**Russia's control of Ukraine's rare earths hinders global supply**

**Amanda Coakley 'None** [Amanda Coakley; None; None; The war has thwarted Ukraine’s plan to export rare earth materials - Coda Story; None; https://www.codastory.com/waronscience/ukraine-lithium-export/; Accessed 06-17-2024; cut by AI] \*double quotes converted to single quotes

Teona Tsintsadze/Getty Images Climate Before Russia invaded Ukraine in February 2022, Ukraine, home to approximately 500,000 tons of high-quality lithium and vast quantities of rare earth elements, was poised to be a key player in the global transition to green technology. But as **Russia** has seized territory in Ukraine’s east and south, the future of the country’s critical raw materials has been thrown into question. Even before the war, Ukraine was at least 10 years away from reaping the financial rewards for some of its in-demand raw materials, vital ingredients in many products from iPhones to fighter jets. Most rare earths are, in fact, not all that rare. But extracting and purifying the lightweight elements is expensive, dangerous and environmentally damaging. Almost all of Ukraine’s critical materials and rare earths can be easily found elsewhere. International investors might seek less risky alternatives.   Stay on the story Coda produces journalism that digs into the roots of major global trends. Sign up to receive stories and insights straight to your inbox. As the war grinds into its second year, the European Union, the United States and other Western powers are making strategic investments around the world to diversify away from their dependence on Chinese and Russia-sourced critical raw materials — investments that will translate into mines and infrastructure in places other than Ukraine and greatly undermine Ukraine’s ability in the future to compete in the critical raw materials market. “Most of the foreign natural resource development is probably off the table,” said Chris Berry, an analyst on critical raw materials at House Mountain Partners in Washington, D.C. Even after the war, investor confidence is likely to be deeply shaken. The demining process alone will take approximately ten years according to Ukrainian officials. Russia has contaminated vast swathes of territory with landmines and other unexploded ordnance. The total value of Ukraine’s deposits is believed to be astronomical, a prospective loss to add to the estimated $138 billion worth of damage caused so far by Russian strikes on Ukrainian infrastructure. Ukraine and the European Commission had signed a strategic partnership agreement on raw materials in 2021, heralded as a significant step forward for Ukraine in the renewables space. It was an accord that also boosted the confidence of foreign mining companies moving to secure Ukrainian exploration permits, the first step in the mining process.   The Ukrainian government has not publicly announced how many lithium fields and promising areas are now under Russian occupation. Before the invasion, no lithium was being extracted from Ukraine. But several licenses were in various stages of development, including the Shevchenkivske field in the Donetsk region, the Kruta Balka block in the Zaporizhzhia region and the Dobra block and the Polokhivske field in the Kirovohrad region. Both the Shevchenkivske field and the Kruta Balka have danced along the war’s ever-moving frontlines. Despite this, Ukrainian officials have presented an image of a stalwart critical materials partner to the EU, and last month Ukraine and the EU reaffirmed the strategic importance of their alliance. In December, Ukraine’s parliament passed mining reform legislation to increase the attraction of the country’s extraction industries.   The invasion coincided with the EU’s quest to seek alternatives from China in order to meet its ambitious goal of achieving carbon neutrality by 2050. The pandemic established the need to move away from single suppliers like China, while the Ukraine invasion underscored the geopolitical vulnerabilities for Europe that exist close to home.    China supplies Brussels with 98% of the EU’s supply of rare earth elements. It’s a supply chain that Olivia Lazard, a fellow at the Carnegie Endowment for International Peace, said needs to be reviewed. In fact, the issue of raw materials tops Brussels’ political agenda. Last September, the president of the European Commission, Ursula von der Leyen, announced the European Critical Raw Materials Act. “Lithium and rare earths are already replacing gas and oil at the heart of our economy,” said von der Leyen in a speech, adding that Europe has to “avoid falling into the same dependency as with oil and gas.” While Europe has been moving away from reliance on Russian oil and gas, Russia continues to hold many of the essential elements for the West’s green transition. Russia accounts for approximately 7% of the global supply of nickel, a vital ingredient in solar panels. It is also a leader in the global supply of aluminum, palladium, potash and vanadium. The EU imports approximately $7.4 billion a year in Russian raw materials. The Vatican is turning its back on Belarus’ Catholics Amanda Coakley Europe scrambles for gas in Africa despite climate concerns Ruth Michaelson The war in Ukraine triggered a reckoning in universities Lydia Tomkiw Russian metals and minerals have escaped the same kind of scrutiny that oil and gas exports have encountered. Norilsk Nickel, the world’s largest producer of palladium and high-grade nickel, owned by the Putin-supporting oligarch Vladimir Potanin, has not come under Western sanctions. Russian nickel exports to the U.S. and the EU actually saw a boost in 2022. “If you look into the sanctions, you will see that the EU has been more cautious on certain types,” said Vasileios Rizos, the head of sustainable resources and circular economy at CEPS, a think tank. “The whole raw materials agenda comes from a more strategic perspective at the EU level.” In 2020, Russia pledged $1.5 billion for mining rare earth minerals with the goal of becoming the biggest producer after China. Capturing raw materials on Ukrainian land will redound to Russia’s benefits, allowing the Kremlin to keep the materials off world markets.  Russia’s Wagner paramilitary group is believed to collect raw material deposits to shore up its finances. “This tells us something about the nature of the Russian approach now regarding security and defense,” said Lazard, the Carnegie fellow. “Geology is now an asset and geological exploration is a competency to wield in the global geopolitical competition.”  The story you just read is a small piece of a complex and an ever-changing storyline that Coda covers relentlessly and with singular focus. But we can’t do it without your help. Show your support for journalism that stays on the story by becoming a member today. Coda Story is a 501(c)3 U.S. non-profit. Your contribution to Coda Story is tax deductible. Amanda Coakley is a former Senior Staff Reporter at Coda. Copyright © 2024 Coda Media, Inc. All Rights Reserved.