

OVERVIEW OF UKRAINE'S MINERAL WEALTH AND ITS STRATEGIC IMPORTANCE.

Introduction

Overview of Ukraine's mineral wealth and its strategic importance.

Ukraine possesses significant reserves of rare earth elements, a group of 17 chemically similar minerals essential for advanced technologies, including defense, electronics, and renewable energy. While these elements are relatively common worldwide, their extraction and refinement require complex processes, a sector currently dominated by China.

The exact volume and economic worth of Ukraine's rare earth resources remain uncertain due to the lack of updated geological surveys. Much of the existing data dates back to the Soviet era and is considered unreliable. Some experts estimate that Ukraine holds valuable deposits of scandium, cerium, dysprosium, neodymium, and several other rare earth elements, though specific details remain classified.

In discussions about a potential mineral deal, former U.S. President Donald Trump claimed he sought access to \$500 billion worth of rare earths from Ukraine. However, industry analysts argue this figure is highly exaggerated, as the entire global rare earth market is valued at approximately \$12 billion.

Substantial reserves of other critical minerals

Beyond rare earths, Ukraine also holds substantial reserves of other critical minerals, such as titanium, graphite, lithium, and uranium. These minerals are essential for military, aerospace, and energy industries. Some estimates suggest Ukraine's total mineral wealth could be worth up to \$14.8 trillion, though exact valuations depend on market fluctuations, further exploration, and extraction feasibility.

Ukraine also has significant hydrocarbon reserves, including coal, natural gas, and oil. However, a considerable portion of these resources is located in areas currently occupied by Russia, including offshore gas fields near Crimea and coal mines in eastern Ukraine.

While no rare earth extraction projects are currently active in Ukraine, developing these resources could take years and require substantial investment. Additionally, the ongoing conflict presents logistical and security challenges, with nearly 40% of Ukraine's mineral wealth located in Russian-controlled areas. If the U.S. were to secure access to Ukraine's mineral resources, it could reduce reliance on China and Russia for critical raw materials, but the feasibility of such a strategy remains uncertain.

Most Valuable Underground Elements in Ukraine

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Ukraine is endowed with a rich variety of underground minerals and elements, positioning it as a significant player in the global mineral market. The most valuable of these include:

Titanium: Ukraine ranks among the top ten countries globally in proven titanium reserves, accounting for approxi Ukraine and the U.S. Finalize Draft Agreement on Critical Minerals

Ukraine and the United States have reached an agreement on a preliminary draft concerning future mineral extraction and licensing. While the document does not apply to current mining activities, it sets the foundation for future cooperation in developing Ukraine's rich reserves. Both nations are expected to sign the agreement soon.



RARE EARTH METALS AND THEIR IMPORTANCE

- Rare Earth Metals and Their Importance
- Rare earth metals are a group of elements, including scandium, yttrium, and lanthanides, known for their unique physical and chemical properties. These materials are essential for advanced industries such as electronics, aerospace, defense, battery production, and optics. Currently, China dominates global production, controlling a significant portion of the market.
- Lanthanides include 15 elements: lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium. Additionally, scandium and yttrium, which share similar properties, are also classified as rare earth metals.

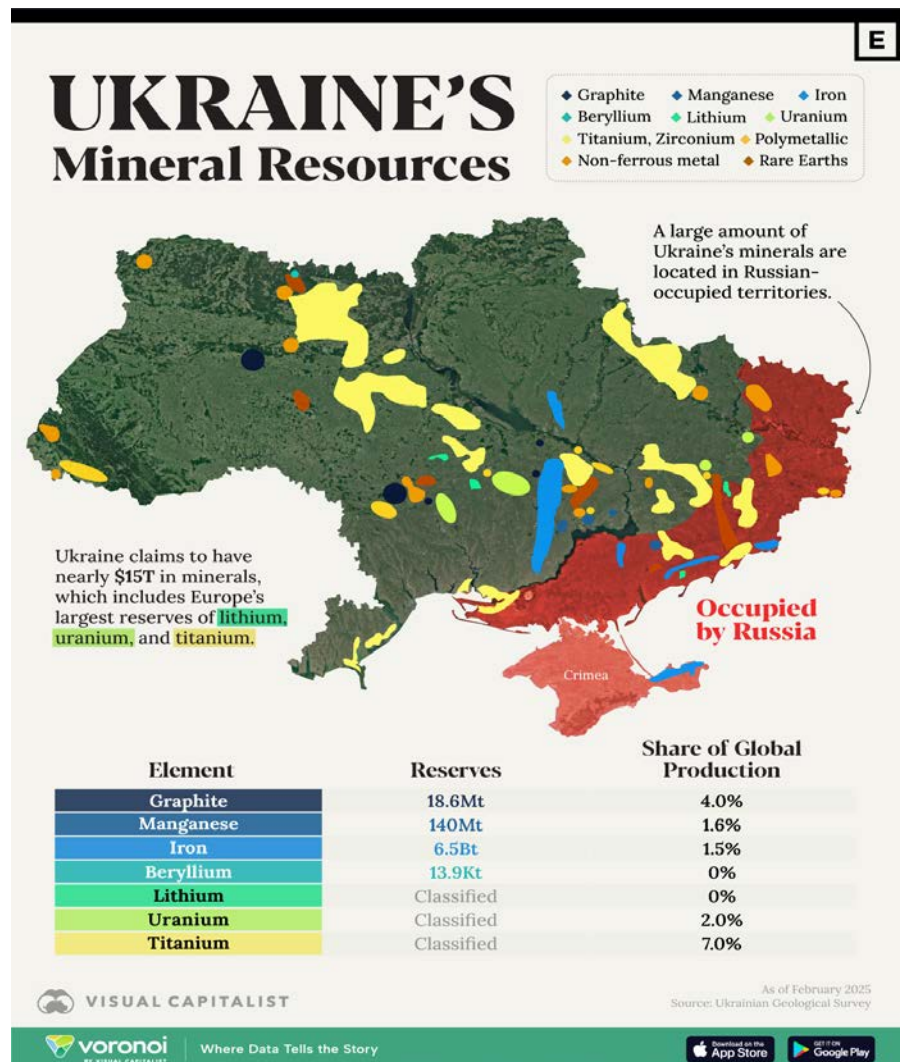
Ukraine's Mineral Wealth and Strategic Reserves

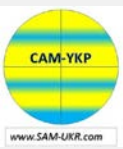
Ukraine possesses substantial deposits of rare earth metals and other valuable minerals. Key locations for these resources include the Mazurivske deposit, the Dobrovolychivka area (Kirovohrad region), the Ukrainian Shield, the Donbas region, the Kryvyi Rih Basin, and the Azov iron ore region.

Some of the most significant reserves in Ukraine include:

- Lithium – Accounting for about one-third of Europe's known reserves, approximately 3% of global resources.
- Graphite – Ukraine ranks among the world's top five countries in graphite reserves.
- Titanium – The country is one of the top ten global producers, with the Stremyhorod deposit in Zhytomyr region among the largest worldwide.
- Uranium – Ukraine has the largest uranium reserves in Europe and ranks 11th globally.

Other critical minerals – The country also has significant reserves of manganese, iron, gold, lead, zinc, cobalt, nickel, copper, and zirconium.





GEOGRAPHICAL DISTRIBUTION OF THESE ELEMENTS AT THE PROVINCIAL LEVEL

Coal Deposits:

Donetsk and Luhansk Regions:

These eastern provinces are home to the Donbas Coal Basin, one of Europe's largest coal reserves, historically fueling Ukraine's industrial sector.

Natural Gas and Oil: Dnipro-Donetsk Basin: Spanning the Poltava, Kharkiv, and Dnipropetrovsk regions, this basin accounts for approximately 80% of Ukraine's natural gas production.

Carpathian Region: Located in western Ukraine, particularly in the Ivano-Frankivsk and Lviv regions, this area contributes notably to the country's oil output.

Iron Ore: Concentrated in the Kryvyi Rih region.

Manganese: Found in the Nikopol basin.

Titanium: Deposits in Zhytomyr and Dnipropetrovsk regions.

Lithium: Notable deposits in the Donetsk and Kirovohrad regions.

Cobalt: Associated with nickel deposits in the Kirovohrad region.

Rare Earth Elements: Scattered across various regions, with significant potential in the Novopoltavske apatite ore field.

Estimated Financial Value of These Resources

- An assessment of the economic worth of Ukraine's mineral reserves, considering global market prices and potential revenue.

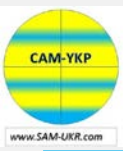
A recent study by SecDev estimates that over \$12 trillion worth of hydrocarbons and critical minerals are located in territories of Ukraine currently occupied by Russia. The total value of Ukraine's national resource reserves is believed to exceed \$26 trillion, according to an exclusive report from The Washington Post. These findings highlight that a significant share of Ukraine's resource wealth—measured in mineral and energy deposits—is now under Russian control.

Economic Disruption and Strategic Intentions

- Russia's ongoing military actions in Ukraine are not only aimed at territorial expansion but also at weakening Ukraine's economy and destabilizing its role as a global trade partner. The war has severely impacted the country's ability to extract and export vital resources, particularly minerals, hydrocarbons, and agricultural products. Industries in eastern and southern Ukraine, where many of these resources are concentrated, have been particularly hard-hit, with some of the largest mining companies either halting or reducing operations.
- Beyond the immediate economic damage, Russia's aggression has created long-term uncertainty for investors. Prior to the war, European nations were considering Ukraine as an alternative supplier for rare earth elements and lithium, reducing dependence on China. However, these plans have been put on hold indefinitely. As the conflict continues, Ukraine risks losing its status as a leading player in the mining and agriculture sectors, affecting global commodity prices and delaying Europe's shift to renewable energy.

Russia's Economic Motives and Resource Control

- Although geopolitical factors and historical tensions play a role in Russia's invasion, economic incentives are also a major driver. Russia is actively working to undermine Ukraine's ability to produce and export oil, gas, agricultural goods, and minerals. In addition to damaging infrastructure and obstructing Ukraine's access to key ports, Russia has also been accused of seizing Ukrainian grain and selling it on the global market. Furthermore, Moscow stands to profit from annexed mineral resources, leveraging them for both domestic use and export.
- Ukraine is one of the world's most resource-rich nations, home to 117 out of 120 of the most commonly used minerals. The country has:
 - The largest uranium reserves in Europe
 - The second-largest reserves of iron ore, titanium, and manganese
 - The third-largest shale gas reserves globally
- By maintaining control over occupied regions, Russia can prevent Ukraine from developing its natural resources, ultimately using them for its own economic gain.



GLOBAL CONSEQUENCES AND WESTERN ENERGY SECURITY

Russia's occupation of Ukrainian land also has serious implications for Western energy security and access to critical minerals. Before the conflict, Western nations were looking to invest in Ukraine's oil and gas industry in 2013 and rare earth mining in 2021. However, the annexation of Crimea in 2014 and the full-scale invasion in 2022 disrupted these plans.

As a result, Europe remains highly reliant on Russia for fossil fuels and on China for rare earth elements—with the latter supplying nearly 98% of Europe's rare earth imports. Without significant investment in alternative energy sources such as renewables and nuclear power, Western nations will continue to depend on these geopolitical rivals for critical resources.

The Impact on Ukraine's Economy and Global Markets

By limiting Ukraine's ability to export minerals, hydrocarbons, and agricultural products, Russia is weakening its economy and making it harder for Ukraine to secure foreign investments, repay debts, and sustain economic growth. The reduction in food and mineral production has led to higher global prices for key commodities, fueling economic uncertainty and political unrest worldwide.

At the same time, Russia benefits from the rise in global commodity prices, as it also exports many of the same resources as Ukraine, including grain, oil, gas, and minerals. By keeping Ukraine's wealth under its control, Russia strengthens its own economic position while pushing its neighbor further into financial distress.

Details of the Agreement Between the USA and Ukrainian Government

Recent developments have seen negotiations between the USA and Ukraine regarding access to these critical minerals:

- Proposed Agreement: The U.S. and Ukraine have agreed on the terms of a draft minerals deal central to Kyiv's push to win Washington's support.

Ukraine and US Finalize Rare Earth Minerals Agreement

Ukraine's President Volodymyr Zelensky is set to meet with US President Donald Trump in Washington on Friday to formalize an agreement granting the United States access to Ukraine's rare earth mineral deposits.

Zelensky expressed optimism that the preliminary agreement would pave the way for additional deals, though he confirmed that no formal security guarantees from the US have been included.

Trump, in turn, stated that the agreement would help American taxpayers recover some of the funds provided to Ukraine as aid throughout the war. However, he emphasized that European nations should bear the primary responsibility for Kyiv's security.

Key Aspects of the Agreement

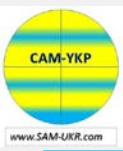
Although full details of the deal have not yet been disclosed, Ukrainian Prime Minister Denys Shmyhal confirmed on Wednesday that Ukraine and the US had finalized a draft version of the agreement.

Speaking on Ukrainian television, Shmyhal explained that the agreement outlines the creation of an "investment fund" aimed at financing Ukraine's reconstruction. Both Kyiv and Washington would manage the fund on equal terms.

Ukraine is expected to contribute 50% of future revenues generated from state-owned mineral resources, oil, and gas into the fund, which would then be reinvested in Ukrainian development projects.

While Zelensky acknowledged the existence of the fund, he stated in an interview with the BBC that discussions about financial specifics remain premature.

A report from *The New York Times* suggests that the US would own the maximum share of the fund permitted under American law but would not necessarily control the entire fund.



STRATEGIC MOTIVATIONS BEHIND THE AGREEMENT

The idea of a minerals deal was first introduced by Zelensky last year as a way to offer the US a tangible reason to continue its support for Ukraine.

On Tuesday, Trump suggested that in exchange for access to Ukraine's minerals, the country would gain "the right to continue fighting." He also indicated that the US would keep supplying military equipment and ammunition "until an agreement with Russia is reached."

Additionally, Trump mentioned that Russia might be open to allowing European peacekeepers in Ukraine. However, Russian Foreign Minister Sergei Lavrov dismissed this as an unacceptable option for the Kremlin.

Does the Deal Include a Security Guarantee?

Zelensky has been pushing for security assurances as part of the agreement, but he confirmed on Wednesday that no such guarantees have been included in the deal so far.

"I wanted security guarantees for Ukraine to be explicitly stated, and it's important that such a commitment is made," he said.

When asked whether he would walk away from the agreement if security guarantees were not provided, Zelensky responded, "I want a clear NATO pathway or something equivalent. Without security guarantees, there will be no ceasefire, and nothing will work."

Despite the lack of a formal guarantee, Shmyhal stated that the US remains supportive of Ukraine's efforts to secure long-term security commitments. He also noted that Ukraine would not finalize the agreement until Zelensky and Trump reach a consensus on how to integrate security assurances into the framework.

Trump, however, indicated that the US would not commit to any security guarantees beyond "a certain extent," emphasizing that Europe should take on this responsibility. He added that the presence of American workers in Ukraine's resource sector would provide an "automatic security benefit."

Public Opinion Regarding the Proposed Agreement

- Domestic Sentiment: Reactions from Ukrainian citizens, political figures, and media outlets.
- International Perspectives: Opinions from global stakeholders and allied nations.

Public Opinion on the Agreement

Ukraine and US Finalize Major Minerals Agreement

Ukraine's Prime Minister Denys Shmyhal has confirmed that a significant minerals agreement has been reached with the United States.

During an interview on Ukrainian television, Shmyhal noted that the deal includes a clause stating that the US supports Ukraine's pursuit of security guarantees aimed at establishing long-term peace.

Reports indicate that Washington has abandoned its initial demand for rights to \$500 billion (£395 billion) in potential revenue from Ukraine's natural resources. However, no definitive security commitments have been provided by the US.

US President Donald Trump announced that he expects Ukrainian President Volodymyr Zelensky to visit Washington later this week to sign the agreement, following a period of tense exchanges between the two leaders.

Long-Term Impact on US Foreign Policy

Kyiv hopes that US financial involvement in Ukraine's natural resource sector will provide the White House with additional incentive to safeguard Ukraine's sovereignty, especially if hostilities resume after a ceasefire.

Meanwhile, the Biden administration is signaling a shift in US foreign aid policy under the Trump era. Assistance is no longer being granted unconditionally—whether for humanitarian or strategic reasons.

This marks a significant departure from decades of American foreign policy, stretching from the Marshall Plan to post-Cold War global initiatives and George W. Bush's "Freedom Agenda," which aimed to promote democracy worldwide.

Ukraine is only the beginning. Trump and his foreign policy team are expected to apply their "America First" strategy on a global scale over the next four years.



CONCLUSION UKRAINE AND THE US REPORTEDLY FINALIZE CRITICAL MINERALS

Ukrainian and American negotiators have reportedly reached an agreement on a deal concerning Ukraine's critical minerals. President Volodymyr Zelenskyy is expected to visit Washington on February 28 to formally sign the agreement.

However, the deal has sparked controversy within Ukraine, where Zelenskyy faces significant political risks if the agreement is perceived as overly favorable to the US without clear benefits for Ukrainians. Some critics have drawn comparisons to the Budapest Memorandum, which failed to provide Ukraine with lasting security assurances.

Key Details and Political Tensions

While full details remain undisclosed, Ukraine has successfully resisted US attempts to claim \$500 billion worth of mineral deposits as part of the deal.

The agreement has also raised concerns over political pressure. President Trump's statements suggesting that Ukraine could face serious consequences if Zelenskyy refuses to sign have been criticized as contradicting the principles of strategic partnership and undermining international law.

The Vienna Convention on the Law of Treaties states that agreements made under coercion or threats are legally void (Articles 51-52). Additionally, the 1994 Budapest Memorandum commits the US to refrain from economic pressure that would compromise Ukraine's sovereignty (Article 3).

Financial Terms and Aid Repayment Dispute

Trump's demand that Ukraine's resource revenues be used to reimburse past US aid lacks legal precedent.

Following a similar argument, Ukraine could potentially claim compensation for its disarmament under international agreements such as the 1992 Treaty on Conventional Armed Forces in Europe (which led to the disposal of thousands of tanks, combat vehicles, and aircraft) and the 2005 Ukraine-NATO agreement (which resulted in the destruction of large stockpiles of weapons and ammunition).

Furthermore, the majority of US aid to Ukraine has been structured as non-repayable grants, as specified in multiple bipartisan funding bills between 2022 and 2024. Only the April 2024 Ukraine Appropriations Act included provisions for forgivable loans, totaling \$9.4 billion, of which \$4.7 billion was already canceled by President Biden in November.

Additionally, allowing private companies to extract Ukrainian resources would not directly return funds to US taxpayers. The deal could set a risky precedent of retroactively converting grants into loans, even as the EU has explicitly stated that it will not demand mineral rights in exchange for its aid.

Questioning the Numbers

Trump is seeking a repayment of \$500 billion—far exceeding the actual \$175 billion in aid allocated to Ukraine.

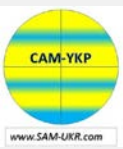
A significant portion of this amount has not even been spent in Ukraine. Only around \$43 billion has gone toward humanitarian and economic support. Military aid funds of \$66 billion have largely remained in the US, financing American defense contractors rather than directly benefiting Ukraine.

About \$34 billion was used to replenish US stockpiles of weapons sent to Ukraine.

Another \$33 billion was allocated to new arms production for Ukraine, though only a fraction of these weapons have been delivered due to bureaucratic delays.

Additionally, roughly \$60 billion labeled as "Ukraine aid" has been allocated to broader military efforts, including bolstering US forces in Europe and supporting other allied nations.

Meanwhile, claims that Europe has provided significantly less aid than the US are misleading. Between 2022 and 2024, the EU has allocated \$174 billion, including \$52 billion in military aid, with the rest covering financial, humanitarian, and refugee assistance.



SECURITY IMPLICATIONS

Security Implications

While the agreement aims to unlock Ukraine’s mineral wealth and contribute to its economic recovery, security experts warn that it does not sufficiently address Ukraine’s ongoing security challenges amid continued Russian aggression.

Although the document acknowledges U.S. support for Ukraine’s pursuit of security guarantees, it does not specify steps toward ending the war or establishing concrete security arrangements.

U.S. Business Perspective

Andy Hunder, President of the American Chamber of Commerce in Ukraine, told VOA that the agreement focuses on creating a new American-Ukrainian investment fund to manage state-owned enterprises and Ukraine’s rich subsoil resources, including gas, oil, and critical minerals.

“This is an exciting opportunity. Bringing in professional fund managers could quickly turn these enterprises into profitable ventures, benefiting both Ukrainian and American taxpayers,” Hunder said.

Ukraine has one of the highest numbers of state-owned enterprises globally, many of which are inefficiently managed. According to Hunder, introducing professional oversight could significantly enhance profitability.

Conclusion

Security Concerns Persist

Despite the economic benefits, former Ukrainian Defense Minister Andriy Zagorodnyuk warns that economic cooperation alone will not be enough to secure Ukraine’s sovereignty.

“This deal demonstrates the U.S.’s vested interest in Ukraine, but economic investments must be complemented by strong military capabilities to deter future Russian aggression,” Zagorodnyuk told VOA.

He stressed that while NATO membership remains the ideal security guarantee, Ukraine must secure a robust defense package if NATO accession is not feasible.

Negotiation Outcomes and Geopolitical Considerations

Sources close to the negotiations, who requested anonymity, indicated that Ukraine was able to negotiate more favorable terms than initially proposed, reducing an original U.S. demand for a \$500 billion claim on Ukrainian natural resources.

However, the final agreement does not include explicit U.S. security guarantees, which Kyiv had sought. The U.S. will retain decision-making authority within the investment fund, with specific ownership terms to be determined in later discussions.

While the agreement is expected to strengthen Ukraine’s economy, recent remarks by President Trump—who referred to Zelenskyy as a “dictator” and urged him to sign the deal quickly—have sparked controversy. The U.S. administration views the deal as a way to recoup part of the military aid sent to Ukraine.

Future Uncertainty

The key question remains whether this economic partnership will contribute to lasting peace and stability in Ukraine. As negotiations continue, Ukraine faces the challenge of balancing economic recovery with its urgent security needs.

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