

Transatlantic Expert Group | #2024.01

Towards Transatlantic Coordination on Purchasing and Stockpiling Critical Commodities

To enhance their economic security, the European Union and the United States should start building strategic reserves of critical commodities in the context of a cooperative framework that commits them to coordinating purchases and providing emergency supplies to one another in case of severe supply disruptions. Such an arrangement would help mitigate critical import vulnerabilities by limiting market instability and deterring covert and overt geo-economic coercive threats.

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For the United States and Europe, individually and collectively, a dependence on critical imports is by far the greatest source of economic and geo-economic vulnerability. Export dependence is relatively limited with exports accounting for a mere 8% of GDP in

the U.S. and 16% of GDP in the EU, compared to a global average of almost 30% of GDP. Financial vulnerabilities are even more limited. The U.S. and Europe almost exclusively rely on their own currencies to conduct international trade and financial

transactions. Other countries rely much more on America's or Europe's financial system to issue liabilities and purchase assets than vice versa. Transatlantic economic security cooperation should therefore prioritize the mitigation of critical import-related vulnerabilities.

An import-related vulnerability is critical in an economic sense if demand for the imported good (or service) is highly inelastic, cost-effective substitutes are difficult to procure and the economic disruption caused by a substantial decline in supply causes severe economic disruption. The greater the diversification of imports, the smaller the likelihood of systemic supply disruptions. By the same token, the greater the dependence on a single supplier or small number of suppliers, the greater the susceptibility to geo-economic coercion and concomitant supply disruption.

Import-related vulnerabilities can provide a supplier country with the ability to impose (or threaten to impose) significant economic costs on another country. This constitutes a significant source of geo-economic power. Not only are certain import-related vulnerabilities a greater source of systemic economic risk than export-related or financial vulnerabilities. But export restrictions, which exploit import dependence, are also more efficient and effective from the geo-economic coercer's point of view. In a world where export restrictions increasingly target non-military and non-dual-use goods, countries would do well to mitigate their dependence on critical imports.

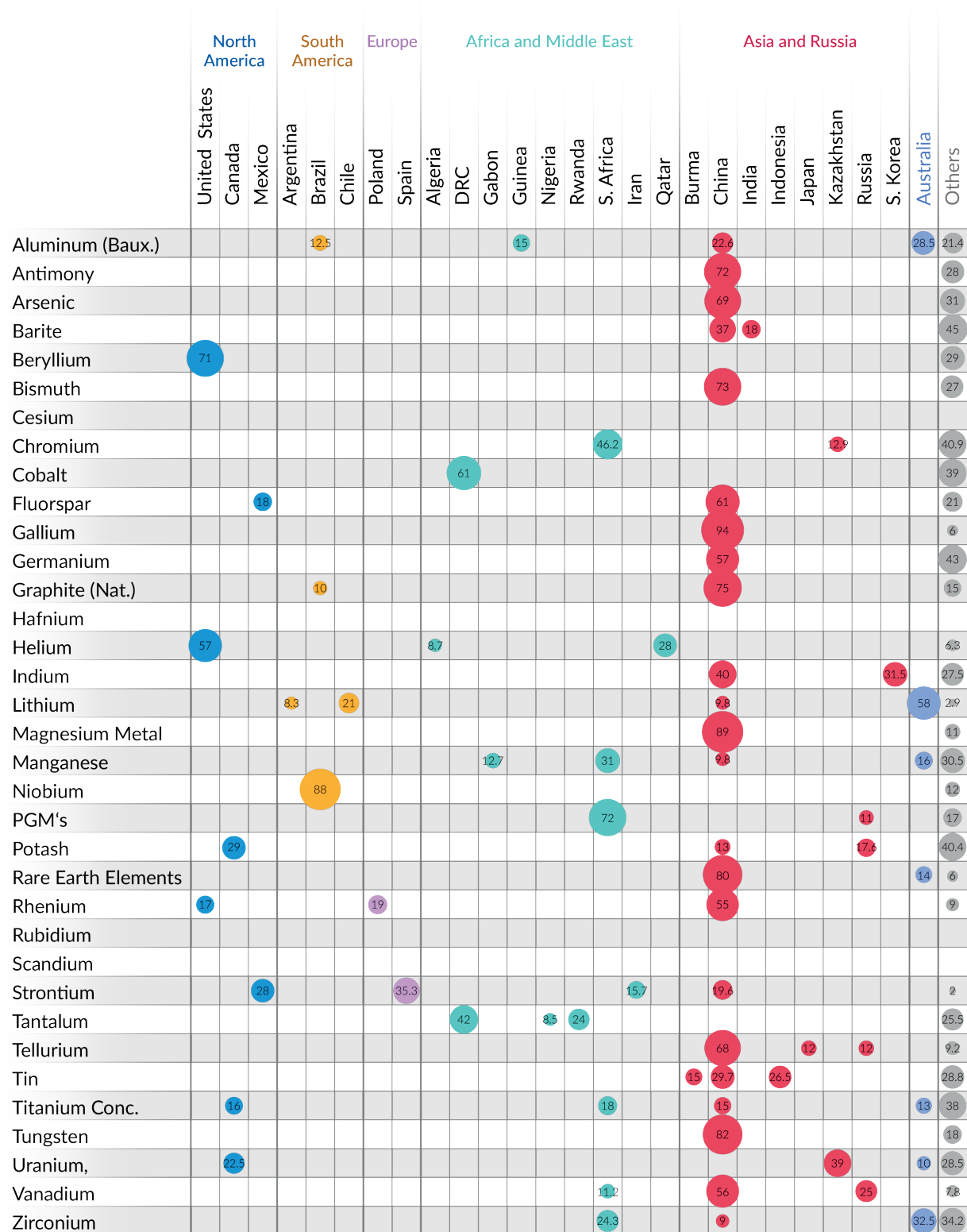
EU and U.S. Supply Chain Risk Mitigation Policies

In this context, Washington and Brussels have been undertaking efforts to understand what their most critical import-related vulnerabilities are and how best to mitigate them. The EU, for example, has identified as critical various intermediate and finished goods, including semiconductors, hydrogen, batteries, rare minerals, chemicals and solar panels as well as services related to cybersecurity and IT software. The United States has found very similar vulnerabilities.

The U.S. and the EU appear to be particularly dependent on the import of critical minerals due to a lack of substitutes and a concentration of supply. In a recent study, the IMF found that both the demand for and supply of minerals was highly inelastic, particularly in the short term, and much more so than for agricultural and energy commodities. In 2022, the U.S. deemed 50 mineral commodities to be critical to its economy and national security. In 2023, the EU considered 34 raw materials as critical. China mines 70% of rare earth concentrates, processes 87% and refines 91%. Not only does this create a very significant dependency and vulnerability. It also represents a "single point of failure", a geoeconomically exploitable "chokepoint". EU dependence is particularly high with respect to rare mineral imports: the EU and the U.S. import 98% and 80% of rare minerals from China. For heavy rare minerals, the EU figure is 100%.

China Dominates Production of Critical Minerals

% Global Production (2017) Select countries



Source: Congressional Research Service, Critical Minerals and U.S. Public Policy, 2019 (https://crsreports.congress.gov/product/pdf/R/R45810_p_17)

The Biden administration has made supply chain security an important plank of its economic security agenda. Institutionally, it has established a *Supply Chain Disruptions Task Force*, which is a whole-of-government effort involving a large number of different agencies, including the White House, Commerce, Defense, Energy, amongst others, to address the risk of short-term supply disruptions. The task force is to devise policies to support production of critical medicines onshore through public-private partnerships, develop domestic lithium supply chains through loans, invest in domestic and international production and processing of critical minerals, as well as partner with the private sector to address semiconductor supply risk through long-term investment. The Biden administration also passed important legislation that partly aimed at securing and reshoring critical supply chains, including the *Bipartisan Infrastructure Law (2021)*, the *Chips and Science Act (2022)* and the *Inflation Reduction Act (2022)*. But U.S. legislation has also led to increased transatlantic tensions due to their protectionist and discriminatory provisions, which create incentives for reshoring and attract (or divert, depending on one's point of view) European investment to the United States, thus undermining EU reshoring objectives and supply chain security.

The EU has similarly launched a variety of initiatives to address its dependence on critical imports, including critical commodities. In 2008, it launched the *Raw Materials Initiative* and first began to identify its critical dependencies related to raw

materials. In 2020, the EU Commission proposed the *Action Plan on Critical Raw Materials*, aimed at reducing the EU's dependence on critical imports. In March 2024, it adopted the *Critical Raw Materials Act*, which sets thresholds (to be met by 2030) for the consumption of critical raw materials as a share of extraction (>10%), processing (>40%) and recycling (>25%) as well as a maximum threshold for imports from a single third country (<65%). The act also aims to diversify critical raw material supply chains, strengthen circularity (or recycling) and support research focused on efficiency and substitutes. In addition, it seeks to enhance the EU's capacity to monitor vulnerabilities.

Moreover, the EU has designated various non-commodity imports as critical, including certain active pharmaceutical ingredients, lithium, hydrogen, semiconductors and cloud computing. Like the U.S., the EU has flanked its risk mitigation strategy with industrial policies, including the *EU CHIPS Act* to lessen its dependence on semiconductor imports. It has pursued new and enhanced free-trade agreements to diversify its access to critical raw materials.

The EU has created a *Critical Raw Materials Club* with the aim of bringing together EU members to engage mineral-rich countries and invest in supply chain security. Meanwhile, the U.S. has set up a *Minerals Security Partnership*, which includes thirteen countries, including Japan, Korea and India, and aims to mobilize private sector investment for projects to support the mining, processing and recycling of critical minerals in an attempt to develop diverse and sustainable supply chains. Washington and Brussels are in talks about merging the EU's

Critical Raw Materials Club with the U.S.' Mineral Security Partnership.

The EU and the U.S. are also trying to cooperate in the context of the *EU-US Trade and Technology Council*, which has a working group focused on supply chain security. Progress has been somewhat limited and has mostly been confined information sharing and transparency. For example, an agreement was reached on an early warning system for semiconductor supply chain disruptions as well as an information sharing system concerning drugs and critical raw materials.

It is too early to assess the success and long-term sustainability of individual U.S. and EU risk mitigation policies regarding critical supply chains. Progress has been made in terms of identifying vulnerabilities and recognizing the need for mitigating action. Visible progress is being made in terms of building semiconductor fabs in the EU and the U.S. How effective these and other critical raw material related measures will be in terms of mitigating vulnerabilities is too early to say. It is early days. Things are moving in the right direction. However, considering the degree of dependence on critical mineral imports in relation to the EU's goals as per *Critical Raw Materials Act* (see above), it will take many years before the EU's vulnerability reaches manageable levels.

A Transatlantic Approach to Stockpiling and Emergency Purchases of Critical Raw Materials

Washington and Brussels have been working on various initiatives to address supply chain vulnerabilities. They are doing so largely

individually, in some instances jointly (e.g. EU-US Trade and Technology Council), and sometimes they do so at cross purposes (e.g. *Inflation Reduction Act*).

Washington and Brussels should devise a more ambitious and coordinated approach to tackling critical import dependencies. Of the five mitigation options – import diversification, reshoring, innovative substitution, deterrence and stockpiling – the latter offers the best prospect for transatlantic cooperation. Trade diversification through free-trade agreements with third parties is inherently competitive. Reshoring is also competitive. Innovative substitution can be competitive if supported by discriminatory policies. Joint deterrence is not competitive and should therefore be explored as a venue for transatlantic cooperation. Stockpiling lends itself best to coordination and cooperation.

Stockpiling critical imports, if designed and coordinated properly, holds out the greatest promise, not least because it has already been tried successfully in the guise of the Strategic Petroleum Reserve established following the 1973 oil shock. Stockpiling critical inputs helps buffer the impact of supply shocks and it reduces the ability of geo-economic adversaries to exploit import-related dependencies.

The building of national stockpiles should be accompanied by transatlantic cooperation in the guise of bilateral agreements to allow for the lending and sale of reserves to one another as well as to commit the U.S. and the EU to a coordinated approach to releasing reserves in case of market instability. Although the stockpiles would nominally remain under national control, cooperative agreements on lending and sales would help

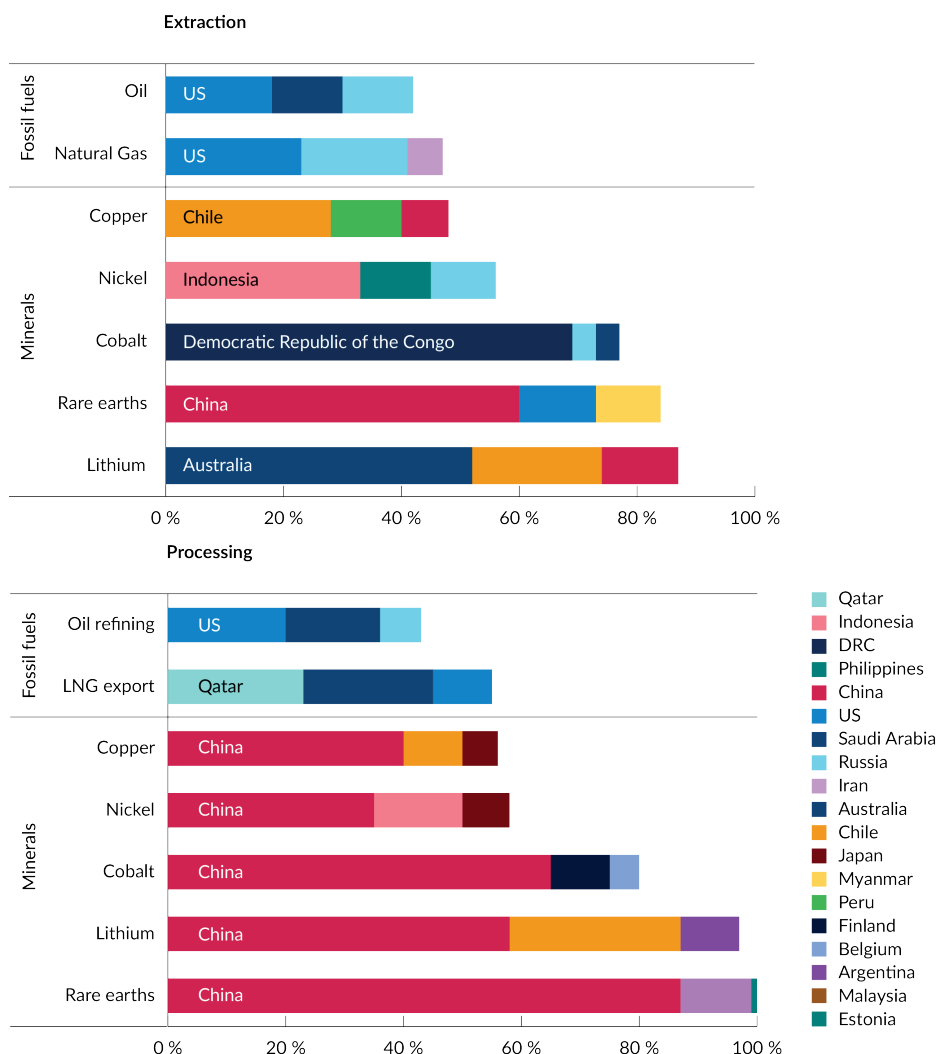
generate diversification benefits and thus enhance collective security.

Initially, transatlantic cooperation on stockpiling policies should cover critical raw materials, primarily minerals, due to their greater criticality in terms of dependence, rather than more differentiated goods, like batteries, solar panels or semiconductors. Unlike some of the more differentiated manufacturing goods, most non-agricultural commodities are non-perishable or at least they do not have a limited “shelf life” as is more characteristic of more differentiated manufactured intermediate goods.

Moreover, different technological standards may on occasions make it difficult to trade reserves, thus limiting risk diversification benefits. But most importantly, supply is generally (but not always) far less concentrated in the case of most critical non-commodity goods. They are less likely to suffer systemic disruption and are hence less amenable to be used in geo-economic coercion. Managing vulnerabilities related to critical non-commodities is generally best left to the private sector.

Concentration of Production of Raw Materials and Fossil Fuels

Share of top three producing countries in production of selected minerals and fossil fuels, 2019



Source: IEA (2021), The Role of Critical Minerals in Clean Energy Transitions, IEA, Paris Licence: CC BY 4.0 (<https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary>)

With respect to the stockpiling, purchasing and sale of critical goods, the U.S. and the EU should explore cooperation along the following lines:

- **Identify import-related vulnerabilities and quantify the associated risks to be able to assess the EU-U.S. risk on a “consolidated” basis.** Research should focus on areas where the risks of downstream economic disruption is high,

where relatively cost-effective substitutes are not available and where supply is highly concentrated as to make feasible geo-economic coercion. Research should also focus on projected demand for critical commodities in light of their prospective rather than current importance. The relevant information needs to be shared and consolidated to assess.

- **Create separate EU and U.S. strategic reserves for critical commodities.** Like the Strategic Petroleum Reserve, reserves of relevant critical raw materials should aim to hold a certain level of annual national consumption. The amount of reserves held can and should be adjusted in view of the assessed risk of systemic or geo-economic disruption and can vary by critical commodity. Such stockpiles would allow the authorities to intervene in situations of rapid price increases by releasing a share of their reserves. It would also allow them to take advantage of low prices to replenish reserves. Similar to central banks, reserve managers can provide and withdraw liquidity. If well-managed, it is unlikely that the reserve funds will incur losses. Instead, they provide essential short-term insurance against excessive price spikes and the risk of geo-economic coercion. Finally, by entering supply purchase agreements that create stable, longer-term demand, the respective reserve funds could play a role in supporting private-sector investment in critical minerals.
- **Form a buyers' cartel to at least coordinate purchases during supply shortages to avoid adding to price instability.** Coordination purchases during a time of market stability should also be considered. It is important that the world's two largest international buyers of critical commodities do not engage in a bidding war that unnecessarily drives up prices in case of a supply shock. This can be done through pre-agreements to coordinate purchases or even engage in joint purchases in the face of supply shortfalls, perhaps combined with a pro-rate sharing agreement. Government-led and government-coordinated large-scale purchases by the world's largest buyers of critical commodities can help overcome official and private-sector collective action problems and calm markets. Coordinating U.S. and EU purchasing power would help mobilize its quasi-monopsony or oligopsony power (namely the influence that one or a small number of buyers have when they negotiate prices in market with many sellers) to balance the power of monopolistic suppliers, which may help limit the risk of coercion.
- **Commit to coordinated reserve release policies and create a facility to lend or sell reserves to one another to reduce individual risks.** During a market panic, reserve holders would like the other to release its reserves to help stabilize the market. As in the case of (emergency) purchases, pre-agreed sales policies would help overcome transatlantic collective action problems. Pre-agreed swap, lending and sales policies would also help reduce the leverage of a potential coercer by reducing the effectiveness of individually targeted export controls. Coordinated release policies would have a more powerful market-stabilizing effect.
- **Extend transatlantic stockpiling cooperation to all G7 countries as well as U.S. treaty allies, like Australia and Korea.** The EU, the U.S., the G7 countries and U.S. allies account for 40% of global manufacturing and an even larger share of advanced manufacturing that relies on critical raw materials, and especially critical minerals. While a larger number of members may make agreement more difficult to achieve, it would also give it more market power, and it would make it

more difficult for would-be coercers to pursue a geo-economic “divide and rule” policy. Policy coordination and risk sharing will make for greater anti-coercive power in the sense of “deterrence by denial” rather than “deterrence by punishment.”

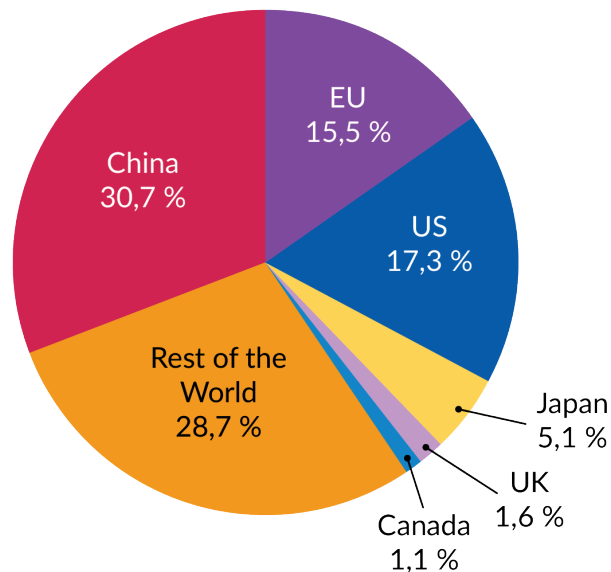
- **Consider extending stockpiling policies to include critical non-commodity imports.**

If a coordinated approach to stockpiling is successful in maintaining price stability and deterring geo-economic coercion (which, in practice, may be difficult to prove definitively), it may be worth analyzing whether stockpiling policies should be extended to other types of critical non-commodity imports. It needs to be determined whether stockpiling offers the best and most cost-effective solution to mitigate vulnerabilities, compared to other policies, such as trade diversification, reshoring, innovative substitution and geo-economic deterrence.

- **Establish a permanent secretariat to coordinate critical commodity sales and purchasing policies.** In the U.S., the *Office of Petroleum Reserve*, which manages oil reserves, is part of the Department of Energy. The Department of Defense also maintains stockpiles of rare earths and critical materials for military purposes. A transatlantic critical mineral policy would likely be an inter-agency process under the aegis of the White House’s National Economic Council. On the EU side, it would be desirable to appoint a critical commodities policy coordinator to allow the EU to speak with one voice (once intra-EU agreement is reached) and facilitate transatlantic coordination. The EU-US TTC appears less well-suited given that it is a negotiating forum rather than a policy coordination and implementation bureaucracy.

EU, US, G7 collectively account for largest share of global manufacturing

(% of total, value added in manufacturing, 2022)



Source: World Bank, Data Bank

<https://databank.worldbank.org/#:~:text=DataBank%20is%20an%20analysis%20and,us%20know%20what%20you%20think!>
Engaging the United States, the G7 and Beyond

At a minimum, a transatlantic agreement on coordinated stockpiling and purchasing policies would require the support of the U.S. government, the EU Commission, and EU member states. Cooperation could be expanded in the context of pre-existing regimes, such as the U.S.-led *Minerals Security Partners* and the EU's *Critical Minerals Club*, particularly if the two regimes merge or begin to cooperate more closely. However, the need for close coordination and cooperation may make it desirable to focus on the G7 countries and close U.S. allies. This would make it easier to reach a broad agreement before opening the arrangement to other countries, especially U.S. allies.

To the extent that stockpiling requires upfront financing and a solid domestic-legal footing, it will require support from the U.S.

Congress. While this might suggest an uphill battle, given partisan polarization and congressional dysfunction, the proposal should be pitched in terms of economic and national security. As such, it will find greater resonance in Congress and command the attention of national-security-focused policymakers in the executive, regardless of who wins the November presidential elections.

It is inevitable that the approaching U.S. elections will create uncertainty and reduce the appetite to engage in exploratory negotiations about critical commodity cooperation. A second Biden administration would be much more inclined to cooperation than a Trump administration. The Biden administration has already demonstrated its readiness to engage in "plurilateral" cooperation with respect to the *Mineral Security Partnership*. Cooperation on critical minerals would be a harder sell in case of a

second Trump administration, not least because the broader transatlantic relationship would suffer due to a more unilateral *America First* policy, including trade protectionism. Yet this should not prevent European policymakers from floating the proposal and reaching out to current and possible future policymakers to convince them of the mutual benefit of such an agreement in light of the increasing weaponization of international economic relations.

Finally, getting other G7 governments and U.S. allies to join coordinated stockpiling policies should be relatively easy. All G7 members share similar import-related vulnerabilities, they are geopolitically closely aligned and they thus have an incentive to engage in cooperation. The group is also

sufficiently small and homogenous to facilitate agreement and decision-making. As the other G7 members are economically smaller than the EU and the U.S. they stand to benefit disproportionately from cooperation, similar to the way smaller members in defensive military alliances benefit from the larger members who contribute more to collective security in absolute and often relative terms. Nevertheless, the EU and the U.S. would also benefit from cooperation with the G7 and treaty allies by making stockpiling and purchasing policies more effective, by diversifying risks more broadly and by internalizing the security externalities of economic cooperation.

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About

This policy brief is a product of the [Transatlantic Expert Group](#) which was established by the Bertelsmann Stiftung together with the Bertelsmann Foundation in Washington, DC. The Transatlantic Expert Group identifies vulnerabilities arising from economic interdependencies, analyses the consequences for the political capacity of the EU and the US to act, and develops strategies to improve transatlantic cooperation in order to increase mutual resilience. The findings of the expert group are published in a series of policy briefs. [You can find all policy briefs here.](#)

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