fertile ground for increased European investment.[12] By positioning itself as a supportive partner in Ukraine's resource development, the EU can secure the essential materials needed for its strategically critical industries and help Ukraine strengthen its economy. This cooperative strategy could create a win-win scenario, benefiting the EU's strategic interests and Ukraine's path toward more significant recovery and integration into the European economy.

This report examines the current state of the EU's mineral needs and objectives. It briefly examines its latest partnerships with several third countries and compares them to EU-Ukraine cooperation, identifying key gaps and opportunities. It also discusses how the recently signed US-Ukraine minerals deal could impact Ukraine's relations with the EU and provides recommendations on advancing the current collaboration on raw minerals between Ukraine and the EU.

This report is based on a review and analysis of primary (e.g., laws and regulations) and secondary (e.g., think tank reports, various mineral assessments, and official publications from the Ukrainian, EU, US, and other sources) data resources.

2. Importance of minerals and benefits of intensified EU engagement with Ukraine

2.1 Background

Over nearly three decades, the EU has launched several initiatives to ensure efficient and sustainable access to critical raw materials, acknowledging their crucial role in driving economic growth.

Starting with the launch of the 2008 Raw Materials Initiative, which focused on a three-pillar approach of domestic production, circularity, and more diverse global supplies of raw materials, the EU later introduced other important initiatives (e.g., European

[11] F. Chee and P. Blenkinsop, *EU Agrees Mineral Supply Targets to Cut Reliance on China*, (November 2023), https://www.reuters.com/sustainability/eu-set-okay-rules-secure-critical-raw-materials-eu-official-says-2023-11-13/ ; See (n8) and Ibid.
[12] S. Starcevic, *EU Offers its Own 'Win-Win' Minerals Deal to Ukraine*, Politico, (February 2025), https://www.politico.eu/article/critical-minerals-rare-earths-deal-eu-not-donald-trump/

Innovation Partnerships on Raw Materials and Critical Raw Materials Lists), focusing on identifying supply risks and enhancing innovations.[13]

The launch of Circular Economy Action Plans in 2015 and the Green Deal in 2019 further stipulated the importance of raw materials in sustainable product design. It also fuelled the development of green technologies, particularly wind turbines and batteries, as part of the EU's efforts to achieve its broader sustainability and climate objectives.[14]

Subsequently, between 2020 and 2025, the EU has focused on decreasing dependency on imports of raw materials from countries like China and enhancing supply chain resilience. During this period, the EU launched the Strategy on Raw Materials, the Action Plan on Critical Raw Materials, the European Raw Materials Alliance and the Critical Raw Material Act (CRMA).[15] They concentrated on detailed supply objectives, prioritised strategic raw materials, and streamlined permitting processes for key projects that support the EU's sustainable objectives in the automotive, electronics, industrial, defence, and other crucial economic sectors.[16] In particular, CRMA set the EU's capacity objectives to achieve 10% extraction, 40% processing, and 15% recycling of raw materials inside the EU by 2030.[17] Building upon previously introduced strategic documents (e.g., A European Strategy on Raw Materials), it reiterated the projected increase in demand for numerous crucial minerals, particularly cobalt and lithium.[18] CRMA also emphasised the need to ensure that supplies of REEs and essential minerals do not exceed 65% from third countries in every instance. It also mentioned the need for special consideration of collaboration with countries that have strategic partnerships with the EU, as they provide greater assurance regarding supply chain challenges.

2.2 The state of the current EU minerals needs

Today, the EU is heavily dependent on importing a broad variety of critical minerals from several countries, predominantly China (e.g., REEs, lithium, cobalt, and nickel) and several from Turkey (e.g., borate), Congo (e.g., cobalt), South Africa (e.g., Iridium), Russia (e.g., palladium), and Iran (e.g., strontium).[19]

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[13] European Commission, *The European Innovation Partnership (EIP) on Raw Materials,* (2025), https://single-market-economy.ec.europa.eu/sectors/raw-materials/eip_en; European Commission, *Critical Raw Materials*, (2025), https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en

[14] Council of the European Union, *European Green Deal, (2019), https://www.consilium.europa.eu/en/policies/european-green-deal/#what* ; European Commission, *First Circular Economy Action Plan*, (2025), https://environment.ec.europa.eu/topics/circular-economy/first-circular-economy-action-plan_en#:~:text=In%202015%2C%20the%20European%20Commission,growth%20and%20generate%20new%20jobs.

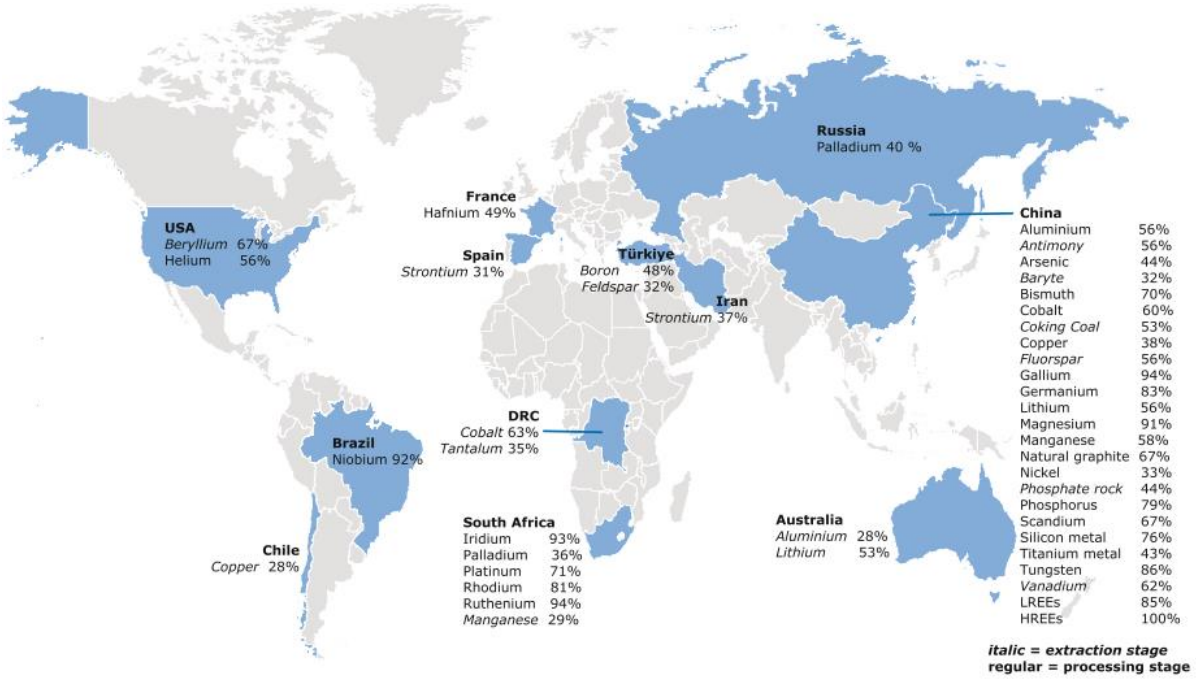
[15] See (n9); European Parliament, *European Strategy for Raw Materials*, (November 2021), https://www.europarl.europa.eu/doceo/document/TA-9-2021-0468_EN.pdf; European Commission, *Critical Raw Materials Resilience: Charting a Path towards Greater Security and Sustainability*, (September 2020), https://ec.europa.eu/docsroom/documents/42849 ; European Raw Materials Alliance, *ERMA* (2025), https://erma.eu/

[16] Ibid

[17] See (n9)

[18] See (n9) and (n15)

[19] M. Grohol, C. Veeh, *Study on the Critical Raw Materials for the EU 2023*, European Commission (2023), https://op.europa.eu/en/publication-detail/-/publication/57318397-fdd4-11ed-a05c-01aa75ed71a1;
F. Findeisen, *The Club Approach: Towards Successful EU Critical Raw Materials Diplomacy*, Jacques Delors Centre, (October 2023),



Source: Study on the critical raw materials for the EU 2023[20]

Such overreliance on critical minerals, particularly on China, exposes the EU not only to supply disruptions but also to the risk of political blackmail where continued access to minerals can be used as leverage in geopolitical confrontations.[21] Thus, this overall strategic vulnerability adversely influences the EU's objectives of securing critical minerals to ensure industrial resilience and a swifter transition to a sustainable economy.

Many of these critical minerals are essential in ensuring the EU's energy transition and supporting its development of defence capabilities. As the EU aims to reduce carbon emissions and transition to RES, critical minerals such as lithium, cobalt, nickel, and REEs play a crucial role in producing electronics and batteries, while also being actively used in the development of advanced weapon systems and aerospace technologies.[22]

https://www.delorscentre.eu/fileadmin/2_Research/1_About_our_research/2_Research_centres/6_Jacques_Delors_Centre/Publications/20231031_Findeisen_CriticalRawMaterials.pdf

[20] Ibid.

[21] L. Patey, *The European Union Can Go Green and Lower Dependencies on China*, Danish Institute for International Studies (February 2024), https://www.diis.dk/en/research/the-european-union-can-go-green-and-lower-dependencies-on-china?;

[22] European Commission, Critical Raw Materials: Ensuring Secure and Sustainable Supply Chains for EU's Green and Digital Future, (March 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1661; see (n13); European Parliament, Sustainable Supplies of Critical Raw Materials Crucial for the EU Industry, (November 2021), https://www.europarl.europa.eu/topics/en/article/20211118STO17611/sustainable-supplies-of-critical-raw-materials-crucial-for-eu-industry

Expected increase in demand by 2030 and 2050 per key critical mineral:

Type of mineral	Key Applications	2030 fcst	2050 fcst
REEs	EVs and wind turbines	6-fold	7-fold
Lithium	RES and batteries	12-fold	21-fold
Graphite	RES, electronics, and batteries	14-fold	26-fold
Nickel	EV and energy storage batteries	10-fold	16-fold
Aluminium	EV, aerospace, RES	4-fold	6-fold
Platinum	Clean energy and climate solutions	30-fold	200-fold

Source: Combined data based on the EU Commission, Reuters, and other sources[23]

It is predicted that the EU's demand for lithium-ion batteries will increase significantly, rising 12-fold by 2030 and 21-fold by 2050, compared to 2020 levels. [24]In turn, demand for graphite is expected to increase 14-fold by 2030 and 26-fold by 2050 compared to 2020.[25] Most importantly, demand for REEs used in permanent magnets that power motors in electric vehicles and wind turbines is forecasted to increase sixfold by 2030 and sevenfold by 2050, respectively.[26]

Thus, this situation underscores the importance of securing a diversified and secure supply of critical minerals for the EU, while safeguarding industrial systems against potential geopolitical risks. Ensuring the proper handling of these potential risks by following these necessary steps will be critical for successfully implementing the CRMA and Europe's long-term economic stability and development.

[23] See (n8)
[24] G. Ragonnaud , *Critical Raw Materials Act*, European Parliament (June 2024), https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/747898/EPRS_BRI%282023%29747898_EN.pdf;
[25] Ibid.
[26] See (n8)

2.3 EU's minerals partnerships with third countries and how partnering with Ukraine can be mutually beneficial

2.3.1 EU's minerals partnerships with third countries

Since 2021, the EU has established several strategic partnerships with third countries on critical raw materials to ensure sustainable and resilient access to REEs and minerals. Among them were a few from countries in Africa (Rwanda, the Democratic Republic of the Congo, and Zambia), Mercosur in Latin America (Uruguay, Paraguay, Argentina, and Brazil), Central Asia (Kazakhstan), and the Americas (Canada).[27]

The amount of imports from third countries with which the EU has complex relationships, particularly China and Russia, stands out. In 2023, 94% of the EU's REE imports came from China, Malaysia, and Russia combined.[28] In this regard, in 2023, the EU imported 46% ($5 bn) of critical raw materials from China, nearly 25% (around $2.5 bn) from Latin America, 16% from Africa (around $2 bn), 9% from Russia (around $1 bn), around 6% from Canada (around $600 million). [29] Hence, the EU relies heavily on the import of critical raw materials (e.g., lithium, cobalt, nickel, and magnesium) and REEs (e.g., neodymium and praseodymium) from third countries to develop the EU's automotive, aerospace, electronics, and biomedical industries.[30] '

Consequently, such an overreliance on imports from third countries poses many economic and geopolitical risks, considering China's dominant role in REE supply and Russia's supply of critical raw materials, such as titanium, palladium, and nickel. Relying on these countries as major suppliers of REEs and critical minerals poses risks to supply volatility, price manipulation, and export restrictions, making European industries vulnerable to potential supply chain disruptions caused by geopolitical tensions and a lack of transparency.[31]

2.3.2 On the state of Ukraine's mineral reserves and its potential for the EU-Ukraine cooperation

In light of the above-mentioned risks and vulnerabilities posed by nearly monopolistic suppliers of REEs and minerals from several countries, particularly China, the EU has a strategic opportunity to diversify its supply chains and substantially lower its dependence on them by working closely with Ukraine.

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[27] European Commission, Global Gateway: *EU Signs Strategic Partnerships on Critical Raw Materials Value Chains with DRC and Zambia and Advances Cooperation with US and Other Key Partners to Develop the 'Lobito Corridor'*, (October 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_5303; I. Carry, *Critical Raw Materials Partner Canada: An (almost) Perfect Match*, SWP, (July 2024), https://www.swp-berlin.org/publikation/critical-raw-materials-partner-canada-an-almost-perfect-match; D. Kopinski, *African Critical Raw Materials and the EU's Economic Security*, Polish Economic Institute (September 2023), https://pie.net.pl/wp-content/uploads/2023/09/Surowce-Afryki-ENG.pdf

[28] Eurostat, *International Trade in Critical Raw Materials*, (October 2024), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International_trade_in_critical_raw_materials

[29] European Commission, *Trade in Goods with China*, (2023), https://webgate.ec.europa.eu/isdb_results/factsheets/country/details_china_en.pdf and Ibid.

[30] Ibid.

[31] European Commission, *Critical Raw Materials Resilience: Charting a Path towards Greater Security and Sustainability*, (September 2020), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0474; see (n8); M. Mouel and N. Poitiers, *Why Europe's Critical Raw Materials Strategy Has to be International*, Bruegel, (April 2023), https://www.bruegel.org/analysis/why-europes-critical-raw-materials-strategy-has-be-international

In July 2021, the EU and Ukraine signed a Memorandum of Understanding (MoU) on a Strategic Partnership on Raw Materials, outlining the framework for collaboration on critical raw materials and the battery value chains.[32] The document outlined the objective of integrating the country into the EU's supply chain networks while reducing reliance on other third-country suppliers. Between 2021 and 2022, the MoU was followed by an initial Roadmap containing planned activities aimed at strengthening the sustainable sourcing and processing of raw materials and batteries in Ukraine.[33] This was also followed by the plan to identify and implement joint-venture projects for EU and Ukrainian industrial and investment players via the Business Investment Platforms of the European industrial alliances.[34]

Nevertheless, substantial progress has not been made on REEs and critical materials collaboration as of 2025, due to administrative and legislative hurdles, as well as the adverse impact of war.[35] In particular, the war impact has led to a substantial spike in the prices of nickel (36%) and lithium (15%), which are essential for RES and EV market segments in the EU.[36]

As a result, Ukraine was nearly at the bottom of the list, with exports of REEs and vital raw materials accounting for approximately 2% (around $320 million) of the total EU imports in 2023.[37] In contrast, this is substantially lower than the above-mentioned partnerships with Canada (6%), the Mercosur countries (25%), or African countries (16%), which are geographically distant and entail additional expenditures for processing and delivering REEs and critical minerals to the EU.

Ukraine's deposits of critical minerals and REEs and how they relate to the EU needs

Type of critical mineral	Approximate reserves	% of Global Share of reserves	% of Global share production	Key applications	2023 EU imports, $	% out of all EU imports, 2023
Graphite	343 Mt	20%[38]	0.2%[39]	RES, electronics, and batteries	$0.85M	0.8%
Manganese	140Mt	1.6%[40]	3.1%[41]	Electronics and EV batteries	$200M	7.4%
Titanium	185 Mt[42]	5%[43]	6.5%[44]	Aerospace components	$45.2M	2.2%

[32] See (n2); European Commission, *EU and Ukraine Kick-start Strategic Partnership on Raw Materials*, (July 2021), https://single-market-economy.ec.europa.eu/news/eu-and-ukraine-kick-start-strategic-partnership-raw-materials-2021-07-13_en
[33] Ibid; European Commission, *Strategic Partnership Roadmap 2021-22*, (July 2021), https://ec.europa.eu/docsroom/documents/46299/attachments/1/translations/en/renditions/native
[34] See (n32)
[35] See (n3), (n5) and (n6)
[36] Ibid.
[37] European Commission, *Raw Materials Information System, Country Profiles – Ukraine*, (2023), https://rmis.jrc.ec.europa.eu/cp/UA
[38] See (n4)
[39] Climate Mineral Explorer, *Ukraine* (2022), https://climateminerals.org/countries/UKR
[40] B. Venditti, *Mapped: Ukraine's Mineral Resources*, (March 2025), https://www.visualcapitalist.com/mapped-ukraines-mineral-resources/
[41] See (n37)
[42] France24, *Ukraine Titanium Mine Hopes US deal Will Bring Funds,* https://www.france24.com/en/live-news/20250306-ukraine-titanium-mine-hopes-us-deal-will-bring-funds
[43] Ibid.
[44] See (n37)

Lithium	500 Kt[45]	3%	Not mined yet	RES, electronics, EVs	n/a	0%
Copper	18.6 Mt	n/a, 4th largest in Europe[46]	n/a	EV wiring, power grids, electronics, wind turbines	$3.2M	0.02%
Aluminium	n/a	n/a	0.04%	Lightweight components (e.g., RES, aerospace, and EVs)	$62.2M	0.2%
Platinum Group Metals	n/a	n/a	n/a	Electronics, hydrogen fuel cells	$6M	0.5%
Nickel	390 Kt	n/a	n/a	EV and energy storage batteries	$2M	0.03%
REEs	n/a	n/a	n/a	EVs, wind turbines, defence applications, and electronics	$0.55M	0.41%
Total					**$320M**	**2%**

Source: Calculation based on the 2023 EU import data on Ukraine, RMIS and Ukrainian Geological Survey[47]

This approach should be reconsidered and acted upon, as Ukraine is in close geographical proximity, has close economic ties, and shares political alignment with EU values, while also possessing untapped potential in REEs and critical raw materials.

In particular, Ukraine has around 20,000 mineral deposits and ore-bearing sites, of which nearly half are actively mined and comprise 117 of the 120 most globally used metals and minerals.[48] In this regard, the country holds deposits of approximately 22 out of 34 critical raw materials identified by the EU, including lithium, cobalt, REEs, and other vital materials for renewable energy, electric vehicles (EVs), and various high-tech applications.[49] More specifically, Ukraine holds substantial reserves of graphite, manganese, and lithium, which are utilised in RES, electronics, EVs, and

[45] UN, *Rare Earths and Strategic Minerals in Ukraine*, (February 2025), https://unric.org/en/rare-earths-and-strategic-minerals-in-ukraine/
[46] (n4)
[47] See Ibid; Ukrainian Geological Survey, *Ukraine: Mining Investment Opportunities*, (2024), https://www.geo.gov.ua/wp-content/uploads/presentations/en/investment-opportunities-in-exploration-production-strategic-and-critical-minerals.pdf; Ukrainian Geological Society, *Critical Minerals Portfolio*, (2024), geo.gov.ua/wp-content/uploads/presentations/en/critical-minerals-portfolio.pdf
[48] R. Muggah and R. Rohozinski, The *Mineral Wars - How Ukraine's Critical Minerals Will Fuel Future Geopolitical Rivalries*, Center for International Relations and Sustainable Development, (2025), https://www.cirsd.org/en/horizons/horizons-winter-2025-issue-no-29/the-mineral-wars; Institute of Geography of the National Academy of Sciences, *National Atlas of Ukraine*, (2025), http://wdc.org.ua/atlas/en/4040100.html#:~:text=Ores%20of%20rare%20metals.&text=The%20most%20important%20is%20Ukrainian,tantalum-niobium-zirconium%20ores
[49] European Commission, *EU - Ukraine Strategic Partnership on Raw Materials: the European Bank of Reconstruction and Development Will Support Digitalisation of Geological Data in Ukraine*, (November 2022), https://enlargement.ec.europa.eu/news/eu-ukraine-strategic-partnership-raw-materials-european-bank-reconstruction-and-development-will-2022-11-17_en; M. Jones, *What Critical Materials and Minerals Does Ukraine Have and Why is Trump Eyeing Them*?, Euronews, (March 2025), https://www.euronews.com/my-europe/2025/03/05/what-critical-materials-and-minerals-does-ukraine-have-and-why-is-trump-eyeing-them

battery production. Additionally, the country has reserves of titanium and uranium, which are utilised in the military and aerospace industries.[50]

In 2022, the Ukrainian government identified over 30 areas for the exploration and production of strategic minerals, including titanium, lithium, graphite, beryllium, and rare earth metals, as well as gas deposits in Ukraine.[51] The government posted a list of over 100 different mining opportunities for around 10 critical raw materials (e.g., titanium, lithium, graphite, cobalt) and REEs (tantalum, niobium, and beryllium) during the European Raw Materials Week in 2022 and 2023.[52] Currently, the Ukrainian Geological Survey maintains the most up-to-date database of opportunities, which includes an active list of all available sites for the potential exploration, development, and production of critical minerals across the country without specifying the approximate investment needed.[53]

Overall, approximately 50% of Ukraine's available critical minerals and REEs could realistically be supplied to the EU within the next 2-3 years. In particular, 20% of those minerals are already contributing (graphite, manganese, and titanium), and might not require substantial investments.

In terms of graphite deposits and their development and extraction, several companies have been involved at a limited level in Horodniavska, Khmelivska, Burtynske, and Zavallivske deposits in western and central parts of the country. Among those companies are Volt Resources (Australia), BGV Group Management (Ukraine), and Turkish Onur Group (Turkey), which have a combined annual extraction of around 30,000 tonnes.[54] Yet, there are many available opportunities for the development and extraction of graphite in the Khmelivska, Petrivska, Kodatska, Bohoslovska, and Voevodska areas in Kropyvnytskyi, Mykolaivskyi, and Khmelnytskyi regions, which European companies could potentially consider for potential investment.[55]

In terms of titanium deposits, several Ukraine-based state-owned and private companies, including Irshansk MBP, Velta, and Neqsol Holding, have been conducting development and extraction in several areas with substantial deposits, such as Zhytomyrskyi. Kropyvnytskyi, and Dnipropetrovskyi regions.[56] In this regard, it is worth noting that in October 2024, Cemin Ukraine, part of Neqsol Holding, acquired UMCC, one of the world's largest producers of titanium, which mines and processes ores into sands and concentrates.[57] Titanium production stood at approximately 130,000 tonnes

[50] See (n47)
[51] Ukraine Invest, *Ukraine and the EU to Strengthen Cooperation in the Field of Critical Raw Materials*, (September 2022), https://ukraineinvest.gov.ua/en/news/23-09-22/ ; See (n47)
[52] Ibid.
[53] https://www.geo.gov.ua/en/critical-raw-materials/
[54] Ibid.
[55] Ukrainian Geological Survey, *Non-metallic Materials*, (2025), https://www.geo.gov.ua/nemetalichni-korysni-kopalyny/
[56] BRDO, *Titanium – a Goldmine of the Ukrainian Economy*, (November 2023), https://brdo.com.ua/en/news/tytan-zolota-zhyla-ekonomiky-ukrayiny-yak-stvoryty-pryvablyvi-investytsijni-umovy-dlya-efektyvnoyi-rozrobky-tytanovyh-pokladiv/
[57] Bloomberg News, *Ukraine Sells Titanium Producer in Rare Wartime Privatization*, (October 2024), https://www.mining.com/web/ukraine-sells-titanium-producer-in-rare-wartime-privatization/

in 2024, accounting for around 7% of the global total.[58] Currently, several investment opportunities exist for the exploration, development, and production of titanium in the Zhytomyrskyi, Dnipropetrovskyi, Kropyvnytskyi, Kharkivskyi, and Sumskyi regions, which EU firms could consider for potential investment.[59]

In turn, Ukraine has been a major producer of manganese, manganese ore and manganese ferroalloys, with proven global reserves of 1.6%.[60] Pokrovsky GOK has been Ukraine's leading producer of manganese ore, responsible for mining nearly 70% of the country's manganese reserves, with several other more minor, Ukraine-based players covering the remaining production.[61] Nevertheless, the overall manganese production (including silicomanganese and ferromanganese) plummeted by nearly half over the last two years due to the war's impact and energy cuts.[62] In this regard, it is worth noting that due to these factors, no manganese concentrate was produced at all last year.[63] In terms of deposits, there are several opportunities at large-scale sites in the Kharkivskyi, Dniprovskyi, and Khersonskyi regions for processing and extraction that European firms could explore for potential collaboration opportunities.[64]

Simultaneously, another 30% of critical minerals are likely to require substantial investments and the adoption of appropriate regulatory and administrative measures by the Ukrainian authorities (lithium and REEs). In particular, Ukraine holds nearly 3% of the world's proven lithium reserves, as well as some rare-earth metals, including tantalum, niobium, and beryllium, with no publicly available data on precise deposits.[65] There are several investment opportunities in Shevchenkivske (Donetsk region), Kruta Balka (Zaporizkyi region), and Dobra (Kropyvnytskyi region) for exploration and development. It is predicted that implementing each project at the production and processing stages would require investments ranging from $150 million to $250 million.[66]

The remaining 50% are unlikely to contribute substantially due to limited reserves or a lack of production capabilities, such as those found in nickel, cobalt, and platinum group metals and require closer assessment by geological teams to estimate availability and investment requirements. Yet, their potential exploration should still be considered and discussed as some of those critical minerals can potentially support the EU's CRMA objectives. For instance, there are several sites, such as Zheleznyaki

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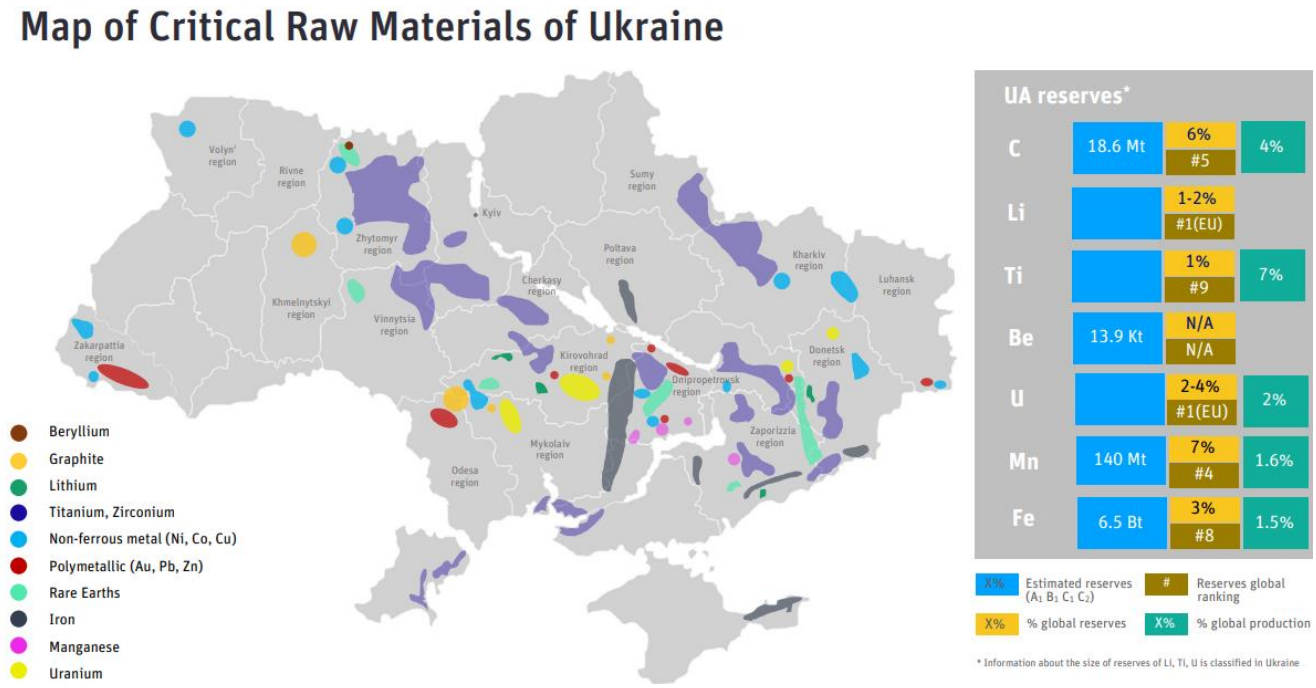
[58] Statista, *Leading Countries Based on the Mine Production of Titanium Minerals Worldwide in 2024*, (2025), https://www.statista.com/statistics/759972/mine-production-titanium-minerals-worldwide-by-country/
[59] Ukrainian Geological Survey, *Critical Raw Materials*, (2025), https://www.geo.gov.ua/en/critical-raw-materials/
[60] See (n40)
[61] GMK Center, Pokrov GOK (Mining and Processing Plant, (2025), https://gmk.center/en/manufacturer/pokrov-gok-mining-and-processing-plant/
[62] Interfax, *Ukraine's Largest Manganese Ore Producer Pessimistic About Restarting Production Due to Energy Shortage*, (May 2024), https://interfax.com/newsroom/top-stories/102697/
[63] S. Kudryavtsev, *In 2024, Ferroalloy Plants Produced 108 thousand tons of Products*, GMK, (February 2025), https://gmk.center/ua/opinion/u-2024-mu-ferosplavni-zavody-vyrobyly-108-tys-t-produktsii/; The Odessa Journal, *Ukrainian Ferroalloy Plants Have Reduced Production by Nearly 50%*, (February 2025), https://odessa-journal.com/ukrainian-ferroalloy-plants-have-reduced-production-by-nearly-50
[64] https://www.geo.gov.ua/metalichni-korysni-kopalyny/
[65] See (n47)
[66] Ibid.

(Zhytomyrskyi region), Lypovenkivske (Kropyvnytskyi region), and Sukhokhutirsk (Dnipropetrovskyi region), that have deposits of the above-mentioned critical minerals available for evaluation, processing, and extraction.[67]



Source: Ukrainian Geological Survey[68]

In 2023, Ukraine and the EU aligned on a set of measures within the framework of the EU-Ukraine Critical Raw Material Partnership Roadmap 2023-2024, focusing on integrating critical minerals and value chains while developing resources in a sustainable manner[69]. To achieve this, the Ukrainian government agreed to engage the European Raw Materials Alliance and the European Battery Alliance as platforms for EU and Ukrainian stakeholders, including funding and investment organisations, to collaborate on developing joint venture project opportunities.[70] Still, it is unclear how many opportunities are currently being considered as potential EU-Ukraine collaborations.[71] There is limited public information available regarding the status of these opportunities, particularly regarding the EU funding attracted and companies that have shown interest in investing in Ukraine's critical minerals. As of March 2025, there is no joint EU-Ukraine CRM project registry in place, which makes it challenging to understand the scale and progress of opportunities.

There have been recent steps in mobilising private capital to support Ukraine's recovery, particularly in the area of critical minerals. In November 2024, the EU launched a call for Expressions of Interest to attract proposals for mobilising private EU investment in Ukraine's recovery by March 2025, in line with the Ukraine

[67] Ukrainian Geological Survey, *Metallic Materials*, (2025), https://www.geo.gov.ua/metalichni-korysni-kopalyny/
[68] See (n47)
[69] The Ukrainian Government, *Ukraine Facility Plan 2024-2027*, https://www.ukrainefacility.me.gov.ua/wp-content/uploads/2024/03/ukraine-facility-plan.pdf
[70] Ibid.
[71] Ibid.

Investment Framework, an integral pillar of the EU's Ukraine Facility Plan.[72] This EU initiative aims to attract EU-based firms to invest in critical minerals, which are identified as one of the key focus areas, in support of Ukraine's broader reconstruction and recovery efforts.[73] Nevertheless, despite this recent initiative, specific private European investments in Ukrainian mineral projects have not been reported, unlike some of the recent efforts from the US side. For instance, in March 2025, TechMet, a US-based mining company, expressed its readiness to invest in the development of a lithium site in central Ukraine.[74] If the EU does not increase its involvement in Ukraine's minerals sector, there is an increasing likelihood that US-backed capital and regulatory frameworks will shape the direction of Ukraine's mineral sector.

Furthermore, in 2024, the Ukrainian government launched the Ukraine Facility Plan 2024-2027, which addresses the management of critical raw materials (Chapter 13).[75] The Plan demonstrates the government's commitment to creating an optimal legal framework for investors, streamlining administrative procedures, and integrating Ukraine into modern value chains, while also fostering new joint projects.[76]

This situation presents a unique opportunity for EU decision-makers to consider stepping up efforts to discuss and launch several new projects on critical raw materials and REEs with Ukraine. A recent statement from Stephane Séjourné, the European Commissioner responsible for prosperity and industrial strategy, signalled the possibility of joint projects between the EU and Ukraine on critical minerals, starting from March 2025, with the EU being especially interested in a project for extracting Ukrainian graphite.[77] This is a positive step, considering Ukraine's close geographical proximity and its aspirations for EU integration. To expedite this process, Ukraine also needs to implement a set of administrative, legal, and economic measures to ensure the possibility of proceeding with the exploration and development of critical mineral projects at a faster pace.

Proceeding from the above, the EU is at a critical juncture in securing the critical minerals and REEs required to ensure a smooth transition towards a more sustainable economic model and meet the needs of key industries such as automotive, defence, RES, and aerospace. With an exponential growth in demand for various critical minerals and REEs, Ukraine stands out as an excellent partner due to its untapped potential, geographical proximity, and political alignment with the EU. While the 2021 EU-Ukraine partnership laid the groundwork for various avenues of collaboration, the overall progress has been far from satisfactory, with the EU-Ukraine partnership having the lowest number of REEs and mineral imports among all third countries.

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[72] Directorate-General for Neighbourhood and Enlargement Negotiations, *EU Launches Call for EU Business to Invest in Ukraine's Recovery and Reconstruction*, (November 2024), https://enlargement.ec.europa.eu/news/eu-launches-call-eu-business-invest-ukraines-recovery-and-reconstruction-2024-11-13_en

[73] Ibid.

[74] C.Jamasmie, *US-backed Miner TechMet Seeks to Develop Ukraine Lithium Site*, Financial Times (March 2025), https://www.ft.com/content/bc0c6df8-229c-4ec6-9a27-190961715070

[75] See (n69)

[76] Ibid.

[77] T. Vysotska, *European Commissioner Reveals Which Critical Raw Materials Interest EU in Ukraine and When Cooperation Will Begin*, Ukrainska Pravda, (February 2025), https://www.pravda.com.ua/eng/news/2025/02/26/7500274/

Hence, there is room for improvement for both the EU and Ukraine. If proper steps are taken, this could lead to a mutually beneficial development, making both parties more economically aligned than before. This is particularly important for Ukraine with its EU aspirations and commitment to converge its economy with the EU standards as part of the EU accession process.

Nevertheless, the signed US-Ukraine minerals deal could serve as a stumbling block to deeper EU-Ukraine integration, particularly in terms of cooperation on raw materials. This deal can present numerous economic, political, and legal hurdles for the EU if it doesn't act swiftly and explore concrete avenues for collaboration with the Ukrainian government on critical minerals.

3. Implications of the US-Ukraine minerals deal for the EU-Ukraine cooperation

The US-Ukraine minerals deal may negatively affect both ongoing and future EU-Ukraine collaboration, particularly under the 2021 partnership agreement on raw materials. While presented as non-exclusive, the deal contains provisions limiting Ukraine's investment fund governance and mineral development process.[78] These conditions could adversely affect EU-Ukraine collaboration on minerals and the EU's broader strategic objectives of reducing dependency on imports of raw materials from countries like China and enhancing supply chain resilience via preferential treatment arrangements. This risk could be especially significant if the deal prioritises the US's access to Ukraine's critical minerals and grants preferential treatment to US businesses.[79] These concerns are especially relevant in light of the EU's own CRMA implementation, which aims to ensure a reliable and diversified supply of critical minerals. The key risks the EU must now prepare for are the following:

3.1 Economic risks

Access and resource allocation issues. The US-Ukraine minerals deal might introduce structural disadvantages for the EU in accessing Ukraine's critical minerals. While the deal is formally non-exclusive, it still establishes governance conditions and investment procedures that are more favourable to the US. Among those conditions are revenue-sharing obligations (Article VI), rights of first negotiation (Article VIII.1), and non-discrimination clauses that hinder Ukraine from offering better terms to third parties (Articles VII.1.d and VIII.1.ii).[80] While these conditions do not explicitly ban third-party agreements, they could potentially constrain Ukraine's ability to offer more favourable conditions to the EU without conflicting with current commitments under the US-Ukraine minerals deal. As a result, this could potentially lead to a situation in which future exploration, extraction, and processing projects will be shaped mainly by US businesses, potentially minimising space for EU involvement.

[78] See (n1)
[79] Ibid.
[80] Ibid.

Moreover, the US-Ukraine minerals deal also has conditions requiring Ukraine to adopt or maintain regulations that ensure that the deal takes precedence over national law in case of potential conflict (Article II.3).[81] Thus, this arrangement can lead to Ukraine's inability to adjust terms or open access to minerals project participation by third parties, particularly the EU. Consequently, the US firms could gain preferential access to REEs and critical minerals, such as graphite, lithium, and nickel, thereby hindering the EU's access and reducing the volumes available to EU industries.

At the same time, the deal's provision can potentially minimise Ukraine's flexibility in managing resource revenues and investment objectives. The deal requires Ukraine to allocate 50% of royalty and licensing revenues from new mineral projects to a jointly governed partnership with the US (Article VI).[82] While this mechanism could support reconstruction purposes, it could also constrain the Ukrainian government's ability to direct funds towards other collaboration projects with EU partners.

These conditions may discourage EU investment in Ukrainian mineral projects due to limited access to early-stage negotiations, regulatory uncertainty, and the perception of unequal treatment. In this regard, if the Ukrainian government continues to grant preferential or exclusive treatment to American companies and projects over potential European ones, this could backfire and lead to EU investors reconsidering their potential investment and involvement in minerals projects in Ukraine due to uncertain permitting conditions and long-term supply guarantees. This situation could adversely affect fair access for EU companies in extraction and processing and across the entire critical raw materials value chain, including exploration, recycling, and industrial applications in aerospace, electronics, defence and RES technologies.[83]

All the above-mentioned factors would substantially impact the EU's intended supply chain diversification plans, as outlined in the CRMA and other documents. Notably, this would adversely affect the EU's CRMA supply capacity objectives, which aim to reduce reliance on single suppliers, such as China, and achieve 10% extraction, 40% processing, and 15% recycling of raw materials within the EU by 2030. Hence, if the current deal structure proceeds without a complementary EU-Ukraine mechanism, the perspective of Ukraine helping the EU meet some of those set objectives will likely be jeopardised.[84]

3.2 Legal and political risks

The US-Ukraine minerals deal may pose substantial legal and political risks for the future EU-Ukraine collaboration, particularly concerning Ukraine's EU integration and the 2021 strategic partnership on raw materials. While the deal acknowledges Ukraine's current EU obligations and includes provisions on consulting in good faith if

[81] Ibid.
[82] Ibid.
[83] R. Gramer, *Ukraine's Allies in DC Tell Zelenskyy: Take the Rare Earths Deal*, Politico (February 2025), https://www.politico.com/news/2025/02/20/ukraines-zelenskyy-rare-earths-deal-00205313
[84] See (n1)

future EU-related commitments lead to discrepancies, it doesn't establish a binding mechanism to deal with such situations or formally involve the EU (Article VII.1.c)[85]

Simultaneously, the deal stipulates precedence of its provisions over conflicting Ukrainian regulations (Article II.3).[86] This may limit Ukraine's ability to revise deal terms to better align with EU standards over time.

Moreover, unlike the 2021 strategic partnership on raw materials, which stipulates sustainability standards and regulatory alignment, the US-Ukraine minerals deal doesn't contain provisions on formal EU involvement in project selection and investment.[87] Thus, this situation could lead to conflicting parallel legal frameworks for mineral sector governance, one driven by EU integration and another by the Reconstruction Investment Fund.

With the deal now signed, the US is positioned to play a substantially larger role in Ukraine's economic recovery, and the EU's role is likely to be affected and diminished on many levels. While this would imply reduced and more complicated EU access to Ukraine's REEs and critical minerals, such an impact might also extend to broader economic sectors. In this regard, a dominant US presence and influence over Ukraine's minerals could also backfire on EU-Ukraine cooperation, particularly regarding Ukraine's progress toward EU accession and its commitments under the EU-Ukraine Association Agreement:

Potential legal implications if the US-Ukraine minerals deal is signed

Potential Issues	Source in the EU-Ukraine Association Agreement
Import and export restrictions on goods, including minerals	Articles 31 and 35
Obligation to strengthen and develop cooperation on minerals and mining matters	Articles 379 and 381
Trade-related issues due to the obligation to facilitate trade in energy goods, particularly raw materials, and ensuring a competitive and non-discriminatory environment	Article 338
Cooperation in environmental matters to ensure sustainable resource extraction and sustainable mining practices	Article 363

Source: EU-Ukraine Association Agreement[88]

[85] Ibid.
[86] Ibid.
[87] Ibid.
[88] European Union, *EU-Ukraine Association Agreement*, (May 2024), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22014A0529(01)

This situation could raise legal conflicts with Ukraine's obligations under the EU-Ukraine Association Agreement, which contains provisions on strengthening cooperation in the mining and minerals sector. It would also conflict with the provisions of the aforementioned strategic partnership on raw materials, which provides the framework for collaboration on critical raw materials and battery value chains.[89]

Furthermore, preferential treatment of US businesses could lead to legal questioning in light of Ukraine's undertaken obligations under the EU-Ukraine Deep and Comprehensive Free Trade Area obligations, which include ensuring non-discriminatory access to markets, including for mineral and raw material products and prohibiting export restrictions, safeguarding the EU's access to Ukraine's critical resources.

Finally, this deal could also harm Ukraine's accession prospects, considering that critical minerals are part of the accession negotiations.[90] In particular, collaboration on developing Ukraine's vital raw materials extraction and processing is a key component of Ukraine's accession negotiations with the EU.[91]

4. Recommendations

For the EU:

- **Pursue engagement mechanisms with the US and Ukraine.** The EU leadership should explore avenues for constructive engagement on critical minerals with the US and Ukraine, leveraging current mineral partnerships signed with the US in 2022 and Ukraine in 2021. As the US-Ukraine minerals deal has already been signed and stipulates the establishment of a bilateral governance structure, the EU leadership should consider exploring possibilities for engagement in discussions via observer status, data-sharing, and joint project coordination to safeguard its access to Ukraine's critical minerals. The primary objective would be to ensure that the EU's regulatory, investment, and strategic interests are considered while developing Ukraine's critical minerals sector.
- **Ensure compliance with the EU-Ukraine signed agreements.** The EU should also urgently initiate discussions with the Ukrainian government to explore in detail the US-Ukraine minerals deal's legal, economic, and policy implications for the EU-Ukraine collaboration. This is particularly essential to ensure compliance with the provisions of the EU-Ukraine Association Agreement. In particular, those provisions that guarantee fair access to non-discriminatory treatment for EU companies and a commitment to no import or export restrictions on critical raw materials. Also, while the Memorandum of Understanding (MoU) on a Strategic Partnership on Raw Materials signed back in 2021 doesn't create obligations, it still plays crucial role as it emphasises the

[89] Ibid.
[90] See (n5)
[91] Ibid.

importance of deepening cooperation in the sphere of raw materials and batteries, to achieve closer integration of critical raw materials value chains and batteries. Hence, the EU leadership could launch consultations to discuss these matters under this partnership agreement, ensuring that its interests in raw materials are considered.

- **Technical assistance.** The EU should offer technical assistance to Ukraine to help it align its mining sector with EU sustainable and permitting standards. The EU should also provide funding for feasibility studies that may require substantial resources, ranging from $2 million for scattered deposits to $11 million for indigenous rock deposits.[92]
- **Express readiness to invest in minerals.** Despite Ukraine's geographical proximity, the import of raw materials from Ukraine into the EU has been extremely low. The EU should actively mobilise private and public EU investment in critical minerals. To this end, the EU should intensify its efforts, as outlined in the recent November 2024 Call for mobilising private EU investment in Ukraine's recovery, to attract private investment to support Ukraine's broader rebuilding efforts. In this regard, it would also be essential to establish a joint EU-Ukraine CRM project registry to track the scale and progress of all investment opportunities.
- **Target particular projects**. The EU leadership should adopt a two-fold approach when seeking opportunities, focusing on the most immediate and medium-term areas depending on availability, required investment, and the complexity of projects. In terms of immediate focus areas, the EU could potentially explore opportunities related to around 15 different sites with high concentrations of graphite, titanium, manganese, and several other significant mineral deposits in the Kropyvnitskyi, Kharkivskyi, Dnipropetrovskyi, Sumskyi, and Khmelnytskyi regions, with some of them available for extraction and processing without requiring excessive time and financial investments. In turn, the EU should also consider exploring investment opportunities in sites with other strategically essential minerals, such as lithium and REEs. There are several sites with proven reserves in Zaporyzhskyi, Kropyvnitskyi, and Donetskyi regions. Still, they would require more deliberate assessment, planning, and substantial investments ranging from $150 million to $250 million for the production and processing stages, depending on various estimates, with some lithium projects requiring even up to $1 billion.
- **Active engagement**. The EU should focus on advancing collaborative frameworks with Ukrainian counterparts. This objective could be achieved by bringing more Ukrainian research and industrial institutions into the EU's industrial alliances, thereby fostering closer collaboration and exchange of ideas that could culminate in new mutually beneficial projects. For instance, the EU should actively involve Ukrainian research organisations and businesses in the EC's Graphene Flagship, a program aimed at advancing

[92] See (n69)

graphene.[93] This approach will lead to more collaborative opportunities with academic and industrial partners and support Ukraine's development of domestic graphite processing and extraction infrastructure. Subsequently, this could facilitate Ukraine's more active integration into the EU's graphite value chains, leading to higher EU imports.

For Ukraine:

- **Balancing partnerships with the EU and the US.** The Ukrainian government should comply with its obligations under the EU-Ukraine Association Agreement. In particular, Ukraine should ensure that EU investors have non-discriminatory access to diverse markets, particularly for minerals and raw materials, and prohibit export restrictions, thereby securing the EU's access to Ukraine's critical raw materials. This way, the Ukrainian government will demonstrate its willingness to consider EU interests in REEs and critical minerals and its continued commitment to European integration.
- **Reassuring alignment with the EU's sustainable standards.** In light of the absence of binding sustainability provisions in the US-Ukraine minerals deal, the Ukrainian government should prioritise the sustainable sourcing and processing of raw materials. This approach would ensure it adheres to the provisions and objectives stipulated in the EU-Ukraine Partnership Roadmap for 2023-2024 and the Ukraine Facility Plan 2024-2027. It would also signal to the EU Ukraine's continued commitment to compliance with the EU's environmental standards and regulatory compatibility on critical minerals.
- **Regulatory measures.** The Ukrainian government should continue cooperating with the EU on improving regulatory measures in line with the 2021 partnership agreement on raw materials and engage in regular dialogue with the EU private sector through the Business Investment Platforms of the European industrial alliances. This approach would signal Ukraine's readiness to adopt sustainable practices and its continued commitment to incorporating EU standards into Ukrainian legislative and administrative frameworks.
- **Elimination of administrative hurdles**. The Ukrainian government should also prepare a detailed pipeline of investment projects, including approximate investment requirements, timelines, and project conditions. The Ukrainian Geological Survey should prepare and facilitate a list of such opportunities through online auction bidding and production sharing agreement tenders. It should ensure that this list is fully digitised and contains all the necessary geological data on deposits of critical minerals in one single portal. This way, it could improve administrative procedures and ensure that conditions are clear for EU investors, allowing them to invest in Ukrainian critical mineral projects much faster.

[93] European Commission, *Graphene Flagship*, (2025), https://graphene-flagship.eu/about/our-story/the-graphene-flagship/

5. Brief summary

The EU has a unique opportunity to bolster its strategic autonomy by intensifying its partnership with Ukraine, particularly in light of the signed US-Ukraine minerals deal. The 2021 partnership agreement on raw materials remains a valuable foundation. Still, in its current shape, it requires targeted enhancement to reflect the current geopolitical challenges and to more effectively integrate Ukraine into the EU's critical raw materials strategy. By taking affirmative actions through targeted investment, active pursuit of joint ventures and technical support for Ukraine's minerals sector, the EU can secure vital minerals for its automotive, defence, and aerospace industries. Simultaneously, these actions can support Ukraine's recovery and accelerate its European integration.

At the same time, Ukraine's position is also crucial considering the strategic implications of the signed US-Ukraine minerals deal. The Ukrainian government must thoroughly manage how its new bilateral commitments influence its sovereignty, control over critical minerals, and ability to ensure regulatory and investment alignment with the EU. The key question is whether the Ukrainian government can balance partnerships with the EU and the US while maintaining its commitment to EU integration and legal obligations. In this regard, the EU should be more proactive, especially considering the importance that Ukraine's critical minerals can play in meeting some of the CRMA objectives and its broader industrial resilience.

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