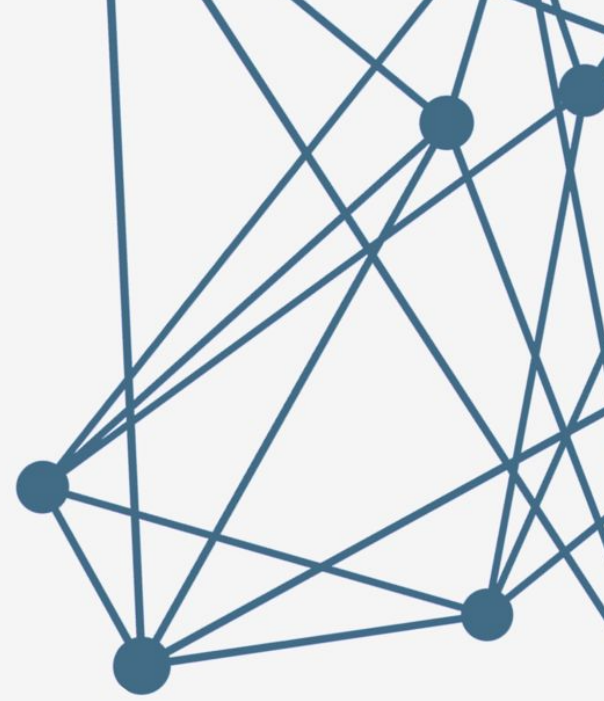


Kazakhstan Could Lead Central Asia in Mitigating the World's Energy and Food Shortages



by Margarita Assenova, Ariel Cohen, PhD, and Wesley A. Hill

April 2023



The Eurasia Center’s mission is to enhance transatlantic cooperation in promoting policies that strengthen stability, democratic values, and prosperity in Eurasia, from Eastern Europe in the West to the Caucasus, Russia, and Central Asia in the East.

April 2023

Cover: Illustration by Izabella Ozello.

ISBN-13: 978-1-61977-276-2

This report is written and published in accordance with the Atlantic Council Policy on Intellectual Independence. The authors are solely responsible for its analysis and recommendations. The Atlantic Council and its donors do not determine, nor do they necessarily endorse or advocate for, any of this report’s conclusions.

Kazakhstan could lead Central Asia in mitigating the world's energy and food shortages

Executive Summary	2
Introduction.....	4
The Current State of Affairs: War and Sanctions Impact Assessment	7
Central Asia's Natural Resources and Export Routes.....	16
Central Asian Government Policies on Energy and Food Exports	23
EU and US Policies on Imports from Central Asia	25
Policy Recommendations.....	27
Biographies.....	28

EXECUTIVE SUMMARY

- Russia's invasion of Ukraine created economic and political disruptions along its borders, including in Central Asia, raising concerns about regional security and economic stability. The five states in the region have responded by accelerating regional integration and seeking greater Western engagement.
- Western sanctions against Russia highlighted the region's economic imbalances and created new opportunities for trade and investment. Central Asia's overdependence on export routes through Russia became a significant hurdle for its natural resources to reach international markets. Simultaneously, global energy and raw-materials shortages stimulated demand for Central Asian natural resources and increased interest in regional investments. These challenges should be addressed by the national government and business communities, in cooperation with Western powers.
- The primary challenges for Central Asia and its Western partners remain diversifying export routes and expanding the capacity of alternative transportation corridors, especially the Trans-Caspian International Transportation Corridor, or the "Middle Corridor."
- Kazakhstan is the leading producer of uranium ore in the world, but most of its uranium is enriched in Russia and exported via Russian ports. A potential United States (US) and/or European Union (EU) ban on uranium civilian-reactor fuel exports from Russia may close this route for Kazakhstan. However, Kazakhstan could double its share of the European market if it builds its own conversion and enrichment facilities while utilizing the Middle Corridor.
- The energy crisis in Europe stimulated plans for the thus far dormant Trans-Caspian natural-gas pipeline. The first efforts are focused on gaining political will in Ashgabat and installing an underwater East-West connector in the Caspian Sea between the off-shore gas deposits of Turkmenistan and Azerbaijan to link them with the existing pipeline network of the Southern Gas Corridor. US and EU involvement will be critical for the project's success.
- The war disrupted international food production and supply chains. Kazakhstan, which already grows 2 percent of the world's wheat, can help mitigate the global food shortage. Plans to produce fertilizers locally will help increase agricultural outputs. Grain can be exported through the Middle Corridor to Europe and Africa, and east to Asia.
- Chinese trade and investment will likely increase as Russian influence wanes, but reservations about replacing dependence on Moscow with dependence on Beijing persist in all five capitals. Local actors hope the United States and EU will facilitate Central Asia's expanding economic ties with the West, to counteract Chinese influence and mitigate regional Sino-Russian competition. So far, the Europeans have demonstrated some engagement, while the United States remains aloof.
- Central Asia is a strategically undervalued region for the EU and NATO. Despite the region's enormous economic potential and openness to Western-oriented economic engagement, local actors feel insufficiently encouraged by Western actors' engagement. This could inadvertently retrench Russian and enhance future Chinese expansion of influence.

Figure 1. Map of the Caucasus and Central Asia



Source: "The Caucasus and Central Asia," US Central Intelligence Agency, 2009, <https://www.loc.gov/item/2009584329/>.

INTRODUCTION

Russia's war against Ukraine has profoundly impacted the global economy. It has disrupted energy and financial markets, hindered food exports and fertilizer production, obstructed maritime and land transportation routes around the Black Sea, and increased environmental pollution. For most of the world, the war contributed to exceedingly high energy prices, rising inflation, and food shortages that endangered more than eight hundred million lives in the poorest countries.

For the five Central Asian states—which, like Ukraine, were part of the Soviet Union until 1991—the war generated fear for their security and foreign economic relations. Kazakhstan, the largest Eurasian state, shares a 4,750-mile border with the Russian Federation and is home to 3.5 million ethnic Russians, who comprise 17 percent of the total population. They live mainly in the northern and western regions, along the border with Russia. For most citizens of Kazakhstan, threatening statements by Kremlin officials, politicians, and propagandists cause concern, as such rhetoric echoes Moscow's claims against Ukraine. A recent interview by the Russian ambassador to Astana, stating that Kazakh nationalism is growing and offering Russia's help to curb it, has caused a strong public rebuke.¹

None of the Central Asian states have endorsed Russian President Vladimir Putin's war on Ukraine, although they have been reticent to join Western sanctions imposed on Moscow for the invasion. Astana has openly opposed the war, expressed support for the territorial integrity of Ukraine, and refused to recognize Russia's annexation of four Ukrainian regions.² Nevertheless, the economic dependence on Russia due to geographic location, transportation infrastructure, and post-colonial legacies has forced the Central Asian states to maintain close economic relations with Moscow

while seeking alternative export destinations and transportation routes.

Landlocked Central Asia—surrounded by Russia, China, Afghanistan, and Iran—has suffered the economic effects of the war and global sanctions against Moscow. Russia has remained a leading trade partner for Central Asia during three decades of independence. Most of the oil and gas pipelines of the hydrocarbon-rich region were built northward or westward to Russia, both during and after Soviet times. Even newer oil developments, such as the Tengiz and Kashagan fields in Kazakhstan, use pipelines through Russian territory to export most of Kazakhstan's oil. The Tengiz-Novorossiysk oil pipeline, managed by the Caspian Pipeline Consortium (CPC), transports 80 percent of Kazakhstan's oil to global markets. Russia suspended that pipeline's operations four times in 2022, citing various pretexts, from environmental concerns to allegedly needing to remove World War II-era explosives in the Black Sea at the port of Novorossiysk.³

Western sanctions against Moscow also affected Kazakhstan's oil exports through CPC and the Atyrau-Samara interconnector. Astana needed to procure special permission from several capitals that had banned Russian oil imports to be able to transit its oil via Russia to Europe. US imports of Kazakhstan crude have dropped by two-thirds since the Russian invasion, primarily due to buyers' concerns about exports from Russian ports.⁴ In addition, many Western companies involved in technological and maintenance services for Russia's extractive industries either were forced to leave the country under the threat of sanctions or hesitated to service the CPC.

Central Asia is also connected to China, with oil pipelines from Kazakhstan and gas pipelines from Turkmenistan and Uzbekistan. Energy trade with

1 Manshuk Asautay and Tokmolda Kusainov, "Nationalist Tendencies are Watched, 'We Can Help': Russian Ambassador to Kazakhstan," Radio Azatyk, December 5, 2022, <https://rus.azattyq.org/a/natsionalisticheskie-tendentsii-prosmatrivayutsya-my-pomozhem-posol-rossii-o-kazahstane-i-reaktsii/32162663.html>.

2 Isabel Van Brugen, "Putin Ally Speaks out against Ukraine Approach to His Face," *Newsweek*, June 20, 2022, <https://www.newsweek.com/putin-ally-speaks-out-against-ukraine-approach-st-petersburg-donetsk-luhansk-1717408>.

3 Georgi Gotev, "Russia Shuts down Terminal after Kazakhstan Offers to Send More Oil to the EU," *Euractiv*, July 6, 2022, <https://www.euractiv.com/section/central-asia/news/russia-shuts-down-terminal-after-kazakhstan-offers-to-send-more-oil-to-the-eu/>.

4 Arathy Somasekhar, "U.S. Imports of Kazakh Crude Tumble after Russia's Ukraine Invasion," Reuters, October 4, 2022, <https://www.reuters.com/business/energy/us-imports-kazakh-crude-tumble-after-russias-ukraine-invasion-2022-10-05/>.

China will undoubtedly continue to increase, but reservations about switching from dependence on Moscow to dependence on Beijing are evident in all five capitals. The experience of Turkmenistan with the Central Asia-China pipeline, a \$6.7-billion Chinese investment that created a monopsony and curtailed Ashgabat's gas-export profits, has not been conducive to diverting energy trade entirely to China.

Kazakhstan is increasingly working on developing the Trans-Caspian International Transportation Route, or the Middle Corridor, through the Caspian Sea and the Caucasus to the Black Sea or Turkey for its exports of energy and other goods to Europe. Agreements between Astana and Baku have made possible the export of oil from Kazakhstan through the Baku-Tbilisi-Ceyhan pipeline to the Mediterranean Sea, or through the Baku-Tbilisi-Supsa pipeline to the Black Sea. However, options to reach European markets remain limited and require serious investments.

The Caspian route will be a profitable opportunity for natural-gas exports from Turkmenistan and Kazakhstan to reach European markets if the Trans-Caspian pipeline is finally built. Europe's energy shortages and high gas prices have created new momentum for this pipeline project. At the same time, Russia, which has opposed its construction for decades, is weakened by its war against Ukraine and has also indefinitely lost its European gas markets. Moscow might also prefer to allow Turkmenistan access to Europe rather than compete with Ashgabat for the Chinese market, one of the few remaining destinations for Russian gas.⁵

In the wake of the European Union's partial embargo and price cap on Russian oil, Kazakhstan has secured a deal to export crude to Germany through Russia's Druzhba pipeline, the northern fork of which transits Belarus and Poland. State-owned KazTransOil confirmed that, in the first quarter of 2023, it would transit three hundred thousand tons of oil via the Atyrau-Samara connector to the pipeline system operated by Russian Transneft for further delivery to Germany. While the current permission by Transneft is for 2.3 million barrels of oil for the first three months

of the year, Astana aims to deliver 11.4 million barrels to Germany by the end of 2023.⁶

Furthermore, Russia's invasion of Ukraine has stymied global uranium trade. As one-third of the world's uranium is enriched in Russia, the United States and the European Union are scrambling to find alternative sources of nuclear fuel. Uranium is the only segment of Russian energy that has not come under sanctions thus far. Still, the United States may impose a ban on Russian uranium imports and seek to develop domestic sources. The EU is also considering such a ban, while taking a closer look at Central Asia's uranium resources in Kazakhstan and Uzbekistan.

Kazakhstan is the leading producer of uranium ore in the world, but much of its milled uranium is processed in Russian conversion plants and enrichment facilities before it is sent to global markets. The main export point is by sea from St. Petersburg, another link with Russia that can become an impediment to Kazakhstan's uranium trade. But opportunities also accompany the challenges—Kazakhstan could double its European market share if Russian uranium exports are banned. However, the country must build its own supply chain: conversion and enrichment facilities and utilize alternative export routes to Europe, potentially via the Caspian Sea. This will not be easy or cheap.

The war also disrupted global food-production supply chains. Blocked by the Russian navy, Ukraine's Black Sea ports were inaccessible to foreign ships transporting the grain harvest to international markets for months. The disruption affected wheat, barley, corn, and sunflower seeds for oil. A deal brokered by the United Nations (UN) and Turkey in July 2022 allowed for the shipment of grain to resume, but conditions remained volatile because Moscow seemed ready to abandon the agreement at any time.⁷ Russia and Ukraine are among the world's largest grain producers and exporters, providing almost one-third of the world's wheat and one-quarter of the barley demand on the international market.

5 Bruce Pannier, "Europe's Wait for Turkmen Natural Gas Continues," Foreign Policy Research Institute, September 13, 2022, <https://www.fpri.org/article/2022/09/europes-wait-for-turkmen-natural-gas-continues/>.

6 "KazTransOil JSC Will Transit 300 Thousand Tons of Kazakh Oil to Germany in the First Quarter of 2023," KazTransOil, January 13, 2023, https://kaztransoil.kz/en/press_centre/news/3499-kaztransoil-jsc-will-transit-300-thousand-tons-of-kazakh-oil-to-germany-in-the-first-quarter-of-2023.

7 Iliya Kusa, "The Ukraine-Russia Grain Deal: A Success Or Failure?" Wilson Center, January 9, 2023, <https://www.wilsoncenter.org/blog-post/ukraine-russia-grain-deal-success-or-failure>.

Kazakhstan grows 2 percent of the world's wheat, placing the country among the medium-sized producers. Its grains primarily feed the Central Asian populations, but last year the harvest was 30 percent higher, which will contribute to alleviating global food shortages and stabilizing food prices. Wheat yields can be increased.

Importantly, global fertilizer production took a significant blow in 2022 because of natural-gas shortages in Europe. Natural gas is used as raw material in the fertilizer industry. Countries heavily dependent on Russian gas had to shut down their chemical plants, leading chemical producers to define gas shortages due to a war as a force majeure that stopped operations. Fertilizer shortages and high production costs that result in increased food prices will have a bearing on the next harvest, as many farmers will not be able to plant enough crops.

The five Central Asian states can make a meaningful contribution to mitigating the world's energy and food deficits, but this will require determination by local governments and the commitment of Western government and business partners. They can attract new investments to tap into the region's natural resources and facilitate much-needed exports to Europe through investment-friendly policies and transparent rules of the game. For that to happen, the Central Asian governments must accelerate domestic economic reforms and diversification, strengthen the rule of law, guarantee legal protections for investments, boost education, and embark on changes to develop pluralistic political systems. The government of Kazakhstan, the leading economy in the region, has announced a program of reforms that would build on the market transformations of the last three decades.

THE CURRENT STATE OF AFFAIRS: WAR AND SANCTIONS IMPACT ASSESSMENT

Western sanctions to cut Russia off from the world's financial system are the most potent economic weapon in the recent history of sanctions as a foreign policy tool to compel a country to change its behavior.⁸ The Atlantic Council's database shows nearly eleven thousand sanctions against Russia, with 78 percent targeting individuals and around 21 percent levied against private and state-owned entities. These, added to the previous sanctions levied by the international community against Russia after it annexed Crimea in 2014, have further weakened Moscow's economic standing, but have failed to change its behavior so far.⁹

Impact of Russia's Invasion of Ukraine on Global Energy Markets

Russia's invasion of Ukraine, subsequent Western sanctions, and the unreliability of Russia as an energy supplier have not only shaken global energy markets, but have significantly altered future energy and other export-import operations. Russia has lost its enormous share of the lucrative European markets and may have difficulty regaining it without a comprehensive peace agreement and the lifting of sanctions, which at this point seem highly unlikely.

While Russia delivered 25 percent of Europe's crude oil in 2021, the EU has now phased out 90 percent of oil imports from Russia.¹⁰ Europe quickly moved to swap Russian energy imports with alternative supplies. Russian crude was replaced with a frenzy of ad hoc shipments from around the world, including Saudi Arabia and even Venezuela, after a rapprochement with Washington.¹¹

By the end of 2022, EU states banned imports of Russian oil and adopted an embargo on Russian seaborne crude and petroleum oil products, which are now subject to a price cap. The EU granted an exemption from the ban to only four EU nations. The landlocked Czech Republic, Hungary, and Slovakia, which lack alternative pipelines, will continue importing Russian oil through the Druzhba pipeline, while Bulgaria will maintain deliveries via the Black Sea until the end of 2024.

In 2021, Russian natural-gas imports accounted for 39 percent of total EU natural-gas demand, but dropped to 6 percent by the end of 2022. In January 2023, Russian gas deliveries plunged to less than 500 million cubic meters (mcm) a week, down from 3,300 mcm at the same time last year.¹² Although Russian natural gas is not under Western sanctions, Moscow decided to drastically reduce supplies to Europe in an attempt to put pressure on Western governments to stop supporting Ukraine.

Moscow rehearsed its gas-market manipulation scenario in 2021, almost a year before the war, by reducing gas supplies to Europe to strictly contractual levels, thus creating shortages that sent prices soaring. In the meantime, Gazprom-controlled storage facilities were almost empty in 2021, creating panic in the market and pushing prices even further up.¹³

Repeating the same scenario in 2022, Gazprom progressively scaled down natural gas deliveries to Europe with every round of EU sanctions, in hopes of scaring the Europeans with potential energy shortfalls in a cold winter. Gas transit through the Yamal-Europe pipeline stopped in May 2022, while

8 "Western Sanctions on Russia Are Like None the World Has Seen," *Economist*, March 5, 2022, <https://www.economist.com/briefing/2022/03/05/western-sanctions-on-russia-are-like-none-the-world-has-seen>.

9 *Russia Sanctions Database*, Atlantic Council, last visited March 3, 2023, <https://www.atlanticcouncil.org/blogs/econographics/russia-sanctions-database/>.

10 Julia Horowitz, "The West Just Scrambled the Oil Market. What Happens Next Is up to Russia," CNN Business, December 5, 2022, <https://www.cnn.com/2022/12/05/energy/russia-oil-embargo-price-cap-explainer/index.html>.

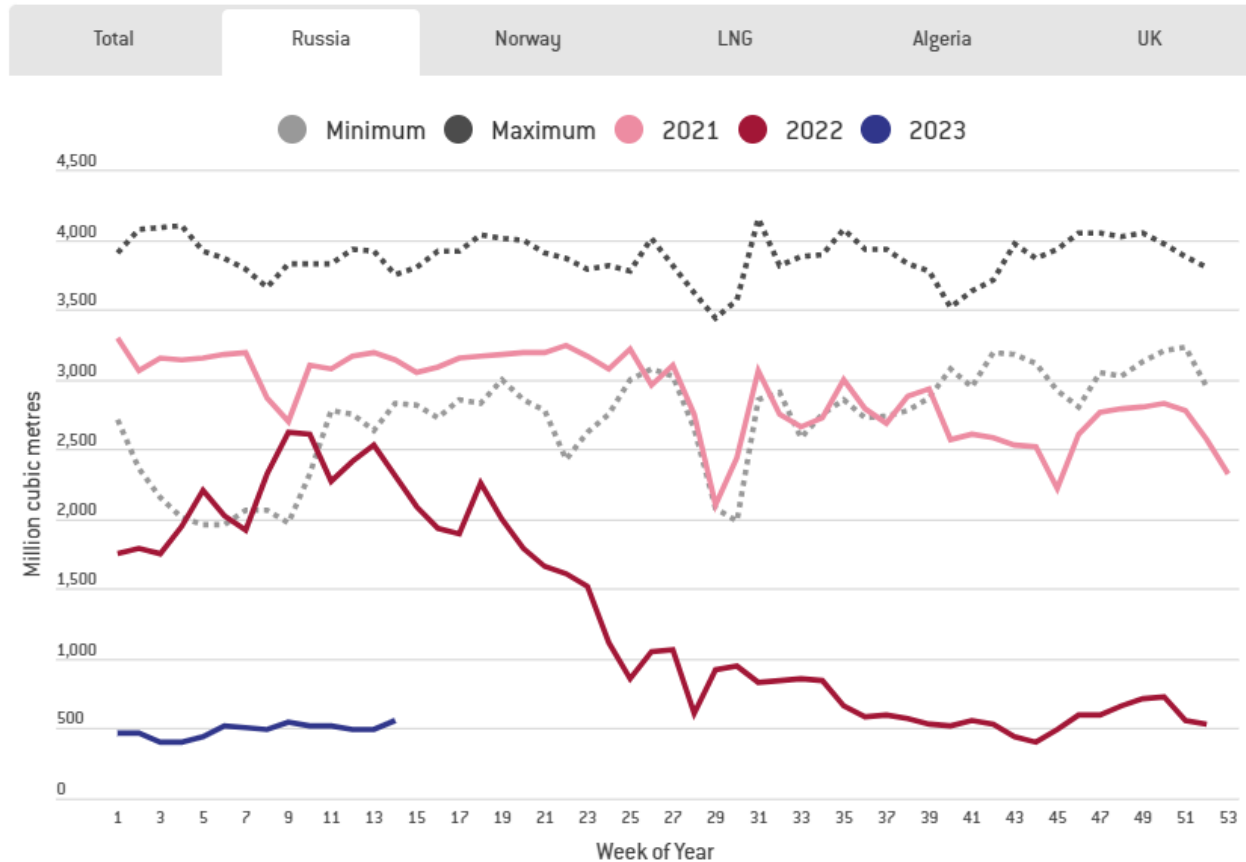
11 Ryan Hogg, "Oil From Sanctioned Venezuela to Help Europe Replace Russian Crude as Soon as Next Month: Report," *Business Insider*, June 5, 2022, <https://www.businessinsider.com/oil-from-venezuela-to-help-replace-russian-crude-reuters-reports-2022-6>.

12 Oksana Kobzeva, "Russian Piped Gas Exports to Europe Falls 30% in January to New Lows—Data," Reuters, January 31, 2023, <https://www.reuters.com/business/energy/russian-piped-gas-exports-europe-falls-30-january-new-lows-data-2023-01-31>.

13 Margarita Assenova, "Gazprom's 'Italian Strike' or the Latest Russian Blackmail of Europe," *Eurasia Daily Monitor*, November 4, 2023, <https://jamestown.org/program/gazproms-italian-strike-or-the-latest-russian-blackmail-of-europe/>.

Figure 2. 2022-2023 EU natural gas imports from Russia

Last updated: 12/04/2023 (updated every Tuesday/Wednesday)



Source: Zachmann, et al., “European Natural Gas Imports.”

gas flows from Nord Stream 1 were suspended in September 2022.¹⁴ Only the TurkStream pipeline under the Black Sea and the Ukrainian gas network (at a low capacity) are still in use by Gazprom.¹⁵

The EU replaced most of the Russian natural-gas exports with increased pipeline gas supplies from Norway and North Africa and liquefied natural gas (LNG) deliveries from the United States, Qatar, and elsewhere, while a limited amount of Russian piped gas via Turkey and Russian LNG continued to flow.¹⁶ However, before these arrangements were made,

gas prices skyrocketed, bringing record levels of revenue to Russia. The current gas-price slide in Europe is somewhat helpful for the Western allies’ goal to constrain Russian budgetary inflows, as Russia entered 2023 with the most significant deficit in the twenty-first century.

On September 26, 2022, three of the four strings comprising the Nord Stream 1 and Nord Stream 2 pipelines were damaged by a still-mysterious underwater explosion, described as a “gross sabotage” by Swedish prosecutors.¹⁷ CNN reported

14 Georg Zachmann, Giovanni Sgaravatti, and Ben McWilliams, “European Natural Gas Imports,” Bruegel, March 1, 2023, <https://www.bruegel.org/dataset/european-natural-gas-imports>.

15 Zachmann, et al., “European Natural Gas Imports.”

16 Therese Robinson, “Gazprom in Search of New Natural Gas Markets After Exports to Europe Plummeted in 2022,” Natural Gas Intelligence, January 10, 2023, <https://www.naturalgasintel.com/gazprom-in-search-of-new-natural-gas-markets-after-exports-to-europe-plummeted-in-2022/>.

17 Tristan Fiedler, “Nord Stream Pipelines Were Sabotaged, Swedish Prosecutor Says,” *Politico.eu*, November 18, 2022, <https://www.politico.eu/article/nord-stream-sabotage-sweden-prosecutor-mats-ljungqvist/>.

that European security officials observed Russian Navy support ships nearby days before the explosions, and Russian submarines were also spotted in the area the previous week. The latest reporting about the potential involvement of a pro-Ukrainian group lacked information about the saboteurs' identities. The investigators have not yet been able to find out who commissioned the suspected group of perpetrators. They also do not exclude a false-flag operation to implicate Ukraine.¹⁸ Some experts have said that if the pipelines are not repaired quickly, seawater will cause corrosion, rendering them unusable. A Kremlin spokesman announced in December that Russia has not decided on whether to begin repairs.¹⁹

Impact of Russia's Invasion of Ukraine on Global Food Markets

Russia's embargo on Ukrainian ports, combined with sanctions on Moscow, has resulted in grain shortages, a dramatic rise in food prices, and an increase in the number of people suffering from acute hunger.

The World Food Programme (WFP) has said that the number of people facing acute food insecurity more than doubled in 2022—reaching a staggering 349 million, compared to 135 million before the Covid-19 pandemic.²⁰ The International Food Policy Research Institute stated that 2022 was one of the worst years for global food security.²¹ Russia and Ukraine are among the world's largest grain producers and exporters. Exports from these two countries account

for 12 percent of the total caloric value traded by humanity.²²

Food shortages caused by the war in Ukraine came on the heels of supply-chain difficulties stemming from the COVID-19 pandemic, which left global food stocks 31 percent lower than the five-year average. In May, the global food price index hit record highs, reaching a high of 173.5. By mid-February 2022, wheat prices were already 50 percent above their five-year average and went up another 30 percent within two weeks after the war began.²³ Although grain prices have decreased since then, they are still at historically high levels in early 2023.²⁴

Complicating the already delicate balance of food security systems, the World Food Programme, which benefits the world's poorest and most vulnerable, buys 50 percent of its grain from Ukraine. Thus, the blocked Black Sea ports in Ukraine and routinely smuggled grain stocks have directly affected the poorest countries in the world, mainly in the Middle East and Africa, including Nigeria, Somalia, Ethiopia, Egypt, and Yemen.²⁵

Ukraine is also a major exporter of corn, barley, sunflower oil, and rapeseed oil. The ongoing war raised concerns over whether crops would be harvested and whether ports would be open for the 2022 harvest to be exported. An UN-brokered deal with Russia to allow passage to ships with Ukrainian grain has been inconsistent, and shipment security remains at high risk.²⁶

18 Holger Stark, "Nord Stream I investigations: Traces Lead to Ukraine," *Zeit*, March 7, 2023, <https://www.zeit.de/politik/ausland/2023-03/nordstream-2-ukraine-anschlag>.

19 "In Nord Stream Mystery, Baltic Seabed Provides a Nearly Ideal Crime Scene," *New York Times*, December 26, 2022, <https://www.nytimes.com/2022/12/26/world/europe/nordstream-pipeline-explosion-russia.html>; Katie Bo Lillis and Kylie Atwood, "First On CNN: European Security Officials Observed Russian Navy Ships in Vicinity of Nord Stream Pipeline Leaks," CNN, September 29, 2022, <https://edition.cnn.com/2022/09/28/politics/nord-stream-pipeline-leak-russian-navy-ships/index.html>.

20 "2023: Another Year of Extreme Jeopardy for Those Struggling to Feed Their Families," World Food Programme, last visited January 20, 2023, <https://www.wfp.org/global-hunger-crisis>.

21 "Global Food Prices Remain High, Food Security Remains Uncertain This Year (Epoch Times)," International Food Policy Research Institute, January 13, 2023, <https://www.ifpri.org/news-release/global-food-prices-remain-high-food-security-remains-uncertain-year-epoch-times%2%A0>.

22 Joseph Glauber and David Laborde, "How Will Russia's Invasion of Ukraine Affect Global Food Security?" International Food Policy Research Institute, February 24, 2022, <https://www.ifpri.org/blog/how-will-russias-invasion-ukraine-affect-global-food-security#:~:text=Today%2C%20Russia%20and%20Ukraine%20exports,%2C%20barley%2C%20sunflowers%20and%20maize>.







23 "War in Ukraine Will Cripple Global Food Markets," *Economist*, March 12, 2022, <https://www.economist.com/finance-and-economics/2022/03/12/war-in-ukraine-will-cripple-global-food-markets>.

24 "Global Food Prices in 2022 Hit a Record High Amid Drought and War," Associated Press, January 6, 2023, <https://apnews.com/article/russia-ukraine-inflation-health-business-climate-and-environment-00539505ec5db37de5877137b9febeb8>.

25 Eleni Borboli, "Food Crisis: The 5 Countries that Have Been 'Hit' the Most by the War in Ukraine," *iEidiseis*, June 16, 2022, <https://www.ieidiseis.gr/kosmos/150633/epistitistiki-krisi-oi-5-xores-pou-exoun-xytipithe-perissotero-apo-ton-polemo-stin-oukrania>.

26 Michelle Nichols, "Black Sea Grain Export Deal Extended, but Russia Wants More on Fertiliser Exports," Reuters, November 17, 2022, <https://www.reuters.com/world/un-secretary-general-says-black-sea-grain-deal-extended-2022-11-17>.

Figure 3. Russia and Ukraine account for one-third of global wheat supply

Producer	Grain Exports in Million Tons (MT)
 United States	93MT
 Russia &  Ukraine	87MT
 Argentina	56MT
 EU	50MT
 Brazil	44MT
Other	87MT

Source: Bruno Venditti, “3 Reasons for the Fertilizer and Food Shortage,” Elements by Visual Capitalist, July 24, 2022, <https://elements.visualcapitalist.com/3-reasons-for-the-fertilizer-and-food-shortage/>.

Thus far, food and fertilizer exports have been generally exempted from Western sanctions. The US Treasury Department stated that agricultural and medical trade are not targets of the sanctions imposed on Russia for its atrocities in Ukraine.²⁷ The European Union’s sanctions exclude Russian food-supply and fertilizer exports to EU and non-EU markets. However, related trade and finance—including trade credits, spare parts, insurance, shipping, and visas for managers—were negatively affected by overzealous compliance enforcers and cautious bureaucrats.

But several countries restricted agricultural exports in the wake of the invasion to ensure availability for their populations, including Ukraine. Turkey, Kazakhstan, and Kyrgyzstan imposed an embargo on grain exports.²⁸ Russia restricted wheat exports before the war by introducing floating export taxes and licensing requirements. In the spring of 2021, Moscow banned wheat exports to other states in the Eurasian Economic Union for three months to prevent re-exports through the free economic zone without

paying the new wheat-export tax of \$130 per metric ton.²⁹

The food security prognosis in 2023 remains bleak as fertilizer prices stay high, causing farmers to plant fewer crops. “All signs point to 2023 looking even worse on an acute level, on a chronic level, and in terms of malnutrition,” according to Catherine Maldonado, senior director of food security at Mercy Corps.³⁰

Impact of Russia’s Invasion of Ukraine on Fertilizer Production

Russia is the world’s top exporter of nitrogen fertilizers and a significant supplier of potassium-based and phosphorous fertilizers. The war has disrupted traditional export routes for Russian fertilizers. Still, the Kremlin-imposed licensing requirements in 2021 to halt re-export through free economic zones without paying tax dues, also slowed trade.

Fertilizer deliveries from Russia have declined even further compared to 2021’s already restricted levels,

27 “OFAC Food Security Fact Sheet: Russia Sanctions and Agricultural Trade,” US Department of Treasury, July 14, 2022, https://home.treasury.gov/system/files/126/russia_fact_sheet_20220714.pdf.

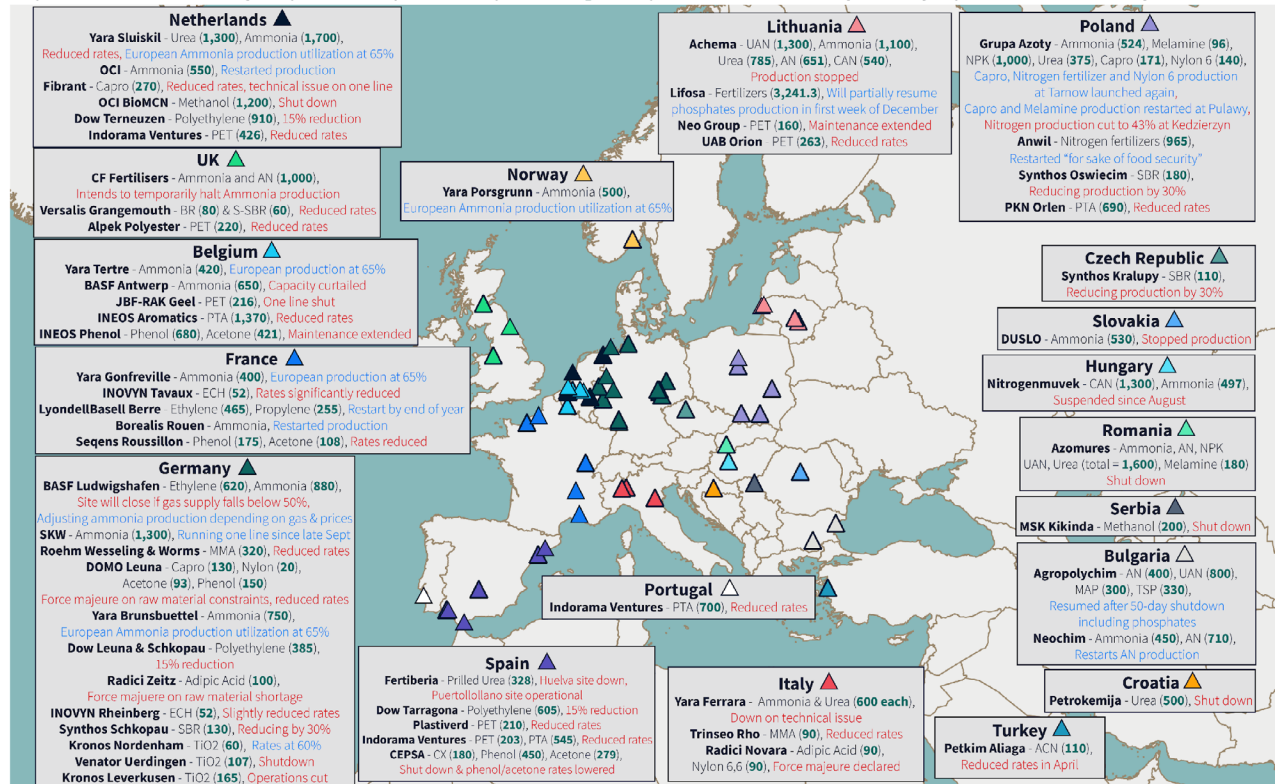
28 Alvaro Espita, Nadia Rocha, and Michele Ruta, “How Export Are Impacting Global Food Prices,” World Bank, July 6, 2022, <https://blogs.worldbank.org/psd/how-export-restrictions-are-impacting-global-food-prices>.

29 Joseph Glauber, David Laborde, and Abdullah Mamun, “From Bad to Worse: How Russia-Ukraine War-Related Export Restrictions Exacerbate Global Food Insecurity,” International Food Policy Research Institute, April 13, 2022, <https://www.ifpri.org/blog/bad-worse-how-export-restrictions-exacerbate-global-food-security>.

30 Teresa Welsh, “‘Very, Very Worried’: Another Bleak Year Expected for Food Security,” Devex.com, January 4, 2023, <https://www.devex.com/news/very-very-worried-another-bleak-year-expected-for-food-security-104605>.

Figure 4. High gas prices hit Europe chemicals, fertilizers

Capacities in '000 tonnes/year put next to product impacted in green, plants colour coded by country, updated on 13 January 2023



Source: Aura Sabadus, "Topic Page: War in Ukraine, Gas Crisis," Independent Commodity Intelligence Service, January 27, 2023, <https://www.icis.com/explore/resources/news/2023/01/20/10733319/topic-page-war-in-ukraine-gas-crisis>.

with ammonia down 63 percent.³¹ The product traditionally reached global markets through pipelines from the Togliatti plant in Russia to Odesa, Ukraine, and the Baltic Sea ports. The ammonia pipeline to Ukraine is suspended to ensure the safety of people in its vicinity, while the Baltic states have stopped importing Russian ammonia.³²

Moscow's de facto satellite and junior partner, Belarus, is also a major fertilizer producer currently the target of sanctions for its continued political repressions levied by the government of Alyakandr Lukashenka.³³ Russia and Belarus collectively account for 41 percent of global exports of the crop

nutrient potash (potassium chloride), but all potash exports from these two countries have been affected by the EU embargo.³⁴

The EU extended the restriction to Russian potash to avoid re-exports from Belarus under the Russian flag. This measure did not target direct trade between Russia and third parties, but restricted access to European ports for shipping companies working with Russia. In December 2022, the EU agreed to ease curbs on Russian fertilizer exports to improve food security in third countries. The compromise included allowing individual states to unfreeze the assets of

31 Joseph Glauber and David Laborde, "How Sanctions on Russia and Belarus Are Impacting Exports of Agricultural Products and Fertilizer," International Food Policy Research Institute, November 9, 2022, <https://www.ifpri.org/blog/how-sanctions-russia-and-belarus-are-impacting-exports-agricultural-products-and-fertilizer>.
 32 Ibid.; Aura Sabadus, "Topic Page: War in Ukraine, Gas Crisis," Independent Commodity Intelligence Service, January 27, 2023, <https://www.icis.com/explore/resources/news/2023/01/20/10733319/topic-page-war-in-ukraine-gas-crisis>.
 33 "Responding to Continued Repression by the Lukashenka Regime in Belarus," US Department of State, press release, January 17, 2023, <https://www.state.gov/responding-to-continued-repression-by-the-lukashenka-regime-in-belarus/>.
 34 Glauber and Laborde, "How Sanctions on Russia and Belarus Are Impacting Exports of Agricultural Products and Fertilizer."

certain sanctioned individuals within the agriculture and fertilizer industries.³⁵

Since the fertilizer industry uses natural gas not only as an energy source, but as raw material, the sharp increase in gas prices in 2022 led to a decrease in fertilizer production in Europe. Production has stopped in Serbia, Croatia, Romania, Hungary, and Slovakia. Millions of tons of fertilizer and chemical capacity are still offline in Europe.³⁶

Across the board, chemical plants are operating at capacity reduced by 30–40 percent. In contrast, some plants in Germany and Italy, both heavily reliant on Russian gas in the past, have shut down due to raw-material shortages. Four of Germany's twelve chemical plants were forced to stop production, and another could suspend operations if gas supplies drop below 50 percent of necessary levels for full-capacity production.³⁷ The German chemical industry provides 25 percent of European chemical output; thus, shutdowns will impact many chemical supply chains globally.³⁸

In addition, high gas prices, particularly in Europe, have broadly increased industrial production costs, making fertilizers less affordable for small and medium farms, and further increasing food shortages.

Impact of Russia's Invasion of Ukraine on Uranium Production

Russia's invasion of Ukraine and subsequent economic sanctions have thrown the nuclear-fuel supply chain into disarray and may impact innovation in civilian nuclear power. While uranium imports from

Russia are not under embargo yet, both the United States and the EU are working to diversify their supplies. In March 2022, US Senator John Barrasso (R-WY), ranking member of the Senate Energy and Natural Resources Committee, introduced a bill that would stop US reliance on Russian uranium imports due to national security concerns.³⁹ The bill had not passed at the time of writing this report.

The United States receives nearly half of its nuclear-fuel supplies from Russia, Kazakhstan, and Uzbekistan, all of which have been disrupted by the war.⁴⁰ Before its full-scale invasion of Ukraine, Russia was slated to supply the United States with a specialized energy-dense fuel called high-assay low-enriched uranium (HALEU), which is needed for the advanced, smaller next-generation reactors expected to come online by 2030.⁴¹ This has further impeded the development of the smaller and safer small modular reactors (SMRs) and micro modular reactors (MMRs). In December 2022, the US Senate passed a bill, Fueling Our Nuclear Future Act of 2022, to ensure a domestic supply of HALEU for advanced nuclear reactors. The law will stimulate domestic production of uranium, and thus limit dependence on Russia.⁴²

The EU parliament has also called for a ban on Russian uranium imports, but many states have hesitated. Russia's state-owned nuclear-energy company Rosatom has built eighteen reactors in EU member states, which rely on Russian sources for their supply of nuclear fuel, isotopes, reactor maintenance, and other services.⁴³

35 Susannah Savage, Bartosz Brzezinski, Barbara Moens And Jacopo Barigazzi, "EU Agrees to Ease Russia Fertilizer Curbs After Row, Angering Ukraine," *POLITICO*, December 15, 2022, <https://www.politico.eu/article/fertilizer-row-holds-up-eu-latest-russia-ukraine-war-sanctions-package-famine-food-supplies/>.

36 Ben Aris, "Energy Crisis: Europe's Industry Shutting Down," *bne IntelliNews*, September 20, 2022, <https://www.intellinews.com/energy-crisis-europe-s-industry-shutting-down-255913>.

37 Sabadus, "Topic Page: War in Ukraine, Gas Crisis."

38 Peter Meijer, "Local Disruptions with Global Implications: How the War Affects the Chemicals Sector," *Bain & Company*, May 12, 2022, <https://www.bain.com/insights/local-disruptions-with-global-implications/>.

39 "Barrasso Leads Bill to Ban Russian Uranium Imports," *John Barrasso Senate Website*, March 17, 2022, <https://www.barrasso.senate.gov/public/index.cfm/2022/3/barrasso-leads-bill-to-ban-russian-uranium-imports>.

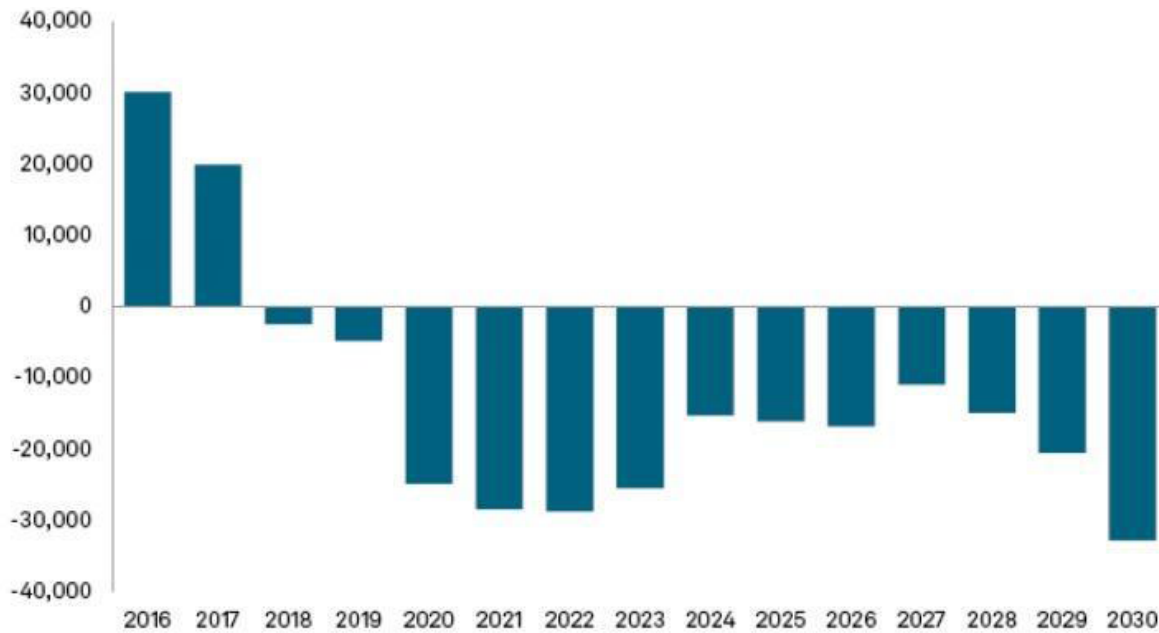
40 Ernest Scheyder and Trevor Hunnicutt, "Exclusive: U.S. Utilities Push White House Not to Sanction Russian Uranium," *Reuters*, March 2, 2022, <https://www.reuters.com/business/energy/exclusive-us-utilities-push-white-house-not-sanction-russian-uranium-2022-03-02>.

41 Daniel Moore, "Russian Uranium Dominance Leaves U.S. Scrambling to Catch Up," *Bloomberg Law*, March 11, 2022, <https://news.bloomberglaw.com/environment-and-energy/russian-uranium-dominance-leaves-u-s-scrambling-to-catch-up>.

42 Ron Richter, "Barrasso Bipartisan Nuclear Fuel Bill Passes Senate," *Sheridan Media*, December 24, 2022, <https://sheridanmedia.com/news/123190/barrasso-bipartisan-nuclear-fuel-bill-passes-senate/>; 117th Congress, Fueling Our Nuclear Future Act of 2022, <https://www.energy.senate.gov/services/files/D931C940-D08C-4CF1-BC7C-7D0FA31C0B8C>.

43 Jan Haverkamp, "The Looming Dependency on Rosatom in the EU," *Laka*, March 2019, www.laka.org/docu/catalogue/publication/2.34.6.50/03_nuclear-energy-the-looming-dependency-on-rosat.

Figure 5. Uranium supply surpluses and deficits, 2016-2030* (000 lbs)



As of Oct. 13, 2022.
 * 2022-2030 data is estimated.
 Source: Scotiabank Global Equity Research.
 © 2022 S&P Global.

Source: Scotiabank Global Equity Research.

Although not the largest producer of uranium, Russia has the largest conversion and enrichment capacity, accounting for about 39 percent of global enrichment capacity in 2022. This gives Russia substantial leverage in the industry, acting as a difficult-to-bypass chokepoint in the supply chain. As a result, raw uranium-producing states in Central Asia have suffered from war and sanctions.

Kazakhstan has been the top producer and exporter of uranium since 2009, providing around 40 percent of the global supply.⁴⁴ Economists predict the country will maintain this position in the next few years. Uranium mined in Kazakhstan is exported to Europe, the United States, China, India, and Russia. In 2021, Kazakhstan was the second largest supplier of uranium to Europe (23 percent), with Niger leading at 24.3 percent and Russia delivering 19.7 percent.⁴⁵

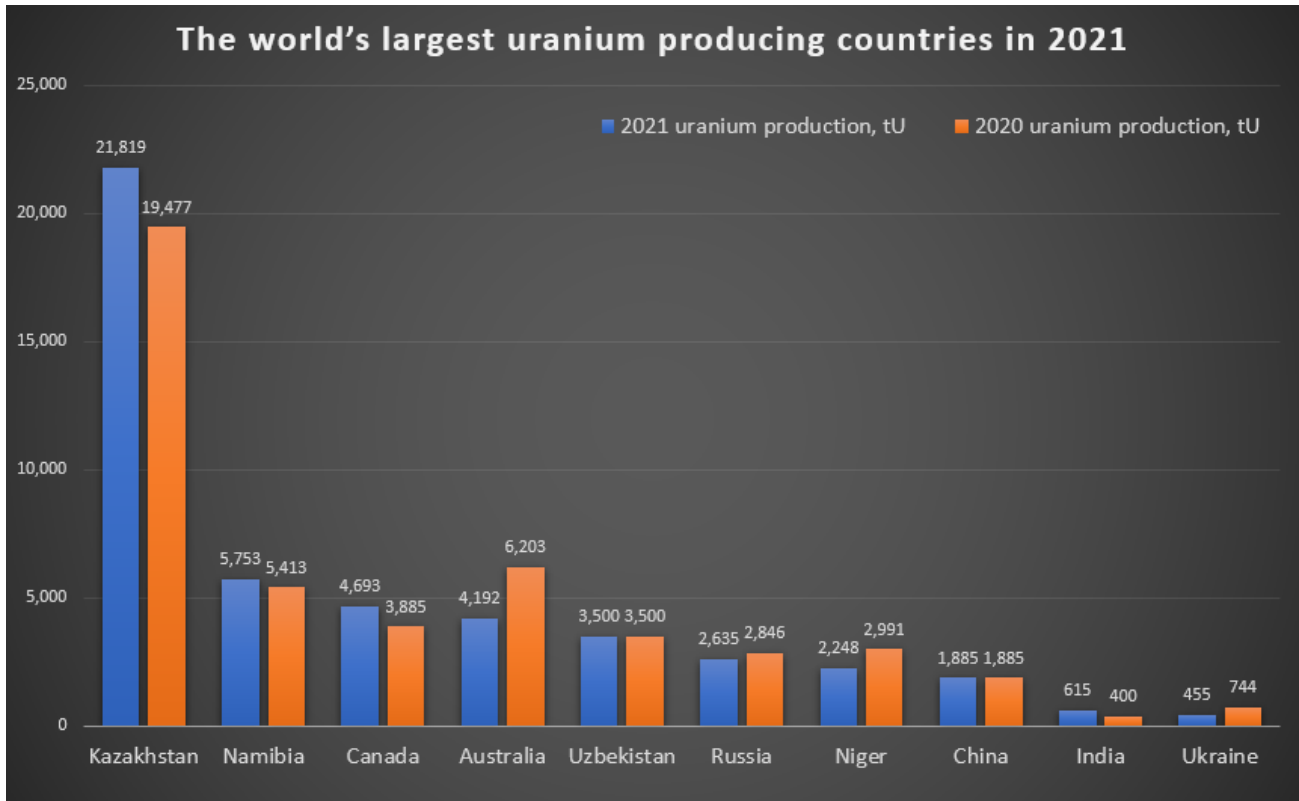
But, unlike Russia, Kazakhstan produces very few fuel rods ready for use in nuclear plants. Its milled uranium travels to Russia for enrichment before being exported to global markets from the Russian port of St. Petersburg. If sanctions on Russian uranium fuel assemblies are introduced, Kazakhstan will not be able to continue transporting nuclear fuel through the Russian route or, at a minimum, will experience the same problems it currently has with transporting oil through its northern neighbor.

Addressing this emerging threat, Kazatomprom plans to use an alternative route that avoids Russian territory to ship uranium to Europe across the Caspian Sea. The cost of shipping via the Caspian Sea will be higher, and security procedures need to be developed. But if the country and the European partners expand its

44 Pratima Desai, "Transport Disruptions the Wild Card for Kazakh Uranium Shipments," Reuters, January 7, 2022, <https://www.reuters.com/markets/commodities/transport-disruptions-wild-card-kazakh-uranium-shipments-2022-01-07>.

45 Sam Meredith, "Europe Is Still Quietly Importing Russian Nuclear Energy," CNBC, October 14, 2022, <https://www.cnbc.com/2022/10/14/ukraine-war-europe-is-still-quietly-importing-russian-nuclear-energy.html>.

Figure 6. Biggest Uranium Producers



Source: "The World's Largest Uranium Producing Countries In 2021," Kitco News, July 4, 2022. <https://www.kitco.com/news/2022-07-04/The-world-s-largest-uranium-producing-countries-in-2021-report.html>.

enrichment capacity and build the supply chain, the trade cost will decrease in the long run.⁴⁶

Kazakhstan already has a major plant that produces nuclear-fuel pellets and aims to eventually sell nuclear fuel in addition to raw uranium. China is a major partner of Kazakhstan in civilian nuclear energy. A conversion plant is being built with 49-percent Chinese equity.⁴⁷ Clearly, China-Kazakhstan cooperative efforts serve the needs of the Chinese nuclear industry. If the West does not want to be left behind, investments in Kazakhstan's uranium-enrichment sector are needed to balance Chinese interests and Russian domination.

The geopolitical landscape has provided an opportunity for Kazatomprom to seek alternative means to enrich Kazakh uranium and explore alternative transportation routes for uranium export. Forecasts show that demand for uranium will exceed supply in 2023 and continue growing.⁴⁸ The United States, Japan, and several EU countries have decided to extend the life of nuclear-power plants, construct new facilities to reduce greenhouse emissions, and address energy shortages caused by Russia's invasion of Ukraine.⁴⁹

Uranium demand was depressed by the Fukushima Dai-ichi plant meltdown in 2011, and is in a slow

46 Aida Kadyrzhanova, "Kazakhstan Offers Europe Chance to Kick Its Russian Uranium Habit," September 26, 2022, bne IntelliNews, <https://www.intellinews.com/kazakhstan-offers-europe-chance-to-kick-its-russian-uranium-habit-257334/>.

47 "Uranium and Nuclear Power In Kazakhstan," World Nuclear Association, last updated June 2022, <https://world-nuclear.org/information-library/country-profiles/countries-g-n/kazakhstan.aspx>.

48 Camellia Moors and Kip Keen, "Nuclear Revival Buys Uranium Sector, but New Mines Not on Horizon," S&P Global, November 9, 2022, <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/nuclear-revival-buys-uranium-sector-but-new-mines-not-on-horizon-72602064#:~:text=Pressure%20for%20new%20uranium%20mines,in%20a%20July%20%20note>.

49 Michael Birnbaum and Michelle Ye Hee Lee, "A Decade after Fukushima Disaster, Focus on Nuclear Power Reconsidered," *Washington Post*, August 27, 2022, <https://www.washingtonpost.com/climate-environment/2022/08/27/nuclear-germany-japan-ukraine-russia/>.

recovery. Prices are still hovering around \$50 per pound (lb), which is too low for restarting closed production capacities or stimulating new investments. Uranium miners say they are looking for prices of \$70–\$75/lb to invest in new capacity.⁵⁰ This is the time for countries like Kazakhstan that are expanding production to seek new opportunities, as increased demand will drive up prices and stimulate investor confidence to increase supply.

If demand outpaces supply, the International Atomic Energy Agency (IAEA) could potentially provide uranium from its reserves. In 2017, the organization

opened the world's first low-enriched-uranium bank in Kazakhstan. This long-running dream of the international community stems back to the initiatives of Kazakhstan's founding President Nursultan Nazarbayev during Kazakhstan's denuclearization efforts in the 1990s. The reserves guarantee uranium supply in case of an emergency experienced by any IAEA member state. The bank reserves in Kazakhstan could provide enough energy to power an entire metropolis for three years.⁵¹ The bank also works to decrease price volatilities experienced through supply fluctuations, greatly increasing the predictability and practicality of nuclear power.

50 Moors and Keen, "Nuclear Revival Buys Uranium Sector, but New Mines Not on Horizon."

51 Chingiz Mayseit, "What Makes Kazakhstan a Leader in Uranium Production?" EL.kz, June 29, 2022, https://el.kz/ru/chto_daet_kazakhstanu_mirovoe_liderstvo_v_dobyche_urana_43296/.

CENTRAL ASIA'S NATURAL RESOURCES AND EXPORT ROUTES

Energy—Oil and Gas Resources and Energy Transportation Routes

Although the energy crisis in Europe has somewhat alleviated since state actors have pushed supply diversification, EU member states must make long-term plans to build relationships with reliable suppliers. With its considerable hydrocarbon reserves, Central Asia could play an essential role in mitigating energy shortages in Europe, while expanding relations with the West to reduce dependence on Russia and balance Chinese influence.

Kazakhstan has already led the way among Central Asian republics in transporting oil to international markets through the CPC pipeline, which brings 80 percent of its crude to international markets. Astana produces 1.8 million barrels of oil per day, or eighty-six million tons, projected to increase to 107 million tons as new fields are developed. The added volumes will require new export routes, since the capacity of CPC will not provide enough reach.⁵²

The CPC pipeline is the largest transportation system for shipping oil from the Caspian region to the global market. The 1,500-kilometer pipeline connects the oil fields of western Kazakhstan with the Russian Black Sea coast, where the product is shipped to tankers through sea terminals. The current total capacity of the pipeline is sixty-seven million tons per year, and by 2023 this will increase to eighty million.⁵³

Since its launch in 2001 and until the outbreak of the war in February 2022, CPC has been a reliable export route. However, last year, it was suspended on four separate occasions by its operator, Russian Transneft. In March, a sea storm damaged two of the three offshore mooring units, which were repaired by

the end of May. In mid-June, Russia suspended the shipment of Kazakh oil through the CPC, claiming to have found underwater mines and other explosive devices left at the bottom of the sea during World War II. Once the demining was completed a month later, the Primorsky District Court of Novorossiysk ordered the CPC to be suspended for thirty days because of violations under the oil-spill response plan. On July 11, upon appeal, the court changed the decision to a fine of 200,000 rubles (\$3,100).⁵⁴

The incidents led to speculation that Moscow was retaliating against Astana for its opposition to the war in Ukraine. Yet these measures may have also intended to limit oil availability on the global market to increase prices, perhaps to push back on the US/EU-imposed price cap on Russian oil, and to increase earnings from ongoing trade exchange with China and India. Since the beginning of the invasion, Russia has primarily sold oil to China and India at deep discounts of \$20–33 below Brent crude price.⁵⁵

In September, S&P revised the outlook for Kazakhstan's sovereign credit rating from "stable" to "negative" citing vulnerability to potential disruptions in the CPC that could adversely affect the country's foreign economic and fiscal indicators.⁵⁶

Fortunately, the suspensions had a negligible effect on the volumes of exported oil, which decreased by just 2.2 percent. The monetary revenues, on the other hand, were much higher because of global oil-price increases.

Part of Kazakhstan's crude oil is supplied to China through the Kazakhstan-China oil pipeline, with a total capacity of twenty million tons. Russia also uses the pipeline to transport oil from western Siberia to

52 Rabiga Dyusengulova, "Kazakhstan Is Looking for Alternative Transport Routes Because of Increased Oil Production," Tengrinews.kz, August 25, 2022, https://tengrinews.kz/kazakhstan_news/kazakhstan-ischet-alternativnyie-marshrutyi-eksporta-nefti-iz-476229.

53 "The Pumping of Kazakh Oil through the CPC May Be Limited Until Spring," *Kursiv*, September 19, 2022, <https://kz.kursiv.media/2022-09-19/prokachka-kazahstanskoj-nefti-cherez-ktk-mozhet-byt-ogranichena-do-vesny>.

54 "Oil Shipment at CPC Marine Terminal Reached 41.5 Mt," *Kursiv*, September 28, 2022, <https://kz.kursiv.media/2022-09-28/otgruzka-nefti-na-morskoy-terminale-ktk-dostigla-41-5-mln-tonn>.

55 Shruti Menon, "Ukraine Crisis: Who Is Buying Russian Oil and Gas?" BBC, December 6, 2022, <https://www.bbc.com/news/world-asia-india-60783874>.

56 "S&P Revised the Outlook on the Sovereign Rating of the Republic of Kazakhstan to Negative," *Kursiv*, May 5, 2022, <https://kz.kursiv.media/2022-09-05/s-p-peresmotrelo-prognoz-po-suverennomu-rejtingu-rk-na-negativnyj>.

Figure 7. Major Caspian oil and natural gas export route



Source: U.S. Energy Information Administration: <https://www.eia.gov/todayinenergy/detail.php?id=12931>.

China. As Russia's energy exports to Europe are now limited, Moscow has become dependent on Central Asia for increased oil and gas transit to China. This dependence will play a significant role in preventing future disruptions of oil transmission through the CPC, and allowing Kazakhstan to transship oil to Europe via the Druzhba pipeline.

The Middle Corridor

A bilateral agreement with Azerbaijan will now allow Kazakhstan to deliver up to five million tons of oil through the Baku-Tbilisi-Ceyhan pipeline in 2023. Although this is a small volume, annual shipments are expected to grow to 6–6.5 million tons over time.

Astana is hoping to activate the existing capacities of the ports of Aktau and Kuryk to bring the volume of oil transportation up to twenty million tons per year, according to Kazakhstan's President Tokayev.⁵⁷

Another aspect of Kazakhstan's oil-export diversification strategy involves using tankers from the ports of Aktau and Kuryk to transport oil into the Baku-Supsa pipeline, which has a terminal on Georgia's Black Sea coast. Although the government announced that the priority direction for Kazakhstan's energy exports is the Trans-Caspian route or the Middle Corridor, this undertaking will require significant infrastructure

⁵⁷ "The Volume of Oil Transportation through the Ports of Aktau and Kuryk Will Be Increased to 20 Million Tons Per Year—Tokayev," *Vlast*, November 7, 2022, <https://vlast.kz/novosti/52428-obem-transportirovki-nefti-cerez-porty-aktau-i-kuryk-budut-dovedeny-do-20-mln-tonn-v-god-tokaev.html>.

investments and will double the cost of transportation compared to the CPC.⁵⁸

Yet, analysts caution that the geopolitical consequences of the war in Ukraine could be much more severe and lead to internal turmoil in the Russian Federation, which could further disrupt energy transportation and trade.⁵⁹ Similar to Germany, which had to make enormous investments in building several LNG regasification terminals at once to secure alternative gas supplies, the states in Central Asia and the Caucasus can plan to attract investments that will return dividends for decades to come.⁶⁰

The Trans-Caspian corridor will become vital for supplying much-needed natural gas to Europe. Turkmenistan, Kazakhstan, and Uzbekistan have gas deposits and are interested in exporting these via the Trans-Caspian corridor. Should the long-planned Trans-Caspian gas pipeline be built, it could be linked to the Southern Gas Corridor from Baku through Turkey to the Balkans. For now, Azerbaijan and Turkmenistan are discussing how to connect their offshore deposits in the Caspian Sea, which are forty-two nautical miles apart.⁶¹

The EU has reached out to Azerbaijan to expand the volume of gas exports to Europe from 8 billion cubic meters (bcm) in 2021 to approximately 20 bcm by 2027. The two have also agreed to work on boosting Azerbaijan's export potential in the renewable-energy sector, including offshore wind and green hydrogen.⁶²

Kazakhstan recently signed a strategic partnership agreement with the European Union to ensure its access to a steady supply of raw materials, batteries,

and renewable hydrogen. In addition, the European renewables consortium Svevind Energy Group plans to build one of the world's largest green-hydrogen production facilities in Kazakhstan's Mangystau region.⁶³

The Middle Corridor is not only an energy transportation project. It will connect other transportation arteries, like rail and roads, across the east and west sides of the Caspian Sea. It is a vital part of the wider strategy of regional integration that was championed by President Nazarbayev, and will bolster security in the Caucasus and Central Asia, enhance commercial access to Central Asia, increase the resilience of European supply chains, and diversify European energy supplies.⁶⁴

On November 25, 2022, the foreign ministers and transport ministers of Kazakhstan, Azerbaijan, Georgia, and Turkey met in Aktau on the Caspian Sea shores to sign a roadmap for developing the Middle Corridor for 2022–2027.⁶⁵ The transportation corridor, which links Central Asia with the Caucasus and Turkey, is, in essence, an alternative route between Europe and China, bypassing Russia. It is highly significant that Turkey is taking an active role in this project.

Food Production and Exports—Availability, Transportation Corridors, and Challenges

Central Asian states form an integrated and largely self-sufficient wheat economy. Among them, Kazakhstan is the only surplus producer. Its agricultural products are supplied to seventy countries. The traditional sales markets are the Eurasian Economic Union countries,

58 Nurbek Bekmurzaev, "Can Kazakhstan Rescue Europe Amid the Russian Oil Embargo?" *Eurasia Daily Monitor*, January 10, 2023, <https://jamestown.org/program/can-kazakhstan-rescue-europe-amid-the-russian-oil-embargo/>.

59 Olesia Kyrvetska, "Russia's Aggression against Ukraine: Global Trade Implications after 7 Months of War," International Institute for Sustainable Development, September 26, 2022, <https://www.iisd.org/articles/policy-analysis/russia-ukraine-trade-implications>.

60 Stanley Reed and Christopher F. Schuetze, "Germany Announces New L.N.G. Facility, Calling It a Green Move From Russian Energy," *New York Times*, September 1, 2022, <https://www.nytimes.com/2022/09/01/business/germany-lng-russia-green-energy.html>.

61 "The Time Is Now for a Trans-Caspian Pipeline," Trans Caspian Resources, Inc., 2022, <https://transcaspianresources.us>.

62 Mateusz Kubiak, "Azerbaijan Set to Become a Green Energy Supplier to the EU," *Eurasia Daily Monitor*, January 5, 2023, <https://jamestown.org/program/azerbaijan-set-to-become-a-green-energy-supplier-to-the-eu/>.

63 Valentina Romano, "EU Signs 'Strategic Partnership' with Kazakhstan on Green Hydrogen, Raw Materials," *Euractiv*, November 8, 2022, <https://www.euractiv.com/section/energy/news/eu-signs-strategic-partnership-with-kazakhstan-on-green-hydrogen-raw-materials/>; "Kazakhstan and EU to Build Hub for Green Hydrogen Production and Distribution," *Astana Times*, October 27, 2022, <https://astanatimes.com/2022/10/kazakhstan-and-eu-to-build-hub-for-green-hydrogen-production-and-distribution/>.

64 Tuba Eldem, "Russia's War on Ukraine and the Rise of the Middle Corridor as a Third Vector of Eurasian Connectivity," Stiftung Wissenschaft Und Politik (SWP), October 28, 2023, <https://www.swp-berlin.org/en/publication/russias-war-on-ukraine-and-the-rise-of-the-middle-corridor-as-a-third-vector-of-eurasian-connectivity>.

65 J. Bachmann, "Kazakhstan, Azerbaijan, Georgia and Turkey Signed A Roadmap for the Development of the Middle Corridor for 2022–2027," *New Silk Road Discovery*, November 28, 2022, <https://www.newsilkroaddiscovery.com/kazakhstan-azerbaijan-georgia-and-turkey-signed-a-roadmap-for-the-development-of-the-middle-corridor-for-2022-2027/>.

Uzbekistan, Tajikistan, Afghanistan, Turkey, Latvia, and Italy. With plans to increase agricultural production three times by 2030, the country will be able to export grain to China and the European Union.⁶⁶

Kazakhstan imposed wheat and flour export restrictions in April 2022, due to unusually hot and dry conditions during the previous year and worries that the war in Ukraine would create domestic food insecurity with negative internal repercussions, including potential social unrest. In the first half of 2022, Kazakhstan still exported nearly 3.3 million tons of wheat and meslin cereal worth \$1 billion.⁶⁷ The restrictions were lifted in September, when the average yields were estimated to be at least 30 percent higher than last year. The Ministry of Agriculture assessed the gross grain harvest would reach 18.3 million tons, with wheat accounting for more than 13.4 million tons in the marketing year 2022–2023. Half of the wheat will remain for domestic consumption. The average yields are reported at 1.2 tons per hectare. Kazakhstan will be able to export 6.5 million metric tons of wheat in 2023, contributing to reducing food shortages.⁶⁸

Traditionally, the structure of exports is dominated by

- wheat and meslin (5.7 million tons, 37.5 percent of total exports);
- barley (0.8 million tons, 4 percent);
- flax seeds (333.6 thousand tons, 6 percent);
- flour (1.5 million tons, 12 percent);
- sunflower oil (97 thousand tons, 3 percent); and
- cotton fiber (63 thousand tons, 3 percent).

Kazakhstan could reclaim the barley, wheat, and wheat-flour export-market share that it lost in 2022 due to lower production. According to the US Department of

Agriculture, exports for these products are expected to reach multiyear highs on solid production and steady demand from importing countries.

Central Asian Fertilizer Production and Export

The abundance of natural-gas resources allows Central Asia to expand its fertilizer-production capacities and become an important exporter to Europe. Natural-gas prices remain volatile in Europe, and Turkmenistan, Uzbekistan, and Kazakhstan are emerging candidates for bringing large quantities of locally produced fertilizers to global markets.

Azerbaijan has seized the opportunity and is already building a special fertilizer terminal at its new facility in Alat. The project is financed jointly by the Port of Baku and the government of Azerbaijan, indicating the terminal's expected high profitability. The investment decision came after a feasibility study confirmed the significant potential for the transshipment of fertilizers from landlocked Central Asia to western markets via Azerbaijan.⁶⁹

The new fertilizer terminal will have the capacity to handle 2.5 million tons annually.⁷⁰ It will import sulfur, carbamide, and ammonium-nitrate fertilizers from Kazakhstan, Uzbekistan, and Turkmenistan. Construction began in July 2022, and the project will be completed in 2023.⁷¹

The volume of Central Asian fertilizers shipped through the Port of Baku has increased more than thirteen-fold between 2018 and 2020, and the trend is accelerating. "A new terminal will ensure reliability in Central Asia's fertilizer supply chain and allow us to increase volume from Turkmenistan, Kazakhstan, and Uzbekistan," according to Taleh Ziyadov, director-

66 "Kazakhstan Finalized 2021–2030 Agricultural Development Policy Document," United States Department of Agriculture Foreign Agricultural Service, May 10, 2022, https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Kazakhstan%20Finalizes.%202021-2030%20Agricultural%20Development%20Policy%20Document%20_Nur-Sultan%20%28Astana%29_Kazakhstan%20-%20Republic%20of_KZ2022-0010.pdf.

67 "Kazakhstan's Wheat and Meslin Exports Reach \$1 Billion in January-July," *Astana Times*, September 20, 2022, <https://astanatimes.com/2022/09/kazakhstans-wheat-and-meslin-exports-reach-1-billion-in-january-july/>.

68 "Agricultural Products for Export: What, Where and in What Volumes Kazakhstan Supplies," *InfomBuro News*, September 1, 2022, <https://infomburo.kz/stati/agroprodukcija-na-eksport-cto-kuda-i-v-kakix-obyomax-postavlyayet-kazaxstan>.

69 Nicholas Woodroof, "Port of Baku Begins Construction of Fertilizer Terminal," *World Fertilizer*, June 10, 2021, <https://www.worldfertilizer.com/project-news/10062021/port-of-baku-begins-construction-of-fertilizer-terminal>.

70 "Claudius Peters Supplies Turnkey Fertilizer Terminal to the Port of Baku," Claudius Peters, May 9, 2023, <https://www.claudiuspeters.com/en-GB/news/5304/claudius-peters-supplies-turnkey-fertilizer-terminal-to-the-port-of-baku>.

71 "A Terminal for Transshipment of Fertilizers From Turkmenistan and Kazakhstan Will Be Put into Operation in the Baku Port in 2023," *Turkmenportal*, November 15, 2023, <https://turkmenportal.com/en/blog/54232/a-terminal-for-transshipment-of-fertilizers-from-turkmenistan-and-kazakhstan-will-be-put-into-operation-in-the-baku-port-in-2023>.

general of the Port of Baku.⁷² The terminal will be a vital part of the Middle Corridor.

The three hydrocarbon-rich Central Asian countries—Turkmenistan, Uzbekistan, and Kazakhstan—have a combined production capacity for various fertilizers that exceeds 6.6 million tons per year. They include urea, sulfur, and potassium carbonate, which are urgently needed by farmers around the world who are facing shortages and high prices. All three states have invested extensively in building new fertilizer-production plants to reduce dependence on imports from Russia, China, and Pakistan and increase potential export volumes.

Turkmenistan's largest Garabogaz fertilizer complex on the eastern shore of the Caspian Sea can produce more than 1.2 million tons of urea per year, of which more than 90 percent is for export. The ammonia plant has a capacity of 730,000 tons per year.⁷³ The facility was built in 2018 with the help of a \$1.16-billion loan from the Japanese Bank for International Cooperation.⁷⁴

Uzbekistan is also investing in its chemical industry while privatizing some of its largest fertilizer producers, such as JSC Ferganaazot, with a capacity of 2.8 million tons of fertilizers annually. At the same time, the industry is rapidly expanding. Uzbekistan's state-owned Uzkimyosanoat (Uzbek Chemical Industry) and Samsung are building a new state-of-the-art plant for the production of ammonia-based mineral fertilizers in the city of Yangiyer in the Syrdarya region in 2003. It will produce 495,000 tons of ammonia and 594,000 tons of granular urea.⁷⁵ The ammonia plant is a part of a large fertilizer complex expected to become fully operational in 2023.

In 2021, Uzkimyosanoat, in cooperation with Japan's Mitsubishi, launched a new \$985-million production complex for ammonia and urea at JSC Navoiyazot, financed through Japanese banks and Uzbekistan's Fund for Reconstruction and Development. The chemical-production complex also uses technologies from leading international companies such as Denmark's Haldor Topsoe, Italian Sapiem, and German Udhe.⁷⁶

The leading fertilizer producer in Kazakhstan, KazAzot, is preparing to construct a large production complex for ammonia, urea, nitric acid, and ammonium nitrate in Aktau on the eastern shore of the Caspian Sea in Aktau. From the port of Aktau, the fertilizers can reach the Baku International Sea Trade Port and travel further to European ports. The total investment is projected at approximately \$1 billion and will be the country's largest combined fertilizer-production complex. It will have the capacity to produce 660,000 tons of ammonia, 577,500 tons per year of urea, 395,000 tons of nitric acid, and 500,000 tons per year of ammonium nitrate. Kazakhstan exports 450 tons of fertilizers per year.⁷⁷

But Kazakhstan imports more than 600,000 tons of mineral fertilizers annually, about 80 percent of which are brought from Russia. As the breadbasket of Central Asia, the country needs large volumes of nutrients, which it produces in insufficient quantities. Astana is looking at developing phosphate and potassium fertilizers on its own.⁷⁸ Kazakhstan has potassium and phosphate fields that are not yet developed. In 2017, Turkmenistan opened a large facility capable of producing 1.3 million tons of potash annually. Available potash resources in the Central Asia Salt Basin consist of 1.63 billion metric tons. Undiscovered resources are between thirty-nine and fifty-four billion metric tons,

72 Woodroof, "Port of Baku Begins Construction of Fertilizer Terminal."

73 "Garabogaz Fertilizer Plant," Berksan, last visited March 4, 2023, <https://www.berksan.com/en/garabogaz-fertilizer-plant-t39>.

74 "Turkmenistan Aims to Build New Petroleum, Fertilizer Production Plants," Business Turkmenistan Information Center, 2022, <https://business.com.tm/post/9236/turkmenistan-aims-to-build-new-petroleum-fertilizer-production-plants>.

75 "New Ammonia-Based Fertilizer Plant to Be Constructed in Uzbekistan," March 24, 2022, *AgriBusiness Global*, <https://www.agribusinessglobal.com/plant-health/npk/new-ammonia-based-fertilizer-plant-to-be-constructed-in-uzbekistan>.

76 Pippa Luck, "Urea Production Begins at Uzbekistan's New \$958 Million Industrial Complex," *World Fertilizer*, January 6, 2021, <https://www.worldfertilizer.com/special-reports/06012021/urea-production-begins-at-uzbekistans-new-us958-million-industrial-complex/>.

77 "Kazazot—the Leading Company in the Fertilizer Industry in Kazakhstan—Selects Tecnicas Reunidas as the Contractor to Develop a New Ammonium, Urea, Nitric Acid and Ammonium Nitrate Complex In Kazakhstan," *Industry Intelligence*, January 24, 2023, <https://www.industryintel.com/agriculture/news/kazazot-the-leading-company-in-the-fertilizer-industry-in-kazakhstan-selects-tecnicas-reunidas-as-the-contractor-to-develop-a-new-ammonium-urea-nitric-acid-and-ammonium-nitrate-complex-in-kazakhstan-158386779024>.

78 Zhanbulat Mamyshev, "Kazakhstan to Gradually Nullify Its Imports of Fertilizers from Russia," *Kursiv*, July 14, 2022, <https://kz.kursiv.media/en/2022-07-14/kazakhstan-to-gradually-nullify-its-imports-of-fertilizers-from-russia/>.

Figure 8. Global Production of Wheat from 2000 to 2020



Source: "These Are the Top 10 Countries that Produce the Most Wheat," World Economic Forum, August 4, 2022, <https://www.weforum.org/agenda/2022/08/top-10-countries-produce-most-wheat/>.

according to an assessment by the US Geological Survey (USGS).⁷⁹

The fertilizer industry in Central Asia is gearing steam just as European fertilizer plants work at reduced capacity after the shock of high natural-gas prices. While Kazakhstan has privatized most of the industry, Uzbekistan is only now starting the process, and Turkmenistan is far from such an undertaking.

Nevertheless, all three states have attracted sizeable foreign investments in their chemical industry from Europe and Asia that will positively affect the restructuring and governance of enterprises. With the availability of natural gas and large potash deposits, Central Asia has the potential to become an essential global fertilizer exporter.

79 Jeff Wynn, et al., "USGS Assesses 39–54 Billion Metric Tons of Undiscovered Potash Resources in Central Asia," United States Geology Survey, March 23, 2016, [https://www.usgs.gov/news/technical-announcement/usgs-assesses-39-54-billion-metric-tons-undiscovered-potash-resources#:~:text=Survey%20\(USGS\).-,Known%20potash%20resources%20in%20the%20Central%20Asia%20Salt%20Basin%20consist,mostly%20for%20use%20in%20fertilizers](https://www.usgs.gov/news/technical-announcement/usgs-assesses-39-54-billion-metric-tons-undiscovered-potash-resources#:~:text=Survey%20(USGS).-,Known%20potash%20resources%20in%20the%20Central%20Asia%20Salt%20Basin%20consist,mostly%20for%20use%20in%20fertilizers).

CENTRAL ASIAN GOVERNMENT POLICIES ON ENERGY AND FOOD EXPORTS

The governments in Central Asia are facing an unprecedented time in the short history of their countries' independence. On the one hand, growing demand for energy in Europe and Asia, food and fertilizers shortages around the globe, and the expected shortage of nuclear-power fuel supply present an excellent opportunity for the region to export its resources and help mitigate the crisis. On the other hand, the geographical realities in Central Asia and the region's overdependence on an aggressive and unstable Russia for transportation routes and trade have become enormous hurdles for those resources to reach international markets quickly and safely.

The post-COVID market trends were already showing increased global energy demand, high energy prices, and an upsurge in food prices. As Central Asia was steadily moving toward post-pandemic recovery, with slower growth rates but a positive outlook, Russia invaded Ukraine, sending shockwaves to global markets and stunning both the publics and elites in the region. The war hit close to home, making people nervous about a possible Russian attack on their homelands and causing economic hardship in the region.

The Central Asian states responded to potential threats to their sovereignty by embracing regional cooperation and mutual support. In July 2022, the presidents of the five states signed a far-ranging Issyk-Kul Protocol on building institutional links to coordinate efforts in economics, legislation, trade, education, social policies, ecology, and security. They went as far as agreeing on collective security cooperation in case of threats to the sovereignty of any member state.⁸⁰ While a significant development, this was an acceleration of previous trends, rather than a critical break with the past.

Recent displays of regional solidarity are manifestations of the doctrine of "multi-vector foreign policy," wherein Kazakhstan and other Central Asian republics strive to remain equidistant between major powers. First implemented in Kazakhstan under Nazarbayev, this doctrine stresses that Kazakhstan's exports will

inevitably have foreign policy repercussions due to the logistics of transit. Therefore, Kazakhstan and the other Central Asian states need to be prepared to balance and reorient exports as the geopolitical winds change. This makes Kazakhstan, and the region as a whole, much more flexible than a purely structural analysis would suggest.

Despite the advantages of this foreign policy doctrine, the timing of the war could not have been worse. The country had just experienced public unrest, overtaken in some places by armed groups, and the resulting violence that had left more than two hundred people dead in the so-called "January Events."⁸¹ As Astana was pivoting to more decisive economic and social reforms that would allow the population to benefit more from the country's riches, the war compounded fundamental obstacles to reform. Everything that was already built in the past—pipelines going north through Russia, transportation routes through Russia, joint ventures with Russian companies that could fall under Western sanctions, dealings with sanctioned Russian banks—had to be reviewed and revised to isolate the country from potential transportation interruptions and prevent secondary sanctions.

The Trans-Caspian route has been strategically vital for Kazakhstan's economic security, as the country has no access to the open sea. This route was used before the CPC oil line through Russia became operational to export oil to the European markets. Its importance has increased significantly since Russia's war against Ukraine began, as exports through Russian territory become difficult due to sanctions.

Astana has launched several significant initiatives to diversify regional exports away from Russian routes:

- A major diplomatic effort involving Azerbaijan, Georgia, Turkey, and several Central Asian states to develop and utilize the Trans-Caspian International Transportation Corridor (the Middle Corridor) to export energy and goods. This

80 S. Frederick Starr, "Can Central Asia Seize the Initiative?" *National Interest*, October 26, 2022, <https://nationalinterest.org/feature/calssn-central-asia-seize-initiative-205553?fbclid=IwAR1FX4IAAeNlSWsw0iOy1qsr4C9trn0GC1bAMuP76MgldmeC7R0-jCHR9Vs>.

81 Kamran Bokhari, "Kazakhstan Crisis Not as Bad as Many Think," *Newsweek*, February 11, 2022, <https://www.newsweek.com/kazakhstan-crisis-not-bad-many-think-opinion-1678218>.

project will take enormous investments, sound cooperation between several players, and profound reforms in regional trade such as rapid digitalization, boosting customs services, and investing in rail, road, and sea transportation.

- Astana began negotiations to ensure an alternative oil export route through the Caspian Sea via Azerbaijan to the Black Sea coast of Georgia via the Baku-Tbilisi-Supsa oil pipeline, or to Turkey's Mediterranean coast through the Baku-Tbilisi-Ceyhan oil pipeline. The volumes that would travel through these pipelines are not high for now, and the transportation cost will be higher, but this is an important first step.
- The Trans-Caspian natural gas pipeline project received a new impetus as not only Turkmenistan but also Kazakhstan and Uzbekistan would benefit from sending gas to Europe. Uzbekistan is one of the world's largest natural gas producers, producing around 60 bcm annually, while Kazakhstan produces about 32 bcm. Currently, all three countries export gas to China.
- The Middle Corridor is slated to transport grains from Kazakhstan to Europe using ships across the Caspian Sea, rail through the Caucasus, and then ships again through the Black Sea or the Mediterranean Sea, if the railway from Baku to Turkey via Georgia is utilized. This project is an alternative to the Russian Trans-Siberian Railway to deliver goods from China to Europe. It has the potential to transport up to ten million tons of cargo per year, including up to two hundred thousand containers.
- Kazakhstan is accelerating the development of its uranium conversion facilities to allow for the direct export of nuclear fuel through the Middle Corridor, bypassing Russian uranium enrichment plants and transportation routes.
- Astana approached Tehran to make room for a new Kazakh terminal in the Bandar Abbas port for the transport and trade of grain. Iran agreed to increase Kazakhstan's grain-shipment volumes as part of this initiative. The terminal will be used for deliveries to Pakistan, India, Southeast Asia, and East Africa markets, which are new to Kazakhstan.

Astana began work on the Trans-Caspian route at the end of February, immediately after the Russian

invasion of Ukraine. The first goal was to strengthen ties with transit countries that could become potential partners, such as Azerbaijan and Turkey. In May, Kazakhstan's President Kassym-Jomart Tokayev visited Ankara to enlist the support of Turkish President Recep Tayyip Erdogan for strengthening the transport and transit partnership between the two states and making full use of the potential of the Trans-Caspian International Transport Route.⁸²

In addition, cooperation is deepening between Astana and Baku, with Azerbaijan considered a strategic partner and one of the most important allies of Kazakhstan. Yerkin Tukumov, who heads the Institute for Strategic Studies under the president of the Republic of Kazakhstan, stated: "These are not only gas and oil pipelines; we are talking about a broader understanding: the East-West transit direction. We have access to Turkey through Baku, and Azerbaijan is one of the key player countries for us."

In April 2022, Georgia, Azerbaijan, Turkey, and Kazakhstan signed a quadrilateral declaration "on the East-West Trans-Caspian Corridor." The document envisions increasing the transit potential, integrating the route into the international transport system, and strengthening cooperation between the four countries. Freight traffic through Central Asia and the Caucasus is expected to reach 3.2 million metric tons in 2022, six times more than the previous year, according to the TITR Association.⁸³

A project to launch a container hub based on the Aktau port in the Caspian Sea in western Kazakhstan is now in full swing. The port is currently used at less than one-quarter of its potential. The container hub, part of the Aktau Seaport Special Economic Zone, will allow increasing cargo flows bypassing Russia. Global container operators such as Singapore's PSA Group, Danish Maersk, and Swiss MSC are potential investors. Previously, goods produced on the territory of the special economic zone were exported to Europe via Russia, but this route was shut down at the end of February 2022.

These plans mandate additional sea transport. Kazakhstan currently depends on Azerbaijani ferry ships, which will soon be insufficient. Astana is now building ferries to carry cargo across the Caspian Sea. In addition, it began production of containers in 2022.

82 Dyusengulova, "Kazakhstan is Looking for Alternative Transport Routes."

83 Nini Gabritchidze, "Georgia, Azerbaijan See Surge in Transit Demand Amid Russia's Isolation" Eurasianet, June 2, 2022, <https://eurasianet.org/georgia-azerbaijan-see-surge-in-transit-demand-amid-russias-isolation>.

EU AND US POLICIES ON IMPORTS FROM CENTRAL ASIA

Both the United States and EU have expressed support for Central Asia's efforts to improve connectivity and diversify transportation links in the aftermath of disrupted traditional trade routes through Russia. The role of the United States in global security, coupled with its significant investments in energy and other industries in Central Asia, makes it an indispensable partner.

The EU accounts for more than 42 percent of total foreign direct investment (FDI) stock in Central Asia, compared to 14.2 percent for the United States, 6 percent for Russia, and 3.7 percent for China. The Trans-Caspian International Transport Route will benefit Europe by providing energy, nuclear fuel, and food supplies. European leadership is aware of the new momentum in EU-Central Asia relations and the need to tap into this potential quickly.

"We must deepen our ties with the region and tap into the vast potential it has to offer, in terms of energy supplies, critical raw materials, and new transport corridors that do not depend on Russia," EU foreign policy representative Josep Borrell wrote.⁸⁴ Borrell also said that the EU's Global Gateway and its global financing, which is foreseen to be as much as 300 billion euros, would be used better to link Europe with the Caucasus and Central Asia.

The Transport Corridor Europe-Caucasus-Asia (TRACECA), an international transport program that involves the European Union and twelve member states of the Eastern European, Caucasus, and Central Asian region, has received a boost to become a high-priority project. "This joint venture could become an important route for the markets of the European Union and contribute to the stabilization of global energy and food security," said Ryszard Czarnecki, a Polish member of the European Parliament. He stressed

that these trade routes would allow Kazakhstan to become the largest supplier of uranium to Europe, thus contributing to EU energy security by weaning it off Russian gas. Germany has expressed interest in the participation of German businesses in developing the Trans-Caspian International Transport Route and in investment in energy.⁸⁵

The European Bank for Reconstruction and Development (EBRD) is conducting a study on sustainable transport corridors between Central Asia and Europe. The study, which is funded by the European Commission and should be completed by the summer of 2023, looks at how to overcome bottlenecks, transportation deficiencies, and other obstacles.⁸⁶

The US Agency for International Development has long invested in Kazakhstan. Since independence, the United States poured in billions in investments. It is now deepening cooperation by assisting customs departments and government agencies specializing in transport policy in the five Central Asian states. The initiative also involves representatives of national associations of road carriers, logistics companies and freight forwarders, seaports, and shipping companies of Azerbaijan, Georgia, and the Central Asian countries.⁸⁷

In November 2022, the EU signed a partnership agreement with Kazakhstan to ensure a steady supply of raw materials, batteries, and renewable hydrogen.⁸⁸ Favorable conditions for European investments in the renewable-energy sector will further increase Brussels' share in Kazakhstan's total FDI, which is currently at 60 percent. Astana is also seeking to attract more investors from the United States and Canada. The United States has invested more than \$62 billion in Kazakhstan since 1991.

84 Josep Borrell, "Central Asia's Growing Importance Globally and for the EU," EU External Action, November 20, 2023, https://www.eeas.europa.eu/eeas/central-asia%E2%80%99s-growing-importance-globally-and-eu_en.

85 "Germany Shows Interest in Development of Trans-Caspian International Transport Route," *Azernews*, September 6, 2022, <https://www.azernews.az/region/198980.html>.

86 Anton Usov, "EBRD Researches Sustainable Transport Connections between Central Asia and Europe," European Bank for Reconstruction and Development, November 7, 2022, <https://www.ebrd.com/news/2022/ebd-researches-sustainable-transport-connections-between-central-asia-and-europe.html>.

87 Dyusengulova, "Kazakhstan is Looking for Alternative Transport Routes."

88 Romano, "EU Signs 'Strategic Partnership' with Kazakhstan on Green Hydrogen, Raw Materials."

Central Asia is at a pivotal moment in its history, one in which geopolitical events will impact its economic development and political reforms. The economic vacuum left by Russia can be quickly filled by China if the EU does not step up economic ties with the region and the United States delays assigning the region a higher-priority status in its foreign policy.⁸⁹ Russia

and China have been designated the main economic rivals and strategic adversaries of the United States and EU. Western failure to swiftly take advantage of the new opportunities for engagement and influence in Central Asia will empower China in the region and allow it to strengthen its global position.

89 Ralph Jennings, "China Eyes Sunny Central Asia for Green Energy, Natural Gas Deals," *South China Morning Post*, September 15, 2022, https://www.scmp.com/economy/china-economy/article/3192615/china-eyes-sunny-central-asia-green-energy-natural-gas-deals?module=perpetual_scroll_0&pgtype=article&campaign=3192615.

POLICY RECOMMENDATIONS

- The United States and EU must recognize that Central Asia's energy and agricultural potential and resources make it an area of strategic opportunity with vital interests at stake.
- The Central Asian states need to intensify their Western-oriented diplomatic outreach to attract support from state and private actors for investment and technological partnerships in alternative transportation routes. In addition to renovation of the rolling stock and engines, this includes building locomotive construction and assembly facilities, and upgrading software and personnel-training projects.
- Central Asian states must increase regional cooperation, so Central Asia is less susceptible to "divide and conquer" strategies from predatory foreign powers and can exercise greater leverage when negotiating as a bloc.
- The United States and EU must not allow Russia and China to cooperate in Central Asia and should take every opportunity to exacerbate Sino-Russian competition in the region.
- The United States and EU must not allow Russia or China to gain a decisive advantage against the other in any competition in Central Asia.
- The United States and EU must recognize that Central Asia will always have economic relationships with Russia and China, and all policies must be formulated with this in mind.
- Kazakhstan should continue leading negotiations with Azerbaijan, Georgia, and Turkey to upgrade the Middle Corridor's transportation facilities, including the Caspian ports.
- Kazakhstan should continue its strategy of absorbing refugees and capital fleeing Russia, while maintaining security screening and enforcing the sanctions regime.
- The United States and EU should give Kazakhstan the benefit of the doubt regarding its absorption of Russian people and capital in terms of sanctions compliance. Encouraging the long-term responsible international behavior by Russia—including respect of borders, independence, and territorial integrity of its neighbors, and strengthening of Central Asia—is in the long-term national interest of Western actors. Ephemeral, unintended, and accidental violations of sanctions policy should not impede this objective.
- Western companies should be encouraged by the EU and the United States to invest in Kazakhstan's uranium-enrichment program and build uranium-conversion facilities and supply chains.
- Western actors should recognize Central Asia's political progress and fragile strategic position by avoiding slandering Central Asian states as "Russian allies." Doing so is not only inaccurate, but counterproductive, as it increases local dependency on and ties with Moscow.
- US and EU members should discuss with Turkmenistan's government the Trans-Caspian interconnector and the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline, to encourage diversification away from its dependency on China.
- The West should encourage the Trans-Caspian and TAPI pipelines to decrease Chinese influence in Turkmenistan, supply energy-starved Pakistan and India markets, and open Central Asia to southward energy-export routes.
- The EU should launch strategic projects in the Middle Corridor as soon as possible, even before the EBRD study is fully completed.

BIOGRAPHIES



Margarita Assenova is a Senior Fellow at the Jamestown Foundation in Washington, DC and a regular contributor to its flagship publication *Eurasia Daily Monitor*. She also teaches Eastern Europe Advanced Area Studies courses at the Foreign Service Institute, Department of State, as a contractor.

Assenova is a recipient of the *John Knight Professional Journalism Fellowship* at Stanford University for her reporting on nationalism in the Balkans. Her articles appeared in US and European newspapers, magazines, and online publications, including *RFE/RL Newsline* and *Balkan Report*, *The Hill*, *The National Interest*, *The Washington Times*, *Transitions Online*, *Balkan Times*, *Baltic Rim Economies Review*, *The Capital Weekly (Bulgaria)*, *Internationale Politik (Germany)*, *World Finance Review Magazine (UK)*, *Future Prospects (UAE)*, and others. She has also written extensively on Russian disinformation for *Polygraph.info*, a Voice of America counter-disinformation program.

Assenova has authored book chapters and journal articles on security, energy, and democracy published by CSIS Press, Brassey's, Freedom House, Bertelsmann Foundation Publishers, the University of New Haven, the Jamestown Foundation and the Center for European Policy Analysis. Her latest books include *Eurasian Disunion: Russia's Vulnerable Flanks* (Jamestown Foundation, 2016), co-authored with Janusz Bugajski, a critical study on Russian subversion in Europe, Eurasia and Central Asia, and *Azerbaijan and the New Energy Geopolitics of Southeastern Europe*, Ed. (2015). Her report *Nord Stream 2: Myths, Reality, and the Way Forward* (CEPA, 2018) became instrumental in mobilizing efforts to curtail Russian energy domination ambitions in Europe.



Ariel Cohen, L.L.B., PhD., is an internationally renowned expert on energy policy, Russia/Eurasia, Eastern and Central Europe, and the Middle East. He is a recognized authority on political and security risk management; economic development, investment policy; the rule of law; crime and corruption; market entry strategies; and other aspects of state/business relations.

Dr. Cohen is a Senior Fellow with the International Tax and Investment Center and Director of the Energy, Growth and Security program. He also serves as a nonresident Senior Fellow at the Atlantic Council's Eurasia Center. He is a member of the prestigious Loisch Group at the George Marshall Center in Garmisch, Bavaria, Germany.

Dr. Cohen has authored six books and monographs and has been involved in journalism since 1981, and has published over 900 articles in professional and popular media. A columnist for *Forbes*, he regularly appears on CNN, NBC, CBS, FOX, C-SPAN, BBC-TV, Al Jazeera, and all Russian and Ukrainian national TV networks. He is a columnist for *Forbes*, and the *Voice of America* weekly commentator.

He is or was a regular columnist for *Newsweek*, *The National Interest*, *Huffington Post*, *The Atlanticist*, and *UPI*, and has written numerous guest columns for the *New York Times*, *International Herald Tribune*, *Christian Science Monitor*, the *Washington Post*, *The Wall Street Journal*, *The Washington Times*, and *National Review Online*. He is widely published in Europe and the Middle East.

Until July 2014, Dr. Cohen was a Senior Research Fellow at the Heritage Foundation in Washington, DC. Dr. Cohen conducts White House briefings, and regularly lectures at the request of U.S. Government institutions: the U.S. Department of State, the Joint Chiefs of Staff, the Training and Doctrine and Special Forces Commands of the U.S. armed services, the Central Intelligence Agency, and the Defense Intelligence Agency. Dr. Cohen

frequently testifies before committees of the U.S. Congress, including the Senate and House Foreign Relations Committees, the House Armed Services Committee, the House Judiciary Committee and the Helsinki Commission. He also directs high-level conferences on a wide array of topics.

Dr. Cohen is the Founding Principal of International Market Analysis, a boutique advisory firm. The firm's consulting practice spans many industries, including energy and natural resources, defense, finance, telecommunications, and transportation.

Dr. Cohen is a member of the Council on Foreign Relations, American Bar Association, and of the American Council on Germany.



Wesley Alexander Hill, PhD [ABD] is the leading Research Associate and International Program Manager for the Energy, Growth, and Security Program at the International Tax and Investment Center. ITIC's EGS arm focuses on critical natural resources, energy transformations, infrastructure, and geopolitics in Eurasia while exploring opportunities for investment and policymaking.

Wesley is an accomplished foreign policy professional and expert on energy policy, security studies, grand strategy, Chinese politics, Sino-American relations, Sino-African relations, and Sino-Eurasian relations. Wesley serves as a contributor and has been published in *Forbes*, *New Lines*, and *Voice of America*.

Prior to working with the International Tax and Investment Center, Wesley was a professor at Tulane University teaching classes in Political Science. Wesley is a fellow of the National Bureau of Asian Research, having conducted research at Beijing's Tsinghua University and Taipei's National Normal University. Wesley began his career conducting foreign policy research and analysis on behalf of the office of Congresswoman Dina Titus' constituent services office.

Wesley graduated from Tulane University.



CHAIRMAN

*John F.W. Rogers

EXECUTIVE

CHAIRMAN

EMERITUS

*James L. Jones

PRESIDENT AND CEO

*Frederick Kempe

EXECUTIVE VICE

CHAIRS

*Adrienne Arsht

*Stephen J. Hadley

VICE CHAIRS

*Robert J. Abernethy

*C. Boyden Gray

*Alexander V. Mirtchev

TREASURER

*George Lund

DIRECTORS

Todd Achilles

Timothy D. Adams

*Michael Andersson

David D. Aufhauser

Barbara Barrett

Colleen Bell

Stephen Biegun

Linden P. Blue

Adam Boehler

John Bonsell

Philip M. Breedlove

Richard R. Burt

*Teresa Carlson

*James E. Cartwright

John E. Chapoton

Ahmed Charai

Melanie Chen

Michael Chertoff

*George Chopivsky

Wesley K. Clark

*Helima Croft

*Ankit N. Desai

Dario Deste

Lawrence Di Rita

*Paula J. Dobriansky

Joseph F. Dunford, Jr.

Richard Edelman

Thomas J. Egan, Jr.

Stuart E. Eizenstat

Mark T. Esper

*Michael Fisch

Alan H. Fleischmann

Jendayi E. Frazer

Meg Gentle

Thomas H. Glocer

John B. Goodman

*Sherri W. Goodman

Jarosław Grzesiak

Murathan Günal

Michael V. Hayden

Tim Holt

*Karl V. Hopkins

Kay Bailey Hutchison

Ian Ihnatowycz

Mark Isakowitz

Wolfgang F. Ischinger

Deborah Lee James

*Joia M. Johnson

*Safi Kalo

Andre Kelleners

Brian L. Kelly

Henry A. Kissinger

John E. Klein

*C. Jeffrey Knittel

Joseph Konzelmann

Franklin D. Kramer

Laura Lane

Almar Latour

Yann Le Pallec

Jan M. Lodai

Douglas Lute

Jane Holl Lute

William J. Lynn

Mark Machin

Marco Margheri

Michael Margolis

Chris Marlin

William Marron

Christian Marrone

Gerardo Mato

Erin McGrain

John M. McHugh

*Judith A. Miller

Dariusz Mioduski

Michael J. Morell

*Richard Morningstar

Georgette Mosbacher

Majida Mourad

Virginia A. Mulberger

Mary Claire Murphy

Edward J. Newberry

Franco Nuschese

Joseph S. Nye

Ahmet M. Ören

Sally A. Painter

Ana I. Palacio

*Kostas Pantazopoulos

Alan Pellegrini

David H. Petraeus

*Lisa Pollina

Daniel B. Poneman

*Dina H. Powell

McCormick

Michael Punke

Ashraf Qazi

Thomas J. Ridge

Gary Rieschel

Michael J. Rogers

Charles O. Rossotti

Harry Sachinis

C. Michael Scaparrotti

Ivan A. Schlager

Rajiv Shah

Gregg Sherrill

Jeff Shockey

Ali Jehangir Siddiqui

Kris Singh

Walter Slocombe

Christopher Smith

Clifford M. Sobel

James G. Stavridis

Michael S. Steele

Richard J.A. Steele

Mary Streett

*Gil Tenzer

*Frances F. Townsend

Clyde C. Tuggle

Melanne Verveer

Charles F. Wald

Michael F. Walsh

Ronald Weiser

*Al Williams

Maciej Witucki

Neal S. Wolin

*Jenny Wood

Guang Yang

Mary C. Yates

Dov S. Zakheim

HONORARY

DIRECTORS

James A. Baker, III

Robert M. Gates

James N. Mattis

Michael G. Mullen

Leon E. Panetta

William J. Perry

Condoleezza Rice

Horst Teltschik

William H. Webster

**Executive Committee Members*

List as of March 6, 2023



The Atlantic Council is a nonpartisan organization that promotes constructive US leadership and engagement in international affairs based on the central role of the Atlantic community in meeting today's global challenges.

© 2023 The Atlantic Council of the United States. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without permission in writing from the Atlantic Council, except in the case of brief quotations in news articles, critical articles, or reviews. Please direct inquiries to:

Atlantic Council

1030 15th Street, NW, 12th Floor,
Washington, DC 20005

(202) 463-7226, www.AtlanticCouncil.org