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The Role of America's European Allies in the Russia-Ukraine War, 2022-24

John R. Deni
and
Lisa A. Aronsson



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The Role of America's European Allies in the Russia-Ukraine War, 2022–24

John R. Deni and Lisa A. Aronsson

September 2024



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The research conducted for this study was based on more than 50 semi-structured, not-for-attribution personal interviews with government officials and experts in the United States and Europe. The authors conducted most interviews in person, and the authors are grateful to the many individuals who gave their time and shared their personal perspectives.

The interviewees included individuals at the Pentagon; the US Department of State; US Army Europe and Africa; NATO Supreme Headquarters Allied Powers Europe; the German chancellery; the German Federal Ministry of Defence; the Finnish Ministry of Defence; the Ministry of National Defence of the Republic of Lithuania; the Romanian Ministry of National Defense and the Romanian Ministry of Foreign Affairs; the Ministry of National Defence and the Ministry of Foreign Affairs Republic of Poland; NATO Headquarters; the Finnish Embassy in Washington, DC; the French Embassy in Washington, DC; the Polish Embassy in Washington, DC; the German Embassy in Washington, DC; the British Embassy in Washington, DC; the Ukrainian Embassy in Washington, DC; United States European Command; Security Assistance Group-Ukraine; the logistics-support area in Rzeszów, Poland; and US embassies in Berlin, Vilnius, Helsinki, Warsaw, and Bucharest.

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Foreword

What military support and other assistance might the United States expect from its European allies and partners as the United States engages in strategic competition with Russia and China? Given the scope and expected long-term duration of strategic competition with Russia and China, Washington should—and, indeed, must—rely on its European allies and partners. They represent a unique, comparative advantage over Moscow and Beijing. The recent past provides several examples of the United States relying militarily on its European allies to achieve significant national security objectives, such as the surge in the Iraq War (2007–8), the surge in the Afghanistan War (2009–10), and sanctions on Iran (early 2010s). However, none of these examples included a direct or proxy confrontation with Russia or China, with the scope and duration such a confrontation would entail.

Russia has been waging its unjustified, immoral war against Ukraine for more than 10 years, and more than two years have passed since the full-scale invasion. Ukraine has shown remarkable resilience, and Ukraine's defense has benefited tremendously from international military assistance. The United States has given Ukraine significant materiel, expertise, and time, given the threat a Russian victory would present to the United States' treaty allies in Europe. Moreover, a Russian defeat, no matter how defined, is in the United States' national interests. Once again, Washington is looking to its allies in Europe to do more militarily, especially given the scale of the Russia-Ukraine War. In 2022 and 2023, Europeans gave Ukraine significant financial, economic, humanitarian, and military assistance. Europeans also weaned themselves off Russian oil and gas and opened their homes to six million Ukrainian refugees.

In many ways, the United States and Europe have exhibited exemplary transatlantic burden sharing in the context of a major war in Europe. Europeans have also significantly increased investments in their own defense and deterrence, with more than 20 allies meeting NATO's 2 percent benchmark for defense spending by the 2024 NATO summit. Washington needs these defense-spending trends to continue, and the United States needs its European allies to do more militarily for Ukraine, whose security and independence are in the vital national interests of all NATO and EU member states. In this monograph, John R. Deni and Lisa A. Aronsson explore the military assistance the United States' allies and partners in Europe gave Ukraine in the first two years of the war and assess whether European allies can continue or even expand their assistance while preserving their own national security and fulfilling their NATO

commitments. Deni and Aronsson’s findings indicate European allies remain firmly in support of assisting Ukraine, bilaterally and collectively, even if the rationales for allied support vary across Europe.

Despite agreeing about the necessity of supporting Ukraine and despite continued growth in allied defense budgets, this study finds European allies are unable—and, in some cases, even unwilling—to scale up dramatically their materiel, training, and other forms of military assistance to Ukraine. The reasons for allies’ reluctance vary, and some exceptions exist, but Deni and Aronsson find without continued, sustained US engagement, leadership, and presence in Europe, European allies will not be able to increase their military support for Ukraine dramatically in the short term while also strengthening their own collective defense and deterrence in the context of NATO. To facilitate and sustain the positive trends in burden sharing, the authors provide several practical recommendations for US policymakers to consider.

The analysis, findings, and conclusions Deni and Aronsson make in this study hold significant implications for the United States. By assessing whether and how US allies in Europe are able and willing to support Ukraine, decisionmakers in Washington can gain invaluable insight into the role European allies might play in future iterations of strategic competition with Russia or China and into the levers available to spur allied solidarity and generate more capacity. This peer-reviewed monograph makes an important contribution to our understanding of key concerns in the context of strategic competition.

Dr. C. Anthony Pfaff
Director, Strategic Studies Institute
and US Army War College Press

Executive Summary

Allies and partners are crucial to the United States' ability to address the threats Russia and China pose today. Nowhere has this been clearer than in Europe, where the United States helped coordinate more than 50 countries' military assistance to Ukraine after Russia's full-scale invasion in February 2022. This study examines the military assistance Washington's European allies provided to Ukraine from early 2022 through the end of 2023. The study's aim is to inform US policymakers about what they might expect from European allies in a prolonged conflict with Russia or in future iterations of strategic competition with Russia or China.

The first part of this study traces the mechanics of allied military assistance to Ukraine during the early phases of this war. Notably, neither the EU nor NATO formally led or coordinated military assistance to Ukraine in the aftermath of the invasion. Instead, the United States, the United Kingdom, and their allies set up new, ad hoc arrangements, including the Ukraine Defense Contact Group, which now comprises 54 countries. This study found Ukraine Defense Contact Group meetings positively but very weakly correlate with public announcements of new military assistance during the first year of the war.

The results of the quantitative analysis suggest European strategic rationales for supporting Ukraine pertain to European allies' values, geographies, threat perceptions, and strategic cultures. Furthermore, to unpack these motivations and other characteristics of military support for Ukraine, the authors examine eight case studies—Finland, France, Germany, Lithuania, Poland, Romania, Türkiye, and the United Kingdom. These countries each made significant or unique contributions to Ukraine's defense during the war's first two years.

The case studies demonstrate that political support for Ukraine after Russia's full-scale invasion has endured. European allies remain united in their political support for Ukraine, but none were prepared for the scale of the war effort or for how long it has endured. Yet, despite a slower start, by mid-2023, European allies overtook the United States in total military commitments to Ukraine.

The authors argue, however, that European allies cannot continue supporting Ukraine or expand their assistance without significant adjustments, especially for materiel, which is limited by production capacity, disparate threat perceptions, civilian-military disagreements, and other challenges. Fortunately, European defense spending has been

increasing for nearly a decade and will likely increase further. Nevertheless, allies are unlikely to place their economies on the war footing necessary to respond to Ukraine's requirements faster or sustain long-term military support.

This study's findings have important consequences for the United States as the war in Ukraine continues, conflict unfolds across the Middle East, and tensions with China rise. Specifically, this study assesses the implications for the United States in three areas: 1) the risk of escalation; 2) the challenges of inequitable burden sharing; and 3) the role of US leadership and military posture in Europe.

The study concludes with practical recommendations for US policymakers. Some recommendations are also relevant to European and other allied leaders, including the following.

1. Continue providing US leadership but leverage extant multilateral structures and tools where possible.
2. Continue to provide US enablers while European allies build capabilities and capacity.
3. Strengthen the forward-based resources necessary for reassurance, coordination, and communication with European allies.
4. Encourage European adoption of defense-production laws.
5. Expand the presence of allied personnel in the US national security establishment.
6. Eliminate barriers to secure communications among allied militaries.
7. Hire Ukrainian war veterans to improve training realism.
8. Facilitate long-term procurement contracts.

This study relies in part on more than 50 interviews with civilian and military officials and experts in the United States and in Europe. The authors conducted semi-structured interviews in national capitals, allied and partner embassies, US and NATO departments and organizations, the logistics-support area in Poland, and other European military commands. Methodologically, the authors

based their analysis on process tracing, content analysis, semi-structured elite interviews, and correlational statistical analysis.

This study forms part of a broader effort by researchers at the US Army War College, Columbia University, and the National Defense University to assess strategic lessons learned from the first two years of the Russia-Ukraine War. Although extracting lessons learned from an ongoing, unpredictable war is difficult, the US Defense establishment must try. Russia and Ukraine are both learning and adapting, and Ukraine depends on its international supporters to adapt, too.

— 1 —

Introduction

Allies in Strategic Competition

The United States is engaged in a long-term strategic competition with the Russian Federation and the People’s Republic of China. Given the scale and potential duration of this challenge, Washington should, and, indeed, must, rely on allies and partners, especially those in Europe, for support. The United States’ transatlantic network of allies constitutes a significant advantage. European allies account for more than one sixth of global gross domestic product (GDP) and just over 15 percent of the world’s military spending.¹ European allies confer political legitimacy for audiences both domestic and international and provide important capabilities and capacity. They also help share the risks and responsibilities associated with achieving international security, pursuing overlapping strategic interests, and promoting shared values.

During the last decade, the United States relied on collaboration with European allies to achieve major national security objectives. The United States relied on allies during the surge in the Iraq War (2007–8), the surge in the Afghanistan War (2009–10), and sanctions on Iran (early 2010s), though none of the three events included a direct or proxy confrontation with Russia or China, with the scope and duration such a confrontation would entail. So, two critical questions confronting policymakers today are, first, whether the United States can rely on its European allies to sustain or even increase their military support for Ukraine in the

1. “National Accounts and GDP,” Eurostat (website), June 2023, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=National_accounts_and_GDP; and Forecast International, “Global Defense Spending Annual Part 4 – Europe & USA,” *Defense and Security Monitor* (blog), May 14, 2024, <https://dsm.forecastinternational.com/2024/05/14/global-defense-spending-annual-part-4-europe-north-america/>.

near term, and second, what the United States might be able to expect from its European allies in future iterations of strategic competition with Russia (and perhaps with China as well). This study's close examination of European military assistance to Ukraine in 2022 and 2023 can answer the first research question and can provide useful insights into the secondary research question by discussing Europe's possible contributions to future iterations of strategic competition with Russia and, perhaps, with China.

In response to Russia's full-scale invasion of Ukraine on February 24, 2022, Washington's European allies have demonstrated a remarkable degree of political unity, reminiscent of the days following the September 11 attacks, when NATO invoked Article 5 of the North Atlantic Treaty for the first time in history. European political unity in the wake of Russia's invasion reflected skillful intelligence sharing and a sense of shock, especially in Western Europe, Russia had followed through with the invasion. Political unity and the allies' ability to pivot relatively quickly to supporting Ukraine's defense and resilience also reflected steps NATO had already taken to revitalize itself and strengthen defense and deterrence after Russia's illegal annexation of Crimea in the Ukraine crisis of 2013–14. The subject of this study is the materiel, training, logistics, and operational assistance Europe provided to Ukraine after Russia's full-scale invasion of 2022.

Despite a slower start, European allies and partners overtook the United States in 2023 in terms of total committed support to Ukraine. Europe's surge in support was primarily due to the European Commission's Ukraine Facility, a €50 billion fund to support Ukraine's recovery needs, modernization, and the reforms associated with EU accession between 2024 and 2027.² European allies and partners also overtook the United States in support because the EU allocated another €5.6 billion for Ukraine under its European Peace Facility (EPF), which helped member states deliver critical systems and ammunition to Ukraine. But Europe has delivered much of its military assistance to Ukraine bilaterally, and a handful of European countries, including Denmark, Germany, Lithuania, Norway, Portugal, Sweden, Switzerland, and the United Kingdom, recently made significant multiyear commitments to Ukraine.³ Europeans have delivered assistance to Ukraine while weaning

2. "Defending European Peace: United to Support Ukraine," European Commission (website), September 8, 2023, https://state-of-the-union.ec.europa.eu/state-union-2023/defending-european-peace_en.

3. "Ukraine Support Tracker: Europe Clearly Overtakes US, with Total Commitments Now Twice as Large," Kiel Institute for the World Economy (website), July 9, 2023, <https://www.ifw-kiel.de/publications/news/ukraine-support-tracker-europe-clearly-overtakes-us-with-total-commitments-now-twice-as-large/>.

themselves off Russian oil and gas, opening their homes to six million Ukrainian refugees, and bolstering their own defense and deterrence.

Most European allies see Ukraine's security and independence as integral to wider European security, and the allies retain strong political will to continue supporting Ukraine in the future. In June 2022, the EU granted Ukraine candidate status for accession to the EU, and a majority of allies support Ukraine's eventual membership in NATO. But this study argues European allies cannot continue delivering military assistance to Ukraine without significant adjustments to their risk assessments, defense priorities, budgeting processes, industrial capacity, and related legislation. Adjustments are especially necessary to continue providing materiel, which is limited by stockpiles, productive capacity, and diverging threat perceptions. European defense spending will likely continue to grow in line with commitments made at NATO summits in Vilnius and Washington, but European allies are not likely to place their economies on the war footing necessary to facilitate a faster response to Ukraine's requirements or sustain military support over time.

For US policymakers, an analysis of the roles European allies and partners played in providing military assistance to Ukraine during the first two years of the Russia-Ukraine War is helpful in several important ways. First, analyzing allies and partners' roles offers policymakers an understanding of how and why the conflict unfolded the way it did over the last two years. Second, it sheds light on European strategic rationales for supporting Ukraine, including whether and how Europeans might continue to assist Ukraine militarily in the future, and what Europe might require from the United States to assist in its efforts. Third, more broadly, analyzing roles provides policymakers with insights into whether and how Europeans might play a role in future iterations of strategic competition with Russia in Europe and, possibly, with Russia and China in other theaters.

Theoretical Framework, Methodology, and Study Structure

This policy-oriented study is situated within, and represents a contribution to, two distinct areas of academic literature in international relations and strategic studies. The first body of relevant international relations literature centers on collective action and burden sharing, and examines the challenges of providing public goods. Two characteristics define public goods—first, one country's consumption does not affect the amount of goods available to others, and second, public goods are available to everyone because making the goods exclusive is too costly or otherwise difficult. One example of a public

good is US extended nuclear deterrence. The central challenge international relations literature on public goods originally identified—the earliest formulations being decades old—is the challenge of free riders.⁴ Free riders are members of an alliance or coalition that limit their own contributions to providing public goods and instead rely on their allies or coalition partners.

More recently, scholars have expanded on the rather parsimonious free-rider construct by borrowing from real-world cases, including NATO.⁵ One of the most important developments in the literature was the recognition that some of the goods that states provide for alliance use are not purely public goods. Instead, the goods are sometimes entirely private or a mix of both public and private.⁶ For example, in contrast to nuclear deterrence, conventional military forces are not a pure public good because those forces become less available if an increasing number of allies share them. Theoretically, free riding is less likely for conventional forces compared to nuclear deterrence—countries have a harder time realizing the excludable benefits of conventional forces if they do not also provide conventional forces. These and other important theoretical refinements help to explain why state motivations to contribute (or not) to collective action are often more complicated than relatively simple threat calculations and instead consist of political, bureaucratic, and organizational factors.

In some ways, European allied military contributions to Ukraine do not represent a burden-sharing case, since Ukraine is not a member of NATO or the EU yet, so allies have no formal burdens to share per se. Nonetheless, this study fits within the collective-action literature insofar as a group of like-minded countries—most of them in Europe—have formed an ad hoc coalition whose sole purpose is to provide military and other assistance to Ukraine. So, though the benefits and burdens associated with the coalition's endeavor are quite different from the formal responsibility sharing within NATO, the members of the ad hoc coalition are engaged in collective action, with all the attendant challenges identified in both the relevant academic literature and historical experience.

The second body of academic literature relevant to this study is in the field of strategic studies and focuses on the dynamics of multinational coalitions. Much of the literature on multinational coalitions has examined

4. Mancur Olson Jr. and Richard Zeckhauser, "An Economic Theory of Alliances," *Review of Economics and Statistics* 48, no. 3 (August 1966): 266–79; and Gavin Kennedy, *Burden Sharing in NATO* (London: Duckworth, 1979).

5. Keith Hartley and Todd Sandler, "NATO Burden-Sharing: Past and Future," *Journal of Peace Research* 36, no. 6 (November 1999): 665–80.

6. Todd Sandler and John F. Forbes, "Burden Sharing, Strategy, and the Design of NATO," *Economic Inquiry* 18, no. 3 (July 1980): 425–44.

United States–led coalition military operations in the environment after the September 11 attacks and has examined the tensions between the benefits and costs of working with sovereign states toward overlapping security interests or to address shared international challenges.⁷ Nearly all modern United States–led military operations—stretching back to World War II—have depended to varying degrees on contributions from willing allies and partner states.⁸ In nearly all cases of allied and partner support, the United States has faced a tension between, on the one hand, the legitimacy coalition partners confer and, on the other hand, the practical challenges of working with sovereign states in a coalition format. The challenges are widely known and often stem from differing strategic, operational, or tactical priorities; unequal technological capabilities; and disparate risk tolerances.⁹

Nevertheless, Washington has routinely shown it prefers to bear the costs of coalitions in the name of the political legitimacy coalition partners bring both domestically and internationally. In many instances, the benefits extend beyond just legitimacy—coalition partners also bring regional knowledge, capacities, and capabilities the United States sometimes lacks, either entirely or in part.¹⁰ Indeed, a defining feature of US national security policy—as well as a wholly ironic feature, considering the United States’ immense power—is the degree to which the United States has insisted on operating in every international context with allies and partners by its side. That the strategic studies literature on coalition warfare has made limited inquiries into the costs-benefits balance of coalition partners is therefore surprising. Some more recent works attempt to unpack what it takes for an ally or partner to add value—vice burdens—in the context of a coalition operation.¹¹

7. Ellen Hallams, *The United States and NATO since 9/11: The Transatlantic Alliance Renewed* (Abingdon, UK: Routledge, 2010); and Ellen Hallams and Benjamin Schreer, “Towards a ‘Post-American’ Alliance? NATO Burden-Sharing after Libya,” *International Affairs* 88, no. 2 (March 2012): 313–27.

8. For example, see Kathleen J. McInnis, “Lessons in Coalition Warfare: Past, Present and Implications for the Future,” *International Politics Reviews* 1 (2013): 78–90; and Corbin Williamson, “Fighting with Friends: Coalition Warfare in Korean Waters, 1950–1953,” *Joint Force Quarterly* 83 (2016).

9. Joel D. Rayburn and Frank K. Sobchak, *The U.S. Army in the Iraq War – Volume 1: Invasion – Insurgency – Civil War, 2003–2006* (Carlisle, PA: US Army War College Press, 2019); and Special Inspector General for Afghanistan Reconstruction, *What We Need to Learn: Lessons from Twenty Years of Afghanistan Reconstruction*, SIGAR 21-46-LL (Arlington, VA: Office of the Special Inspector General for Afghanistan Reconstruction, August 2021), 12.

10. Hal Brands and Peter D. Feaver, “What Are America’s Alliances Good for?” *Parameters* 47, no. 2 (Summer 2017): 15–30, <https://press.armywarcollege.edu/parameters/vol47/iss2/4/>.

11. Olivier Schmitt, *Allies That Count: Junior Partners in Coalition Warfare* (Washington, DC: Georgetown University Press, 2018); Jennifer Kavanagh et al., *Building Military Coalitions: Lessons from U.S. Experience* (Santa Monica, CA: RAND Corporation, 2021); David P. Auerswald and Stephen M. Saideman, *NATO in Afghanistan* (Princeton, NJ: Princeton University Press, 2014); and Rebecca R. Moore, “Benefit or Burden? NATO-Led Military Missions and Western Cohesion,” in *War Time: Temporality and the Decline of Western Military Power*, ed. Sten Rynning, Olivier Schmitt, and Amelie Theussen (Washington, DC: Brookings Institution Press and Chatham House, 2021).

In the case of European military assistance to Ukraine, Washington has been eager to draw as many European allies and partners into the coalition effort as possible for several apparent reasons. For example, many of the United States' European allies have Soviet- and Russian-made military equipment that is most familiar to the Ukrainian military forces but does not exist in US arsenals. Similarly, drawing contributions from as many European allies as possible helps reduce the load on US stockpiles, which must be ready to defend global US interests. To date, these and other benefits of working collectively with allies and partners to support Ukraine's defense have outweighed the costs the United States bears in trying to coordinate and lead such a large group of countries.

This study analyzes European military assistance to Ukraine (materiel, training, logistics, and operational assistance) by employing a mix of methodological tools. To understand the changes that unfolded in allies' approaches to the war and their military assistance to Ukraine over the last two years and to identify causal inferences, this study uses process tracing, or a focus on the unfolding of events over time and in detail.¹² This study conducts process tracing in part by comparing data gathered in interviews with primary-source government documents, readouts of Ukraine Defense Contact Group (UDCG) meetings and other bilateral meetings, and speeches by leaders from European allied and partner countries. An in-depth understanding of the steps taken to assist Ukraine since the war's outbreak facilitated an analysis of changes over time and the identification of causal inferences.

Additionally, the study uses case studies of specific donor countries to improve understanding of their strategic objectives, themes, and trends in their military assistance to Ukraine. The case studies rely in part on content analysis of primary-source documents, aimed at identifying key phrases and concepts. The case studies, as well as the process tracing described above, also rely on more than 50 semi-structured interviews with civilian and military officials and experts. The authors conducted the interviews in national capitals; in allied and partner embassies in Washington; at the Pentagon, the US Department of State, NATO Headquarters, and Supreme Headquarters Allied Powers Europe; and at various other US and allied military commands, including in Wiesbaden, Germany, and Rzeszów, Poland. These discussions proved an invaluable source of insights regarding what the requirements of operational security and political sensitivities have turned into an opaque assistance effort.

12. David Collier, "Understanding Process Tracing," *PS: Political Science and Politics* 44, no. 4 (October 2011): 823–30.

Finally, the study uses quantitative analysis to assess the relationship between United States–led coordination efforts—such as UDCG meetings—and international pledges and the provision of military assistance to Ukraine. Specifically, the statistical analysis measures the correlation between UDCG meetings and announcements of new assistance packages as compared with other major EU, NATO, and NATO Chiefs of Defense meetings.

The study begins by unpacking the mechanics of international military assistance to Ukraine since February 2022. The first section outlines the processes through which countries established new, ad hoc institutions and the ways in which Ukraine’s needs were conveyed to and fulfilled by its partners, including through the United States–led UDCG. The study organizes the bulk of the empirical analysis into case studies on Finland, France, Germany, Lithuania, Poland, Romania, Türkiye, and the United Kingdom. These countries represent just 8 of the 54 countries currently participating in the UDCG, but they played significant, leading, or unique roles in assisting Ukraine during the first two years of the Russia-Ukraine War. Moreover, the 8 countries represent large and small allies and a geographic distribution of allies in the north and south, near to and far from the front lines.

For each selected country, this study traces the ally’s immediate response to Russia’s full-scale invasion and the strategic rationales driving its support for Ukraine, including the ways in which some of the rationales changed between early 2022 and the end of 2023. Second, the case studies trace allies’ publicly announced deliveries of military assistance, training, and other support; the national debates about the nature, scale, and pace of allies’ military support; and the implications of military support for other national security priorities. Third, the case studies examine whether and how European allies are measuring the effectiveness of their efforts to assist Ukraine’s defense. Finally, the case studies assess the limits of national stockpiles, productive capacity, domestic political circumstances, varying risk tolerances, and allies’ ambition and ability to do more for Ukraine in the future. In less detail, this study addresses other European allies’ and organizations’ military contributions to Ukraine’s defense, especially the EU, which has played an important financial and political role, and which has helped its member states with delivering and coordinating training.

Drawing on the case-study analysis, this study then generates a set of findings about European military assistance to Ukraine, and analyzes the implications of these findings for the United States as it continues to support Ukraine while addressing conflict in the Middle East and engaging in global strategic competition with Russia and China. The study considers the implications of the findings for the United States through three key lenses: 1) the risk of escalation;

2) challenges associated with inequitable burden sharing; and 3) the role of US leadership and military posture in Europe. The conclusion then presents a series of eight practical recommendations. The authors designed the concluding recommendations to help the United States leverage opportunities and manage risks associated with transatlantic cooperation vis-à-vis supporting Ukraine's military in the Russia-Ukraine War. Most are tailored to the United States in a national or NATO context, but some have relevance for European decisionmakers as well.

Although published as a stand-alone product, this study forms part of a broader effort by researchers at the US Army War College, Columbia University, and the National Defense University to assess the strategic lessons learned during the first two years of the war following Russia's full-scale invasion of Ukraine on February 24, 2022. This study is part of a series of unclassified publications with recommendations for civilian and military leaders, and for allies and partners.¹³ Although to extract lessons learned while the war is still ongoing is exceedingly difficult, but it is important to make an effort. The US Defense establishment, the US Army, and the Joint Staff, in particular, must reflect on the first two years of war while delivering against Ukraine's requirements and helping to build Ukraine's future force. By incorporating findings and making the necessary adjustments, Ukraine's supporters can help ensure Ukraine emerges victorious in the Russia-Ukraine War, recovers fully, and eventually realizes its Euro-Atlantic ambition.

13. Other subjects the federated research effort addresses include strategy, planning, command and control; integrated deterrence; morale and leadership; ethical and legal norms; large-scale combat operations; protracted conflict; security cooperation; cyber warfare; and space. To learn more about the broader study, visit ssi.armywarcollege.edu. Some parts of the broader effort—this study included—will also yield classified annexes.

The Organization of Western Assistance

In late February and March 2022, Ukraine’s success in surviving and eventually halting Russia’s full-scale invasion surprised many casual observers, especially in Western Europe and in the United States. Observers were surprised despite years, or decades, for some NATO allies, of training and conducting capacity-building efforts inside Ukraine. Nevertheless, most allies pivoted relatively quickly to supporting Ukraine’s defense. Allies’ provision of additional training and the flow of war materiel and supplies to the Ukrainian armed forces proved critical to Ukraine’s success in halting Russia’s invasion in 2022. The United States and other allies recognized that, without continued support, Ukraine would not endure Russian efforts to topple the government in Kyiv and destabilize the entire country.

To identify Ukraine’s requirements and coordinate international military assistance, the United States created an informal initiative starting in April 2022 that came to be known as the UDCG. Initially comprising 41 countries, the now 54-member UDCG has continued to meet nearly every month, typically at Ramstein Air Base in Germany but occasionally in Brussels or in a virtual format. The UDCG conducts meetings at the level of defense ministers and uses the meetings to get operational updates from Ukrainian officials, understand the evolving needs of Ukrainian military forces, and encourage donor countries to provide the necessary assistance.¹ The composition of the assistance tranches has shifted over time as Ukrainian requirements have evolved.

The UDCG meetings are typically highly scripted and, according to one official, are sometimes even “performative.”² Nonetheless, the bilateral meetings,

1. Lara Seligman and Paul McLeary, “The Little-Known Group That’s Saving Ukraine,” *Politico* (website), May 1, 2023, <https://www.politico.com/news/2023/05/01/austin-defense-meetings-weapons-ukraine-00089946>; and U Department of Defense (DoD) official, interview by the authors, October 16, 2023.

2. DoD official, interview by the authors, October 16, 2023.

phone calls, preparatory activities, and other events leading up to each UDCG meeting serve important forcing functions for Ukraine and the donor community. The array of pre-meeting coordination phone calls and related activities generates political pressure on states to bring something to the table for Ukraine each month. Pre-meeting activities also prompt allies to consider what more they can do. Although not all allies show up with deliverables to announce each month, an increase in publicly announced tranches of new military assistance follows most Ramstein Air Base meetings.

At the operational level—coordinating and transferring equipment to Ukrainian authorities—Western efforts started out somewhat disjointed. On the US side, XVIII Airborne Corps, based at Fort Liberty, North Carolina, played a key role. Originally deployed to Poland as part of a US troop buildup aimed at reassuring NATO allies and deterring any further Russian adventurism, the XVIII Airborne Corps’s mission also included assisting Poland with the flow of Ukrainian or other refugees fleeing the fighting.³ After Poland and other allies appeared able to manage the refugee flows, and as US officials perceived the need for better coordination of aid flowing into Ukraine, the XVIII Airborne Corps’s mission shifted.⁴ Instead of facilitating the flow of people leaving Ukraine, XVIII Airborne Corps was tasked with facilitating the flow of military equipment and other supplies entering Ukraine. The XVIII Airborne Corps performed this mission starting in spring 2022 and continued into the fall.

Meanwhile, the United Kingdom led a similar effort, starting in early 2022, to coordinate the delivery of military equipment from European allies to Ukraine.⁵ This effort, known as the International Donor Coordination Centre (IDCC), was initially based in Stuttgart, Germany. The IDCC consisted of about 100 personnel, drawn mostly from a British sustainment brigade, but also included some other allied personnel.⁶

In November 2022, as the XVIII Airborne Corps approached the end of its deployment, the United States delegated responsibility for coordinating

3. John Vandiver, “Fort Bragg Troops Arrive in Germany and Poland as Russian Buildup Continues near Ukraine,” *Stars and Stripes* (website), February 4, 2022, <https://www.stripes.com/theaters/europe/2022-02-04/us-troops-from-fort-bragg-land-in-poland-4623974.html>; and US government civilian employee assigned to Supreme Headquarters Allied Powers Europe (SHAPE), interview by the authors, April 18, 2023.

4. US government civilian employee assigned to SHAPE, interview by the authors, April 18, 2023; and US military official previously assigned to Security Assistance Group – Ukraine (SAG-U), interview by the authors, April 19, 2023.

5. Jonathan Beale, “Inside the Room Where Ukraine Orders Arms from the West,” *BBC News* (website), June 15, 2022, <https://www.bbc.com/news/world-europe-61816337>.

6. United Kingdom personnel assigned to International Donor Coordination Centre, interview by the authors, April 19, 2023.

and overseeing the transfer of military materiel to a new, ad hoc entity known as the Security Assistance Group-Ukraine (SAG-U).⁷ Based in Wiesbaden, Germany, the SAG-U drew its roughly 140 personnel mainly from the Wiesbaden-based headquarters of US Army Europe and Africa and included servicemembers from the Navy, Air Force, and Marine Corps and about a dozen allied personnel.⁸ At the same time, the United Kingdom–led IDCC moved from Stuttgart to Wiesbaden and took up space in the same building as the SAG-U, essentially merging efforts led by the United States and the United Kingdom.⁹

The work environment at the SAG-U/IDCC was challenging for a thinly spread staff, which was working 12-to-14-hour workdays, seven days per week—typical for US and allied forces on deployment.¹⁰ Given the grueling pace of operations, in spring 2023, a new plan fully merged the IDCC into the SAG-U and created a more robust organization.¹¹ Instead of relying on borrowed personnel from US Army Europe and Africa, the new SAG-U had a dedicated staff of roughly 430 people, about 80 of whom came from European and other allied countries (including Australia and New Zealand).¹²

The SAG-U mission was set up and is still organized around four lines of effort:

- information and intelligence sharing;
- military advice;
- coordinating the delivery of equipment; and
- coordinating training, including individual basic training, platform- and equipment-centric training, collective training, and leader training.¹³

The SAG-U receives assistance requests directly from key individuals on the General Staff of the Armed Forces of Ukraine, so the picture of Ukraine’s needs is as accurate as possible. If the SAG-U receives conflicting requests, it resolves

7. Sabrina Singh, “Sabrina Singh, Deputy Pentagon Press Secretary, Holds a Press Briefing,” U.S. Department of Defense (website), November 4, 2022, <https://www.defense.gov/News/Transcripts/Transcript/Article/3211167/sabrina-singh-deputy-pentagon-press-secretary-holds-a-press-briefing/>.

8. US officer assigned to SAG-U, interview by the authors, April 19, 2023.

9. US officer assigned to SAG-U, interview by the authors, April 19, 2023.

10. US officer assigned to SAG-U, interview by the authors, April 19, 2023.

11. US officer assigned to SAG-U, interview by the authors, April 19, 2023.

12. US officer assigned to SAG-U, interview by the authors, April 19, 2023.

13. US officer assigned to SAG-U, interview by the authors, April 19, 2023.

them through coordination between the SAG-U commander—an American three-star officer—and the deputy chief of the General Staff of the Armed Forces of Ukraine.¹⁴ But the SAG-U's system is not without occasional tensions. As a sovereign state fighting for its survival, Ukraine will sometimes protect and limit the information it shares with the SAG-U for any number of reasons.¹⁵ In part because of the dynamic with Ukraine, the SAG-U's efforts to bring the key players together to understand Ukraine's evolving battlefield requirements and priorities, gauge Ukraine's ability to absorb and effectively use all the assistance it requests, and assess escalation risk remain challenging.¹⁶ The US decision, beginning in late 2023, to dispatch the SAG-U commander to Kyiv for extended periods of time made coordination somewhat easier.¹⁷

At the tactical level, road and rail connections from allied territory close to Ukraine's borders facilitate shipments of equipment into Ukraine. Poland, Romania, and Slovakia all helped facilitate equipment transfers, but Poland became especially important during the first two years of the war. In particular, the Rzeszów-Jasionka Airport in southeast Poland has played a critical role in facilitating Western efforts to ship aid and passengers into and out of Ukraine since the early days of the war. As more flights landed, crews on the ground would unload the equipment, check it for quality, and check it against the records. Crews put the equipment directly onto truck convoys, which departed for the border soon afterward (a 60-mile trip).¹⁸ Poland's rail networks have also played an increasingly important role, especially for the heavier equipment international donors shipped into Ukraine later in 2023.

Although Poland has become the primary route through which as much as 80 percent of Western and international materiel flows into Ukraine, other NATO allies are also playing important roles.¹⁹ In particular, Romania has played a crucial role as a secondary site for logistics and transport.

14. Senior US officer assigned to SAG-U, interview by the authors, April 19, 2023.

15. Senior US officer assigned to SAG-U, interview by the authors, April 19, 2023.

16. US military official previously assigned to SAG-U, interview by the authors, April 19, 2023.

17. Julian E. Barnes et al., "U.S. and Ukraine Search for a New Strategy after Failed Counteroffensive," *New York Times* (website), December 11, 2023, <https://www.nytimes.com/2023/12/11/us/politics/us-ukraine-war-strategy.html>.

18. US military officials, interview by the authors, May 26, 2023; and Sharon Weinberger, "In Poland's 'J-Town,' Soldiers Move Arms to Ukraine as Russian Spies Try to Stop Them," *Wall Street Journal* (website), September 30, 2023, <https://www.wsj.com/world/europe/in-polands-j-town-soldiers-move-arms-to-ukraine-as-russian-spies-try-to-stop-them-1ec71497>.

19. Sam Skove, "How a Tiny Polish Airport Became a Key Node for Western Aid to Ukraine," *Defense One* (website), September 11, 2023, <https://www.defenseone.com/threats/2023/09/how-tiny-polish-airport-became-key-node-western-aid-ukraine/390165/>. See also Greg Miller, Loveday Morris, and Mary Ilyushina, "Russia Recruited Operatives Online to Target Weapons Crossing Poland," *Washington Post* (website), August 18, 2023, <https://www.washingtonpost.com/world/2023/08/18/ukraine-weapons-sabotage-gru-poland/>.

Romania has facilitated the shipment of humanitarian aid into Ukraine and the passage of truck convoys carrying military assistance, though it has chosen to do the latter quietly for reasons related to Romania's strategic culture and national security threat perceptions.²⁰ Romania also hosts a logistics hub and maintenance center just 15 miles from the border with Ukraine, which ensures operational readiness for several Western systems that are fielded in Ukraine.²¹ Slovakia, the second ally to offer Ukraine MiG-29s and an S-300 missile system, is also situated along the border with Ukraine and hosts another repair facility for heavy equipment less than 20 miles from the border.²² Even Hungary, with its pro-Russia government, permitted the allies to transport military aid across Hungarian territory.²³

In terms of training, a handful of NATO allies and partners, including the United States, the United Kingdom, Canada, and Lithuania, have been training Ukrainians and building long-term defense and security partnerships since the years following Ukraine's independence. Relations between NATO and Ukraine also date back to when Ukraine joined the North Atlantic Cooperation Council in 1991 and the Partnership for Peace program in 1994. Over 30 years, the NATO-Ukraine relationship has developed into one of NATO's most important partnerships. Allied training and capacity-building efforts in Ukraine intensified significantly after Russia's illegal annexation of Crimea in 2014. In response, NATO offered Ukraine an enhanced partnership program and, eventually, a Comprehensive Assistance Package. Allies engaged bilaterally as well, including through the United Kingdom's 2015 launch of Operation Orbital, a training operation based in Kyiv that focused on medical, logistics, leadership, infantry, and maritime capacity building.

After Russia's full-scale invasion in 2022, Operation Orbital personnel relocated to Stuttgart and then Wiesbaden, Germany, where they were collocated

20. "Rheinmetall: A Powerful Partner at Ukraine's Side," Rheinmetall (website), updated February 6, 2024, <https://www.rheinmetall.com/en/media/stories/2023/2023-09-21-rheinmetall-a-powerful-partner-at-uraine-side/>; and Raúl Sánchez Costa, "Romania, the Silent Ally Avoiding Entanglement in Ukraine's War," *El País* (website), September 7, 2023, <https://english.elpais.com/international/2023-09-07/romania-the-silent-ally-avoiding-entanglement-in-ukraines-war.html>.

21. "Armsmaker Rheinmetall Sets Up Maintenance Hub in Romania for Ukraine Weapons," Reuters (website), April 2, 2023, <https://www.reuters.com/world/europe/armsmaker-rheinmetall-sets-up-maintenance-hub-romania-ukraine-weapons-2023-04-02/>; and Robert Muller, "Slovakia Sends Its Air Defence System to Ukraine," Reuters (website), April 8, 2022, <https://www.reuters.com/world/europe/slovakia-gives-s-300-air-defence-system-ukraine-prime-minister-2022-04-08/>.

22. "A Michalovce-Based Military Unit Launches Repair Operations on Ukrainian Military Equipment," Ministry of Defence of the Slovak Republic (website), December 12, 2022, <https://www.mosr.sk/52300-en/v-michalovciach-spustili-prevadzku-na-opravu-ukrajinskej-vojenskej-techniky/>.

23. Lili Bayer, "Hungary Breeds Unquiet on Ukraine's Western Front," *Politico* (website), September 1, 2022, <https://www.politico.eu/article/hungary-unquiet-ukraine-russia-western-front/>.

with the IDCC and SAG-U, just as the latter formed.²⁴ Operation Interflex replaced Operation Orbital in July 2022, but British army personnel led and still lead the operation, which expanded to include personnel from numerous international partners, including Canada, New Zealand, Australia, Norway, Finland, Denmark, Sweden, Lithuania, and the Netherlands.²⁵ Operation Interflex training focuses on three lines of effort: basic- and individual-level training, equipment- and platform-centric training, and leader training. Most Operation Interflex training occurs in the United Kingdom, but collective training at the brigade level occurs at facilities in Germany because British and other European training facilities lack space. Space constraints have limited the amount of collective training Operation Interflex provides to Ukrainian units and their leaders.

Regarding the equipment-focused training, crowdsourced equipment has created a unique set of challenges for Ukraine, as well as for the United States and Ukraine's other supporters, because of the wide array of systems international donors offer, the systems' various states of readiness, and because system donations typically do not include training, logistics, maintenance, or repairs. Nonetheless, SAG-U personnel have tried to find training for Ukrainians for all the equipment Ukraine receives from its international supporters. Meanwhile, leader training has become particularly important given both the hangover of Soviet-era doctrine still extant within Ukraine's military culture and the number of Ukrainian leaders who have been killed or injured in combat to date.²⁶

The EU also set up the EU Advisory Mission for Civilian Security Sector Reform Ukraine, and the EU supports member states' donations through the EPF (European Peace Facility).²⁷ The EPF is an off-budget EU fund launched in 2021 to help finance defense activities with partners in Africa.²⁸ Quite unexpectedly, in 2022, the EPF became the main conduit for EU military efforts vis-à-vis Ukraine.²⁹ The Council of the EU also launched the EU Military Assistance Mission in support of Ukraine (EUMAM Ukraine) in October 2022. Across various

24. Operation Orbital personnel, interview by the authors, April 19, 2023.

25. Chris Fletcher, "UK Armed Forces on Track to Train 37,000 Ukrainian Recruits," British Army (website), June 26, 2023, <https://www.army.mod.uk/news-and-events/news/2023/06/uk-armed-forces-on-track-to-train-37-000-ukrainian-recruits/>.

26. SAG-U training officials, interview by the authors, April 19, 2023.

27. Other relevant missions have included the EU Border Assistance Mission to Moldova and Ukraine, since 2005, and the EU Advisory Mission for Civilian Security Sector Reform Ukraine, since 2014.

28. "Questions and Answers: The European Peace Facility," European External Action Service (website), March 22, 2021, https://www.eeas.europa.eu/eeas/questions-answers-european-peace-facility_en.

29. EU military staff, interview by the authors, October 25, 2023.

sites, EUMAM Ukraine includes personnel and training from 24 EU member states. The mission provides basic, advanced, and specialized training on medical assistance; chemical, biological, radiological, and nuclear defense; demining; logistics; communications; maintenance; and repair. The mission provides junior-leader training from the section and squad and platoon levels up to the company level; perational training in collective maneuvers up to the brigade level; and training in tactics up to the battalion level.³⁰

In addition, the EU provides an important coordinating and support function for its member states and other organizations' assistance for Ukraine. In collaboration with the Armed Forces of Ukraine (AFU), SAG-U, and Operation Interflex, EUMAM Ukraine coordinates and synchronizes its numerous European training modules. As of late October 2023, EUMAM Ukraine had nearly reached its goal of training 30,000 Ukrainian soldiers, and EUMAM Ukraine is now striving to train 40,000 soldiers by the end of its mandate in November 2024.³¹ In addition, Ukraine requested EUMAM Ukraine support for internal security–forces training for Ukraine, including for the National Guard of Ukraine, the State Border Guard Service of Ukraine, and the National Policy and Security Services of Ukraine, all of which are under AFU operational control.³²

The EUMAM Ukraine works from various sites in Europe, including Wiesbaden and Stuttgart; the Military Planning and Conduct Capability, the EU's military–strategic headquarters in Brussels; and through two multinational commands—the Combined Arms Training Command in Poland and the Special Training Command in Germany.³³ Thirty augmentees reinforce the Military Planning and Conduct Capability.³⁴ The Combined Arms Training Command and Special Training Command include personnel from Poland, Germany, and nine additional countries.³⁵ Additionally, 16 EU member states host EUMAM Ukraine training sites. Countries like the Czech Republic, France, Italy, Romania, Slovakia, and Spain also offer training on a national basis.

30. “About EU Military Assistance Mission in Support of Ukraine (EUMAM Ukraine),” EU Military Assistance Mission in Support of Ukraine (website), August 12, 2022, https://www.eeas.europa.eu/eumam-ukraine/about-eu-military-assistance-mission-support-ukraine-eumam-ukraine_en.

31. EU military staff, interview by the authors, October 25, 2023.

32. EU military staff, interview by the authors, October 25, 2023.

33. “Hundreds of Foreign Soldiers to Help Train Ukrainian Troops in Germany, General Says,” Reuters (website), February 22, 2023, <https://www.reuters.com/world/europe/hundreds-foreign-soldiers-help-train-ukrainian-troops-germany-general-2023-02-22/>; and Peter Wilke, “Inside the EU’s Military Crash Course for Ukrainian Troops,” *Politico* (website), August 22, 2023, <https://www.politico.eu/article/eu-military-course-germany-ukraine-russia-war-soldiers-training/>.

34. EU military staff, interview by the authors, October 25, 2023.

35. EU military staff, interview by the authors, October 25, 2023.

Together, SAG-U and EUMAM Ukraine have worked to integrate and synthesize the disparate national and collective training efforts, focusing first on situational awareness and second on providing guidance to other training entities. The standardization of training across entities proved very challenging in 2023.³⁶ In most instances, the allies contributing training had to rely on national training programs, resulting in a broad mix of methodologies and curricula.³⁷ Nonetheless, EU military officials contend 2023 brought significant progress in terms of harmonizing the EU training with NATO standards.³⁸

To assess the relationship between UDCG meetings and announcements of new military assistance, the authors conducted a quantitative analysis. More specifically, the authors structured a pairwise correlational analysis to explore the relationships between the meetings of the UDCG, the Council of the EU, the European Council, and NATO—the independent variables—and announcements of new military assistance to Ukraine by the eight European allies covered as case studies in this monograph. The analysis includes all meetings of the aforementioned groups or entities and all military-assistance announcements between February 2022 and February 2023.

Admittedly, the number of cases is somewhat small—the study only considers eight countries, and only nine UDCG meetings took place during the period considered. Although acknowledging these caveats, the analysis reveals announcements of military assistance positively but very weakly correlate with UDCG meetings, in comparison to other meetings of allied and partner leaders, which shows somewhat weaker positive correlations. Table 1 shows the pairwise correlations between announcements of military assistance by the eight case-study countries on the one hand and UDCG meetings; Council of the EU meetings; European Council meetings; or NATO summits, ministerials, and Chiefs of Defense meetings on the other. Given the positive yet very weak correlation, a reasonable conclusion is UDCG meetings have made a positive but very limited impact—more so than meetings in other venues—on allied commitments to military assistance for Ukraine.

36. SAG-U training officials, interview by the authors, April 19, 2023.

37. US military official assigned to the Joint Staff, interview by the authors, March 14, 2023.

38. EU military staff, interview by the authors, October 25, 2023.

Table 1. Pairwise correlations between military-aid announcements and events

	Announcements of Military Aid	UDCG Meetings	Council of the EU Meetings	European Council Meetings	NATO Meetings
Announcements of Military Aid	1				
UDCG Meetings (9)	0.171233714	1			
Council of the EU Meetings (26)	0.008031721	-0.04390706	1		
European Council Meetings (26)	0.015262661	-0.032823071	-0.057166195	1	
NATO Meetings (15)	0.128238812	0.162118377	0.006334842	-0.00351792	1

— 3 —

Empirical Analysis: European Case Studies

Having outlined how the United States and its allies, broadly defined, organized themselves to provide military assistance to Ukraine in the aftermath of Russia’s full-scale invasion, the following section of this study will examine what selected European allies did to support Ukraine’s defense during the first two years of the Russia-Ukraine War, from early 2022 through 2023. The eight countries covered in this section—Finland, France, Germany, Lithuania, Poland, Romania, Türkiye, and the United Kingdom—represent a distribution of large and small European allies with varying strategic cultures, national security interests, geographies, and proximity to the conflict’s front lines.

The nature or intensity of the countries’ support for Ukraine from 2022 to 2023 is the basis of the case-study groupings. This study categorizes Finland, Lithuania, Poland, and the United Kingdom as committed supporters. From very early on, Finland, Lithuania, Poland, and the United Kingdom have been vocal and forward leaning in delivering materiel, training, and logistics and in their efforts to galvanize other donors. This study characterizes the second group, comprising France and Germany, as evolving supporters due to the significant changes that have taken place in their approach. The study can hardly group the final two case studies, Romania and Türkiye, together because of their differing approaches but the study nonetheless characterizes both as outliers. Romania is among Ukraine’s most important supporters, including for military assistance, but Romania has chosen to keep quiet about its efforts. Türkiye also provided critical assistance but has sought to preserve relations—especially economic ties—with Russia. The eight case studies will highlight open-source materiel, training, and operational assistance allies have provided as well as evaluate the prospects for continued assistance. The analysis will subsequently form the basis of lessons learned for the United States as it seeks to leverage allies in its efforts to support Ukraine and in the United States’ wider national security and defense strategies.

The Committed Supporters

Finland

Like most European allies supporting Ukraine, Finland lacks a formal strategy to guide its assistance efforts. Nonetheless, three imperatives have driven Finland's support. First, Finland is particularly concerned with the rules-based international order.¹ Finland's concern should come as no surprise given the Helsinki Accords were negotiated in the Finnish capital. Thirty-five countries, including Canada, the Soviet Union, the United States, and nearly every European state, signed the act, which they negotiated between 1973 and 1975 at the height of détente. Although technically not a treaty, the act committed signatories to the peaceful resolution of disputes, respect for human rights, and the inviolability of European borders.²

Russia's two invasions of Ukraine—in 2014 and 2022—clearly violated the Helsinki Accords and represented the return of large-scale, interstate war in Europe for the first time since World War II. Both at the time of the Helsinki negotiations and over the decades since, Finland viewed itself as a channel for communication between east and west and steadfastly avoided treating Russia as an adversary.³ So sacrosanct was Finland's middle path between east and west—and the Finns' desire to avoid antagonizing their much larger neighbor—that in 2007, the then Minister of Defence Jyri Häkämies created a political firestorm simply because he identified Russia as Finland's principal security challenge.⁴ Similarly, but at the operational level, for decades, Finnish military officials used the term "A2 yellow" (or A2 keltainen) to reference Russia in planning and exercises, and in exercise scenarios, enemy landing forces arrived not from the east but instead materialized almost out of nowhere.⁵

The extent and brutality of Russia's 2022 invasion of Ukraine essentially forced Helsinki to choose between its traditional role as an east-west bridge

1. Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

2. Organization for Security and Co-operation in Europe, *Conference on Security and Co-operation in Europe Final Act* (August 1, 1975), <https://www.osce.org/files/f/documents/5/c/39501.pdf>.

3. Douglas Brommesson, *Finland's Foreign and Security Policy: From Bridge-Building to the Core of the West* (Stockholm: Swedish Institute of International Affairs, May 2022).

4. John Vinocur, "Politicus: Assessing Russia's Plans with a Rare Fortitude," *New York Times* (website), October 1, 2007, <https://www.nytimes.com/2007/10/01/world/europe/01iht-politicus.1.7695904.html>; and Kyösti Karvonen, "Three R-Words That Shook Finland," *Finland Abroad* (website), April 4, 2008, https://finlandabroad.fi/web/grc/current-affairs/-/asset_publisher/h5w4iTUJhNne/content/three-r-words-that-shook-finla-1/384951.

5. Petri Korhonen, "Kesän suurin värimuutos: A2 keltainen vaihtui Venäjän verenpunaiseen," *Demokraatti* (website), June 24, 2022, <https://demokraatti.fi/kesan-suurin-varimuutos-a2-keltainen-vaihtui-venajan-verenpunaiseen>.

on the one hand and its commitment to the central tenets of the Helsinki Accords on the other. Finnish leaders chose the latter, and since the February 2022 invasion, Helsinki has sought to ensure Russia receives some kind of punishment for its violation of international law and norms.⁶

The second strategic imperative guiding Finland's support for Kyiv is the desire to help facilitate Ukraine's right to defend itself.⁷ Just weeks after Russia's February 2022 invasion, the then Finnish Prime Minister Sanna Marin spoke before the Finnish parliament on the foreign- and security-policy situation confronting her country, and she drew parallels between Ukraine's effort to defend itself from Moscow's attack and Finland's own efforts to do the same more than eight decades prior.⁸ Since Russia's second invasion of Ukraine, Finnish leaders have regularly emphasized their support for Ukraine's independence, self-determination, and territorial integrity.⁹

Finally, the desire to ensure security across Europe more broadly has also guided Finnish assistance for Ukraine.¹⁰ Finnish officials have routinely noted their support for Ukraine is critical not simply for Ukraine's defense but for the benefit of the broader European security order for decades to come.¹¹

With these three imperatives guiding Finnish efforts, Helsinki has provided \$1.5 billion in bilateral military assistance through November 2023.¹² Finland's military assistance to Ukraine amounts to roughly 0.30 percent of Finland's GDP, placing Finland in seventh position among the countries

6. For example, see "Finland to Participate in Two Sets of Proceedings Resulting from Russia's War of Aggression," Finnish Government (website), September 22, 2022, <https://valtioneuvosto.fi/en/-/finland-to-participate-in-two-sets-of-proceedings-resulting-from-russia-s-war-of-aggression>.

7. Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

8. "Speech Delivered by Prime Minister Sanna Marin at Parliament's Topical Debate on 15 March 2022," Finnish Government (website), March 15, 2022, <https://valtioneuvosto.fi/en/-/10616/speech-delivered-by-prime-minister-sanna-marin-at-parliament-s-topical-debate-on-15-march-2022>.

9. For example, see "Foreign Minister Haavisto's Statement on the Anniversary of the Illegal Annexation of Crimea," Ministry for Foreign Affairs of Finland (website), March 18, 2022, https://um.fi/statements/-/asset_publisher/6zHpMjnlHgl/content/ulkoministeri-haaviston-lausunto-krimin-laittoman-liittamisen-vuosipaivana/35732; "Joint Statement by the Foreign Ministers of Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Sweden and Ukraine," Ministry for Foreign Affairs of Finland (website), November 29, 2022, https://um.fi/current-affairs/-/asset_publisher/gc654PySnjTX/content/joint-statement-by-the-foreign-ministers-of-estonia-finland-iceland-latvia-lithuania-norway-sweden-and-ukraine; and "National Statement on the Anniversary on 24 February 2023 of Russia's Invasion of Ukraine," Ministry for Foreign Affairs of Finland (website), February 24, 2023, https://um.fi/statements/-/asset_publisher/6zHpMjnlHgl/content/kansallinen-julkilausuma-venajan-hyokkayssodan-vuosipaivana-24.2.2023/35732.

10. Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

11. For example, see "Finland to Send More Defence Materiel to Ukraine," Finnish Government (website), July 6, 2023, <https://valtioneuvosto.fi/en/-/finland-to-send-more-defence-materiel-to-ukraine>.

12. "Russian Attack on Ukraine and Finland's Support to Ukraine," Finnish Ministry of Defence (website), n.d., accessed August 16, 2023, https://www.defmin.fi/en/topical/russian_attack_on_ukraine_and_finlands_support_to_ukraine.

providing bilateral military assistance.¹³ Aside from the total cost in euros of assistance provided, most of the details regarding Finnish military assistance for Ukraine remain classified for two reasons. The first and more important reason is to avoid tipping off Moscow as to whether, where, and how Finland’s own defense capabilities may be less robust. The second is to ensure the operational security of the equipment transfers, so equipment arrives as intended in Ukraine. Concern with public backlash against bilateral Finnish military assistance has not been an issue in Helsinki—recent surveys reveal 89 percent of Finns “strongly agree” or “tend to agree” with providing military support to Ukraine.¹⁴

The classified character of most Finnish military assistance packages has had some exceptions. Of the 20 military assistance packages announced through August 2023, Finland has made some details about the first two public, as well as some details about packages 13 through 17.¹⁵

■ **Package 1:**

- 2,000 bulletproof vests
- 2,000 composite helmets
- 100 stretchers
- Equipment for two emergency medical care stations

■ **Package 2:**

- 2,500 assault rifles
- 150,000 cartridges for the assault rifles
- 1,500 single-shot antitank weapons
- 70,000 combat-ration packages

■ **Package 13:**

- Three Leopard 2 armored mine-clearing vehicles, including training related to their use and maintenance

■ **Package 14:**

- Three Leopard 2 armored mine-clearing vehicles, including training related to their use and maintenance
- Heavy weapons and munitions

13. “Ukraine Support Tracker,” Kiel Institute for the World Economy (website), updated June 6, 2024, <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>. Data as of May 31, 2023.

14. European Commission, *Standard Eurobarometer 99: Public Opinion in the European Union* (Brussels: European Commission, Spring 2023), T251.

15. “Russian Attack on Ukraine.”

- **Package 15:**
 - Materiel for training Ukrainian soldiers in the EU training mission in Poland
- **Package 16:**
 - Antiaircraft weapons and ammunition, among other items
- **Package 17:**
 - Antiaircraft weapons and ammunition, among other items

The focus of Finland's bilateral military assistance to Ukraine has been on providing complete capability packages that are both sustainable and usable immediately. Finnish politicians have pressured the Ministry of Defence to provide more assistance and to do so more quickly. Moreover, Finland is thought to have some of the largest stores of military materiel in Europe, so its capacity for even larger donations of equipment to Ukraine is likely very high.¹⁶

But three important impediments have prevented the Finnish government from doing more. The first is Finland's own defense requirements. Finland shares a roughly 830-mile border with Russia and, as a formerly militarily nonaligned country, has had to rely on itself for its defense. Although Finland has recently joined NATO, Finns are determined to maintain the ability to defend themselves. For this reason, Finland cannot jeopardize Finnish security by providing too much assistance to Ukraine.

The second impediment is productive capacity. Finland has an advanced but highly specialized defense industry. Several of Finland's firms are world leaders in areas such as wheeled armored vehicles; turreted mortar systems; certain command, control, communications, computers, cyber, intelligence, surveillance, and reconnaissance systems; and logistical solutions.¹⁷ But Finland cannot build additional productive capacity overnight or even within a single year—often, building capacity takes several years. Without a long-term demand signal, industry in Finland, as in other countries, is reluctant to make major investments in additional arms-manufacturing facilities.

16. Christina Anderson and Henrik Pryser Libell, "Finland, 'Prepper Nation of the Nordics,' Isn't Worried about Masks," *New York Times* (website), April 5, 2020, <https://www.nytimes.com/2020/04/05/world/europe/coronavirus-finland-masks.html>.

17. Tuija Karanko, "The Finnish Defence Industry – A Different Approach to Supporting Defence Capabilities," *European Security & Defence* (blog), February 14, 2020, <https://euro-sd.com/2020/02/articles/16189/the-finnish-defence-industry-a-different-approach-to-supporting-defence-capabilities/>; and Tuija Karanko, "The Finnish Defence Industry and Changes in the Security Environment," *European Security & Defence* (blog), September 9, 2022, <https://euro-sd.com/2022/09/articles/27146/the-finnish-defence-industry-and-changes-in-the-security-environment/>.

Finally, a third impediment is institutional reluctance, reflecting the kind of bureaucratic politics seen in some other case studies, such as Germany. As mentioned above, Finland's military takes its responsibility to defend the country without external assistance very seriously—subsequently, the Finnish military is committed to its defense plans and the materiel requirements that underpin those plans. Finland's national materiel requirement makes the military particularly reluctant to part with equipment—both because losing equipment might create unacceptable risk and because of a fear Finland may not replace the equipment, even if that equipment is not in good condition and is therefore ripe for recapitalization.¹⁸

In addition to defense materiel, Finland supports the United Kingdom–led basic training of Ukrainian troops.¹⁹ Twenty Finnish military personnel have been participating in training in the United Kingdom since August 2022. Finland also provides 50 trainers to the EU-led training mission in Poland. There, Finnish personnel provide training in medical services and other specialized skills, like explosive-ordnance disposal.²⁰

Beyond training assistance, Finland provides no additional operational assistance. Aside from the Finnish defense attaché in Kyiv, Finland does not have a footprint on the ground elsewhere in Ukraine. In part, Finland's absence is due to a lack of personnel resources—Finland's Ministry of Defence comprises only about 135 civilian personnel and roughly 15 military personnel. The Finnish general staff is a separate organization, but it, too, is relatively small.

Finland's recent accession to NATO does not yet appear to have had a significant impact on Helsinki's ability and will to provide more assistance to Ukraine. But Finnish Ministry of Defence officials expect the impact of Finland's NATO accession to change. As Finland becomes more enmeshed in NATO's defense-planning process and as NATO comes to rely on Finland playing a role in operational planning, increased Finnish contributions to NATO could make assisting Ukraine more difficult for Helsinki.

Whether the equipment, training, and other military assistance Helsinki has provided Ukraine to date has made any difference in the outcome of the war is difficult to discern. Finland lacks any formal measures of effectiveness

18. Finnish defense-policy expert, interview by the authors, March 28, 2023; and Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

19. Cristina Gallardo and Clea Caulcutt, "Ukraine's Military Recruits Need Training. Only One of Europe's Giants Is Pulling Its Weight," *Politico* (website), September 16, 2022, <https://www.politico.eu/article/uk-and-france-at-odds-over-military-training-for-ukrainians/>.

20. Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

for its assistance efforts.²¹ Instead, Finnish officials try to get a sense of the impact of Finland's assistance based on feedback directly from the battlefield and based on evidence of Ukraine's territorial advance against Russia's occupying forces.²² The Ukrainian embassy in Helsinki is another source of feedback—the embassy has provided the Finnish government with specific information about how Ukraine has used Helsinki's assistance as well as insights into broader lessons learned. Finally, the Finnish defense attaché in Kyiv and the international training-coordination bodies mentioned above also provide some information to inform Helsinki officials on the effectiveness of assistance provided to date.

Lithuania

Since the fifteenth century, Lithuania has frequently been subject to external domination, including by Sweden and Russia (in the mid-1600s), Russia again (in the late 1700s until World War I), Nazi Germany (in 1939–40), the Soviet Union (in 1940–41), Nazi Germany again (in 1941–45), and the Soviet Union again (in 1945–90). That fear of again falling under Moscow's domination drives Lithuanian assistance to Ukraine should therefore come as no surprise. Although Lithuania lacks a formal strategy for the Russia-Ukraine War, Lithuanian elites and the public broadly agree Lithuania could be next on revanchist Moscow's list if Ukraine fails to hold back Russia.²³

Even before Russia's second invasion of Ukraine in February 2022, Lithuanian officials viewed Russia's shifting policies in the region with grave concern, particularly Russia's policies regarding Belarus. Russia's moves to integrate the Belarusian economy more tightly, expand Russian military presence in Belarus following the Zapad 2021 exercise, and control Belarusian politics amounted to a kind of soft annexation by Russia, according to Vilnius.²⁴ Russia's actions in Belarus in 2021 and then in Ukraine in 2022 merely confirmed the views of most Lithuanians, who perceive Russians are acting as they have for the last several centuries—that is, seeking to dominate, if not subsume, neighbors.

21. Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

22. Finnish Ministry of Defence officials, interview by the authors, March 27, 2023.

23. Lithuanian government officials, interview by the authors, March 23, 2023; US government official assigned to the US Embassy in Lithuania, interview by the authors, May 10, 2023; and Tunku Varadarajan, "Little Lithuania Stands Tall against Russia and China," *Wall Street Journal* (website), May 5, 2023, <https://www.wsj.com/articles/lithuania-stands-against-russia-and-china-landsbergis-taiwan-ukraine-war-362976d3>.

24. Brian Whitmore, "Soft Annexation: Inside the Russian Takeover of Belarus," Atlantic Council (website), March 31, 2021, <https://www.atlanticcouncil.org/blogs/belarusalert/soft-annexation-inside-the-russian-takeover-of-belarus/>; and John R. Deni, "What's Russia Doing in Ukraine? Its Latest Military Drills Provide Critical Clues," Atlantic Council (website), November 23, 2021, <https://www.atlanticcouncil.org/blogs/new-atlanticist/whats-russia-doing-in-ukraine-its-latest-military-drills-provide-critical-clues/>.

The sense among Lithuanians that they may be next is not entirely without justification. Of particular concern to Vilnius is the Russian exclave of Kaliningrad. Formerly the East Prussian city of Königsberg before Red Army forces took over and Moscow annexed it, Kaliningrad has been Russian territory since the end of World War II. Today, Kaliningrad is home to substantial Russian combat forces, including the Russian Baltic Fleet, advanced air defenses, and mobile, nuclear-capable Iskander-M missiles.²⁵ A significant amount of Russian cargo and passenger traffic moves daily by road and rail from Russia proper to Kaliningrad, and energy linkages between Russia proper and Kaliningrad also cross Lithuanian territory, placing Vilnius in a somewhat precarious geostrategic position. During the large Russian exercise Zapad 2021, Russian and Belarusian troops practiced closing off the Lithuanian-Polish border—thereby severing lines of communication between the Baltic states and the rest of Europe—by attacking from Belarus in the direction of Kaliningrad.²⁶

In addition to concerns about Russian revanchism, a sense of kinship and cultural affinity has motivated Lithuanian support for Ukraine.²⁷ At the height of its power in the fifteenth century, what was then known as the Polish-Lithuanian Commonwealth—a union of the kingdom of Poland and the grand duchy of Lithuania—stretched from the Baltic Sea to the Black Sea, encompassing modern-day Belarus and most of Ukraine. Despite the reality of a complicated relationship between the Lithuanians of the grand duchy and their Ukrainian contemporaries—which may, at times, have been more exploitative than brotherly—Lithuania and Ukraine cast the historical relationship today in a more friendly, collaborative light.²⁸ The increasingly cooperative relationship between Lithuania and Ukraine is the direct result of Russia’s actions against the latter. For example, so repulsed were Lithuanians by Russia’s attack and the way

25. Steve Wills, “Kaliningrad: Impregnable Fortress or ‘Russian Alamo’?,” *In Depth* (blog), May 15, 2023, <https://www.cna.org/our-media/indepth/2023/05/kaliningrad-impregnable-fortress-or-russian-alamo>.

26. Konrad Muzyka, *Defending the Union: Zapad-2021* (Tallinn, EE: International Centre for Defence and Security, December 2021), 7; and Richard Milne, “Baltic States Fear Encirclement as Russia Security Threat Rises,” *Financial Times* (website), February 20, 2022, <https://www.ft.com/content/38b1906f-4302-4a09-b304-dc2ecf5dc771>.

27. US government official assigned to the US Embassy in Lithuania, interview by the authors, May 10, 2023.

28. Timothy Snyder, *The Reconstruction of Nations: Poland, Ukraine, Lithuania, Belarus, 1569–1999* (New Haven, CT: Yale University Press, 2004), 110–19; “Joint Declaration of Foreign Ministers of the Republic of Poland, the Republic of Lithuania and Ukraine on Establishing Lublin Triangle,” Ministry of Foreign Affairs of the Republic of Lithuania (website), n.d., <https://www.urm.lt/en/news/928/joint-declaration-of-foreign-ministers-of-the-republic-of-poland-the-republic-of-lithuania-and-ukraine-on-establishing-lublin-triangle>; Jakub Bornio, “Lithuania, Poland and Ukraine Inaugurate ‘Lublin Triangle,’” *Eurasia Daily Monitor* 17, no. 115 (August 2020); and “Presidents of Ukraine, Lithuania and Poland Signed the Joint Declaration Following the Second Summit of the Lublin Triangle in Lviv,” President of Ukraine – Volodymyr Zelenskyy (website), January 11, 2023, <https://www.president.gov.ua/en/news/u-lvovi-prezidenti-ukrayini-litvi-ta-polshi-pidpisali-spilnu-80313>.

Russia's soldiers conducted themselves that the Lithuanian parliament declared Russia a "terrorist country" in May 2022, positioning Lithuania among the most forward leaning of European countries.²⁹

Concerns about Russian revanchism and an affinity for the plight of Ukrainians have animated Lithuania's provision of military assistance to Ukraine. Lithuania has a relatively small economy (22nd among the 27-member EU) and military (the 20th largest among NATO's 31 members). Nonetheless, as of the end of 2023, Lithuania had provided a significant amount of bilateral military assistance to Ukraine—the equivalent of roughly 0.80 percent of its GDP—making Lithuania the fourth-highest contributor, in percentage terms.³⁰

Unlike some other so-called frontline states like Finland, Lithuania has been remarkably transparent regarding the bilateral military assistance it has provided to Ukraine. Lithuania has publicly announced nearly all its assistance to date. Lithuania's assistance follows five lines of effort. First, Lithuania participates in Ukraine's Defense Reform Advisory Board. Formed in 2016, the board primarily comprises retired general officers from Lithuania, the United Kingdom, Canada, Germany, Poland, and formerly the United States. The Defense Reform Advisory Board provides high-level advice directly to Ukraine's defense minister and other senior government officials on modernization and meeting NATO standards.³¹

The second line of effort focuses on command-and-control advice. Activity here occurs primarily in Ukraine and comprises two advisers in Kyiv as well as several additional advisers working elsewhere in Ukraine.³² Lithuanian officials have classified most other details about command-and-control advisory efforts.

Lithuania's third line of effort is its training support. Lithuanian officials' training of Ukrainian troops occurs in Germany, Lithuania, Poland, and the United Kingdom, and has included headquarters-staff training, basic-unit tactics, and specialized training for explosive-ordnance specialists, snipers, and equipment mechanics.³³ Lithuania was one of a handful of NATO countries—along with the United States, Canada, Poland, and the United Kingdom—to provide training

29. Rachel Treisman, "Lithuania Designates Russia as a Terrorist Country, a Global First," NPR (website), May 10, 2022, <https://www.npr.org/2022/05/10/1097911440/lithuania-russia-terrorism-genocide-ukraine>.

30. "Ukraine Support Tracker," Kiel Institute for the World Economy (website), updated June 6, 2024, <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>. Data as of May 31, 2023.

31. Lithuanian government officials, interview by the authors, March 23, 2023.

32. Lithuanian government officials, interview by the authors, March 23, 2023.

33. Lithuanian government officials, interview by the authors, March 23, 2023.

for Ukrainian soldiers after Russia's illegal annexation of Crimea in 2014. More specifically, Lithuania contributed to the US and Canadian missions.³⁴

The fourth line of effort is materiel support. Lithuanian officials proudly note Lithuania was the first Western country to provide lethal assistance to Ukraine in 2014, following Russia's first invasion. More recently, Lithuania sent €900 million from February 2022 through April 2023, including M113 armored personnel carriers, mortars, and Stinger shoulder-fired air-defense weapons.³⁵ At the individual, private level, Lithuanians have sought to support Ukraine directly as well. For example, one crowdfunded effort reportedly raised €20 million to buy advanced air-defense radars.³⁶ Other supplies private Lithuanian entities have increasingly provided include consumables, such as combat rations and hygiene kits. Nevertheless, the Lithuanian government's ability to provide military materiel is nearly exhausted; according to government officials, Vilnius cannot provide more.³⁷ Perhaps more worrisomely, some officials argue regenerating the Lithuanian military capabilities donated to Ukraine will take years.³⁸

The fifth and final line of effort includes all other forms of assistance to Ukraine. An example of assistance within the fifth line of effort is medical rehabilitation the Ministry of Health of the Republic of Lithuania and the Ministry of National Defence's Military Medical Service provided for roughly 100 injured Ukrainian military personnel.³⁹ Additionally, Lithuania provides language training for Ukrainian troops through Lithuania's military academies.⁴⁰

To date, public support for assistance to Ukraine has been extraordinarily high in Lithuania. In recent polling, 84 percent of Lithuanians "strongly agree" or "tend to agree" with providing military support to Ukraine, higher than

34. Ben Hodges, "U.S. Army Europe/Seventh Army: Complex Continent Sees Unprecedented Changes," Association of the US Army (website), October 1, 2016, <https://www.ousa.org/articles/us-army-europeseventh-army-complex-continent-sees-unprecedented-changes>.

35. Lithuanian government officials, interview by the authors, March 23, 2023.

36. Steve Cannane, "Ukraine Is Begging the West for More Military Support, and the People of Lithuania Are Answering the Call," *Australian Broadcasting Corporation News* (website), March 24, 2023, <https://www.abc.net.au/news/2023-03-25/how-lithuania-is-answering-ukraines-request-for-support/102122390>.

37. Lithuanian government officials, interview by the authors, March 23, 2023.

38. Edvardas Špokas, "€400m of Military Support – What Has Lithuania Sent to Ukraine?," Lithuanian Radio and Television (website), February 24, 2023, <https://www.lrt.lt/en/news-in-english/19/1921978/eur400m-of-military-support-what-has-lithuania-sent-to-ukraine>.

39. "Rehabilitation Will Be Provided to Ukrainian Troops in Lithuania, We Must Help in Every Way Possible, A. Anušauskas Says," Ministry of National Defence of the Republic of Lithuania (website), May 24, 2022, <https://kam.lt/en/rehabilitation-will-be-provide-to-ukrainian-troops-in-lithuania-we-must-help-in-every-way-possible-a-anusauskas-says/>.

40. Lithuanian government officials, interview by the authors, March 23, 2023.

in Latvia (74 percent) or Estonia (64 percent).⁴¹ To some degree, the polling results likely reflect the ethnic makeup of the Baltic states—Latvia and Estonia have higher percentages of ethnic Russians (about 25 percent each) than Lithuania (5 percent). Nonetheless, Lithuanian government officials were not sure precisely how the ethnic Russian population in Lithuania might react to Lithuania aggressively providing aid to Ukraine. Some evidence shows the war has divided the Russian-speaking population in Lithuania.⁴² In any case, given the extraordinarily strong support more broadly, the Lithuanian government would apparently have the public policy scope to expand its assistance efforts if capacity were not an issue.

Like most allies assisting Ukraine, Lithuania lacks any formal measures of effectiveness. The limited numbers of Lithuanian military personnel in Ukraine provide some channels for feedback on what is working and how, but this evidence is anecdotal.⁴³ Other anecdotal feedback reaches Vilnius by way of person-to-person contacts thanks to long-standing, close relationships individual Lithuanian and Ukrainian servicemembers have built.⁴⁴ Some operational risk is involved in person-to-person communications because they occur over unsecured lines. Moreover, the high casualty rate among experienced Ukrainian military personnel has negatively impacted these informal networks. Otherwise, Lithuanian officials in Vilnius have little in the way of formal feedback from Ukrainian officials on whether and how Lithuanian assistance is effective.⁴⁵

Poland

Poland is another major European supporter of Ukraine's independence and territorial integrity, and Poland considers Russia's military aggression in Ukraine and across the region an existential threat to its own national security.

After Russia's second invasion of Ukraine in February 2022, the Polish people responded with an immediate outpouring of support for Ukrainian citizens. Poland helped more than nine million Ukrainian refugees' transit

41. European Commission, *Standard Eurobarometer* 99.

42. Neringa Klumbytė, "Lithuania at the Frontier of the War in Ukraine," *Current History* 121, no. 837 (October 2022).

43. Lithuanian government officials, interview by the authors, March 23, 2023.

44. US government official assigned to the US Embassy in Lithuania, interview by the authors, May 10, 2023.

45. Lithuanian government officials, interview by the authors, March 23, 2023.

across Polish territory, and Poland hosts nearly one million refugees.⁴⁶ Warsaw is also organizing to support Ukraine's long-term economic recovery, and Poland has given Ukraine significant military assistance. Poland has also used its heightened political influence in Europe to exert pressure on other NATO allies to do more for Ukraine at every stage of the Russia-Ukraine War.

As of the end of 2023, Poland had provided a total of three billion euros in lethal military assistance to Ukraine.⁴⁷ Poland's assistance has ebbed and flowed during various phases of the war, just as other European donors' assistance has ebbed and flowed. Poland's assistance has included major equipment along with related logistics, support, training, transport, and security. Poland's airports, roads, and rail links have also proved essential for logistics, transit, and maintenance for 80 percent of all international donors' military assistance.⁴⁸

Poland prides itself on having begun to provide Ukraine with lethal assistance before Russia's February 24, 2022, invasion. In the weeks prior, as Russia was amassing troops along its borders with Ukraine, some in the West were still in disbelief Russia would carry out such an attack. Poland, meanwhile, had begun digging into its stocks of Soviet-era equipment and transferred what critical capabilities it could to Ukraine for Ukraine's immediate defense.

In the first phase of Polish military support for Ukraine, between February 2022 and June 2022, Poland delivered as much as it could from its existing stocks, including 200 T-72 tanks, 18 AHS Krab self-propelled howitzers, Piorun surface-to-air missiles, combat vehicles, drones, anti-aircraft launchers, ammunition, spare parts, and other equipment.⁴⁹ Alongside the neighboring Czech Republic, Poland was the first NATO ally to deliver tanks to Ukraine. Germany, the United Kingdom, and the United States did not decide to deliver tanks to Ukraine until the end of 2022 or the beginning of 2023. During the first year of the war, Poland accounted for 17 percent of total Ukrainian arms

46. "Ukraine Refugee Situation," UN High Commissioner for Refugees Operational Data Portal (website), n.d., accessed December 12, 2023, <https://data.unhcr.org/en/situations/ukraine>.

47. "Poland Ranks 6th in Military Aid to Ukraine: BBC," Polskie Radio (website), January 4, 2024, <https://www.polskieradio.pl/395/7785/artykul/3310371,poland-ranks-6th-in-military-aid-to-ukraine-bbc>.

48. "Increasing the US Military Presence in Poland," Ministry of National Defence, Republic of Poland (website), n.d., accessed June 7, 2024, <https://www.gov.pl/web/national-defence/increasing-the-us-military-presence-in-poland>.

49. Alicja Ptak, "Poland Has Given Ukraine Military Aid Worth at Least \$1.7bn, Expects Allies to Help Fill the Gaps," Notes from Poland (website), June 15, 2022, <https://notesfrompoland.com/2022/06/15/poland-has-given-ukraine-military-aid-worth-at-least-1-7bn-expects-allies-to-help-fill-the-gaps/>.

imports, whereas the United States accounted for 35 percent, Germany 11 percent, the United Kingdom 10 percent, and the Czech Republic 4.4 percent.⁵⁰

As 2023 began, Poland entered a new phase in its support for Ukraine and announced a significant new aid package as part of the Tallinn Pledge with European partners. The new Polish package included S-60 anti-aircraft guns and 70,000 pieces of ammunition and continued the deliveries of 155-millimeter AHS Krab howitzers with medical, engineering, and other training packages.⁵¹ In early 2023, Poland was preparing to send a company of its own German-made Leopard 2 tanks with ammunition, and the then Prime Minister Mateusz Morawiecki and President Andrzej Duda engaged their German counterparts in negotiations about the idea of transferring the Leopard 2 tanks. Initially, on January 9, 2023, the prime minister noted Poland would not act unilaterally, and Poland sought a coalition of countries to donate Leopard 2 tanks.⁵² But, 10 days later, Morawiecki said: “We will either get this agreement quickly, or we will do the right thing ourselves.”⁵³

In late January, after weeks of pressure, Germany allowed Poland to transfer its state-of-the-art Leopard 2 tanks to Ukraine. Poland announced it would deliver an additional 60 tanks to Ukraine, including 30 Polish PT-91 Twardy tanks, a modernized version of the T-72, which would complement Poland’s delivery of 14 German-made Leopard 2 tanks. At that time, Poland was the largest European supplier of tanks, having already delivered its 290 T-72A/T-72M/T-72M1R tanks from the inventories of Poland’s armed forces.⁵⁴

Soon after Poland and other Western allies began delivering tanks to Ukraine, Poland became the first NATO ally to transfer MiG-29 fighter jets formally to Ukraine. Poland transferred an initial four jets and then pledged an additional

50. Pieter D. Wezeman, Justine Gadon, and Siemon T. Wezeman, *Trends in International Arms Transfers, 2022* (Stockholm: Stockholm International Peace Research Institute, March 2023), 10.

51. A group of European countries including Estonia, the United Kingdom, Poland, Latvia, Lithuania, Denmark, the Czech Republic, Netherlands, and Slovakia made commitments. See Ben Wallace, “Joint Statement – The Tallinn Pledge,” GOV.UK (website), January 19, 2023, <https://www.gov.uk/government/news/joint-statement-the-tallinn-pledge>.

52. “Poland in Talks with Germany over Giving Leopard Tanks to Ukraine,” Notes from Poland (website), January 9, 2023, <https://notesfrompoland.com/2023/01/09/poland-in-talks-with-germany-over-giving-leopard-tanks-to-ukraine/>.

53. Nicolas Camut, “Poland Ready to Send Tanks without Germany’s Consent, PM Says,” *Politico* (website), January 19, 2023, <https://www.politico.eu/article/poland-ready-tanks-without-germany-mateusz-morawiecki-consent-olaf-scholz/>.

54. “Poland Confirms Supply to Ukraine of 30 PT-91 Twardy Tanks,” Army Recognition (website), January 27, 2023, https://www.armyrecognition.com/defense_news_january_2023_global_security_army_industry/poland_confirms_the_supply_to_ukraine_of_30_pt-91_twardy_tanks.html.

14 jets.⁵⁵ Slovakia also pledged 13 jets around the same time. Some of the jets were not operational, though, and Poland and Slovakia might have delivered the jets for parts alone.

By April 2023, Poland led the European Union as the largest donor of military assistance to Ukraine, behind the United States and the United Kingdom at the time.⁵⁶ By June 2023, Poland's military contributions to Ukraine as a share of Poland's GDP totaled 0.68 percent. Among the NATO allies, only the three Baltic states had given more as a share of their GDPs.⁵⁷

But during the latter half of 2023, Poland's relative importance as a donor of lethal assistance slid in comparison to other Western donors. Poland's declining assistance could partly reflect domestic politics in Poland ahead of its October 2023 elections or bilateral tensions with Kyiv over grain exports. In fact, Poland continued to deliver what assistance it could, but had simply run through its stocks. Moreover, Poland did not have the inventory of more sophisticated Western military equipment the United States and other European allies could offer. To be sure, Poland experienced tensions in bilateral relations with Kyiv, but Poland remains a committed partner to Ukraine. Poland is committed to staying the course for Ukraine and helping ensure a strategic defeat for Russia and the realization of Ukraine's Euro-Atlantic aspirations.

Given the high stakes for Poland and its threat perceptions vis-à-vis Russia, Poland has probably delivered more military assistance to Ukraine than the Polish government has publicly announced. For example, some evidence shows Poland provided security for the Ukrainian delegates who took part in the March 2022 negotiations in Belarus, and, even after Russia's full-scale invasion in February 2022, Polish forces stayed on in Kyiv's suburbs, where they had been training Ukrainian special forces.⁵⁸

55. "Duda: Poland to Provide Ukraine with at Least 14 MiG-29 Fighter Jets," *Kyiv Independent* (website), April 5, 2023, <https://kyivindependent.com/duda-poland-transfers-8-mig-29-jets-to-ukraine/>; and James Black, "What Difference Will Polish and Slovakian Fighter Jets Make to Ukraine?" *RAND Blog*, March 23, 2023, <https://www.rand.org/pubs/commentary/2023/03/what-difference-will-polish-and-slovakian-fighter-jets.html>.

56. Lili Bayer and Jacopo Barigazzi, "Not as Generous: Polish Leader Hits Germany over Ukraine Support," *Politico* (website), March 24, 2023, <https://www.politico.eu/article/poland-prime-minister-mateusz-morawiecki-germany-ukraine-support-not-generous/>.

57. "Total Bilateral Aid Commitments to Ukraine as a Percentage of Donor Gross Domestic Product (GDP) between January 24, 2022 and May 31, 2023, by Country," Statista (website), n.d., accessed June 30, 2023, <https://www.statista.com/statistics/1303450/bilateral-aid-to-ukraine-in-a-percent-of-donor-gdp/>.

58. Zbigniew Parafianowicz, *Polska na wojnie* (Jabłonna, CZ: Czerwone i Czarne, 2023), 34–35.

Poland also reportedly sought to rally allied support for Ukraine, evincing a willingness to take on greater risk. For example, Polish officials evidently pushed more skeptical US officials on the need to provide combat aircraft to Ukraine early in the war. Warsaw was frustrated by what Polish officials perceived as Washington's indecision and reluctance to provide combat aircraft to Ukraine. As a result, Poland apparently acted independently—it dismantled 10 MiG-29 jets, left the parts in a forest near the border with Ukraine, and informed Kyiv of the parts' location.⁵⁹ Polish officials perceived the incremental approach shaped by fears of Russian retaliation and escalation were putting Ukraine at risk. As the example of the dismantled jets illustrates, Warsaw's tolerance for escalation risk has differed markedly from Poland's Western allies.⁶⁰

In addition to Poland's significant early donations of military equipment, Poland became the most important logistics and transport hub for nearly all international military assistance. As noted in an earlier section, the Rzeszów-Jasionka Airport in southeast Poland has played, and continues to play, a critical role in efforts to ship military aid into Ukraine. The Rzeszów-Jasionka Airport also transfers passengers, including foreign dignitaries traveling to Ukraine, those needing medical evacuations, and Ukrainian soldiers traveling to and from European training sites. The airfield also hosts the Remote Maintenance and Distribution Center – Ukraine, where former employees described the work tempo as “fast-paced with longer days—usually 10–12 hours.”⁶¹ Since March 2022, the Remote Maintenance and Distribution Center – Ukraine has delivered increasingly efficient maintenance support, including via 24-hour video chats with the Armed Forces of Ukraine on the front lines to “immediately assist battle equipment malfunctions.”⁶²

Although the Rzeszów-Jasionka Airport proved important for logistics, passenger transport, and the transport and remote maintenance of international donors' military assistance early in the conflict, Poland's other infrastructure, especially its rail networks, played an increasingly vital role later in the war's first and second years. Poland's rail lines proved crucial for transiting heavier equipment, such as main battle tanks, into Ukraine. To facilitate transfers of heavier equipment, Poland expanded its rail capacity by adding several

59. Parafianowicz, *Polska na wojnie*.

60. Ptak, “Poland Has Given Ukraine Military Aid.”

61. Cindy Pray, “Civilian Deployers: Recent European Assignment ‘Eye Opening’ for Land and Maritime Associate,” Defense Logistics Agency (website), May 31, 2023, <https://www.dla.mil/About-DLA/News/News-Article-View/Article/3412161/civilian-deployers-recent-european-assignment-eye-opening-for-land-and-maritime/>.

62. Natalie Weaver, “Remote Maintenance Soldiers Establish Personal Ties with Ukraine Armed Forces,” U.S. Army (website), October 30, 2023, https://www.army.mil/article/271255/remote_maintenance_soldiers_establish_personal_ties_with_ukraine_armed_forces.

new terminals to its lines into Ukraine, including at Mostyska, Sosnowiec, and Zamość.⁶³ The rail link through Zamość, which is 30 miles from Ukraine's borders, has been particularly important for transport and maintenance. Germany deployed Patriot systems and 300 soldiers to the Zamość rail link for a year to protect the link and the nearby facilities that serviced German equipment in the war.⁶⁴

Polish officials intend to stand by Ukraine for the duration of the war. The new government, under Prime Minister Donald Tusk, promised to keep supporting Ukraine and “resolve differences between Warsaw and Kyiv over grain shipments and trucking . . . Poland will do everything to increase Ukraine’s chances of victory in this war.”⁶⁵ Tusk also committed to “loudly and firmly demand[ing] the full mobilization of the free world . . . to help Ukraine in this war.”⁶⁶ But Poland’s efforts to produce and supply military materiel to Ukraine will necessarily compete with simultaneous efforts to modernize and expand the Polish military. Poland is now legally required to spend 3 percent of its GDP on defense, and Poland’s modernization program is valued at more than \$130 billion.⁶⁷ Whether Poland will be able to expand its military capacity and capability while also providing Ukraine what it needs in the war against Russia therefore remains to be seen.

United Kingdom

The United Kingdom is one of Ukraine’s most important military supporters in Europe. The United Kingdom’s support is based on United Kingdom officials’ and public opinion’s shared sense British security is deeply interconnected with the security of Ukraine, and Russia’s aggression in eastern Europe is an

63. Marjorie van Leijen, “These Terminals Have Helped Ukraine-Poland Rail Freight Flow This Year,” RailFreight.com (website), September 5, 2022, <https://www.railfreight.com/railfreight/2022/09/05/these-terminals-have-helped-ukraine-poland-rail-freight-flow/>.

64. “Germany to Withdraw Patriot Air Defence Units from Poland,” Reuters (website), November 8, 2023, <https://www.reuters.com/world/europe/germany-withdraw-patriot-air-defence-units-poland-2023-11-08/>.

65. Prime Minister Donald Tusk, quoted in “Poland’s Tusk Says Ukraine-Russia War a Fight ‘between Good and Evil,’” *Al Jazeera* (website), January 22, 2024, <https://www.aljazeera.com/news/2024/1/22/poland-pm-visits-ukraine-in-latest-show-of-solidarity-in-war-against-russia>.

66. Marta Prochwicz-Jazowska, “Internal Polish Politics Temper Prime Minister Donald Tusk’s Post-PiS Embrace of Ukraine,” German Marshall Fund (website), January 26, 2024, <https://www.gmfus.org/news/internal-polish-politics-temper-prime-minister-donald-tusks-post-pis-embrace-ukraine>.

67. “The Prime Minister in Siedlce: The Polish Budget Is Providing Money for Developing the Polish Army,” Chancellery of the Prime Minister, Republic of Poland (website), September 5, 2022, <https://www.gov.pl/web/primeminister/the-prime-minister-in-siedlce-the-polish-budget-is-providing-money-for-developing-the-polish-army>; and “Poland – Country Commercial Guide: Defense Industry,” US International Trade Administration (website), January 6, 2024, <https://www.trade.gov/country-commercial-guides/poland-defense-industry>.

assault on Europe as a whole. As a result, the government has identified Ukraine's defense as the United Kingdom's most "immediate and most urgent priority" for defense and security.⁶⁸

Reflecting the government's strategic approach, London's assistance for Ukraine has been consistent and substantial. Shortly after Russia launched its full-scale invasion, the then Secretary of State for Defense Ben Wallace called a first international meeting of 15 defense ministers in Rzeszów, Poland, where both British and US forces were preparing for possible humanitarian contingencies.⁶⁹ British and US forces quickly pivoted from a humanitarian focus to logistics, and the forces became indispensable when the first flight of British military assistance landed at the Rzeszów-Jasionka Airport two days later, on February 27, 2022.⁷⁰

Following the initial delivery of British assistance, the United Kingdom provided £2.3 billion in military assistance during the first year of the war as well as another £2.3 billion during the second. The then Prime Minister Rishi Sunak recently announced funding for Ukraine's military assistance will increase to £2.5 billion in the third year of the Russia-Ukraine War.⁷¹ The new United Kingdom package of assistance includes long-range missiles, air defense, munitions, maritime security, and the "largest delivery" of unmanned aerial vehicles to Ukraine "from any country."⁷² His Majesty's Treasury does not appear ready to make multiyear commitments, but the United Kingdom's major parties and public opinion widely support continued assistance for Ukraine.

So far, the unclassified key capabilities the United Kingdom has provided to Ukraine include the following.

- Weapons or launchers
 - 100 anti-air platforms
 - 100 anti-armor weapons
 - 4,000 antipersonnel weapons (including small arms, mortars, and grenades)
 - 120 artillery pieces

68. His Majesty's Government, *Integrated Review Refresh 2023: Responding to a More Contested and Volatile World* (London: His Majesty's Government, March 2023), 3.

69. British government official, interview by the authors, December 8, 2023.

70. British government official, interview by the authors, December 8, 2023.

71. Christopher Miller and Lucy Fisher, "Rishi Sunak Announced UK Military Aid to Ukraine Will Increase to £2.5 Billion," *Financial Times* (website), January 12, 2024, <https://www.ft.com/content/8d55de91-8afc-4720-90f4-d38a78ae6648>.

72. Miller and Fisher, "Rishi Sunak Announced."

- 14 main battle tanks⁷³
- Ammunition
 - 1,500 antiair missiles
 - 12,000 anti-armor rounds
 - 2,500 antistructure rounds
 - 5,000,000 antipersonnel rounds
 - 100 anti-ship missiles
 - 200,000 artillery shells
 - 4,000 main battle-tank shells
- Other:
 - Communications
 - Electronic-warfare systems
 - Spare parts
 - Tools and support
 - Intelligence, surveillance, and reconnaissance
 - Life support
 - Mobility support
 - Personal protective equipment⁷⁴

The British government has also reportedly given much more sensitive military assistance to Ukraine, including in areas related to intelligence, cyber, and other support that is classified for reasons related to operational security or other donor sensitivities.⁷⁵ Nonetheless, London has committed to trying to disclose as much as possible by amalgamating the equipment delivered through sensitive means with other deliveries and reporting sensitive deliveries as part of the total equipment provided to Ukraine.

73. Ben Wallace, “Military Support to Ukraine,” United Kingdom Parliament (website), July 20, 2023, <https://questions-statements.parliament.uk/written-statements/detail/2023-07-20/hcws987>. See also United Kingdom Ministry of Defence, *UK Defence in Numbers 2023* (London: United Kingdom Ministry of Defence, 2023), 3.

74. Wallace, “Military Support.”

75. Foreign, Commonwealth and Development Office and James Cleverly, “UK Boosts Ukraine’s Cyber Defences with £6 Million Support Package,” press release, November 1, 2022, <https://www.gov.uk/government/news/uk-boosts-ukraines-cyber-defences-with-6-million-support-package>.

The United Kingdom's assistance builds on a long-standing, close bilateral relationship with Ukraine. Bilateral defense and security relations between the United Kingdom and Ukraine date back to 1993, and the relationship strengthened considerably after 2014 with Russia's annexation of Crimea. At Ukraine's request, British support expanded to include nonlethal defensive equipment designed to limit AFU casualties. The then Foreign Secretary Philip Hammond ruled out lethal assistance, as did Germany and France at the time, nevertheless a debate erupted in the United Kingdom over lethal assistance, and some members of the Conservative Party began arguing for it.⁷⁶ In what one official described as a "compromise solution," the government set up a training mission in 2015 to focus on defense- and security-sector reform.⁷⁷

The objective of the 2015 training mission known as Operation Orbital was to help transform the Ministry of Defence of Ukraine from a Soviet-style into a Western-style institution—something Ukraine had struggled with since its independence. The United Kingdom sent 75 British trainers for Operation Orbital, which the *Financial Times* reported as an "escalation of British involvement" in the war.⁷⁸ Orbital focused on medical, logistics, leadership, infantry fighting, planning, and maritime capacity building. By 2022, the operation had trained more than 22,000 Ukrainians.⁷⁹ One British official recalled close personal relationships developed as a result of Operation Orbital, and the official cited the 700 United Kingdom paratroopers who joined Ukraine's national Joint Endeavor exercise in 2020 as evidence of mutual trust.⁸⁰

In November 2020, the signing of a Political, Free Trade and Strategic Partnership Agreement further reinforced the bilateral relationship.⁸¹ The United Kingdom has delivered support over many years in a bilateral context as well as through multilateral frameworks like NATO or the Multinational Joint Commission on Defense Reform and Security Cooperation with the United States

76. Alexander Temerko, "Britain Should Arm Ukraine, Says Tory Donor," *Guardian* (website), March 11, 2015, <https://www.theguardian.com/world/2015/mar/11/britain-should-arm-ukraine>.

77. British government official, interview by the authors, December 8, 2023.

78. George Parker, "David Cameron to Send UK Military Trainers to Ukraine," *Financial Times* (website), February 24, 2015, <https://www.ft.com/content/68784fca-bc4e-11e4-b6ec-00144f eab7de>.

79. Prime Minister's Office, 10 Downing Street and Boris Johnson, "UK to Offer Major Training Programme for Ukrainian Forces as Prime Minister Hails Their Victorious Determination," press release, June 17, 2022, <https://www.gov.uk/government/news/uk-to-offer-major-training-programme-for-ukrainian-forces-as-prime-minister-hails-their-victorious-determination>.

80. Yuri Lapaiev, "Russian Disinformation Shadows Ukrainian-British-US Joint Endeavor 2020 Exercise," *Eurasia Daily Monitor* 17, no. 140 (October 2020).

81. Political, Free Trade and Strategic Partnership Agreement between the United Kingdom of Great Britain and Northern Ireland and Ukraine, U.K.-Ukraine, Oct. 8, 2020, C.P. 312.

and Canada in 2014.⁸² More recently the United Kingdom has worked through other formats, including the IDCC and the SAG-U.

The British see themselves as pacesetters within NATO, given the United Kingdom was one of the first NATO allies to provide Ukraine with lethal military assistance. Beyond drawing from stocks and leveraging rapid procurement processes, London has proven willing to act unilaterally on Ukraine's behalf, to lobby others to do more, and to search worldwide to provide Ukraine with more sophisticated military assistance on a faster timeline.⁸³ The United Kingdom's approach became clear as early as November 2021, when the United Kingdom decided to send the man-portable, antitank system—the Next-Generation Light Anti-Tank Weapon—as the intelligence picture became clear and as Berlin and Paris persisted in diplomacy.⁸⁴

Regarding its global search for equipment and ammunition, the United Kingdom established Task Force Kindred in its Ministry of Defence. One official described the task force as an effort to “find, buy, and deliver capabilities” from wherever possible, including from countries that refused to supply Ukraine openly and directly.⁸⁵ Some evidence shows Task Force Kindred's efforts helped facilitate the Armed Forces of Ukraine's offensive to retake Kharkiv, but interviews suggest the United Kingdom found itself bidding against allies, including the United States, for materiel, thus driving up the price.⁸⁶

Beyond equipment and ammunition, the United Kingdom has proven to be a leader in coordinating and providing training as well. Building on Operation Orbital, which ended in 2022, the United Kingdom launched Operation Interflex in July 2022. Interflex offered more technical, equipment,

82. Claire Mills, *Military Assistance to Ukraine 2014–2021*, Research Briefing no. 7135 (London: House of Commons Library, March 4, 2022), 2.

83. Mills, *Assistance to Ukraine 2014–2021*. The International Fund for Ukraine (IFU)-related military aid is cofunded by IFU countries, including the United Kingdom, Norway, the Netherlands, Denmark, Sweden, Iceland, and Lithuania. See: “International Fund for Ukraine (IFU),” GOV.UK (website), updated May 24, 2024, <https://www.gov.uk/guidance/international-fund-for-ukraine-ifu>.

84. See Dan Sabbagh, “UK Supplying Ukraine with Anti-Tank Weapons, MPs Told,” *Guardian* (website), January 17, 2022, <https://www.theguardian.com/politics/2022/jan/17/uk-supplying-ukraine-with-anti-tank-weapons-mps-told>. See also “Britain Says It Is Supplying Anti-Tank Weapons to Ukraine,” Reuters (website), January 17, 2022, <https://www.reuters.com/world/uk/uk-says-supplying-ukraine-with-weapons-system-defend-against-russia-2022-01-17/>; and British government official, interview by the authors, December 8, 2023.

85. British government official, interview by the authors, December 20, 2023.

86. “Prime Minister's Award for Exceptional Public Service,” *Civil Service World*, no. 322 (January 2023): 27; Alla Shcherbak, “Bulgaria Secretly Supported Ukraine in First Six Months of War, Investigation Shows,” *New Voice of Ukraine* (website), January 18, 2023, <https://english.nv.ua/nation/bulgaria-secretly-supported-ukraine-in-first-six-months-of-war-investigation-shows-50298381.html>; and British government officials, interview by the authors, December 8, 2023.

and combat training to help the Armed Forces of Ukraine operate British-donated equipment safely and effectively. The efforts also included Sea King training for 10 crews and engineers and Challenger 2 tank training, including combined-arms training to ensure the tanks could deploy as part of a complete armored formation. The United Kingdom committed to the same for other British systems and platforms and offered training for medical, marine, chaplaincy, and fourth-generation combat aircraft.⁸⁷

Although British personnel led Operation Interflex and most of the training takes place in the United Kingdom, the British government ensured the training became increasingly international. Internationalizing the training has involved reaching out to allies and partners in different contexts, such as the Joint Expeditionary Force. Operation Interflex expanded because of the United Kingdom's efforts and now includes personnel from 11 allied or partner countries. The operation provides its programs along three main lines of effort, including basic- or individual-level training; equipment- or platform-centric training; and leader training.⁸⁸ Between Operation Orbital and Operation Interflex, the United Kingdom trained more than 50,000 troops by the end of November 2023.⁸⁹

The United Kingdom's substantial military assistance for Ukraine has also put London back into a position of leadership and prominence in European security affairs after a few difficult years resulting from Brexit and tensions between the United Kingdom and the EU over defense and security topics. But British efforts also reveal a willingness to lean forward in terms of risk. For example, the United Kingdom was the first Group of Seven country to deliver main battle tanks though it had few to share. The United Kingdom's decision proved crucial in the allied context, helping to convince Washington and Berlin to deliver main battle tanks as well. Similarly, the United Kingdom made an early decision to provide Storm Shadow missiles in May 2023, weeks before France followed suit.⁹⁰

87. "Ukrainian Pilots Learn to Fly F-16 Fighter Jets after Completing Basic Training in the UK," GOV.UK (website), December 26, 2023, <https://www.gov.uk/government/news/ukrainian-pilots-learn-to-fly-f-16-fighter-jets-after-completing-basic-training-in-the-uk>.

88. Ministry of Defence, Grant Shapps, and Rishi Sunak, "30,000 Ukrainian Recruits Trained in Largest UK Military Training Effort since Second World War," press release, November 10, 2023, <https://www.gov.uk/government/news/30000-ukrainian-recruits-trained-in-largest-uk-military-training-effort-since-second-world-war>.

89. Rishi Sunak, "PM Speech at Lord Mayor's Banquet: 13 November 2023" (speech, Lord Mayor's Banquet, London, November 13, 2023), <https://www.gov.uk/government/speeches/pm-speech-at-lord-mayors-banquet-13-november-2023>.

90. James Gregory, "UK Confirms Supply of Storm Shadow Long-Range Missiles in Ukraine," *BBC News* (website), May 11, 2023, <https://www.bbc.com/news/world-europe-65558070>; and David Brennan, "Ukraine Receives Storm Shadow Boost as France Commits 'SCALP' Missiles," *Newsweek* (website), July 11, 2023, <https://www.newsweek.com/ukraine-storm-shadow-boost-france-scalp-missiles-nato-vilnius-atacms-1812251>.

The United Kingdom’s willingness to accept risk in the Russia-Ukraine War is no indication London treats its efforts lightly. Like the United States, the United Kingdom has always calibrated its support for Ukraine to ensure the conflict stays within Ukraine’s borders, and the United Kingdom has put conditions on its weapons supplies, such as restricting weapons use against Russian territory. United Kingdom risk calculations include what defense planners call the “second center of decision-making” concept.⁹¹ This concept holds multiple nuclear decision centers—Washington, Paris, and London, in the case of NATO—to strengthen deterrence vis-à-vis Russia and give London substantial leeway in its decision making.

Regarding measures of effectiveness, the United Kingdom has struggled, like other allies, to assess the impact of its military assistance to Ukraine objectively. For the most part, British officials rely on circumstantial evidence from British officials and interlocutors in Kyiv. British officials point to Russian sustainment operations having moved farther from the front lines after the United Kingdom provided longer-range rocket-artillery systems like the Guided Multiple Launch Rocket System and the High Mobility Artillery Rocket System. Similarly, UK officials cite the withdrawal of Russia’s Black Sea Fleet from Crimea to Novorossiysk as evidence of the Storm Shadow missiles’ effectiveness. But Ukraine’s strikes have not significantly impacted its ability to retake territory under Russian occupation in eastern Ukraine. More recently, British officials focused on measuring the number of Ukrainian brigades regenerated or the brigades’ percentage of combat effectiveness as a way of assessing effectiveness.⁹²

Despite the lack of objective or robust national measures of effectiveness, the United Kingdom nonetheless has made multiple efforts to identify the most important lessons for the United Kingdom to learn from the war’s first two years.⁹³ One important lesson for the United Kingdom relates to the defense-industrial base. The British government, like others, did not place contracts early enough to ensure the United Kingdom could replenish its own stocks and support Ukraine at the same time. The United Kingdom may have acted based on assumptions the war would not last long, an underestimation of Russia’s ability to evade or work around sanctions, or an emphasis on asymmetric capabilities providing offsets.

91. Nuclear Threat Initiative, *United Kingdom Nuclear Overview* (Washington, DC: Nuclear Threat Initiative, August 21, 2015).

92. British government officials, interview by the authors, December 8, 2023.

93. See His Majesty’s Government, *Integrated Review Refresh*. See also Mills, *Assistance to Ukraine 2014–2021*; and Claire Mills, *Military Assistance to Ukraine since the Russian Invasion* (London: House of Commons Library, January 25, 2024).

In terms of the way forward for the United Kingdom's assistance to Ukraine, London's forward-leaning support and its willingness to incur risk are likely to persist. Specifically, the United Kingdom is focusing on strengthening the Armed Forces of Ukraine's ability to hold its gains through 2024 and on building Ukraine's future force. London is leading the maritime-capability coalition alongside Norway, and is strengthening industrial collaboration with Ukraine, including by moving production closer to the front lines.⁹⁴ From a political perspective, the UK executive does not have to subject the government's aid decisions to a vote in parliament, and, in any event, all major parties appear to support continued assistance.⁹⁵

The Evolving Supporters

France

France's strategic approach to the Russia-Ukraine War changed markedly during the first half of 2023. As the war's first anniversary approached in February 2023, the French government finally accepted its early attempts to defuse tensions between Russia and Ukraine through negotiations with Russian leadership had delivered nothing. As a result, the French government substantially increased its military assistance and training for Ukraine, directing much of the assistance and training through EU mechanisms, such as the EPF.⁹⁶ France also became more vocal about its support for Ukraine, and in a major course change, Paris began advocating for EU enlargement and fast-tracking Ukraine's NATO membership.⁹⁷

President Emmanuel Macron personally drove the remarkable change in France's approach to the war, French officials note.⁹⁸ Macron carefully and deliberately rolled out France's new approach to the conflict in a series of speeches he made between February and July 2023. Beginning at the Munich Security Conference on February 17, 2023, President Macron publicly acknowledged France's (and, more broadly, the West's) indifference to Central and Eastern

94. British government official, interview by the authors, December 8, 2023.

95. Malcolm Chalmers, "Shapps's Summit: Priorities for the New UK Defence Secretary," Royal United Services Institute (website), September 1, 2023, <https://www.rusi.org/explore-our-research/publications/commentary/shapps-summit-priorities-new-uk-defence-secretary>.

96. French government officials, interview by the authors, October 13, 2023.

97. "France's Foreign-Policy Revolution," *Economist* (website), July 20, 2023, <https://www.economist.com/europe/2023/07/20/frances-foreign-policy-revolution>.

98. French government officials, interview by the authors, October 13, 2023.

Europe's challenges in the past. Macron also explained that when France and others appeased Russia, they became complicit in Russia's war crimes.⁹⁹

On May 31, 2023, Macron spoke at the GLOBSEC 2023 Bratislava Forum in Slovakia. In his forum speech, Macron said, "We did not always hear the voices you brought, calling for recognition of your painful memories and history . . . we sometimes missed opportunities to listen."¹⁰⁰ Macron then laid out France's new approach, recommitting France to the region and to realizing Ukraine's Euro-Atlantic integration fully. France reaffirmed its commitments at the European Political Community summit in Chişinău, Moldova, on June 1; again at NATO's Vilnius summit in July; and through the Group of Seven security pledge to Ukraine, also in July. By mid-2023, France had become vocal about its support and shared the view with Poland, the United Kingdom, and the Baltic states that gray zones were no longer acceptable for Europe.

After mid-2023, France increased its military support for Ukraine and delivered capabilities and training to Ukraine bilaterally as well as through the EPF. But French officials lamented the public rankings of France's national support and openly disputed the Kiel Institute for the World Economy's figures early in the war. The Kiel Institute for the World Economy reported, as of January 2024, the Scandinavian countries, the United Kingdom, and Germany all allocated more military aid to Ukraine than Italy or France, whose totals were both below €2 billion in the institute's dataset.¹⁰¹ But French government officials argued the Kiel Institute for the World Economy's rankings do not reflect France's assistance to Ukraine because of how much of France's assistance goes through EU mechanisms and because France decided to classify many of its deliveries, especially early in the war.¹⁰²

As a result of the Kiel Institute for the World Economy's rankings and its charges that France had not delivered its fair share of military aid to Ukraine, a parliamentary paper presented to the French National Assembly's Defense and Armed Forces Committee reported the cost of France's military support

99. Roger Cohen, "Macron Calls for Intensified Support for Ukraine but Eyes Peace Talks," *New York Times* (website), February 17, 2023, <https://www.nytimes.com/2023/02/17/world/europe/macron-ukraine-russia-negotiations.html>.

100. "Globsec Summit in Bratislava," Élysée (website), June 1, 2023, <https://www.elysee.fr/en/emmanuel-macron/2023/06/01/globsec-summit-in-bratislava>.

101. Kiel Institute for the World Economy, *Ukraine Support Tracker – Methodological Update & New Results on Aid Allocation* (Kiel, DE: Kiel Institute for the World Economy, February 2024), 9; and "Europe Has a Long Way to Go to Replace US Aid – Large Gap between Commitments and Allocations," Kiel Institute for the World Economy (website), February 16, 2024, <https://www.ifw-kiel.de/publications/news/europe-has-a-long-way-to-go-to-replace-us-aid-large-gap-between-commitments-and-allocations/>.

102. French government officials, interview by the authors, October 13, 2023.

to Ukraine had reached €3.2 billion, which would place France alongside Germany and the United Kingdom as Ukraine's leading supporters.¹⁰³ *Le Monde* reports the value of France's equipment transfers is €1.7 billion but *Le Monde* describes the equipment-transfer figure as inflated because it does not represent the price of the equipment transferred but rather the budgetary cost to France to replace the equipment in its own national arsenals. French lawmakers accepted *Le Monde*'s pricing method; one argued it "is the one that best reflects France's effort, by valuing the current cost of replacing the equipment sold."¹⁰⁴

In any case, French officials contend the competitive donor dynamics in Europe, which the officials see as partly fueled by open-source public rankings of assistance, are counterproductive for the donors as well as for Ukraine. The rankings have both misrepresented France's national contributions and failed to account for the aid and training France has channeled through the EPF. Moreover, the optics do not help France implement its new strategy for Ukraine, which prioritizes Ukraine's defense; Ukraine's integration into the Euro-Atlantic family, including NATO; and allied cohesion. French officials bristle at the sometimes "performative" nature of UDCG meetings, arguing "this is not theater."¹⁰⁵

Paris's emphasis in late 2022 and through most of 2023 was on delivering increasingly sophisticated military assistance and training to Ukraine, strengthening Ukraine's short-term battlefield advantages. France transferred two Multiple Launch Rocket Systems, two Crotale air-defense systems, one Ground Master 200 radar, artillery, including 18 Caesar howitzers (with 12 more committed) and 15 TRF1 155-millimeter howitzers, several dozen VAB armored personnel carriers and AMX-10 RC combat vehicles, about a hundred Mistral surface-to-air missiles, and a variety of ammunition and fuel supplies.¹⁰⁶

France announced its decision to send the Anglo-French SCALP / Storm Shadow long-range cruise missiles to Ukraine at the NATO summit in July, two months after the United Kingdom. France reportedly made its decisions about stock, numbers, and the planned deliveries of SCALP

103. Cédric Pietralunga, "French Military Aid to Ukraine Estimated at €3.2 Billion," *Le Monde* (website), November 9, 2023, https://www.lemonde.fr/en/international/article/2023/11/09/french-military-aid-to-ukraine-estimated-at-3-2-billion_6241996_4.html.

104. Pietralunga, "French Military Aid."

105. French government officials, interview by the authors, October 13, 2023.

106. French government officials based in Washington, DC, e-mail message to authors, November 7, 2023.

missiles in close coordination with the United Kingdom.¹⁰⁷ With a range of 250 kilometers—the longest of any Western-supplied missile at the time—SCALP missiles could reach targets deep behind the Russian contact line. Both French and British officials believe SCALP / Storm Shadow missiles helped Ukraine push back Russia’s Black Sea Fleet, reducing the fleet’s ability to threaten commercial vessels and grain-carrying ships from Ukrainian ports. France also delivered antitank guided missiles, Zodiac Futura boats, and a SAMP/T antiaircraft missile system. France delivered the SAMP/T system jointly with Italy after bilateral negotiations resolved varying risk tolerances and priorities.¹⁰⁸

France prides itself on ensuring it makes all equipment deliveries alongside commitments to train Ukrainian personnel on all systems, sustain systems on the battlefield, and renew stocks as necessary. Until mid-2023, France had kept much of its effort to train the Armed Forces of Ukraine, including systems training for Caesar howitzers, quiet. By midyear, though, France started to become more vocal about the training, and France also expanded the scale of its training consistent with Macron’s new approach. By the end of 2023, France had helped train roughly 7,000 Ukrainian soldiers at sites in France and in Poland, surpassing the previous goals France had set for the year.¹⁰⁹ France has also joined the coalition of Western countries training Ukrainian pilots on F-16 jets.¹¹⁰

For Ukraine’s longer-term defense needs, France is participating in capability coalitions. In addition to providing F-16 pilot training, France cochaired with Germany the inaugural session of the Coalition for Integrated Ukrainian Air and Missile Defense in Berlin in late December 2023. France is also leading an “artillery coalition” and hosted the first meeting in January 2024

107. “‘A Strong Gesture’: French Delivery of SCALP Missiles to Ukraine Marks Shift in Western Strategy,” France 24 (website), July 13, 2023, <https://www.france24.com/en/europe/20230713-a-strong-gesture-french-delivery-of-scalp-missiles-to-ukraine-marks-shift-in-western-strategy>; and French government officials, research discussions with authors, October 13, 2023.

108. “France, Italy Ready to Deliver SAMP/T Anti-Missile System to Ukraine,” Reuters (website), February 3, 2023, <https://www.reuters.com/world/europe/france-italy-ready-deliver-sampt-anti-missile-system-ukraine-2023-02-03/>.

109. Sébastien Lecornu, quoted in “France Helps Ukraine to Train 6,000 Soldiers,” *Ukrainska Pravda* (website), August 14, 2023, <https://www.pravda.com.ua/eng/news/2023/08/14/7415440/>; and Sébastien Lecornu (@SebLecornu), “Au total, nous nous sommes engagés à former 7 000 militaires ukrainiens d’ici la fin de l’année (5 000 en Pologne et 2 000 sur notre territoire),” X (website), September 2, 2023, <https://twitter.com/SebLecornu/status/169794865573317705?s=20>.

110. Dinara Khalilova, “Zelensky: France to Train Ukrainian Pilots on Fighter Jets,” *Kyiv Independent* (website), September 4, 2023, <https://kyivindependent.com/zelensky-france-to-train-ukrainian-pilots-on-fighter-jets/>.

to help Ukraine acquire ammunition and artillery systems.¹¹¹ France is pivoting from an approach focused on existing stockpiles to one focused on industrial collaboration and production close to the front lines. Minister of the Armed Forces Sébastien Lecornu visited Ukraine with some 20 representatives of various French companies, including in fields such as robotics, drones, artillery, and artificial intelligence. France's approach builds on a special fund, endowed with €200 million by an amendment from a group of politicians in the National Assembly supporting the president, which helps Ukraine purchase equipment and ensure maintenance. French officials have described France's approach as a way for Paris to cement ties with Ukraine over the long term.¹¹² As a result, French and Ukrainian companies recently signed a series of industrial partnership agreements.¹¹³

- In early 2024, KNDS will supply 6 Caesar systems in addition to the 18 the French Army already delivered and the 12 Ukraine previously acquired from KNDS.
- KNDS signed agreements with Ukrainian companies to maintain Caesar and AMX-10 RC readiness inside Ukraine and to integrate armaments on AFU vehicles inside Ukraine.
- Arquus Defense signed a contract with a Ukrainian company for VAB spare parts and maintenance and to launch a project to produce VABs in Ukraine.
- Vistory signed an agreement with a Ukrainian company for additive manufacturing solutions for spare parts.
- Delair signed a contract to supply additional drones, as well as a maintenance agreement for the drones already delivered.
- Turgis & Gaillard Groupe signed an agreement to codevelop drones, with a view to local production.
- The French Directorate General of Armament and GICAT signed agreements to promote armament cooperation.

In addition, as announced during the first meeting of the artillery coalition in January 2024, France is expanding its support for the Caesar

111. Abbey Fenbert, "Ukraine, France Strengthen Air Defense Cooperation," *Kyiv Independent* (website), December 29, 2023, <https://kyivindependent.com/ukraine-france-strengthen-air-defense-cooperation/>.

112. Quoted in Constant Méheut and Lara Jakes, "Western Leaders Urge Arms Manufacturing in Ukraine," *New York Times* (website), September 28, 2023, <https://www.nytimes.com/2023/09/28/world/europe/ukraine-arms-manufacturing-nato.html>.

113. French government officials based in Washington, DC, e-mail message to authors, October 13, 2023.

artillery system. As a result of KNDS increasing its production capacity, France will deliver an additional 72 Caesar guns to Ukraine in 2024. France has pledged €50 million for the purchase of 12 Caesar guns. Other coalition partners will supplement France's effort to provide Ukraine with what it needs. Overall, France will deliver 78 (6+72) Caesar guns to Ukraine in 2024. France will also increase the quantity of ammunition it supplies to Ukraine to 3,000 shells per month from the end of January 2024, as compared with 2,000 a month at the end of 2023 and just 1,000 a month at the start of the war. Lastly, France announced during the first meeting of the artillery coalition it will deliver 40 extra SCALP long-range missiles and hundreds of AASM Hammer smart bombs to Ukraine.¹¹⁴

France does not fund its aid to Ukraine through the defense budget but through alternative interministerial mechanisms.¹¹⁵ In early 2024, France focused increasingly on building out a bilateral agreement on security for Ukraine over the longer term, which France and Ukraine signed during one of Macron's trips to Kyiv on February 16, 2024.¹¹⁶ France is also contributing to the buildup of Ukraine's future force model, which involves work on building interoperability with Ukrainian forces and strengthening rapprochement between the industrial bases.

Regarding the effectiveness of its efforts, French officials rely on both the battlefield impact in Ukraine and on the political impact among Ukraine's Western supporters. In terms of the impact of France's efforts on the battlefield, some French officials believe the deliveries of the AMX-10 RC combat vehicles, Caesar howitzers, and the Crotale air-defense systems have had the most significant effects. Officials base their assessments on feedback from the Armed Forces of Ukraine and on the Armed Forces of Ukraine's subsequent requests for more assistance. The AMX-10 RC systems have also demonstrated their value in Europe, French officials say, by shifting other allies' and partners' decision-making calculi vis-à-vis their own equipment transfers to Ukraine. The AMX-10 RC system triggered others' decision making: the United Kingdom delivered its Challenger 2 after France committed the AMX-10 RC system.

114. French government official based in Washington, DC, e-mail message to authors, January 25, 2024. See also, John Leicester, "France Ramps up Weapons Production for Ukraine and Says Russia Is Scrutinizing the West's Mettle," Associated Press (website), January 18, 2024, <https://apnews.com/article/ukraine-russia-war-weapons-france-9a164e85fe9edfeb049dddbeac4674d9/>.

115. "French MPs Approve Huge Boost in Military Spending, Spurred by Ukraine War," France 24 (website), July 13, 2023, <https://www.france24.com/en/europe/20230713-french-mps-approve-huge-boost-in-military-spending-spurred-by-ukraine-war>.

116. French government official based in Washington, DC, e-mail message to authors, January 25, 2024. See also "Agreement on Security Cooperation between France and Ukraine," Élysée (website), February 16, 2024, <https://www.elysee.fr/en/emmanuel-macron/2024/02/16/agreement-on-security-cooperation-between-france-and-ukraine>.

The Biden-Harris administration committed Abrams tanks, then Germany decided to deliver Leopards. As a result, France sees itself as a first mover in the recent sequence of important Western deliveries to Ukraine.

Germany

Several strategic imperatives have motivated Berlin's support for Ukraine. The first, best captured by Chancellor Olaf Scholz just days after Russia's February 24, 2022, invasion of Ukraine, is concern with the rule of law and international norms. In a surprisingly clear-eyed recognition of the changed security landscape in Europe, Scholz's so-called *Zeitenwende*, or turning point, speech in the Bundestag on Sunday, February 27, 2022, asked whether military might can prevail over the law.¹¹⁷ Moreover, Scholz lamented the demise of the European security order, accusing Vladimir Putin of "demolishing" it with his latest invasion of Ukraine. For Scholz and Germany, the rule of law and international norms are "the heart" of the issue.¹¹⁸

Additionally, a sense of allied responsibility and solidarity has motivated Germany. Since the end of the Cold War, Germany has lived in a zone of peace, surrounded by friendly countries and reliant on a policy of interdependence with Russia. Germany's condition—and the conviction interdependence was sufficient to safeguard German interests—led to a sustained and deep reduction of military capability, capacity, and resilience. When Russia unleashed its second invasion of Ukraine in February 2022, Berlin found itself completely unprepared in terms of resilience, defense resources, and sustainability, revealing either Germany's apparent ignorance of the downsides of interdependence or its willful disregard for the associated risks.¹¹⁹ In response, German decisionmakers realized they must take on significant responsibility to maintain control over their own destiny, regain the confidence and trust of Germany's neighbors, and maintain influence both in Europe and in Washington.¹²⁰

Finally, the brutality of the Russian invasion has moved Germany, like nearly all Europeans, to act in support of Ukraine. Scholz began his *Zeitenwende* speech with references to the "cold blood" of Putin's "inhumane" war of aggression.

117. "Policy Statement by Olaf Scholz, Chancellor of the Federal Republic of Germany and Member of the German Bundestag, 27 February 2022 in Berlin," Bundesregierung (website), February 27, 2022, <https://www.bundesregierung.de/breg-en/news/policy-statement-by-olaf-scholz-chancellor-of-the-federal-republic-of-germany-and-member-of-the-german-bundestag-27-february-2022-in-berlin-2008378>.

118. "Policy Statement."

119. Official at the Office of the German Chancellery, interview by the authors, June 29, 2023.

120. Official at the German Embassy Washington, interview by the authors, March 16, 2023; and official at the Office of the German Chancellery, interview by the authors, June 29, 2023.

Scholz cited the terrible images from Ukrainian cities and the pain the Ukrainian people have suffered. Subsequent evidence of Russian troops committing atrocities against Ukrainian civilians only served to strengthen German resolve and commitment to Ukraine.¹²¹

Germany's assistance for Ukraine has gone through three phases. The initial phase began immediately after Russia's February 2022 invasion and has consisted primarily of single-use systems. Germany's single-use systems or defense items included shoulder-fired antitank weapons, ammunition, and other items primarily intended for one-time use. Germany sent most of its assistance to Ukraine through neighboring Poland. As of mid-2023, the initial stage of German assistance was mostly complete, in part because Germany expended most of its stores of single-use items.¹²² Whether Germany is replenishing its stores remains to be seen.

The second phase of German assistance began in April 2022, when Germany announced it had delivered heavy weapons to Ukraine for the first time—specifically, the self-propelled, tracked anti-aircraft Gepard system.¹²³ Germany's announcement came after it faced weeks of criticism from domestic sources as well as from abroad over not having done more sooner. The Gepard, the medium-range IRIS-T air-defense system, the Patriot medium-to-long-range air-defense system, and other weapon systems Germany has provided, like self-propelled howitzers, are more enduring and reusable than the items Germany provided under the first phase. But for maintenance, Ukraine transports German systems out of Ukraine and back into Poland, Slovakia, or elsewhere, where Western military and contractor mechanics service and repair the systems. Maintenance requirements mean Ukraine must take German systems offline for longer periods of time, as equipment moves back and forth across Ukraine's borders.

Additionally, during the second phase, Germany and other allies learned Ukrainian troops are not necessarily employing their Western military equipment according to Western doctrine or within technical limits. For example, maintenance and repair requirements for German-supplied self-propelled howitzers were so great that maintenance teams began to run out of spare parts

121. "Germany's Scholz Vows Response over Bucha Deaths," Deutsche Welle (website), April 3, 2022, <https://www.dw.com/en/ukraine-germanys-scholz-vows-response-over-bucha-deaths-as-it-happened/a-61343522>; and Dan Baer, "Bucha Increases the Moral Pull for the West to Aid Ukraine," Carnegie Endowment for International Peace (website), April 5, 2022, <https://carnegieendowment.org/2022/04/05/bucha-increases-moral-pull-for-west-to-aid-ukraine-pub-86815>.

122. Official at the US Embassy Berlin, interview by the authors, June 29, 2023.

123. Sabine Siebold and Sarah Marsh, "Germany to Supply Ukraine with Heavy Weaponry for First Time," Reuters (website), April 26, 2022, <https://www.reuters.com/world/europe/germany-supply-gepard-anti-aircraft-systems-ukraine-2022-04-26/>.

by late 2022.¹²⁴ When German officials sought to understand why the self-propelled howitzers needed such frequent maintenance, they learned Ukrainian forces were firing the howitzers at a far greater daily rate than German engineers and German doctrine had intended. Instead of using a shoot-and-scoot approach—in which a mobile weapon system shoots at enemy positions then quickly relocates to avoid counterbattery fire—Ukrainian troops were firing repeatedly.¹²⁵ Ukraine’s use of German howitzers reflects two noteworthy phenomena relevant to Western militaries attempting to assist Ukrainian forces. First, disjoints exist between Western doctrine on the one hand and battlefield requirements in Ukraine on the other. More specifically, in the Russia-Ukraine War, the demands of modern large-scale warfare may necessitate more robust weapon systems that can fire repeatedly over longer periods of time. Second, even when provided with Western equipment and Western training, Ukraine—or any other security cooperation partner—is not guaranteed to employ Western equipment as originally intended.

As the second phase continues to unfold, the demands of moving heavy, damaged military equipment back and forth across Ukraine’s borders have yielded a third phase in Germany’s assistance efforts: providing maintenance and repair support inside Ukraine. The time, expense, and logistical challenges involved in hauling main battle tanks and infantry fighting vehicles from the front in eastern Ukraine to maintenance facilities in Poland or Slovakia 800–900 miles to the west are excessive. To alleviate some of the maintenance difficulties, German defense contractors are beginning to establish maintenance facilities in Ukraine.¹²⁶ Germany’s effort appears to be part of a broader shift underway among Ukraine’s Western backers toward greater emphasis on faster repair of damaged equipment.¹²⁷ The time of this study’s publication is too early to assess the effectiveness of the third phase of German support to Ukraine.

Throughout its three phases of support for Ukraine, Germany has delivered a significant amount of military assistance—as of April 30, 2024, Germany is the second-largest contributor of military aid in absolute terms.¹²⁸

124. “Panzerhaubitzen wegen Ersatzteilmangels außer Gefecht,” *Der Spiegel* (website), November 18, 2022, <https://www.spiegel.de/politik/deutschland/ukraine-panzerhaubitzen-2000-wegen-ersatzteilmangels-ausser-gefecht-a-a9056b03-3c01-40cb-b495-611817741b21>.

125. Official at the Office of the German Chancellery, interview by the authors, June 29, 2023.

126. “Rheinmetall Plans Tank-Repair Centre in Ukraine after Summer Break, CEO Says,” Reuters (website), July 28, 2023, <https://www.reuters.com/business/aerospace-defense/rheinmetall-plans-tank-repair-centre-ukraine-after-summer-break-ceo-2023-07-28/>.

127. Paul McLeary, “Allies’ ‘Main Effort’ for Ukraine Shifting from Donating Weapons to Fixing Them,” *Politico* (website), July 19, 2023, <https://www.politico.com/news/2023/07/19/allies-main-effort-for-ukraine-shifting-from-donating-weapons-to-fixing-them-00107181>.

128. “Ukraine Support Tracker,” Kiel Institute for the World Economy (website), updated June 6, 2024, <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>. Data as of July 6, 2023.

Admittedly, German support was slow to begin and initially eschewed weaponry—for these reasons, as noted above, Berlin was subject to criticism at home and abroad. In part, the reluctance to do more faster reflected how difficult abandoning the strategy of interdependence vis-à-vis Russia has been for Scholz and his Social Democratic Party of Germany and reflected a deep concern in the chancellery over the risk of Russian escalation.¹²⁹ Intriguingly, Russian information operations likely fueled the escalation concerns of both the chancellery and the German public more broadly.¹³⁰

The same concerns about escalation animated much of Scholz’s initial unwillingness to transfer Leopard main battle tanks or even to authorize third-party transfers.¹³¹ For all the promise of the *Zeitenwende* speech, and despite the progress Germany has made toward becoming a normal power over the last 30 years, the Leopard incident made two things very clear about Berlin’s role in the world. First, Germany, still cognizant of the lessons of its twentieth-century history, obviously prefers to lead from the center. In other words, in the absence of consensus among allies, Berlin is unlikely to move first. Second, lacking the ultimate guarantee of its own nuclear deterrence, Germany—like every other ally but France and the United Kingdom—will remain dependent on the United States’ extended nuclear umbrella for hard security questions vis-à-vis strategic competitors.

In addition to the factors listed thus far, the German government’s delays and indecision were in part the result of bureaucratic infighting and organizational turf battles, all playing out while Berlin was struggling to build up its own defense capabilities and capacity. Specifically, some evidence indicates Bundeswehr officials were reluctant to part with military equipment because they feared the equipment would not be replaced, potentially dealing a long-term blow to German military

129. German government official, interview by the authors, June 29, 2023; Judy Dempsey, “Scholz’s Tank Decision Upends Germany’s Long Affair with Russia,” Carnegie Europe (website), January 26, 2023, <https://carnegieeurope.eu/2023/01/26/scholz-s-tank-decision-upends-germany-s-long-affair-with-russia-pub-88896>; and Sabine Kinkartz, “SPD Faces the Ruins of Its Russia Policy,” Deutsche Welle (website), March 22, 2022, <https://www.dw.com/en/germanys-ruling-spd-faces-the-ruins-of-its-russia-policy/a-61206332>.

130. German defense policy expert, interview by the authors, October 13, 2022; and Janosch Delcker, “Russian Disinformation Looms Large over German Winter,” Deutsche Welle (website), September 12, 2022, <https://www.dw.com/en/russian-disinformation-threat-looms-large-over-cold-german-winter/a-63096336>.

131. Bojan Pancevski and Bertrand Benoit, “Why Germany Is Reluctant to Send Tanks to Ukraine,” *Wall Street Journal* (website), January 20, 2023, <https://www.wsj.com/articles/why-germany-fears-sending-tanks-to-ukraine-11674225552>; and Yasmeen Serhan, “Why Germany Agonized over Sending Tanks to Ukraine,” *TIME* (website), January 25, 2023, <https://time.com/6249710/germany-leopard-2-tanks-ukraine/>.

strength.¹³² The German armed forces have long suffered from severe readiness shortcomings, and many have viewed even the €100 billion for defense acquisition promised in Scholz's *Zeitenwende* speech as far from sufficient to fix the problem.¹³³

As with materiel assistance, German-provided training of Ukrainian troops got off to a somewhat slow start. In 2022, Germany trained just 1,000 Ukrainian troops, and was aiming to train 5,000 by the end of 2023.¹³⁴ Over the course of the six-week training program German forces offer, Ukrainian troops learn the central tenets of mission command and combined-arms-maneuver warfare, both key elements of modern Western military practice. Whether Ukrainian forces are putting their training to use remains to be seen.¹³⁵

Germany uses several military-training institutions to train Ukrainian troops, including the Bundeswehr's armor school in Münster.¹³⁶ German trainers provide equipment-specific training as well as collective training for company, battalion, and brigade staffs. Training includes live fire, maneuver exercises, mine clearing, and bridging, among other skills, and Germany typically coordinates training with other NATO allies to try to ensure their approaches are similar. In addition to its bilateral training efforts, Germany contributes to and hosts part of EUMAM Ukraine. One of the two sister commands overseeing training—the Special Training Command—is located in Strausberg, Germany, just outside Berlin.¹³⁷ Several Bundeswehr facilities host EUMAM Ukraine training in Germany, which has resulted in Germany training more than 10,000 Ukrainian troops in 2023.¹³⁸

Given criticism of both the pace and substance of its support for Ukraine, the German government has become far more forward leaning in promoting

132. German government official, interview by the authors, October 12, 2022; German defense policy expert, interview by the authors, October 13, 2022; and senior official at the German Embassy Washington, interview by the authors, March 16, 2023.

133. "German Army Problems 'Dramatically Bad', Report Says," *BBC News* (website), February 20, 2018, <https://www.bbc.com/news/world-europe-43134896>; Alfons Mais, "Du wachst morgens auf und stellst fest: Es herrscht Krieg in Europa. Gestern haben wir im Heer einen „Tag der Werte“ durchgeführt," LinkedIn (website), February 24, 2022, https://www.linkedin.com/posts/alfons-mais-46744b99_du-wachst-morgens-auf-und-stellst-fest-es-activity-6902486582067044353-RZky; and "German Army Chief Wants More Money for Equipment," *Deutsche Welle* (website), February 26, 2023, <https://www.dw.com/en/german-army-chief-wants-more-money-for-equipment/a-64823052>.

134. Official at the German Embassy Washington, interview by the authors, March 16, 2023.

135. German government official, interview by the authors, June 29, 2023.

136. Official at the German Embassy Washington, interview by the authors, March 16, 2023.

137. "Germany – EUMAM UA," Bundeswehr (website), n.d., accessed August 23, 2023, <https://www.bundeswehr.de/en/organization/further-fmod-departments/bundeswehr-homeland-defence-command/germany-eumam-ua>.

138. "Trainings EUMAM 2023," Bundeswehr (website), December 27, 2023, <https://www.bundeswehr.de/en/organization/further-fmod-departments/bundeswehr-homeland-defence-command/germany-eumam-ua/trainings-eumam-2023--5722708>.

its assistance efforts. For instance, Germany now updates the website listing of German-supplied military equipment weekly.¹³⁹

Nonetheless, Germany still faces serious hurdles to doing more for Ukraine more quickly. The most significant hurdle is the lack of laws or regulations that would permit the German government to expedite, expand, or reprioritize the supply or provision of materials and services from the German industrial base needed to promote national defense or fulfill its NATO obligations.¹⁴⁰ The German government has taken steps to streamline contracting—such as awarding especially urgent requirements immediately and directly—but German government regulations remain outmoded and insufficient for the challenges at hand.¹⁴¹ If a more forward-leaning defense-production law or regulation existed, Scholz’s government may be able to expand production of critical defense articles or supplies, or at least move German government orders to the head of the queue.

Moreover, even in the absence of laws or regulations that would allow Berlin to compel certain industrial activity in the name of national defense, Germany has no tradition of what some might call strategic contracting.¹⁴² That is, Germany lacks a defense-contracting culture that would enable industry to maintain warm assembly lines, the purpose of which would be to preserve minimal industrial capability between periods of high demand.

Finally, German firms remain reluctant to increase productive capacity dramatically in the absence of long-term commitments and the promise of expedited approvals for industrial expansion.¹⁴³ Leading German defense contractors like Rheinmetall AG or KraussMaffei are reluctant to expand productive capacity without contractual long-term commitments in hand—specifically, 10-year contracts are necessary, versus contracts that are merely two to three years long.¹⁴⁴ Additionally, German defense contractors want to see expedited administrative approvals or waivers granted for any expansion of industrial

139. “The Arms and Military Equipment Germany Is Sending to Ukraine,” Federal Government of Germany (website), updated June 14, 2024, <https://www.bundesregierung.de/breg-en/news/military-support-ukraine-2054992>.

140. Official at the US Embassy Berlin, interview by the authors, October 13, 2022.

141. Aylin Matlé, “Making Germany’s Military Fit for Purpose,” *Internationale Politik Quarterly* (website), February 27, 2023, <https://ip-quarterly.com/en/making-germanys-military-fit-purpose>; and Laura Pitel, “Top German Defence Official Vows to Speed up Procurement in Response to Ukraine War,” *Financial Times* (website), September 10, 2023, <https://www.ft.com/content/82db7d15-e5b6-4d33-99a1-25cbf0e8dfe6>.

142. German defense policy expert, interview by the authors, October 13, 2022.

143. German government official, interview by the authors, June 29, 2023.

144. Official at the US Embassy Berlin, interview by the authors, June 29, 2023.

capacity, versus the standard, exceedingly time-consuming procedures necessary to comply with EU and national regulations.

Even if Germany were able to provide more assistance to Ukraine more quickly, Berlin would still lack any significant insight into the effectiveness of German assistance. Certainly, the volume of assistance—training and especially materiel—has improved significantly, but whether, how, and to what degree any of the assistance is making a difference in helping Ukraine achieve its objectives is unclear. Berlin's feedback channels consist primarily of near-daily contact with its defense attachés in Kyiv and Moscow, reports from Ukrainian government officials, and the observations of German industry officials working inside Ukraine. Germany's existing sources provide, at best, limited insights into effectiveness.

The Outliers

Romania

Romania is one of the most important supporters of Ukraine. Romania has offered significant military, economic, energy, and humanitarian support to Ukraine and has done so for several reasons. First, Romanian officials believe Moscow's strategic aim remains unchanged. Romanian officials believe the Kremlin still hopes to strangle Ukraine's economy, cut Ukraine off from the Black Sea, and roll back the NATO alliance in line with the draft treaties President Putin proposed in December 2021. Should Russia eventually secure a land bridge to Transnistria, it would reinstate a Russian-Romanian land border for the first time in 30 years. Russia is unlikely to reinstate a Russian-Romanian land border in the near term, but Romanian officials believe reinstating the border remains a long-term objective for Russia, and from Bucharest's perspective, no security solution for Ukraine—or for Europe more broadly—can exist without security for neighboring Moldova.¹⁴⁵

Second, despite Ukraine's success in pushing back the Russian Black Sea Fleet, Russia continues to wage naval hybrid warfare in the Black Sea. Russia periodically cuts off large swathes of the Black Sea for snap exercises, and ships coming in and out of the port at Constanța, Romania, face significant risks due to drifting sea mines. Romania, with three minesweepers in service, struggles to address the risk while waiting for an additional two minesweepers from the United Kingdom and for collaboration with the other littoral allies

145. Senior Romanian Ministry of Foreign Affairs official, interview by the authors, November 3, 2022.

to ramp up.¹⁴⁶ Bulgaria, Romania, and Türkiye, formed a Black Sea mine countermeasures task force group in January 2024. The group includes the three countries' ships only but will be open to contributions from other allies and partners.¹⁴⁷ Moreover, drone attacks frequently target Ukraine's Danube River port infrastructure. A kamikaze drone hit a Ukraine-Romania ferry crossing in October 2023, damaging grain storage, leaving wreckage in Romanian territory, and violating Romania's sovereign airspace.¹⁴⁸

Third, Bucharest remains concerned about the security of its offshore natural gas reserves, such as at Neptun Deep, which has the potential to turn Romania into the EU's largest gas producer.¹⁴⁹ Romania expects heightened tensions with Russia in its exclusive economic zone over the next couple of years as a result of Romania's offshore reserves, and Romania's navy currently lacks the capabilities required to deter Russia through outright intimidation. Romania also struggles to address Moscow's continuing harassment of commercial shipping routes—Ukraine's economic lifelines—and the infrastructure on which Ukraine and Romania rely.

For all these reasons, Romania has pledged unwavering political support to Ukraine in its struggle against Russia. Romania has consistently called out Moscow's aggression in Ukraine (and across the wider region), at least since 2014. Romania has lobbied for harsher EU sanctions against Russia, a clear path for Ukraine into NATO, and a clear path for Ukraine and Moldova into the EU. Romania has also long called for more US and broader Western strategic attention to the Black Sea region, especially in the years following the Ukraine crisis of 2013–14 and the destabilization of eastern Ukraine.¹⁵⁰

Beyond providing political support, Romania is a key player in fulfilling Ukraine's immediate economic and energy needs. Romania has made significant

146. "Two Retired Royal Navy Minehunters Sold to Romania," Royal Navy News (website), September 28, 2023, <https://www.royalnavy.mod.uk/news-and-latest-activity/news/2023/september/28/230928-blyth-and-pembroke-sold>.

147. Ali Kucukgocmen and Huseyin Hayatsever, "Turkey, Romania, Bulgaria Sign Deal to Clear Floating Black Sea Mines," Reuters (website), January 11, 2024, <https://www.reuters.com/world/Turkiye-romania-bulgaria-ink-deal-clear-floating-black-sea-mines-2024-01-11/>.

148. "Ukraine-Romania Ferry Crossing Closed after Russian Kamikaze Drone Attack," *New Voice of Ukraine* (website), October 6, 2023, <https://english.nv.ua/nation/russian-kamikaze-drone-attack-targeted-orlivka-isaccea-ferry-crossing-in-odesa-oblast-50358699.html>; and Madalin Necsutu, "Romania-Ukraine Border Point Closed by Russian Drone Attacks," Balkan Insight (website), October 6, 2023, <https://balkaninsight.com/2023/10/06/romania-ukraine-border-point-closed-by-russian-drone-attacks/>.

149. Patrick Heather and Julian Bowden, *Romania's Neptun Deep FID: Can It Be a Regional Gamechanger?* (Oxford, UK: Oxford Institute for Energy Studies, July 2023).

150. Marian Chiriac, "Romania Calls for Permanent NATO Black Sea Force," Balkan Insight (website), February 2, 2016, <https://balkaninsight.com/2016/02/02/romania-calls-for-permanent-nato-black-sea-force-02-01-2016-1/>.

port-infrastructure investments and dredged new shipping lanes through the Danube Delta, positioning Romania to support Ukraine's long-term economic recovery. As a result, Romania has become the most important route for Ukraine's grain exports since Russia's termination of the Black Sea Grain Initiative. Flows of Ukrainian grains through Romania grew from 300,000 tons in March 2022 to nearly three million tons in September 2023, which accounts for 60 percent of Ukraine's total exports.¹⁵¹ Romania has plans to expand transit capacity further so Romania can accommodate up to four million tons of Ukrainian grain exports per month.¹⁵²

Romania has also played a leading role, alongside Poland, in humanitarian efforts to support Ukraine through every phase of the war. In the two months following Russia's full-scale invasion in February 2022, more than one million Ukrainian citizens fled across Ukraine's 650-kilometer-long land border into Romania. Many were on their way to other destinations, but Romanians worked with numerous international organizations and third countries to facilitate the evacuation of diplomatic and other personnel. Groups of Romanian citizens traveled daily to the border to offer support and transit to refugees, and to facilitate logistics and aid deliveries to Ukraine.¹⁵³ In total, Romania has welcomed more than five million Ukrainian refugees.¹⁵⁴

Romania's humanitarian, economic, political, and diplomatic support for Kyiv contrasts sharply with its approach to military aid. Romania is a "strong defender of Ukraine, including [making] robust donations of military aid," but the government has decided to keep the details of Romania's military aid classified.¹⁵⁵ Romanian officials sometimes hint they are providing military assistance, and Ukraine's leadership has openly thanked Romania for its support. In an October 2023 meeting in Kyiv, Ukrainian President Volodymyr Zelensky described his discussions with Romanian President Klaus Iohannis as productive. The two are building a bilateral strategic partnership that,

151. Seth Cropsey et al., *The Battle for the Black Sea! The Importance of Freedom of Navigation and Energy Stakes* (Bucharest: New Strategy Center, 2023), 7.

152. Marton Dunai, "Romania to Bolster Ukraine Export Corridor Despite Russian Attacks," *Financial Times* (website), August 27, 2023, <https://www.ft.com/content/15eef330-54f8-48ef-8a3d-1774e7928957>.

153. See Titus Corlăţean, "Romania's Contribution to the Ukrainian Refugee Crisis," Organization for Economic Co-operation and Development Forum Network (website), June 17, 2022, <https://www.oecd-forum.org/posts/romania-s-contribution-to-the-ukrainian-refugee-crisis> (page discontinued).

154. Joseph Clark, "Austin Praises U.S.-Romania Defense Ties," U.S. Department of Defense (website), December 4, 2023, <https://www.defense.gov/News/News-Stories/Article/Article/3606003/austin-praises-us-romania-defense-ties/>.

155. Clark, "Austin Praises."

Zelensky said, involved “good agreements [with Romania] on weapons.” Zelensky hinted “good news about artillery and air defense” would soon arrive.¹⁵⁶

Recent legislation has facilitated Romania’s provision of military assistance to Ukraine. In April 2022, the Romanian government created a new framework in parliament, and Romania adapted its national legislation to allow Romania to supply weapons to NATO allies as well as to NATO partners, which could include Ukraine.¹⁵⁷ In August 2022, Ukrainian officials reportedly mentioned one series of Romanian assistance packages, which included small arms, ammunition, and spare parts, as well as up to 28 T-72 tanks, of which five were likely operational.¹⁵⁸

According to the Kiel Institute for the World Economy, Romania has publicly announced just one tranche of military aid worth €3 million. Romania delivered that tranche of aid early in the war, including fuel, bulletproof vests, helmets, ammunition, and other military and humanitarian equipment. The Kiel Institute for the World Economy also reported Romania had committed to sending an undisclosed number of weapons in the future.¹⁵⁹ But no publicly available reports detail Romania’s aid.

Oryx, another open-source tracker of support to Ukraine, has explored Ukraine’s direct purchases as well as other EU government purchases from Romanian defense companies. Oryx reported that, between May 2022 and August 2023, Romania had pledged or delivered the following general items, including through third countries. Oryx characterizes the figures below as the low bound of the actual total volume of aid delivered.

- Multiple rocket launchers: 122-millimeter APR-40s
- Towed artillery: 152-millimeter M1981s (D-20s) (May 2023)
- Armored personnel carriers: TAB-71Ms (before November 2022)
- Small arms: DShKM heavy machine guns (before December 2022)

156. “Zelenskiy, Iohannis Discuss Romanian Defense Aid for Ukraine, Doubling Grain Transit,” Radio Free Europe / Radio Liberty (website), October 10, 2023, <https://www.rferl.org/a/russia-drone-strikes-ukraine-counteroffensive-war/32630742.html>.

157. “Romania to Modify Its Laws to Deliver Weapons to Ukraine,” Prensă Latina (website), April 22, 2022, <https://www.plenglish.com/news/2022/04/19/romania-to-modify-its-laws-to-deliver-weapons-to-ukraine/>.

158. Kamil Cațus, “Extremely Cautious. Romania’s Approach to the Russian Invasion of Ukraine,” Centre for Eastern Studies (website), October 14, 2022, <https://www.osw.waw.pl/en/publikacje/analyses/2022-10-14/extremely-cautious-romaniyas-approach-to-russian-invasion-ukraine>.

159. “Ukraine Support Tracker Data,” Kiel Institute for the World Economy (website), updated April 2024, <https://www.ifw-kiel.de/publications/ukraine-support-tracker-data-20758/>. Data as of September 2023.

- Ammunition: 12.7 millimeters for heavy machine guns; PG-7VM and PH-9V rocket-propelled grenades; 73-millimeter PG-9 and 73-millimeter HE 346-E (OG-9) recoilless-rifle rounds; 82-millimeter O-832-MC mortar rounds; and 122-millimeter 9M22U-S rockets
- Military gear: 2,000 helmets and 2,000 ballistic vests
- Miscellaneous items: remote weapon stations and fuel¹⁶⁰

Romanian officials likely decided to keep some of their military-assistance efforts classified for multiple reasons. Romania shares similar concerns with other frontline states like Finland over revealing unacceptable gaps in its national defense. Romanian concerns about a possible land bridge between Russia and Transnistria, as well as ongoing Russian drone attacks that rain debris on Romanian territory, amplify Romania's concerns about gaps in its national defense.

Second, Bucharest fears the possibility of Russian retaliation. Considering Romania's relative weakness vis-à-vis Russian naval and airpower in the Black Sea region, Romania's concern about Russian retaliation is not without merit. Moreover, Romania is concerned about other types of hybrid operations against factories, companies, or other sites associated with Romania's war assistance. Romanians have seen the explosions at ammunition factories and depots in Bulgaria and the assassination attempts against Emilian Gebrev, whose company EMCO produced many of the Soviet-standard shells Ukraine used in the first year of the war.¹⁶¹ No Russian operatives were prosecuted, but industry insiders and former Bulgarian officials say Russia has infiltrated Bulgaria's prosecutorial and security services.¹⁶²

Third, Romania may keep its military support for Ukraine quiet because of historical sensitivities in Romania's bilateral relationship with Ukraine.¹⁶³ Romania has concerns about the treatment of ethnic Romanians in Ukraine, which stem from the loss of the formerly Romanian territories of Bukovina, Hertsa, Cetatea Albă, and Izmail to the Soviet Union—all of which Ukraine

160. "Carpathian Comaraderie: Romania's Military Support for Ukraine," Oryx (website), August 5, 2023, <https://www.oryxspioenkop.com/2023/08/carpathian-camaraderie-romanias.html>.

161. Michael Schwirtz, "How a Poisoning in Bulgaria Exposed Russian Assassins in Europe," *New York Times* (website), December 22, 2019, <https://www.nytimes.com/2019/12/22/world/europe/bulgaria-russia-assassination-squad.html>.

162. Svetoslav Todorov, "Espionage Allegations Rock Bulgaria's Top Security Agencies," *Balkan Insight* (website), February 5, 2024, <https://balkaninsight.com/2024/02/05/espionage-allegations-rock-bulgarias-top-security-agencies/>.

163. Claudiu Degeratu and Leonela Leca, *The Romania and Ukraine Bilateral Agenda. Perspectives for a Roadmap on Security and Defence Sector and Economic Cooperation* (Washington, DC: German Marshall Fund, 2019), 7.

inherited. Some saw Kyiv as continuing a Soviet-style approach to the region, including by restricting education in the Romanian language. Additionally, Romania and Ukraine disagreed over the maritime space surrounding Snake Island, which was also once Romanian and where oil and gas fields exist.

In addition to providing military aid, Romania has made important contributions to international training efforts, including bilaterally, through NATO and the EU. Most notably, Romania recently inaugurated an F-16 training center for Ukrainian pilots. The center will serve as an international hub for F-16 pilot training, building interoperability among NATO allies and with Ukraine. Romania organized the training center to create common operational standards for countries that fly F-16s and to strengthen NATO's ability to address complex threats in the Black Sea region. Romania offered its 86th Air Base in Borcea for the F-16 training center, near the town of Fetești in southeastern Romania.¹⁶⁴

Because of its long border with Ukraine, Romania is a transit and logistics hub for other donors' military assistance, though Romania has played a much less significant role than the logistics hubs in Poland. Romania has also chosen to keep the details of military-assistance transit routes out of sight, including by limiting the times of day when certain convoys may travel. Romania is, nevertheless, an important hub for the maintenance and repair of Western-donated equipment. The German manufacturer Rheinmetall AG, for example, has a hub in Romania for logistics and to maintain the operational readiness of Western-donated systems like self-propelled howitzers, Leopard 2 and Challenger 2 tanks, Marder infantry fighting vehicles, Fuchs armored transport vehicles, and military trucks.¹⁶⁵

Because of the classified nature of Romania's military assistance to Ukraine, assessing the ways in which Romanian officials measure the effectiveness of their efforts is difficult. Public reporting has understandably focused on the steady growth of Romania's ability to export Ukrainian grains via canals in the delta, Romania's port infrastructure at Constanța, and its cooperation with NATO allies, including the demining effort with Bulgaria and Türkiye. Romania is likely focused on ensuring Ukrainian control over Odesa and Mykolayiv as an interim, broad measure of success, while supporting Ukraine's efforts to recover all its internationally recognized territory, including Crimea.

164. Stephen McGrath, "Romania Inaugurates an F-16 Jet Pilot Training Center for NATO Allies and Neighboring Ukraine," Associated Press (website), November 13, 2023, <https://apnews.com/article/romania-nato-ukraine-f16-russia-training-914515e10846720036e9a9c709df2a85>.

165. "Armsmaker Rheinmetall."

The EU's Internal Market Commissioner, Thierry Breton, identified Romania as one of 11 EU countries that host the companies best able to respond to the need for increased capacity.¹⁶⁶ Breton cited a partnership between Romanian defense company ROMARM and an Israeli defense-technology company, to develop a Romanian Artillery Center. Romania is also working with American firm Raytheon Company to begin producing Patriot surface-to-air missiles in Romania—the expectation is these missiles could supply all European Patriot operators.¹⁶⁷ Romania's initiatives will take time to bear fruit. For now, Romania continues to depend heavily on its strategic partnership with the United States and its membership in NATO, and Romania will likely remain too cautious to discuss its military support for Ukraine openly.

But Romania may do considerably more to support Ukraine's defense in the future and publicize more of its assistance. Romania began a significant military-modernization program of its own shortly after Russia's illegal annexation of Crimea. Romania has committed to spending 2 percent of its GDP on defense—2.5 percent as of 2022—and is investing in NATO-interoperable equipment.¹⁶⁸ Romania has tripled its GDP since joining the EU. Having contributed to allied efforts in Afghanistan, Iraq, and the western Balkans, Romania is slowly transitioning its mindset from one of a security recipient inside the alliance to, potentially over the longer term, the mindset of a regional security provider.

Türkiye

Türkiye and Russia have been rivals for a very long time. Through five centuries, the rivalry has frequently led to hostilities—12 wars in all. But somewhat surprisingly, since Russia's second invasion of Ukraine in February 2022, Türkiye has engaged in a careful balancing act, supporting both combatants in different ways while also positioning itself as a neutral arbiter capable of constructively engaging each side. For example, Ankara has both provided critical military assistance to Ukraine and functioned as a vital lifeline for the Russian economy while also negotiating a grain-transit agreement with Kyiv and Moscow.

166. Alexandra Brzozowski and Manuela Preoteasa, "Romania Can Increase Its Defense Production Capacity, EU's Breton Says," Euractiv (website), April 12, 2023, <https://www.euractiv.com/section/defence-and-security/news/romania-can-increase-its-defence-production-capacity-eus-breton-says/>.

167. "Raytheon Wins \$395.8m Contract for Patriot System in Romania," Army Technology (website), May 29, 2018, <https://www.army-technology.com/news/raytheon-wins-395-8m-contract-patriot-system-romania/>.

168. "Romania Commits to NATO Defense Spending Target," Deutsche Welle (website), August 1, 2017, <https://www.dw.com/en/romania-commits-to-nato-defense-spending-target-until-2026/a-39925058>.

In many ways, Türkiye's seemingly Janus-faced approach to the Russia-Ukraine War reflects Ankara's broader balancing of ties to the West on the one hand with its relationship with Russia on the other hand over the last decade. Türkiye's position is somewhat ironic, given Russia's critical role in supporting Türkiye's regional opponents, including Armenia, Cyprus, and Iran, and Syria's Bashar al-Assad regime, and the fact Russia and Türkiye remain strategic competitors.¹⁶⁹ Yet Russia offers Türkiye—specifically Türkiye's recently reelected President Recep Tayyip Erdoğan—a political counterweight to balance the demands of Washington and Brussels. Just as importantly, maintaining Turkish economic ties to Russia—and thereby enabling Moscow to circumvent Western sanctions—has proven important to keeping Türkiye's economy afloat.¹⁷⁰

Trying to have it both ways may seem like strategic dissonance or even crass opportunism, but Türkiye's balancing act reflects Erdoğan's effort to craft a careful path to greater regional leadership, one that pragmatically leverages relationships with all partners and rejects a Manichaean outlook.¹⁷¹ Türkiye's grand strategy over the last decade has been to seek greater independence from the West while simultaneously engaging Russia as both a partner and a regional rival. To date, all sides have appeared willing to tolerate Türkiye's pragmatic balancing act, in part because all sides realized somewhat more benefits from doing so, relative to the costs.

In the context of the Russia-Ukraine War, the strategic imperative driving Ankara's military-assistance effort is to avoid Kyiv's capitulation to Moscow. Such an outcome would worsen the balance of power in the Black Sea region, which historically has rarely been in Türkiye's favor.¹⁷² By cultivating ties to Ukraine and supporting Ukraine's sovereignty and territorial integrity, Türkiye helps to support a vital counterbalance to Moscow.

169. Vicken Cheterian, "Friend and Foe: Russia-Turkey Relations before and after the War in Ukraine," *Small Wars & Insurgencies* 34, no. 7 (February 2023).

170. Patrick Sykes, "Türkiye Boasts of Russia Trade Boom, Defying Push for Sanctions," *Bloomberg* (website), August 12, 2022, <https://www.bloomberg.com/news/articles/2022-08-12/Türkiye-boasts-of-russia-trade-boom-defying-push-for-sanctions>; and Daria Isachenko, *Turkey and Russia: The Logic of Conflictual Cooperation*, Stiftung Wissenschaft und Politik Research Paper 7 (Berlin: Stiftung Wissenschaft und Politik, October 2021).

171. Yevgeniya Gaber, David Lewis, and Graeme P. Herd, "Ukraine and Emerging Trends in Russian and Turkish Foreign Policy," George C. Marshall European Center for Security Studies (website), March 7, 2023, <https://www.marshallcenter.org/en/publications/clock-tower-security-series/strategic-competition-seminar-series-fy23/ukraine-and-emerging-trends-russian-and-turkish-foreign-policy>.

172. Soner Cagaptay, "Unpacking Turkey's Non-Binary Ukraine War Policy," Washington Institute for Near East Policy (website), March 7, 2023, <https://www.washingtoninstitute.org/policy-analysis/unpacking-Türkiyes-non-binary-ukraine-war-policy>.

Counterbalancing Moscow is especially important, given Moscow's annexation of Crimea presaged potential Russian hegemony in the region.¹⁷³

Concerns about Russia led Ankara to participate in the UDCG and send Ukraine 50 used mine-resistant, ambush-protected vehicles valued at roughly €60 million.¹⁷⁴ Perhaps more importantly, though, Ankara has also approved the sale of several dozen critically important Bayraktar drones to Ukraine.¹⁷⁵ The Turkish firm Baykar developed and built the Bayraktar drones and is now building a drone-manufacturing plant in Ukraine that is expected to begin operating in 2025.¹⁷⁶ Additionally, Ankara approved an agreement for Turkish firm RMK Marine to build as many as four corvette warships for Ukraine.¹⁷⁷ Türkiye has also indirectly supported Ukraine by closing the Bosphorus and Dardanelles straits to warships shortly after Russia's second invasion began. Although closing the straits affects both Ukraine and Russia, the implications are far greater for Moscow, since, unlike Kyiv, Russia has many naval assets outside the Black Sea it now cannot use in the war.¹⁷⁸

But much of the bilateral military assistance Türkiye provides to Ukraine is classified, or Ankara characterizes the assistance as a strictly private, commercial exchange between Turkish companies—like Baykar or RMK Marine—and Ukraine. Ankara fears acting too overtly in support of Ukraine will anger Moscow, which would jeopardize Türkiye's lucrative (and vital) trade relationship with Russia.

Over the last several years, Erdoğan put in place several economic policies that seemed only to deepen Türkiye's economic challenges. Inflation has continued to rise, and per capita GDP, employment, and other

173. Mustafa Aydın, "The Long View on Turkish-Russian Rivalry and Cooperation," German Marshall Fund (website), June 8, 2020, <https://www.gmfus.org/news/long-view-turkish-russian-rivalry-and-cooperation>.

174. Burak Ege Bekdil, "Turkey Sends 50 Mine-Resistant Vehicles to Ukraine, with More Expected," *Defense News* (website), August 22, 2022, <https://www.defensenews.com/land/2022/08/22/Turkiye-sends-50-mine-resistant-vehicles-to-ukraine-with-more-expected/>; and "Ukraine Support Tracker," Kiel Institute for the World Economy (website), updated June 6, 2024, <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>. Data as of May 31, 2023.

175. Sinan Tavsan, "With Drone Gift to Ukraine, Turkey's Baykar Wins Fans and Clients," *Nikkei Asia* (website), June 29, 2022, <https://asia.nikkei.com/Politics/Ukraine-war/With-drone-gift-to-Ukraine-Turkiye-s-Baykar-wins-fans-and-clients>.

176. Peshva Magid, "Turkey's Drone Maker Baykar Begins to Build Plant in Ukraine," Reuters (website), February 7, 2024, <https://www.reuters.com/business/acrospace-defense/turkeys-drone-maker-baykar-begins-build-plant-ukraine-2024-02-06/>.

177. Inder Singh Bisht, "Turkey Begins Construction of Second Warship for Ukraine," *Defense Post* (website), August 22, 2023, <https://www.thedefensepost.com/2023/08/22/turkey-second-warship-ukraine/>.

178. Soner Cagaptay, "How Turkey Views Russian Naval Access to the Black Sea," Washington Institute for Near East Policy (website), September 2, 2022, <https://www.washingtoninstitute.org/policy-analysis/how-turkiye-views-russian-naval-access-black-sea>.

measures of economic well-being have steadily fallen.¹⁷⁹ More recently, even as Erdoğan has attempted corrective action, Turks still face serious economic hardships.¹⁸⁰

Given Türkiye's economic challenges, cheap energy resources from Russia have provided an especially valuable lifeline to the Turkish economy, considering Türkiye imports 93 percent of its oil and 99 percent of its natural gas.¹⁸¹ At the same time—and given Western sanctions on Russia and Russian counter-sanctions on the West—Russia has proved eager to purchase Turkish agricultural and manufacturing products. As a result, compared with 2021, Turkish exports to Russia grew by 60 percent in 2022, and Turkish imports of Russian crude oil more than doubled from 2021 to 2022.¹⁸² Overall, trade between Russia and Türkiye spiked in 2022, up 87 percent over 2021.¹⁸³

By keeping its assistance to Ukraine out of the headlines, Ankara also hopes to avoid antagonizing the tens of thousands of Russian expatriates who now call Türkiye home and who have established hundreds of new businesses in Türkiye.¹⁸⁴ Prior to 2022, Russians accounted for just 4.8 percent of the total number of Türkiye's short-term residents. After the war began, that figure more than doubled, to just over 10 percent. As of summer 2023, 145,092 Russians are on short-term residency permits in Türkiye. Subsequently, the increase in temporary residents has led to a rise in Russian real-estate purchases in

179. Jonathan Spicer, "In Türkiye, an Election Reckoning for the Rise and Fall of Erdogan's Economy," Reuters (website), May 14, 2023, <https://www.reuters.com/world/middle-east/Türkiye-an-election-reckoning-rise-fall-erdogans-economy-2023-05-08/>; and Borzou Daragahi, "Erdoğan Is Failing Economics 101," *Foreign Policy* (website), May 25, 2018, <https://foreignpolicy.com/2018/05/25/erdogan-is-a-mad-economist-and-Türkiye-is-his-laboratory/>.

180. Paul Kirby, "Turkey Hikes Interest Rates as Erdogan Stages Economic U-Turn," *BBC News* (website), June 22, 2023, <https://www.bbc.com/news/world-europe-65971791>; and Stefanie Glinski, "Turks Are Running Out of Cash—and Patience," *Foreign Policy* (website), September 7, 2023, <https://foreignpolicy.com/2023/09/07/Türkiye-economy-inflation-erdogan-lira-interest-rate-tourism/>.

181. *International Energy Agency, Turkey 2021: Energy Policy Review* (Paris: International Energy Agency, March 2021), 11.

182. Emil Avdaliani, "Russia and Türkiye: The 2023 Trade and Investment Dynamics," *Russia Briefing* (website), September 1, 2023, <https://www.russia-briefing.com/news/russia-and-turkiye-the-2023-trade-and-investment-dynamics.html/> (page discontinued); and Patricia Cohen, "Turkey Is Strengthening Its Energy Ties with Russia," *New York Times* (website), December 9, 2022, <https://www.nytimes.com/2022/12/09/business/Türkiye-erdogan-energy-russia.html>.

183. Nicolas Bourcier, "Turkey Has Turned into a Trade Platform between Russia and the West," *Le Monde* (website), October 24, 2022, https://www.lemonde.fr/en/international/article/2022/10/24/Türkiye-has-turned-into-a-trade-platform-between-russia-and-the-west_6001620_4.html.

184. Stefanie Glinski, "Türkiye's Balancing Act between Putin and the West," *Foreign Policy* (website), March 6, 2023, <https://foreignpolicy.com/2023/03/06/Türkiye-elections-russia-erdogan-putin-nato/>.

Türkiye. Russians accounted for one quarter of all foreign real-estate purchases in Türkiye in 2022, rising from 5,379 houses in 2021 to 16,582 in 2022.¹⁸⁵

Shorter-term Russian visitors have also flocked to Türkiye. In 2022, Russian tourist visits were up 23 percent over 2021.¹⁸⁶ In 2023, Russia sent more tourists to Türkiye than any other country—nearly 3.5 million Russians visited through July 2023, or just over 13 percent of all foreign tourists, up from 9.5 percent in 2022.¹⁸⁷ Meanwhile, according to the Russian tourism industry, Türkiye is the leading foreign destination for Russian tourists.¹⁸⁸ Russians on holiday, as well as Russians on temporary-residency permits, have been a key source of foreign currency for Türkiye.

Economic and strategic concerns that have compelled Ankara to be pro-Ukraine and yet not anti-Russia were particularly important in the run-up to Türkiye's mid-2023 presidential elections. Although Erdoğan's party dominates the media landscape in Türkiye, his reelection was not assured for two reasons: Erdoğan's policies have resulted in an economic morass for average Turks, and the normally splintered opposition rallied behind a single candidate.

But with the election now in the rearview mirror, observers have some reason to speculate Erdoğan's government is again pivoting, this time toward greater cooperation with Türkiye's Western allies.¹⁸⁹ Early evidence includes Erdoğan's willingness to submit Sweden's NATO membership application to the Turkish parliament and favorable comments about Ukraine deserving NATO membership as well.¹⁹⁰ Whether Türkiye will become more willing to side openly with Ukraine—for example, by clamping down on Russia's evasion of sanctions,

185. Sude Akgundogdu and Collin Trissel, "Turkey's Growing Ukrainian and Russian Communities," Washington Institute for Near East Policy (website), June 28, 2023, <https://www.washingtoninstitute.org/policy-analysis/Turkiyes-growing-ukrainian-and-russian-communities>.

186. Jared Malsin, "U.S. Leans on Turkey to End Russian Flights with American-Made Planes," *Wall Street Journal* (website), January 26, 2023, <https://www.wsj.com/articles/u-s-leans-on-Turkiye-to-end-russian-flights-with-american-made-planes-11674731467>.

187. Republic of Türkiye Ministry of Culture and Tourism, *Number of Arriving-Departing Visitors, Foreigners and Citizens*, Issue 7 (Ankara: Republic of Türkiye Ministry of Culture and Tourism, August 25, 2023).

188. "Around 5 Mln Russian Tourists Expected to Visit Turkey in 2023," TASS (website), August 17, 2023, <https://tass.com/economy/1661781>.

189. Huseyin Hayatsever, Can Sezer, and Burcu Karakas, "Turkey Sets New Western Tilt in Foreign Policy as Economy Weighs," Reuters (website), July 11, 2023, <https://www.reuters.com/world/middle-east/Turkiye-sets-new-western-tilt-foreign-policy-economy-weighs-2023-07-11/>; and Ben Hubbard and Zolan Kanno-Youngs, "Erdogan's Flip on Sweden Signals Mending of Ties with U.S.," *New York Times* (website), July 11, 2023, <https://www.nytimes.com/2023/07/11/world/europe/erdogan-sweden-nato-allies.html>.

190. Todd Prince, "Erdogan Looks West. What Does It Mean for Putin?," Radio Free Europe / Radio Liberty (website), July 22, 2023, <https://www.rferl.org/a/erdogan-looks-west-putin-russia/32514668.html>.

or by providing additional resources from Türkiye's large military holdings—remains unclear. Notably, Türkiye has the second-largest tank fleet in NATO, which only the United States exceeds. Ankara's supply of nearly 2,400 main battle tanks dwarfs the supplies of Greece (1,228), Poland (647), Spain (327), and Germany (321).¹⁹¹ On the other hand, even if Türkiye does not more clearly side with Ukraine against Russia, Ankara may nonetheless play an important role as an interlocutor between Putin's regime and Kyiv.

191. International Institute for Strategic Studies, *The Military Balance 2023* (London: International Institute for Strategic Studies, 2023), 95, 98, 121, 134, 141.

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Analytical Findings

The previous section examined selected European allies' mechanisms and modalities for coordinating assistance to Ukraine in some detail, as well as examples of European allies' national approaches to supporting Ukraine's military. The next section will step back to synthesize and assess key findings and ascertain broad conclusions that are relevant to US policymakers. In some ways, this section will mirror the structure of the case studies, beginning by assessing strategic approaches among allies, then examining materiel, training, operational, and logistical assistance, and ending with a look at allies' attempts to measure the effectiveness of their military support to Ukraine and the outlook for future contributions.

Strategic Approaches

Most European allies lack formal strategies for assisting Ukraine. To some degree, the lack of formal strategies is unsurprising. Even when presented with the relevant intelligence regarding Russia's likely full-scale invasion, and after watching Russia's troops build up along its border with Ukraine, the war still upended most assumptions NATO allies held about their relations with Russia and the nature of their security environment. More importantly for the task of writing strategy, most allied establishments lack the size and capacity of the United States, which has a greater array of resources available to pivot quickly, develop strategy, and respond to strategic shocks.

Nonetheless, the allies pivoted relatively quickly to providing support for Ukraine's defense, including militarily, and allies displayed a remarkable level of political unity in support of Ukraine in the wake of Russia's full-scale invasion. One day after the attack, on February 25, 2022, NATO leaders

met and issued a broad statement condemning Russia's invasion "in the strongest possible terms." The leaders called on Russia to withdraw its forces and cease its aggression, and they offered their "full solidarity" with Ukraine. Leaders also committed to providing political and practical help based on their "unwavering support for the independence, sovereignty and territorial integrity of Ukraine within its internationally recognised borders."¹

Subsequently, NATO allies and partners invested heavily in Ukraine's military defense, though a variety of strategic rationales drove the investment. In some cases, especially along NATO's eastern front, allies feared being next on Russia's invasion list if Ukraine were to fall. Allies such as Poland or the Baltic states see the Russia-Ukraine War as an existential battle for their own survival. One of Romania's initial fears was Russia might succeed in cutting Ukraine off from the Black Sea, which would bring Russia to Romania's borders, create a land bridge to Transnistria, and destabilize Moldova. Relatedly, some allies—especially along the alliance's eastern flank—wanted to impose a strategic defeat on Russia, which has a long history of dominating or attempting to dominate its neighbors across Central and Eastern Europe.

Concerns about Russia's blatant violation of the international rules-based order and the principles underpinning the European security order initially drove some European allies, especially in Northern and Western Europe. Citizens all over the world were appalled by video evidence of the Bucha and Irpin massacres, and European officials stated the video evidence impacted public opinion and drove their provision of military assistance to Ukraine. European allies and partners—including Sweden—felt they had a moral duty to respond. Allies felt a Russian victory in Ukraine could further erode the rules-based order, strengthen the notion might makes right, undercut especially the sovereignty of smaller European states, and subject more civilians to Russian occupation.

A burden-sharing logic, in addition to other security concerns, drives other allies in Europe. That NATO would demonstrate such a high degree of political unity in the invasion's aftermath was not at all clear before the invasion. Allies have since realized the importance of cohesion for defense and deterrence, and a desire to consolidate and strengthen defense and deterrence drives many of the allies. They want to be responsive allies, and they want the world to see them as capable of sharing and willing to share the burden of Euro-Atlantic security with one another and with the United States. In particular, the United Kingdom

1. NATO, "Statement by NATO Heads of State and Government on Russia's Attack on Ukraine," press release (2022) 046, February 25, 2022, https://www.nato.int/cps/en/natohq/official_texts_192489.htm.

and France's efforts to assist Ukraine have provided an opportunity for London and Paris to regain respect and leadership in Europe, in the wake of Brexit for the United Kingdom, and following the failed Minsk process, diplomatic outreach to Russia's leadership, and statements about NATO's brain death for France.

A similar burden-sharing logic explained much of the rest of Europe's willingness to contribute forces to the United States-led military efforts in Iraq and Afghanistan in the 2000s and 2010s. Although a handful of European allies also suffered terrorist attacks, a burden-sharing logic drove most other allies. Allies' strategic rationale—an interest in supporting and being seen to support the United States—integrates their values and their national security concerns within a transactional mindset. By contributing to Euro-Atlantic collective security and defense, especially with troop contributions to NATO's crucial missions and operations, allies can better position themselves within the alliance. Allies hope NATO will then be responsive to them when they need it, and perhaps most importantly, they hope contributing to collective security will help build influence in Washington.

Finally, a handful of allies have cultural affinities with Ukrainians. In particular, the Poles and Lithuanians share a political and cultural history with Ukraine. Much of modern-day Ukraine formed part of the fourteenth-century grand duchy of Lithuania. Later, in the sixteenth century, most of Ukraine fell under Polish control through Poland's union with Lithuania in the Polish-Lithuanian Commonwealth. Ukrainians would later struggle against Poland for independence, but subjugation at the hands of both Nazi Germany and the Soviet Union in the twentieth century has contributed to strong ties between Poland, Lithuania, and Ukraine today.

Materiel, Training, Logistical, and Operational Assistance

Materiel

Ukraine has two centers of gravity vital to its survival in the Russia-Ukraine War: the Ukrainian people's will to resist, and Ukraine's international supporters, especially in the West. The United States and its NATO allies started building security links with Ukraine soon after Ukraine achieved independence. Initially focused on capacity building and security-sector reform, the United States and NATO allies intensified their efforts and deepened their partnerships with Ukraine after Russia's illegal annexation of Crimea in 2014. Their training programs expanded, they began provisioning nonlethal equipment

on a bilateral basis, and debate erupted in Washington, London, and elsewhere about whether and when to supply Ukraine with lethal defensive weapons.²

In the weeks prior to and immediately after Russia's full-scale invasion on February 24, 2022, Western military assistance to Ukraine increased significantly. Some allies began providing Ukraine with lethal military assistance during the fall of 2021. Others, like Poland, pivoted very quickly to supporting Ukraine with materiel in early 2022, digging deep into their inventories right away and giving Ukraine whatever capabilities they could to help Kyiv prepare for its immediate defense. Other European allies, like France, pivoted more slowly and only after concluding diplomatic efforts had failed. Even Germany and Sweden pivoted to providing significant military equipment, marking major shifts in their national policies.³

Some European allies, including Ukraine's staunchest supporters, were frustrated by what they perceived as Washington's overly cautious approach to military assistance, which sought to balance vertical or horizontal escalation risks vis-à-vis Russia and calibrate deliveries of military equipment according to what US officials believed the Armed Forces of Ukraine could operate securely and effectively at different stages in the conflict. Some European allies viewed the United States' calibrated assistance effort as offering too little too late, or just enough to keep Ukraine in the fight, but not enough to win. Meanwhile, other European allies, including the United Kingdom, felt the United States' calibrated approach gave them the flexibility to take on greater risk, leaving Washington to manage strategic deterrence vis-à-vis Russia.

The United States is the largest single donor of military assistance, with over €42 billion committed, but collectively, European donors have committed more—roughly €50 billion.⁴ In aggregate, the EU, its member states, and major non-EU European donors (the United Kingdom and Norway) have committed

2. "NATO's Response to Russia's Invasion of Ukraine," NATO (website), March 21, 2024, https://www.nato.int/cps/en/natohq/topics_192648.htm; and "Explainer: As Ukraine Conflict Intensifies, So Does Debate on Providing Lethal Military Aid," Radio Free Europe / Radio Liberty (website), February 2, 2015, <https://www.rferl.org/a/explain-ukraine-military-aid-western/26826359.html>.

3. "Military Support to Ukraine," Government Offices of Sweden (website), n.d., accessed February 8, 2024 <https://www.government.se/government-policy/swedens-support-to-ukraine/military-support-to-ukraine/>; "Sweden to Send Military Aid to Ukraine in Break with Tradition," *Daily Sabah* (website), February 27, 2022, <https://www.dailysabah.com/world/europe/sweden-to-send-military-aid-to-ukraine-in-break-with-tradition>; and David M. Herszenhorn, Lili Bayer, and Hans von der Burchard, "Germany to Send Ukraine Weapons in Historic Shift on Military Aid," *Politico* (website), February 26, 2022, <https://www.politico.eu/article/ukraine-war-russia-germany-still-blocking-arms-supplies/>.

4. "Ukraine Support Tracker: Europe Clearly Overtakes US, with Total Commitments Now Twice as Large," Kiel Institute for the World Economy (website), July 9, 2023, <https://www.ifw-kiel.de/publications/news/ukraine-support-tracker-europe-clearly-overtakes-us-with-total-commitments-now-twice-as-large/>.

to providing €156 billion in total assistance to Ukraine as of late 2023, whereas the United States has committed to just under €70 billion.⁵ In a comprehensive view of support for Ukraine, burden sharing has matched transatlantic political unity.

But Western commitments of military assistance have not always translated into aid provided, and the sheer number of donors has created its own set of challenges for the Armed Forces of Ukraine. The Kiel Institute for the World Economy notes that, through July 2023, the United States and several European allies committed to providing 659 tanks to Ukraine, but at the time of the publication, the countries had only delivered 419 tanks. Moreover, because assistance efforts involved so many donor countries, Ukraine received wide-ranging equipment and munitions in various states of readiness or in disrepair. The variety of equipment conditions has caused significant sustainment challenges for those fielding the equipment and for those responsible for the equipment's readiness. The SAG-U asks donors to provide 90 days' worth of sustainment for equipment provided to Ukraine, but not all donors have an effective logistics capability.⁶ In some cases, the donated equipment needed repairs before going into Ukraine, and in others, the equipment lacked training or parts entirely.

Even for ostensibly similar equipment—such as 155-millimeter howitzers—different countries produce artillery shells with different quantities of propellant or, in some cases, slightly different design features. Differences in production mean firing a 155-millimeter shell produced by one ally using a 155-millimeter howitzer produced by another ally is sometimes impossible.⁷ One observer closely involved in the assistance effort posited the variety of equipment and related logistical challenges were “overwhelming” Ukraine.⁸

Two additional factors compound the logistical challenges. First, several European allies are sending old equipment to Ukraine. Occasionally, Kyiv has criticized the West for providing old equipment.⁹ For their part, European allies have concerns about sending their more advanced Western equipment to Ukraine,

5. Christoph Trebesch et al., “The Ukraine Support Tracker: Which Countries Help Ukraine and How?,” Kiel working paper no. 2218 (Kiel, DE: Kiel Institute for the World Economy, February 2023), 1–75.

6. Senior SAG-U official, interview by the authors, April 19, 2023.

7. Sam Skove, “Ukraine Learns to Fight with a Hodge-Podge of Foreign Artillery,” *Defense One* (website), September 14, 2023, <https://www.defenseone.com/threats/2023/09/ukraine-using-special-program-manage-foreign-donated-artillery/390322/>. SAG-U has attempted to remedy this issue in coordination with the Armed Forces of Ukraine by developing firing tables to support all types of 155 systems and ammunition.

8. Senior SAG-U official, interview by the authors, April 19, 2023.

9. Justin Scheck and Lara Jakes, “In Rush to Arm Ukraine, Weapons Are Bought but Not Delivered, or Too Broken to Use,” *New York Times* (website), June 19, 2023, <https://www.nytimes.com/2023/06/19/world/europe/ukraine-weapons-howitzers-contracts.html>.

as it might not be replaced, or Russia might capture and exploit the equipment, then hand it to China.¹⁰

The second factor is some allies are not fully transparent with the United States regarding what they are providing to Ukraine.¹¹ The lack of transparency makes sustainment more challenging, since what equipment might need maintenance, parts, or other supplies is unclear.

Despite challenges, European allies have given Ukraine a large amount of military materiel, and most are unable to provide additional military assistance, at least in the short run. Josep Borrell, EU high representative for foreign affairs and security policy, foreshadowed the end of military-assistance capabilities as early as September 2022, when he said weapon stocks among EU member states were severely “depleted.”¹² Since then, European stocks have only dropped further, with several European allies having run out of so-called one-time-use items, such as Stinger anti-aircraft weapons.¹³ In October 2023, NATO’s Military Committee Chair, Dutch Admiral Rob Bauer, noted, “[T]he bottom of the barrel is now visible.”¹⁴

Nonetheless, research for this study revealed civilian authorities in some European capitals pushed to dig deeper into whatever national stocks remain to assist Ukraine, but civilian authorities’ military counterparts argued against such moves and argued for the retention of capability and capacity. Military officials typically couch arguments in terms of needing to retain some minimum stocks for worst-case scenarios, assessments of which are inherently subjective and difficult to counter, given the unpredictable threat Russia poses. What military officials in these countries sometimes leave unstated is they fear whatever weapons and other materiel countries donate to Ukraine are gone for good and that civilian counterparts will not make good on promises to replenish lost capacity or capability.

Even if civilian authorities in allied capitals have the will to replenish drained stockpiles, they do not clearly have the resources and capability

10. Senior US civilian official at US Army Europe and Africa, interview by the authors, April 19, 2023.

11. US military official assigned to the Joint Staff, interview by the authors, March 14, 2023; and senior US civilian official at US Army Europe and Africa, interview by the authors, April 19, 2023.

12. Wilhelmine Preussen, “EU Countries Are Running Out of Weapons, Says Borrell,” *Politico* (website), September 5, 2022, <https://www.politico.eu/article/borrell-warn-eu-countries-running-out-weapons/>.

13. Mike Stone, “Focus: Shrinking U.S. Stinger Missile Supply Faces Re-stocking Challenges,” Reuters (website), April 26, 2022, <https://www.reuters.com/world/shrinking-us-stinger-missile-supply-faces-re-stocking-challenges-2022-04-26/>.

14. John Vandiver, “West Must Kick Arms Production into High Gear to Fill ‘Bottom of Barrel’ Stocks, Experts Say,” *Stars and Stripes* (website), October 4, 2023, <https://www.stripes.com/theaters/europe/2023-10-04/weapon-stockpiles-ukraine-nato-11590298.html>.

to do so.¹⁵ Some smaller countries in Eastern Europe, including Bulgaria, which this study does not cover in-depth, could give more of their Soviet legacy equipment. Smaller countries, however, need confidence the US Foreign Military Financing program will be responsive enough to help fill the gap or support their military recapitalization quickly. Some countries also fear that the EPF, which the EU designed to do something similar, will not deliver quickly enough; or they fear that dissenting countries in the EU, such as Hungary, could politically manipulate the EPF. If the United States and the EU do not fill existing gaps, such as the S-300 delivery in Slovakia, officials in some smaller countries fear pro-Russian, or at least anti-European, parties could return to power.

European allies—even those closest to the Russian threat—appear unwilling or unable to implement a wartime approach to industrial production. Many have reached the maximum output possible within existing production facilities.¹⁶ Some are running ammunition factories at full capacity but still need supplies, investment, or site security. European allies are fearful of Russian retaliation in the form of sabotage and assassinations, and, in some cases, they also fear their own governments' inability or unwillingness to carry out the necessary investigations into Russian activities or to carry out prosecutions.¹⁷

In terms of defense-industrial production, few of the countries examined in the case-studies section of this study have legislation equivalent to the United States' Defense Production Act. A regulation like the Defense Production Act would allow for the central government to direct the prioritization of specific defense contracts or procurement orders or would provide the legal and fiscal basis to provide loan guarantees or other financing assistance. The EU is considering such an act for the European defense industry, but as of late 2023, the European Commission is still in the early stages of formulating the effort.¹⁸

Meanwhile, the EU has approved a three-part plan to provide more ammunition to Ukraine. Under the first part, EU member states committed €1 billion worth of ammunition from their remaining stocks. The second

15. Laurence Norman and Nancy A. Youssef, "U.S., Allies Seek Long-Term Military Aid for Ukraine to Show West's Resolve," *Wall Street Journal* (website), August 29, 2023, <https://www.wsj.com/world/europe/u-s-allies-seek-long-term-military-aid-for-ukraine-to-show-west-s-resolve-6964c66f>.

16. Daniel Michaels and Doug Cameron, "Wars Push Up Demand for Weapons, Sparking Fears of Shortages," *Wall Street Journal* (website), October 29, 2023, <https://www.wsj.com/world/europe/wars-push-up-demand-for-weapons-sparking-fears-of-shortages-57d664ad>.

17. "Russia Is Ramping Up Sabotage across Europe," *Economist* (website), May 12, 2024, <https://www.economist.com/europe/2024/05/12/russia-is-ramping-up-sabotage-across-europe>; and Lili Bayer, "Why Europe Can't Protect Itself against Russian Sabotage Threat," *Politico* (website), September 29, 2022, <https://www.politico.eu/article/europe-plots-near-impossible-task-defending-structures-powering-life/>.

18. Aurélie Pugnet, "European Commission Mulls New European Defence Act before End of Year," *Euractiv* (website), September 4, 2023, <https://www.euractiv.com/section/defence-and-security/news/european-commission-mulls-new-european-defence-act-before-end-of-year/>.

part consists of joint orders of an additional €1 billion worth of ammunition. The third part consists of €500 million in EU funds to bolster industrial production capacities for ground-to-ground and artillery ammunition as well as missiles.¹⁹ Nonetheless, the biggest challenge remains productive capacity—and at present, only limited evidence of allied efforts to replenish drained military supplies exists.²⁰ Officials in the United Kingdom, for example, noted the British government and others, too, failed to generate the demand signal early enough in the war. European defense contractors want assurances—in the form of long-term contracts beyond merely the next two to three years—demand will not simply drop off a cliff if hostilities suddenly end.²¹

Even with the additional funding available from the EU, high inflation is frustrating allies' efforts to recapitalize their inventories.²² In the United States, so-called defense inflation is running at roughly 5 percent year over year, the highest rate in decades.²³ A senior NATO official recently acknowledged allies are “paying more and more for exactly the same.”²⁴

In theory, improvements in the quality of military equipment enable reductions in the quantity procured. But European allied stocks were already so low in nearly every category—in some cases, allies culled entire capability areas from 1991 to 2014, especially smaller allies—the allies will necessarily find themselves looking well beyond Europe to meet their own commitments to Ukraine.²⁵

In the absence of sufficient Western supplies, and with growing concerns about the durability of the West's commitment, Ukrainians are stepping up domestic arms production insofar as they can, given wartime conditions, limited suppliers, and the difficulties of maintaining production in the face

19. Alice Tidey, “Historic: EU Agrees €500 Million Deal to Ramp Up Production of Ammunition for Ukraine,” Euronews (website), July 7, 2023, <https://www.euronews.com/my-europe/2023/07/07/eu-agrees-500-million-deal-to-ramp-up-production-of-munition-for-ukraine-and-for-own-stock>.

20. Official at the US Embassy Berlin, interview by the authors, June 29, 2023.

21. Think tank expert based in Berlin, Germany, interview by the authors, October 13, 2022; official at the US Embassy Berlin, interview by the authors, June 29, 2023; and Michaels and Cameron, “Wars Push Up.”

22. Gwladys Fouche and Sabine Siebold, “Rising Ammunition Prices Set Back NATO Efforts to Boost Security, Official Says,” Reuters (website), September 16, 2023, <https://www.reuters.com/world/rising-ammunition-prices-set-back-nato-efforts-boost-security-official-2023-09-16/>.

23. “The Cost of the Global Arms Race,” *Economist* (website), May 23, 2023, <https://www.economist.com/international/2023/05/23/the-cost-of-the-global-arms-race>.

24. “Joint Press Conference,” NATO (website), September 16, 2023, https://www.nato.int/cps/en/natohq/opinions_218279.htm.

25. Nicholas Burns and Douglas Lute, *NATO at Seventy: An Alliance in Crisis* (Cambridge, MA: Belfer Center for Science and International Affairs, February 2019).

of Russian attacks on the Ukrainian energy grid and other infrastructure.²⁶ Sometimes, Ukraine increases arms production through enhanced collaboration with Western governments. For example, Ukrainian and Swedish leaders signed a letter of intent in August 2023 to strengthen cooperation “in production, operation, training, and servicing of the CV90 [infantry fighting vehicle] platform.”²⁷ In other cases, Ukraine is signing agreements directly with Western defense contractors to bring production into Ukraine. German arms manufacturer Rheinmetall AG recently signed an agreement with the Ukrainian government, for example, to create a joint venture that will eventually produce arms in Ukraine.²⁸

Training

The United States and several European allies have long-standing security-cooperation relationships with Ukraine. Today, more than a dozen NATO allies contribute to training AFU personnel; the United States and European allies have trained over 113,000 Ukrainian troops to date at 88 different sites.²⁹

The path to achieving large-scale training has not always been smooth. In the aftermath of the 2014 invasion, some of the most significant challenges in delivering training were the result of cultural divisions between the Armed Forces of Ukraine, which was still dominated by Soviet culture (especially at the higher levels) and foreign advisers who arrived on short deployments “with a peacetime, bureaucratic approach” and never developed a deep understanding of the local context.³⁰ After the 2016 Wales summit, allies agreed NATO standardization agreements would be the basis for the bilateral training of the Armed Forces of Ukraine. Although standardization agreements provide common objectives and end states for training or other

26. Veronika Melkozerova, “Facing Threat of Trump’s Return, Ukrainians Ramp Up Homegrown Arms Industry,” *Politico* (website), August 21, 2023, <https://www.politico.eu/article/return-trump-lack-foreign-support-looming-ukraine-war-ramp-up-homegrown-weapon-industry/>.

27. “Joint Statement of Intent between the Prime Minister of Sweden and the President of Ukraine,” Government Offices of Sweden (website), August 19, 2023, <https://www.government.se/statements/2023/08/joint-statement-of-intent-between-the-prime-minister-of-sweden-and-the-president-of-ukraine/>.

28. Olena Harmash and Pavel Polityuk, “Ukraine Launches Joint Venture with German Arms Maker Rheinmetall – PM,” Reuters (website), October 24, 2023, <https://www.reuters.com/business/aerospace-defense/ukraine-venture-with-german-arms-maker-rheinmetall-pm-2023-10-24/>.

29. Bryant Harris, “‘As Long as It Takes’: US Army Doubles Down on Ukraine Training Goals,” *Defense News* (website), October 10, 2023, <https://www.defensenews.com/training-sim/2023/10/10/as-long-as-it-takes-us-army-doubles-down-on-ukraine-training-goals/>.

30. Jeffrey Mankoff, ed., *Lessons and Legacies of the War in Ukraine: Conference Report, Strategic Perspectives* no. 43 (Washington, DC: National Defense University Press, February 2024), 70.

standards, they typically provide only limited details about how to achieve the objectives.

More recently, with so many allies providing training of some sort, Ukrainian forces have experienced numerous training methodologies and styles. For example, in some cases, the content offered on the same weapons platform was different, depending on which ally offered the content.³¹ In response to such challenges, SAG-U has worked hard to bring about a degree of consistency in training, including through common programs of instruction, but true standardization remains limited.³² With numerous armies with differing traditions and cultures implementing training, training is bound to differ somewhat on the ground.

On a related point, the increasing number of AFU training activities across Europe put a premium on interpreters. Some evidence shows the limited number of interpreters with adequate knowledge of military vocabulary has in turn limited the effectiveness of training offered to Ukrainian forces.³³

The growing focus on training more AFU soldiers has also resulted in reduced training time for allied forces.³⁴ Just as productive capacity includes limitations in terms of materiel, throughput includes limitations in terms of effective military training. Live-fire ranges and maneuver training areas are limited in number and size across Europe, thus causing greater competition for training time slots.

Although numerous allies offer high-quality individual training and platform training has improved significantly, only limited evidence of effective, larger-scale collective training exists. In part, the absence of large-scale training is a function of available training facilities.³⁵ The United States can house and train up to nine brigades at its major training facilities in Europe, but other key allies like the United Kingdom or Germany lack the United States' capacity and instead focus more on delivering and improving their platform training.³⁶

31. Senior US civilian assigned to US Army Europe and Africa, interview by the authors, April 19, 2023.

32. British military officials assigned to SAG-U, interview by the authors, April 19, 2023; and US civilian official assigned to United States European Command, interview by the authors, April 20, 2023.

33. Igor Kossov, "New Brigade Bears Heavy Brunt of Russia's Onslaught in Kharkiv Oblast," *Kyiv Independent* (website), September 1, 2023, <https://kyivindependent.com/new-brigade-bears-heavy-brunt-of-russias-onslaught-in-kharkiv-oblast/>.

34. Two US military officials assigned to US Army Europe and Africa, interview by the authors, April 19, 2023.

35. British military officials assigned to SAG-U, interview by the authors, April 19, 2023.

36. Senior SAG-U official, interview by the authors, April 19, 2023.

Some evidence also indicates Ukrainian forces have not received training that accurately reflects battlefield conditions. Western training has emphasized combined arms, urban combat, or other skills at the expense of more partner-centric collective training.³⁷ The disconnect between Western training and conditions on the battlefield means Ukrainian forces have, for example, reportedly struggled to employ small-unit tactics they learned from Western trainers because Ukrainian forces lack the necessary cover on the battlefield. In other cases, the training had not adequately focused on how to dislodge entrenched enemy forces or coordinate infantry assaults with artillery and drone support. Collective training efforts have not sufficiently incorporated Ukrainian lessons learned from extant battlefield conditions.³⁸

To some degree, the disjointedness between training and battlefield conditions is probably inevitable, for at least two reasons. First, Western military officials are unable to enter Ukraine and observe the fighting up close. Doing so might enable a more robust feedback loop between current fighting conditions and Western training methodologies. Second, Western militaries have little experience in the kind of war Russia and Ukraine are fighting today, which blends trench warfare with advanced technology like drones and precision munitions.

Another issue complicating Ukrainian forces' ability to use Western training is an enduring Soviet-era military culture among some Ukrainians. The difficulty of turning former Warsaw Pact forces into professional militaries has long been familiar to NATO.³⁹ Admittedly, Western training efforts in Ukraine between 2014 and 2022 focused on building an Armed Forces of Ukraine that could defend the line in the Donetsk Basin, with little emphasis on complex maneuver warfare.⁴⁰ Nonetheless, the challenges associated with the Soviet-era culture endure in some quarters of the Armed Forces of Ukraine, including among older conscripts called into military service.⁴¹ Challenges from the Soviet-era culture often manifest in terms of command and control, with Ukrainian unit commanders sometimes less willing to employ a decentralized (Western) approach at scale.

37. Mankoff, *Lessons and Legacies*, 73.

38. Kossov, "New Brigade"; Jamie Dettmer, "Ukraine's Forces Say NATO Trained Them for Wrong Fight," *Politico* (website), September 22, 2023, <https://www.politico.eu/article/ukraine-war-army-nato-trained-them-wrong-fight/>; and Francis Farrell, "Overcoming Setbacks, NATO-Trained Brigade Breaches Surovikin Line in Zaporizhzhia Oblast," *Kyiv Independent* (website), September 26, 2023, <https://kyivindependent.com/overcoming-setbacks-nato-trained-brigade-breaches-surovikin-line-in-zaporizhzhia-oblast/>.

39. Thomas-Durell Young, *Anatomy of Post-Communist European Defense Institutions: The Mirage of Military Modernity* (London: Bloomsbury Academic, 2018).

40. Mankoff, *Lessons and Legacies*, 73.

41. German Chancellery official, interview by the authors, June 29, 2023; and Sam Skove, "Some Ukrainian Troops Are Still Using Soviet Methods, Despite US Training," *Defense One* (website), April 7, 2023, <https://www.defenseone.com/threats/2023/04/some-ukrainian-troops-are-still-using-soviet-methods-despite-us-training/384967/>.

Ukrainian forces have shown resilience and creativity on the battlefield, but Ukrainian forces do not fully fight as a Western military would.

Operational Assistance

In addition to materiel and training assistance, some evidence indicates allies have provided Ukraine with operational assistance, such as real-time intelligence to the Armed Forces of Ukraine, both at bilateral and multilateral (EU) levels.⁴² This unclassified study confines further discussion and analysis to a classified annex.

Logistical Assistance

In addition to billions of dollars in military materiel and training modules, US allies and partners in Europe have also provided far less quantifiable but no less vital assistance to Ukraine in the form of logistical support. Specifically, access to allied facilities and infrastructure, basing authority, and overflight rights have been critical to the United States–led effort to help Ukraine defend itself.

As noted earlier in this study, a handful of allies bordering Ukraine have played an especially important role. Poland stands out in terms of its support, given its willingness to use, and even expand, civilian infrastructure for military purposes. Poland’s commitment to infrastructure has been especially pronounced for railway lines and terminals, and for the Rzeszów-Jasionka Airport, a small civilian facility that primarily Polish national and budget airlines use and that was previously noted for its underuse.⁴³ After February 2022, the Rzeszów-Jasionka Airport quickly became the most important hub in Europe for Western and, indeed, all international military assistance flowing into Ukraine.⁴⁴

Other allies that border Ukraine have also delivered significant logistics support for the flow of military assistance into Ukraine. Romania’s logistics support has been especially significant, and Romania also has a long land border

42. “EU to Help Ukraine with Intelligence from Own Satellite Centre – EU’s Borrell,” Reuters (website), February 28, 2022, <https://www.reuters.com/world/europe/eu-help-ukraine-with-intelligence-own-satellite-centre-eus-borrell-2022-02-28/>; and Holger Stark, “Hilfe, die zum Ziel führt,” *Die Zeit* (website), September 28, 2022, <https://www.zeit.de/2022/40/ukraine-russland-krieg-bnd-geheimdienstinformationen>.

43. Christian Lowe and Wiktor Szary, “Special Report: EU Funds Help Poland Build ‘Ghost’ Airports,” Reuters (website), December 14, 2014, <https://www.reuters.com/article/us-poland-airports-specialreport-idUSKBN0JS06K20141214>.

44. Sam Skove, “How a Tiny Polish Airport Became a Key Node for Western Aid to Ukraine,” Defense One (website), September 11, 2023, <https://www.defenseone.com/threats/2023/09/how-tiny-polish-airport-became-key-node-western-aid-ukraine/390165/>.

with Ukraine. Truck convoys have passed through Romania and into Ukraine carrying equipment, a route which may benefit from Romania's decision to invest in the so-called Moldova Highway, an infrastructure project connecting Bucharest with the bigger cities in Romania's eastern and northeastern regions.⁴⁵

Even those allies that are less forthrightly pro-Ukraine than Poland or Romania have also contributed to the flow of materiel, training, and sustainment support to Kyiv. Hungary is an example insofar as it does not object to the movement of materiel across its territory that is ultimately bound for Ukraine. Slovakia's new prime minister, Robert Fico, who as a candidate claimed he would not even send one bullet to Ukraine if elected, reversed course once in office and has agreed to continue providing assistance.⁴⁶

Allies less proximate to the war zone have also played important roles. For example, the United States has provided materiel to Ukraine from its pre-positioned equipment-storage sites, some of which are in Western Europe.⁴⁷ Without the ability to move materiel from storage sites across Europe into Ukraine, the flow of assistance would have been more difficult and time-consuming.

Access, basing, and transit rights do not simply appear upon request. Allied relationships built up over years, and sometimes decades, serve to ease the challenges that arise at a time of crisis or conflict. Officials cite both the long-standing US forward presence across Europe as well as NATO's framework for allied cooperation as two key variables.⁴⁸ Other officials noted long-standing personal relationships between the servicemembers in their countries and their Ukrainian counterparts. In comparison, such factors enhancing allyship are absent in the Indo-Pacific theater—outside Japan and South Korea, that is—and officials interviewed for this study noted the contrast between Europe and the Indo-Pacific.

45. Andrei Chirileasa, "Romania Signs First Two Contracts for Vital Highway in the Eastern Part of the Country," *Romania-Insider.com* (website), June 17, 2022, <https://www.romania-insider.com/moldova-highway-contracts-signed-2022>.

46. Jan Lopatka and Radovan Stoklasa, "Not a Single Round': Slovak Election Could See Kyiv Lose Staunch Ally," *Reuters* (website), September 21, 2023, <https://www.reuters.com/world/europe/not-single-round-slovak-election-could-see-kyiv-lose-staunch-ally-2023-09-21/>; and "Ukrainian and Slovak PMs Agree to 'New Pragmatism' to Aid Strained Relations," *Radio Free Europe / Radio Liberty* (website), January 24, 2024, <https://www.rferl.org/a/ukraine-slovakia-shmyhal-meeting-pragmatism-relations-aid/32790125.html>.

47. Gordon Lubold, Nancy A. Youssef, and Brett Forrest, "U.S. Reaches Deep into Its Global Ammunition Stockpiles to Help Ukraine," *Wall Street Journal* (website), March 16, 2023, <https://www.wsj.com/articles/u-s-reaches-deep-into-its-global-ammunition-stockpiles-to-help-ukraine-8224d985>.

48. Senior SAG-U official, interview by the authors, April 19, 2023.

Measures of Effectiveness

Although SAG-U has started a lessons-learned process, none of the countries examined as part of this study have succeeded in developing their own robust measures of effectiveness to assess the value of their national contributions to Ukraine's war effort. Understanding which specific efforts to assist Ukraine have been most effective and why has proven difficult for donors, as well as understanding which efforts might have been counterproductive. Donor perspectives on success also reflect various national foreign and security-policy priorities, and perspectives changed during different phases of the war as Ukraine's needs evolved and as national priorities evolved.

Certainly, the number of square kilometers—or square meters—of occupied territory the Ukrainian forces have regained is one way to measure effectiveness, and this measure of success is extremely important to Kyiv. In a speech to the US National Defense University on December 11, 2023, Zelensky celebrated the fact Ukraine had retaken 50 percent of the territory Russia had seized, and Zelensky presented the reclaimed territory as evidence of Ukraine's success thus far.⁴⁹ But territory gained and lost is a blunt measure that provides little nuance. Measuring the amount of reclaimed territory may offer a snapshot of who has the momentum at a particular point in time, but it offers little guidance as to where to concentrate or refine donor efforts or to shift resources from underperforming to more fruitful initiatives.

Open-source reporting is another possible source of information on the effectiveness of allied assistance. Since the war began in February 2022, increasing numbers of reporters and experts have ventured into Ukraine to learn and write about the unfolding conflict. More than 12,000 reporters have been accredited to cover the war.⁵⁰ But, in what is likely a careful effort to control the narrative of Ukraine's struggle against Russia, the Ukrainian government has increased its control over reporters' access to the front lines, limiting the locales and information to which reporters have access.⁵¹ In some cases, Ukraine has

49. "Freedom Must Always Prevail When Challenged – Speech by the President of Ukraine at the National Defense University of the United States," President of Ukraine (website), December 11, 2023, <https://www.president.gov.ua/en/news/svoboda-povinna-peremagati-zavzhdi-koli-htos-kidaye-yij-vikl-87673>.

50. "Ukraine: A Year of Information Warfare in Numbers," Reporters without Borders (website), February 20, 2023, <https://rsf.org/en/ukraine-year-information-warfare-numbers>.

51. Liam Scott, "New Rules Limit Media's Ability to Cover Ukraine War," Voice of America (website), March 31, 2023, <https://www.voanews.com/a/new-rules-limit-media-s-ability-to-cover-ukraine-war/7031212.html>.

threatened, revoked, or denied Western journalists' credentials if the journalists are accused of breaking the rules.⁵²

Western academics and policy analysts are arguably under even tighter restrictions since their episodic encounters with Ukrainian military forces are more constrained and only possible with Ukrainian government escorts. None of the restrictions on access or information necessarily mean objective or even highly critical open-source information regarding Western assistance cannot make its way out of Ukraine, as a September 26, 2023, story in the *Kyiv Independent* regarding the inadequacy of Western training, which is cited elsewhere in this study, made clear. But, given the limits on access to unfiltered, unclassified information about the effectiveness of Western military assistance in all its forms, open-source reporting is of limited value.

In lieu of formal measures of effectiveness, and given the limits of open-source reporting, the allies have had to rely on a variety of anecdotal and typically secondhand feedback mechanisms. In some cases, allies have looked for measures of effectiveness that relate to their national security or to foreign policy priorities for Ukraine, for the region, or for themselves. The United Kingdom, for example, which sees itself as a maritime nation, wants to facilitate Ukraine's grain trade, so London has prioritized helping Ukraine push the Russian Black Sea Fleet back as far as possible from Odesa and the Danube Delta. Evidence of Ukraine pushing back the fleet meant success.⁵³ Romania, meanwhile, shared the United Kingdom's objective, but focused its measures of success on the growing tonnage of Ukrainian grains passing through Romania's ports or territorial waters on their way to market.

The various European allies' embassy personnel in Ukraine play an important role in shaping the way the allies measure the success of their security assistance to Ukraine. In most cases, allies' embassy personnel are confined to Kyiv, so they have limited access to information coming in from the front lines or depend on Ukrainian interlocutors in the capital to provide frontline updates. The presence of SAG-U leadership in Kyiv for extended periods of time, beginning in late 2023, may eventually result in greater insights into effectiveness. But such insights may remain limited if SAG-U personnel are confined to the

52. Ben Smith, "Inside the High-Stakes Clash for Control of Ukraine's Story," Semafor (website), June 5, 2023, <https://www.semafor.com/article/06/04/2023/inside-the-high-stakes-clash-for-control-of-ukraines-story>.

53. Mansur Mirovalev, "They Miscalculated': Ukraine Turns the Tables on Russia's Black Sea Fleet," *Al Jazeera* (website), October 6, 2023, <https://www.aljazeera.com/news/2023/10/6/they-miscalculated-ukraine-turns-the-tables-on-russias-black-sea-fleet>.

capital along with embassy personnel.⁵⁴ In some limited instances, a handful of allies permit their embassy personnel to travel beyond Kyiv; the classified annex to this study further examines the subject of personnel traveling beyond Kyiv.

Another means of gaining insights into whether and how allied assistance in Ukraine is effective is through person-to-person contacts, or rather through soldier-to-soldier contacts. Given contacts between Ukrainian military personnel and military personnel from allied countries like Lithuania, Poland, or the United Kingdom, began well before February 2022, professional relationships and even friendships have formed. Relationships between personnel have become an important, if not necessarily scientific, source of insights into whether and how Western assistance has proven effective and where the assistance is falling short.

Also, a small but growing number of Western defense contractors are operating in Ukraine.⁵⁵ Contractors that perform maintenance on Western-supplied military equipment in Ukraine or, in some cases, from remote locations, can assess to some degree how Western-supplied equipment is performing by way of video chats with soldiers on the front lines or by seeing the state of the equipment upon its arrival at a repair facility. Defense contractors can then pass information about equipment performance on to Western military officials. Although Western defense contractors may not have witnessed how Western equipment came to be damaged, the contractors can at least see firsthand what damage occurred and, therefore, can provide some minimal insights into what is effective and what is not.

Finally, some Western donors, including the United Kingdom, are also thinking about measures of success in terms of materiel requirements fulfilled—both for Ukraine’s immediate battlefield needs and for its future force requirements. Given Ukraine’s voracious demand for ammunition and air-defense systems, and the limited productive capacity across Europe, issuing and then fulfilling contractual commitments provides a crude sense of whether Western efforts are improving. But satisfying an equipment-demand signal does not necessarily speak to effectiveness in the broader assistance effort.

54. Julian E. Barnes et al., “U.S. and Ukraine Search for a New Strategy after Failed Counteroffensive,” *New York Times* (website), December 11, 2023, <https://www.nytimes.com/2023/12/11/us/politics/us-ukraine-war-strategy.html>.

55. Olena Harmash, “Ukraine Lures Western Weapons Makers to Transform Defence Industry,” Reuters (website), September 30, 2023, <https://www.reuters.com/business/aerospace-defense/ukraine-lures-western-weapons-makers-transform-defence-industry-2023-09-30/>.

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Implications for the United States

The analytical findings explained above hold an array of implications for US strategy and its implementation, which have come to rely heavily on allies and partners to manage the strategic competition with Russia and China. As noted in the introduction to this study, Washington views allies as a center of gravity in its efforts to counter Russian and Chinese aggression in all its forms. Given allies' importance, the United States can learn much from the Russia-Ukraine War about the role US allies and partners can or might play in other crises or conflicts. This next section will identify several of the most salient implications for Washington, particularly in terms of escalation risk, burden-sharing challenges, the role of US leadership among allies, and US posture overseas.

Escalation Risk

Political scientists who study alliances identify entrapment as one of two key risks facing any country in an alliance.¹ Entrapment occurs when a country does something that leads an aggressor to attack the country, then subsequently calls on its allies to assist in its defense. As a result, the attacked country draws—or entraps—allies into a conflict they may have had absolutely no role in initiating.

In the context of the Russia-Ukraine War, if a US ally provided assistance to Ukraine to which Moscow responded with an attack on that ally, that attack could lead to the invocation of NATO's mutual-defense clause. Members of NATO could perceive Moscow's response as proportionate and aimed at merely signaling Russia's displeasure. Conversely, Moscow's response could entail either a vertical escalation (employing new kinds of weapons or new types of targets) or a horizontal escalation (expanding the geographic or functional

1. Thomas J. Christensen and Jack Snyder, "Chain Gangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity," *International Organization* 44, no. 2 (Spring 1990): 137–68.

scope of a conflict).² Regardless, the alliance’s collective-defense clause—Article 5 of NATO’s founding treaty—states NATO will consider an attack on one ally an attack on all. Article 5 requires allies to “assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force.”³ The risk is the Russia-Ukraine War could escalate into a conflict between NATO and Russia, directly involving the United States, with potential strategic implications well beyond Eastern Europe.

Although the scenario outlined above has not played out, American officials have at times expressed concern about the robust nature of the military assistance some European allies have provided to Ukraine.⁴ Western intelligence agencies evince insights into Russian military affairs, but the West does not know every detail of the Kremlin’s thinking about the war.⁵ The United States and its European allies may not fully understand Russia’s redlines on any given day or how Russia’s positions may evolve over time.⁶ The view among some US officials closest to the Western effort to help Ukraine is Moscow is eager to curtail Western support for Ukraine and escalation is therefore a serious risk.⁷

The US perspective on escalation is not exclusive to Americans—some key European allies have the same concerns about activities other European allies have undertaken in support of Ukraine that might lead to escalation.⁸ Romania, for example, is especially sensitive to the possibility of political destabilization in Chişinău, or the spillover of war into Moldova, which would in turn pose major security challenges for Bucharest. But at the same time, the Bucha and Irpin massacres moved a greater number of Europeans to want to support Ukraine.⁹ Some European capitals are more risk tolerant

2. Forrest E. Morgan et al., *Dangerous Thresholds: Managing Escalation in the 21st Century* (Santa Monica, CA: RAND Corporation, 2008), 18.

3. North Atlantic Treaty, Apr. 4, 1949, 63 Stat. 2241, 34 U.N.T.S. 243.

4. US civilian official assigned to United States European Command (EUCOM), interview by the authors, April 20, 2023.

5. For example, see Ellen Nakashima and Shane Harris, “U.S. Spies Learned in Mid-June Prigozhin Was Planning Armed Action in Russia,” *Washington Post* (website), June 24, 2023, <https://www.washingtonpost.com/national-security/2023/06/24/us-intelligence-prigozhin-putin/>.

6. US civilian official assigned to EUCOM, interview by the authors, April 20, 2023; and German Chancellery official, interview by the authors, June 29, 2023.

7. Senior civilian official assigned to Supreme Headquarters Allied Powers Europe, interview by the authors, September 9, 2022; US civilian official assigned to EUCOM, interview by the authors, April 20, 2023; US official at the US Embassy in Lithuania, interview by the authors, May 10, 2023; and US Department of Defense official, interview by the authors, October 17, 2023.

8. Senior official at the German Embassy Washington, interview by the authors, March 16, 2023.

9. Masha Froliak, Yousur Al-Hlou, and Haley Willis, “Their Final Moments: Victims of a Russian Atrocity in Bucha,” *New York Times* (website), December 21, 2022, <https://www.nytimes.com/interactive/2022/12/21/world/europe/bucha-ukraine-massacre-victims.html>.

than the United States because of Russia's broader campaign and Russia's efforts to undermine Euro-Atlantic unity and target allies through hybrid means. The evidence of war crimes has also had a dramatic impact on opinions across Europe at the public and elite levels, compelling decisionmakers to strengthen support for Ukraine, despite the risks.

In part, concern about escalation explains why the United States has incrementally increased the capabilities offered to Ukraine.¹⁰ The United States' incrementalism, born of escalation concerns as well as US perceptions of Ukraine's ability to field capabilities safely and effectively, has been especially obvious regarding long-range artillery, advanced Western tanks, and fourth-generation aircraft. The United States and some allies initially deemed these capabilities off the table, only to reconsider and eventually agree to provide them. Hence, over time, battlefield circumstances have changed, and Washington's risk tolerance has grown.

Indeed, in some cases, appreciation among US officials for the more permissive authorities under which some European personnel operate appears to be growing. The United States can, to some extent, leverage allies that operate under more permissive authorities to learn what is happening in Ukraine, to achieve goals US forces cannot realize, and to remain under the threshold of what Moscow might perceive as provocative if carried out by US personnel.¹¹

Nonetheless, concerns about a Russian attack on allied territory, even as the Russia-Ukraine War consumes Moscow, are not without merit.¹² Eastern-flank countries like Poland and Romania experience frequent incursions into their airspace, and NATO has already had to manage uncertainty around potential attacks on its territory. On November 15, 2022, a missile struck Przewodów, a Polish village near the border with Ukraine, killing two people, and in early 2023, part of a Russian Kh-55 missile was found in a forest near Bydgoszcz, Poland.¹³ Either incident could have led to an escalation of the war had Poland, the United States, and other NATO allies not shown restraint in the immediate

10. In addition to escalation concerns, Washington's more incremental approach was also based on not overwhelming Ukraine's military with capabilities it could not effectively employ or which would necessitate additional capabilities, equipment, or support.

11. Senior SAG-U official, interview by the authors, April 19, 2023; two military officials assigned to US Army Europe and Africa, interview by the authors, April 19, 2023; and British government official, interview by the authors, December 8, 2023.

12. See Lisa A. Aronsson, John R. Deni, and Hanna Notte, *Agile and Adaptable: U.S. and NATO Approaches to Russia's Short-Term Military Potential* (Washington, DC: Center for Strategic and International Studies, September 2023).

13. "Military Object Found in Polish Forest Was Russian Missile – Media," Reuters (website), May 10, 2023, <https://www.reuters.com/world/europe/military-object-found-polish-forest-was-russian-missile-media-2023-05-10/>.

aftermath. Misunderstandings or miscalculations by the Russian leadership or by any of the 32 allies are always a possibility.

Already, some evidence has revealed Russian operations intended to limit or hinder Western unity and Western military-assistance efforts. In March 2023, Polish officials thwarted a sabotage operation Russian agents undertook that could have destroyed rail lines and attached Global Positioning System geolocator tags to allied shipments in Ukraine.¹⁴ More recently, Polish officials learned of other attempts to disrupt train lines through unauthorized radio traffic, and Poland has been concerned about a localized, Russian-directed biological attack.¹⁵ Evidence of Russian cyberattacks aimed at stemming the flow of Western assistance also exists. Officials at Rzeszów-Jasionka Airport in Poland claimed sophisticated cyberattacks threatened network security at the airport.¹⁶

Russian operatives bent on stymieing Western assistance to Ukraine also appear to be targeting other NATO allies, including in southeastern Europe. Russia has hit Romania with cyberattacks, disinformation operations intended to destabilize Bucharest, and naval hybrid warfare intended to harass commercial shipping.¹⁷ Bulgaria had, until 2022, attempted to preserve good relations with Moscow, but Bulgaria is now another major target for Russia. Bulgaria is known to have supplied valuable ammunition to Ukraine, including via third parties, and in 2022 and 2023, Sofia grappled with suspicious explosions at an ammunition depot near the city of Karnobat, Bulgaria.¹⁸ Russia continues to try to leverage corruption, penetration of public-prosecutor offices and security services, and other means to punish or destabilize Bulgaria.¹⁹

14. “Poland Detains Suspected Russian Spies ‘Preparing Acts of Sabotage,’” Euronews (website), March 17, 2023, <https://www.euronews.com/2023/03/17/poland-detains-suspected-russian-spies-preparing-acts-of-sabotage>.

15. Sharon Weinberger, “In Poland’s ‘J-Town,’ Soldiers Move Arms to Ukraine as Russian Spies Try to Stop Them,” *Wall Street Journal* (website), September 30, 2023, <https://www.wsj.com/world/europe/in-polands-j-town-soldiers-move-arms-to-ukraine-as-russian-spies-try-to-stop-them-1ec71497>.

16. Sam Skove, “How a Tiny Polish Airport Became a Key Node for Western Aid to Ukraine,” *Defense One* (website), September 11, 2023, <https://www.defenseone.com/threats/2023/09/how-tiny-polish-airport-became-key-node-western-aid-ukraine/390165/>.

17. Scott Savitz and William Courtney, “The Black Sea and the Changing Face of Naval Warfare,” *RAND Blog*, October 31, 2023, <https://www.rand.org/pubs/commentary/2023/10/the-black-sea-and-the-changing-face-of-naval-warfare.html>; and Chris Vallance and Joe Tidy, “Ransomware Attack Hits Dozens of Romanian Hospitals,” *BBC News* (website), February 13, 2024, <https://www.bbc.com/news/technology-68288150>.

18. “Overnight Explosion Rocks Ammunition Depot in Bulgaria,” *Radio Free Europe / Radio Liberty* (website), July 31, 2022, <https://www.rferl.org/a/bulgaria-gebrev-ammunition-depot-explosion/31967824.html>; and Krassen Nikolov, “Explosions at Bulgarian Arms Factory Set to Export to Ukraine,” *Euractiv* (website), June 26, 2023, <https://www.euractiv.com/section/politics/news/explosions-at-bulgarian-arms-factory-set-to-export-to-ukraine/>.

19. “Investigation Links Notorious Russian Intelligence Unit to Arms Depot Explosion in Bulgaria,” *Radio Free Europe / Radio Liberty* (website), October 20, 2023, <https://www.rferl.org/a/bulgaria-emco-arms-explosion-investigation-russia-gre-unit/32647210.html>.

Inequitable Burden Sharing

In addition to the escalation and entrapment risks outlined in the preceding section, NATO allies also face challenges related to burden sharing. Burden-sharing challenges have usually manifested in the form of periodic US complaints about European allies' low defense-spending levels. But in the context of the Russia-Ukraine War, the burden-sharing challenges are quite different. Although NATO formally committed to assisting Ukraine practically and politically, Ukraine is not a member of NATO, so the allies have no official burden to share. Moreover, a significant number of non-NATO states are offering military assistance to Ukraine. Non-NATO states offering lethal military assistance are doing so voluntarily, bilaterally, or through ad hoc groups, and not through NATO's formal mechanisms.

The ways in which countries coordinated and delivered assistance to Ukraine, especially in the early days of the war, or before the United States and European allies had stood up the IDCC and the SAG-U, created a different set of burden-sharing challenges for the United States and allies to grapple with, including a challenge some political scientists describe as abandonment and others refer to more specifically as burden shifting.²⁰ Burden shifting occurs when one ally, faced with a specific cost or requirement, attempts to ignore it or pass it off to another ally.

In the context of assisting Ukraine in the war, the burden-sharing picture is mixed. On one hand, as of late 2023, European commitments to assist Ukraine in financial, humanitarian, and even military terms have outpaced US commitments. Because of their proximity to the conflict, European allies have also had to shoulder much more of the burden of nonmilitary challenges related to the war. Nonmilitary challenges have included managing the refugee crisis and managing weaponized migration.²¹ European allies have also rapidly had to reduce their dependence on Russian oil and gas, pivot to other energy sources, and manage the resulting economic, social, and energy-security challenges.²² In addition, Russia's hybrid attacks on European allies at times

20. Glenn Snyder, "The Security Dilemma in Alliance Politics," *World Politics* 36, no. 4 (July 1984): 461–95; and Wallace J. Thies, *Friendly Rivals: Bargaining and Burden-Shifting in NATO* (Armonk, NY: M. E. Sharpe, 2003).

21. Ido Vock, "Finland Accuses Russia of Aiding Illegal Migrant Crossings," *BBC News* (website), November 14, 2023, <https://www.bbc.com/news/world-europe-67420564>.

22. Clifford Krauss, "Europe and the U.S. Make Ambitious Plans to Reduce Reliance on Russian Gas," *New York Times* (website), March 25, 2022, <https://www.nytimes.com/2022/03/25/business/energy-environment/biden-eu-liquefied-natural-gas-deal-russia.html>.

include kinetic elements, such as in Lithuania, where Russia has defaced monuments and attacked journalists.²³

At the same time, for the United States to judge some allies as failing to carry their full share of the burden is fair. From the end of the Cold War until Russia's first invasion of Ukraine in 2014, chronic underinvestment in defense meant most European allies reached the bottom of the barrel rather quickly after Russia's full-scale invasion of Ukraine. Nearly all allies increased defense spending after 2014, but the pace and scale—especially among Europe's largest players (France, Germany, Italy, and the United Kingdom)—have proven insufficient. Additionally, the European allies have not managed to ramp up their industrial capacity quickly enough to meet their own commitments.²⁴ The lack of regulatory or legal authority to direct the European defense industry in peacetime, the lack of long-term contracts, and the unwillingness to source EU-funded materiel from outside the EU have together thwarted efforts to provide Ukraine with what it needs. Moreover, the evidence of some European allies essentially competing with each other and the United States in the defense marketplace, thereby pushing up prices, worsens burden sharing by diminishing the purchasing power of whatever limited defense spending is available.²⁵

Paradoxically, transatlantic burden-sharing risks can also become unbalanced when a European ally gives away too much of a particular capability in its national arsenal. If an ally has given away an entire capability category by donating, for instance, all its antitank weapons to Ukraine, the ally may have inadvertently created a gap in alliance-defense plans its allies may then need to fill. More specifically, when European allies empty their warehouses, some allies, such as the United States, may need to prepare to backfill the

23. "Monument to Anti-Soviet Resistance Leader Defaced in Lithuania," Lithuanian National Radio and Television (website), May 8, 2023, <https://www.lrt.lt/en/news-in-english/19/1983200/monument-to-anti-soviet-resistance-leader-defaced-in-lithuania>; and "The Top Strategist of Late Russian Opposition Leader Navalny Is Attacked in Lithuania's Capital," Associated Press (website), March 12, 2024, <https://apnews.com/article/russia-lithuania-navalny-leonid-volkov-attack-b951ca8c07e0c441563b91b6468d55f8>.

24. Joshua Posaner et al., "North Korea Sends Putin Tons of Ammo. Europe Can't Do the Same for Ukraine," *Politico* (website), November 2, 2023, <https://www.politico.eu/article/vladimir-putin-kim-jong-un-russia-pyongyang-beats-brussels-to-a-million-ammunition-rounds/>. One might argue the United States has failed to ramp up its capacity as well, though recent evidence indicates US military production is indeed turning around more quickly than European military production. For example, see Sam Skove, "In Race to Make Artillery Shells, US, EU See Different Results," *Defense One* (website), November 27, 2023, <https://www.defenseone.com/business/2023/11/race-make-artillery-shells-us-eu-see-different-results/392288/>.

25. Paula Alvarez-Couceiro Fernandez, "Europe at a Strategic Disadvantage: A Fragmented Defense Industry," *War on the Rocks* (website), April 18, 2023, <https://warontherocks.com/2023/04/europe-at-a-strategic-disadvantage-a-fragmented-defense-industry/>.

equipment or capabilities, or risk later having to commit more US forces and capabilities to defending European allies in the event of a Russian (or other) attack.

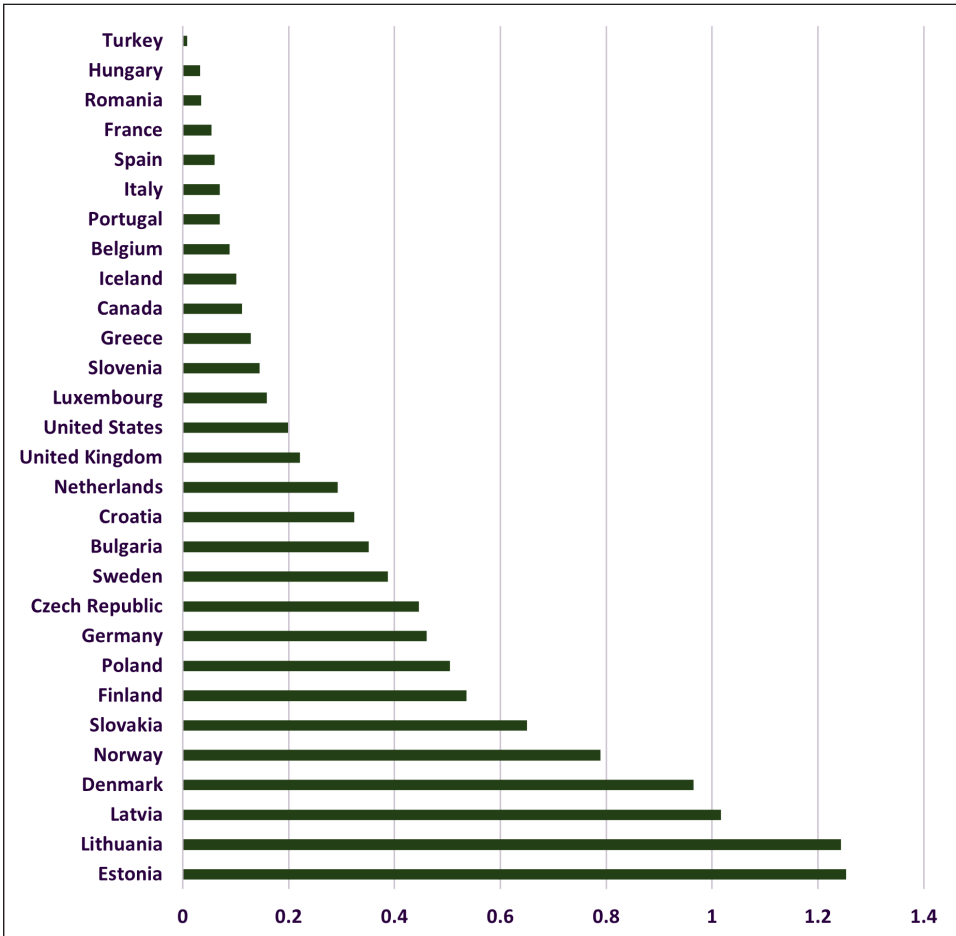


Figure 1. Bilateral and EPF military commitments to Ukraine as a percent of GDP (2021)

But one important caveat is proximity to the threat matters. If a NATO ally far from Russia's borders donates all its man-portable antitank weapons, that ally probably has not created a significant capability gap for its own defense vis-à-vis Russian territorial aggression. Nonetheless, excessive donations could still lead to a lack of capacity for other contingencies. For instance, NATO could lack the capability or capacity to respond to contingencies in Northern Africa or the Middle East. The alliance's new family of defense plans, as well as the revised force structure and alert mechanisms, should make forces and capabilities across the alliance more visible to the Supreme Allied Commander Europe, but prior

to the Russia-Ukraine War, the allies had clearly not coordinated enough and knew too little about one another's readiness gaps.²⁶

Finally, when the materiel allies are offering to Ukraine needs significant refurbishment or repair before allies can give the materiel to Kyiv, the United States faces a burden-sharing dilemma. Some of the international donors have sent equipment that does not work or have sent equipment without the necessary ammunition, logistics, or sustainment requirements. Incomplete or nonfunctional donations add demands on US or other international personnel located at the various logistics hubs and repair facilities to bring subpar materiel up to a safe and effective standard for Ukrainian forces.²⁷

US Leadership and Military Posture in Europe

American Leadership

At the strategic and operational levels, US leadership is critical for NATO. At the strategic level, European allies have proven willing and able to share the burdens and risks associated with confronting major adversaries like Russia, but European allies prefer to do so with the backing of Washington. Several examples serve to illustrate European allies' reliance on US leadership. The most obvious example is the German deliberations over providing main battle tanks. Only after the United States committed to providing Abrams did Berlin agree to provide Leopard tanks and authorize other countries to do the same. A similar situation played out regarding advanced fighter jets. Early in the war, Poland was able and willing to provide MiG-29 fighters to Ukraine, but Poland pressed Washington to endorse the decision because it feared Russian retaliation. Eventually, as noted in the case study on Poland, Warsaw found a surreptitious work-around, but Warsaw's clearly preferred first course of action was explicit endorsement from its most important ally.

At the operational level, the United States, with significant assistance from the United Kingdom, has created ad hoc organizations to perform key leadership, organization, and management functions in the effort to assist Ukraine. to facilitate Beginning with the United States hosting meetings at Ramstein Air Base in Germany and assigning the XVIII Airborne

26. Josh Campbell, "Why NATO Should Adopt a Tactical Readiness Initiative," War on the Rocks (website), July 13, 2020, <https://warontherocks.com/2020/07/why-nato-should-adopt-a-tactical-readiness-initiative/>.

27. US civilian official assigned to EUCOM, interview by the authors, April 20, 2023; and Justin Scheck and Lara Jakes, "In Rush to Arm Ukraine, Weapons Are Bought but Not Delivered, or Too Broken to Use," *New York Times* (website), June 19, 2023, <https://www.nytimes.com/2023/06/19/world/europe/ukraine-weapons-howitzers-contracts.html>.

Corps to facilitate the flow of materiel shortly after Russia launched the Russia-Ukraine War, ad hoc mechanisms have evolved into somewhat more enduring organizations with clear linkages to United States European Command. But operational mechanisms remain ad hoc and are not tied explicitly to leading European security regimes or institutions.

The informality of the ad hoc organizations is especially ironic in the context of US security relationships in the transatlantic environment, particularly in contrast to the Indo-Pacific theater. Since World War II, multilateral security mechanisms like NATO have characterized the transatlantic environment, and NATO developed a formal secretariat and integrated command-and-control organizations. In the Indo-Pacific theater, the United States and its key allies have not created formal multilateral organizations for security. Instead, a hub-and-spoke system developed, with the United States at the center, alongside other, less structured groupings like the Quadrilateral Security Dialogue.²⁸

The fact the West did not rely on multilateral security structures—specifically NATO—to organize and manage the assistance effort for Ukraine is not because mechanisms for managing assistance do not exist in the alliance. For example, instead of conducting political coordination meetings at Ramstein Air Base, the West could have conducted the meetings under the auspices of NATO’s political headquarters or the EU’s headquarters, both in Brussels. Similarly, instead of relying on the SAG-U, Western partners could have used any of several NATO graduated-readiness headquarters to coordinate the provision of assistance and training, including the following.

- The Allied Rapid Reaction Corps headquarters in Gloucester, United Kingdom
- The rapidly deployable 1st German-Netherlands Corps headquarters in Münster, Germany
- The NATO Rapid Deployable Corps – Italy headquarters in Solbiate Olona
- The NATO Rapid Deployable Corps – Greece headquarters in Thessaloniki
- The NATO Rapid Deployable Corps – Spain headquarters in Valencia
- The NATO Rapid Deployable Corps – Türkiye headquarters in Istanbul

28. The “Quad,” consists of Australia, India, Japan, and the United States.

- The NATO Rapid Reaction Corps – France headquarters in Lille
- The Eurocorps headquarters in Strasbourg, France
- The Multinational Corps Northeast headquarters in Szczecin, Poland
- The Multinational Corps South-East headquarters in Sibiu, Romania

Choosing not to use these or similar extant organizations or mechanisms resulted in a somewhat inefficient—and perhaps at times ineffective—leadership, coordination, and management effort, at least initially. In the words of one closely involved US official, even as SAG-U attempts to streamline, “coordination efforts are a spider web of bilateral, trilateral, and some multilateral coordination . . . if you plot it out it’d be messy.”²⁹

Western allies have not concentrated their assistance efforts in extant organizations like NATO, the EU, or NATO and EU mechanisms for at least two reasons. First, the West has been keen to avoid casting the effort as a NATO-led proxy war against Russia. If NATO were in fact leading assistance efforts, and hence conducting a proxy war against Russia, Moscow could argue Western organizations are parties to the conflict, which could generate escalation risks. But US officials at NATO Headquarters acknowledge that though the fear of escalation dominated considerations early in the conflict, concerns have gradually subsided, as Russia made clear it does not distinguish between alliance-led bilateral or ad hoc multilateral military support for Ukraine.³⁰

Second, placing NATO or the EU at the center of the transatlantic assistance efforts would play into Moscow’s propaganda narratives, which cast the conflict as one between Russia and NATO. Russian propaganda narratives have helped the Russian leadership generate support at home and abroad by depicting Russia as a victimized underdog.³¹ By not reinforcing the Kremlin’s narratives early in the war, and by using declassified intelligence to push back, the West could avoid—to some degree—strengthening support for Russian war efforts. Countering Russian propaganda was especially important in the early phases of the war.

Nonetheless, the West probably had ways to use NATO-related structures—thereby taking some of the burden of leadership off the United States—while still avoiding the connotation of NATO as a combatant. For example,

29. Senior member of the SAG-U staff, interview by the authors, April 19, 2023.

30. US government official, interview by the authors, November 8, 2023.

31. Helen Livingstone, “Russia Accuses Nato of ‘Proxy War’ in Ukraine as US Hosts Crucial Defence Summit,” *Guardian* (website), April 26, 2022, <https://www.theguardian.com/world/2022/apr/26/russia-accuses-nato-of-proxy-war-in-ukraine-as-us-hosts-crucial-defence-summit>.

the allies could have relied upon a graduated-readiness headquarters that is dual hatted as a national or binational capability and almost entirely comprises national or binational personnel, such as the Rapid Reaction Corps – France or the 1st German-Netherlands Corps. Relying on national or binational NATO structures could have provided NATO with some plausibility in denying being a party to the conflict.

But research for this study revealed both US and European officials have serious doubts NATO, the EU, or even national-level European entities could perform leadership, coordination, and management duties at scale, at pace, or efficiently.³² Instead, most argue the United States must provide the command-and-control backbone of such an effort. A corollary to the view the United States must lead command and control is that some in Washington may prefer to remain in charge, as a way of managing escalation risks associated with countering Russia. The US preference for avoiding handing control of a sensitive security matter to a multilateral entity is a classic manifestation of the principal-agent dilemma in the multilateralization of national security.³³

None of the information outlined here is to say NATO and the EU are completely irrelevant to assistance efforts, nor to say decades of investment in transatlantic and European security structures have been wasted. Both institutions continue to provide the basis for cooperation and collaboration. As argued earlier, allies cannot generate access, basing, and transit rights overnight. The EU and NATO have facilitated the development of habitual working relationships, shared or overlapping interests and threat perceptions, and mutual trust. They also allow like-minded countries to speak with one voice in international affairs. The EU and NATO spread risk and reduce the costs of acting internationally.³⁴

To complement assistance efforts, NATO has supported Ukraine with defense-institution reforms and by developing Ukraine's armed forces through a partnership program, especially since Russia's illegal annexation of Crimea in 2014. The alliance's support has included capacity building, nonlethal equipment, financial support, and training for thousands of Ukrainian troops. Ukrainians have contributed to NATO's major operations, and the alliance has engaged Ukraine

32. Senior US civilian official at US Army Europe and Africa, interview by the authors, April 19, 2023; two military officials assigned to US Army Europe and Africa, interview by the authors, April 19, 2023; several British military officials assigned to SAG-U, interview by the authors, April 19, 2023; and member of the US interagency assigned to EUCOM, interview by the authors, April 19, 2023.

33. Helen V. Milner and Dustin Tingley, "The Choice for Multilateralism: Foreign Aid and American Foreign Policy," *Review of International Organizations* 8, no. 3 (September 2013): 313–41.

34. Kenneth W. Abbott and Duncan Snidal, "Why States Act through Formal International Organizations," *Journal of Conflict Resolution* 42, no. 1 (February 1998): 3–32.

as a partner in several of its exercises. The NATO-Ukraine Commission—now the NATO-Ukraine Council—directs bilateral activity, and since 2016, much of NATO’s aid for Ukraine has flowed through a Comprehensive Assistance Package. Achieving NATO membership is one of Ukraine’s strategic priorities in the Russia-Ukraine War.

The EU, meanwhile, has also played an important role through its funding for Ukraine and EUMAM Ukraine, which has become the primary framework through which the EU has coordinated and provided training and assistance. On the funding side, the EU has given €40.6 billion to Ukraine in macrofinancial assistance, budget support, crisis and emergency response, and humanitarian aid. The EU has also provided military assistance worth an additional €27 billion, of which the EU channeled €5.6 billion through the EPF.³⁵ The “EU War Chest,” the EPF is an off-budget mechanism to help finance EU military missions and operations and offer partners assistance, but became a key mechanism for supporting Ukraine.³⁶ On February 27, 2022, the Council of the EU decided to direct €450 million—90 percent of the total facility budget for 2022—toward reimbursing EU members for the lethal weapons offered to Ukraine.

Although Russia’s reinvasion of Ukraine has sparked a transformation in terms of the EU’s capacity to respond to crises, interdependencies and differences among member states over the scope, pace, or nature of aid to Ukraine still limit the EU’s impact. In the early phases of the war, the EPF proved crucial for smaller EU member states in Central and Eastern Europe that wanted to donate their relevant Soviet legacy equipment but were fiscally unable to replace donated equipment or modernize their forces. The EPF also enabled smaller allies to dig deeper into their legacy stockpiles than the allies would have otherwise.³⁷ At the same time, some in the region feared bureaucracy or member states wishing to pressure the EU to address their national concerns could hold up funding.

Although neither the EU nor NATO could take overall leadership of European or transatlantic military support for Ukraine, the EU and NATO’s existence, and their organizational scaffolding, have proven to be very important enablers of ad hoc cooperation. The development of the EU and NATO over time has resulted in patterns of cooperation and interaction among Europeans and across the Atlantic, and smaller groups of allies can leverage existing patterns

35. “EU Assistance to Ukraine,” European Commission (website), updated June 11, 2024, https://eu-solidarity-ukraine.ec.europa.eu/eu-assistance-ukraine_en.

36. Łukasz Maślanka, “An EU War Chest: The Success and Uncertain Future of the European Peace Facility,” Center for Eastern Studies (website), July 10, 2023, <https://www.osw.waw.pl/en/publikacje/osw-commentary/2023-07-10/eu-war-chest-success-and-uncertain-future-european-peace>.

37. Senior defense official from Eastern Europe, interview by the authors, November 8, 2023.

when operating in more ad hoc coalitions. Therefore, even if the West does not fully use the tools and structures NATO or the EU offer, the tools and structures have indeed created the framework or the potential for more effective ad hoc collaboration. Therefore, NATO and the EU have reduced some of the costs of cooperation.

Military Posture

In addition to the key role the United States has played as a convener and facilitator of the Western military-assistance effort, other aspects of the US military presence in Europe have also proven critical. Although the effort to assist Ukraine could not occur without the infrastructure, logistics, and military contributions of several European countries, the same could also be said of key US capabilities and capacities in Europe. For example, the ability to use US basing in and logistical capabilities across Europe to facilitate the flow of materiel to Ukraine has been critical.³⁸

Relatedly, US training facilities and capabilities in Europe have been vital to ensuring Ukrainian forces are as well prepared as possible for combat.³⁹ Compared to similar facilities in the continental United States, US training facilities in Europe are relatively small. Nonetheless, US facilities surpass much of what European allies can offer in terms of advanced instrumentation, geographic scope, and the ability to conduct hybrid training, linking units at various locations.

The United States' presence in Europe has also been vital to facilitating the maintenance and sustainment of materiel sent to Ukraine.⁴⁰ Certainly, European maintenance personnel have proven critical, given the array of equipment sent to Ukraine. But without Europe-based US maintenance capabilities, Ukraine's efforts to repair its equipment would take far longer or prove impossible.

Finally, the United States has also leveraged its information and communications technology capabilities across Europe to enable Western assistance to Ukraine. Information and communications technology capabilities from the

38. Senior US civilian official at US Army Europe and Africa, interview by the authors, April 19, 2023; senior SAG-U official, interview by the authors, April 19, 2023; and two military officials assigned to US Army Europe and Africa, interview by the authors, April 19, 2023.

39. Two military officials assigned to US Army Europe and Africa, interview by the authors, April 19, 2023.

40. Cameron Porter, "Ukraine Defense Official Receives Briefing on 405th AFSB Tele-Maintenance Program," U.S. Army (website), July 18, 2022, https://www.army.mil/article/258489/ukraine_defense_official_receives_briefing_on_405th_afsb_tele_maintenance_program; and Patrick Tucker, "US Soldiers Provide Telemaintenance as Ukrainians MacGyver Their Weapons," Defense One (website), September 18, 2022, <https://www.defenseone.com/technology/2022/09/us-soldiers-provide-telemaintenance-ukrainians-macgyver-their-weapons/377306/>.

United States have facilitated, among other things, the remote maintenance efforts mentioned above. But the information and communications technology backbone the United States has built in Europe over decades presents serious challenges as well, especially in integrating European allies. For example, under US leadership, the SAG-U has established a commercial mission network, into which allies plug their own devices. The allies use a virtual private network to maintain the security and integrity of their communications. For classified information that key allies and partners deem shareable, the SAG-U also uses the Battlefield Information Collection and Exploitation Systems Extended platform. But, despite all the available capabilities, most US personnel reflexively rely on the United States-only Secret Internet Protocol Router Network for classified communications as well as information that is unclassified yet sensitive, frustrating efforts to pull European allies into closer coordination.⁴¹

41. The Secret Internet Protocol Router Network is a system of interconnected computer networks used by the US Departments of Defense and State to transmit classified information. Speaker providing comments under Chatham House Rule (SAG-U Lessons Learned webinar, US Army Europe and Africa, June 15, 2023).

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Recommendations

Having assessed from a broad perspective the key implications of European allied efforts to assist Ukraine and having drawn conclusions regarding escalation risks, burden-sharing challenges, US leadership in Europe, and overseas force posture, this study will next examine recommendations designed for US policymakers to leverage the opportunities and ameliorate some of the challenges identified above. This section will present recommendations for both the United States and its NATO allies, outlining how they should consider modifying strategy, concepts, and operations to continue to support Ukraine in the years ahead while also addressing the broader strategic challenges Russia and China present in Europe and beyond.

Continue to Lead but Aim to Streamline

The United States' allies and partners in Europe have made substantial, even unprecedented efforts to support an important European partner country that is struggling for its very existence. Until recently, European efforts have received scant attention in the US government's nearly weekly announcements of the latest US assistance packages for Ukraine. Yet Europeans are now outpacing the United States in commitments to support Ukraine in financial, humanitarian, and military terms.

Despite Europe's expanded assistance, a Europe-only effort to assist Ukraine would clearly fail, for a variety of reasons. At the strategic and political level, Europeans remain reluctant to lean too far forward, further deplete stockpiles, or accept more risk to support Ukraine in the absence of a US commitment to Europe's defense. Aside from the United Kingdom and France, all other European allies rely on the extended deterrence the US nuclear arsenal provides. Without the ultimate guarantee of nuclear deterrence, European allies are unlikely to play the role Washington hopes

they will play vis-à-vis nuclear-capable strategic competitors like Russia. As a result, US leadership in Europe and the United States' extended deterrence commitment to Europe remain vital to allied efforts across an array of national security challenges.

Europeans would likely prove inadequate to the task of producing armaments, moving materiel, providing collective training, and exercising convening authority, and would certainly be unable to do so at the same speed as Washington. No US ally in Europe or elsewhere has the scale of the US military, which remains capable of altering political outcomes anywhere on the planet. Only the United Kingdom has shown evidence, through its attempts to gather regional defense ministers in Rzeszów, Poland, just days into the conflict, that it has the will to fill the United States' role today in leading and coordinating assistance efforts for Ukraine. British officials, however, admit they probably lack the ability to lead assistance as effectively as, as quickly as, or at the scale of the United States.

Although NATO provides a ready-made and obvious framework for the United States to lead its European allies, other modalities may prove more fruitful or appropriate for several reasons. As argued above, a more ad hoc approach to coordinating assistance for Ukraine helped to counter the Kremlin's narrative the war is between NATO and Russia. An ad hoc approach could also have helped to attract non-NATO donors, especially donors who might otherwise shy away from cooperating with the alliance for political reasons. Therefore, US policymakers should view venue shopping as a prudent leadership and management tool in leading European allies.

But if the United States prefers to use ad hoc arrangements for multilateral cooperation and action over more institutionalized frameworks such as NATO, the United States needs to shorten the timeline from crisis formation to campaign formation. The process of establishing a fully resourced SAG-U was unnecessarily long and difficult, resulting in inefficiencies and frustrating the organization's effectiveness, at least initially, at critical moments for Ukraine's survival in the Russia-Ukraine War. Today, coordination among donors remains a work in progress even as it improves over time. Streamlining command and control is therefore a prerequisite for leading European allies.

Continue to Enable, Especially in the Short Run

In addition to providing leadership because European allies likely cannot do so as effectively or efficiently, the United States should also continue to provide enablers, which are still in short supply among European allies. As noted in the *2022 National Defense Strategy of the United States of America*, enablers remain an underdeveloped area among the United States' European allies.¹ Certainly, the countries helping Ukraine are relying heavily on European transportation infrastructure; in particular, Europe's well-developed network of roads, rail lines, seaports, and airports.

Nevertheless, only the United States can use Europe's transportation network quickly and at scale. Airlift; electronic warfare and counterelectronic warfare; counterbattery fires; intelligence, surveillance, and reconnaissance; and aerial refueling are all areas in which Europe lacks sufficient quality and quantity. In the short run, the United States will need to help its allies fill capability gaps while supporting European efforts to develop more critical enablers.

Beef Up Diplomatic and Military Resources Forward

Much of European allies' reluctance to dig deeper into remaining military stocks stems from allies' assessments of the risks that would emerge from doing so. Most allied risk assessments center on the degree to which allies have sufficient military equipment and other supplies for an unforeseen threat to their national security. American forward-stationed military forces can play a critical role in reassuring allies they can take on greater risk and dig deeper for Ukraine. For instance, US policymakers should consider making permanent the now-rotational deployments of armored combat brigades—stationing armored units forward is less expensive in terms of annual recurring costs than rotational presence.² Permanent deployments would deliver reassurance while having the added benefit of saving the United States money.

Leading an alliance of sovereign states requires an in-depth understanding of the political, economic, and other variables at play in expanding or limiting the room for decision making within each sovereign state. Situational awareness—across all allies—is necessary to understand

1. U.S. Department of Defense (DoD), *2022 National Defense Strategy of the United States of America* (Washington, DC: DoD, October 27, 2022), 10.

2. John R. Deni, *Rotational Deployments vs. Forward Stationing: How Can the Army Achieve Assurance and Deterrence Efficiently and Effectively?* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2017).

fully where each ally is, politically or operationally, on any given day or week, what allies are likely to accept or reject, where interests or objectives overlap, and whether senior US officials have room to influence decisions in allied capitals.

Similarly, maintaining relationships with key allied interlocutors is necessary for operational access, basing rights, and other objectives related to achieving broader goals. Achieving broader goals requires substantial diplomatic resources at US embassies in allied capitals to strengthen the United States' ability to understand the situation on the ground in each country. Gauging then influencing the political willingness to support or conduct military operations requires additional personnel resources overseas.

Encourage Defense-Production Laws and Regulations

The US and European industrial bases have shrunk in number and in productive capacity since the end of the Cold War in part because of government policy choices across the West. On the one hand, fewer companies are working with defense ministries in general than during the Cold War, or even five years ago.³ But at the same time, European defense industry remains fragmented along national lines, resulting in a lack of productive scale and in shortages of key products.⁴ As a result, Europe manufactures high-value, complex weapon systems in small numbers.⁵ Over the long term, European allies will need to consolidate defense production and become easier customers for industry by rolling back regulations that hamper procurement, collaboration, mergers, and state aid.

In the meantime, though, one way of incentivizing, cajoling, or even forcing Western industry to respond more quickly is by invoking defense-production laws or regulations. The Defense Production Act in the United States is a Cold War-era law that allows the president to direct US industry to prioritize orders from the federal government. The act also grants the president the authority to leverage private-sector materials, services, and facilities for national defense purposes

3. Jared Serbu, "Defense Industrial Base Loses Thousands More Firms, Mainly Because DoD Is a Tough Customer," Federal News Network (website), February 10, 2023, <https://federalnewsnetwork.com/defense-industry/2023/02/defense-industrial-base-loses-thousands-more-firms-mainly-because-dod-is-a-tough-customer/>.

4. Alvarez-Couceiro Fernandez, "Strategic Disadvantage."

5. Christian Mölling, Sören Hellmonds, and Theresa Caroline Winter, *European Defense in A New Age (#EDINA)*, DGAP Report no. 6 (Berlin: German Council on Foreign Relations, June 2023).

and to offer loans or loan guarantees to private companies. In response to the COVID-19 pandemic emergency, the Trump administration used the Defense Production Act to order General Motors to produce ventilators, and the Biden administration used the act to spur vaccine production.⁶ More recently, the Biden administration has used Defense Production Act authorities to spur domestic production of missiles, munitions, and critical materials.⁷

Directing private industry to perform actions or make decisions the free market may not otherwise incentivize is not without controversy. Directing private industry runs contrary to the liberal, capitalist economic model the United States and most allies embrace. Nonetheless, inducing industry to help meet national security goals may be necessary at times.

Leverage Allied Personnel

Although the United States dispatched some additional personnel to Kyiv in late 2023, the United States should consider more robust ways to leverage the insights of allied and partner personnel who have gotten beyond Kyiv and out to the front lines due to their more permissive national authorities. Intergovernmental personnel-exchange programs can facilitate the placement of non-US military and civilian officials in the US national security enterprise. The United States could use personnel-exchange programs to draw in personnel with recent direct experience on the ground in Ukraine.

More robust efforts to leverage the experience and insights of allied officials could more effectively inject relevant information into US decision making. Leveraging insights, rather than simply relying on intelligence reports informed by allied officials, could be especially impactful in assistance efforts. By more effectively inculcating relevant experience in a wider array of functions, the United States could better leverage allies' knowledge and insights without necessarily increasing the risk to large numbers of US personnel.

6. Anshu Siripurapu, "What Is the Defense Production Act?," Council on Foreign Relations (website), December 22, 2021, <https://www.cfr.org/in-brief/what-defense-production-act>.

7. DoD, *Defense Production Act (DPA) Title III Receives Emergency Supplemental Funding for Ukraine* (Washington, DC: DoD, June 26, 2022); and DoD, "DoD Enters Agreement to Expand Domestic Manufacturing to Strengthen U.S. Missiles and Munitions Supply Chains," news release, June 16, 2023, <https://www.defense.gov/News/Releases/Release/Article/3431173/dod-enters-agreement-to-expand-domestic-manufacturing-to-strengthen-us-missiles/>.

Solve the Secure-Communications Challenge

Since the inception of its integrated military-command structure in the 1950s, NATO has wrestled with interoperability challenges. One of the most enduring challenges through the present day is communicating securely, in terms of both voice and data. The communications challenge applies to both communications between NATO allies and communications among alliance members and participating coalition partners.

In the context of the Russia-Ukraine War, bringing a bespoke solution to fruition requires too much time. Instead, the allies should look to commercial off-the-shelf solutions wherever possible. Using commercial off-the-shelf solutions could mean relying on providers such as Signal—with end-to-end encryption—to facilitate communications to the extent feasible. In some cases, allies are already relying on commercial off-the-shelf solutions informally. To embrace off-the-shelf solutions fully, NATO should work more closely with commercial providers to ensure that corporate decision making and product evolution consider allied interests. Regardless of the methodology selected to address the communications problem, the alliance should treat the secure-communications challenge as urgently as NATO reacted to the opening of the Russia-Ukraine War in February 2022.

Hire Ukrainians to Improve Training Realism

Given evidence of training that is not especially relevant to the kind of fight Ukraine and Russia are waging against one another, NATO could benefit from more realistic training environments in at least two critical ways. Clearly, from a collective-defense perspective, understanding how the adversary is fighting its current war, the environment and terrain, and the constraints ubiquitous drones and electronic jamming have imposed would better position the alliance to counter its primary adversary. Understanding key features of the war would also better position the alliance to conduct train-and-equip activities with partners (like Ukraine).

To achieve a better position, the allies could try to place more observers in Ukraine to collect more lessons learned on battlefield conditions and adversary modalities. Of course, placing observers would come with increased personnel risk and might only be possible for personnel from countries with more permissive authorities.

Another way to achieve more realistic training that would not place NATO personnel at risk is to incorporate Ukrainian military personnel, especially the increasingly large number of Russia-Ukraine War amputees, into NATO training centers. By augmenting existing NATO personnel with Ukrainian personnel with recent combat experience, the alliance should be able to improve the relevance of its training significantly.

Finally, the United States and its allies should consider hiring externally displaced Ukrainians who have learned English. Hiring English-speaking Ukrainians could help to ameliorate the shortage of interpreters at the various training sites across Europe and further the West's efforts to increase the throughput of Ukrainian troops and units.

Facilitate Long-Term Procurement Contracts

One of the challenges in spurring European industry to increase its capacity to produce additional military materiel is European industry's unwillingness to do so without European governments guaranteeing long-term investment. European industry's unwillingness is not based on ill will or a lack of solidarity with NATO allies or Ukraine but rather reflects the reality of defense economics. Defense contractors are unwilling to expand production by adding new assembly lines because they fear government orders will dry up as soon as the Russia-Ukraine War ends. If the war ends sooner rather than later, contractors will have excess productive capacity on their hands without buyers. Contractors will have already borne the costs and wasted the investment in adding new assembly lines.

To overcome European industry's reluctance, and to change the business calculus, European governments would need to negotiate longer-term contracts with private-sector firms. Governments are sometimes reluctant to negotiate long-term contracts—or law prohibits governments from doing so—because long-term contracts bind future officials' hands. But longer-term contracts, especially contracts longer than five years, provide contractors with steady funding sources, creating incentives to invest in productive capacity, research, and workforce development. For some European defense contractors and for certain defense articles, long-term procurement agreements might be as long as 10 years. The EPF or the NATO common funding budget could play a role in providing long-term funding or in underwriting or guaranteeing long-term funding efforts on the part of individual EU or NATO member states.

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Conclusion

This study analyzed European allies' and partners' military assistance to Ukraine during the first two years of the war, from early 2022 through the end of 2023. The study first examined the mechanics by which the United States, Europe, and other allies and partners coordinated and delivered US, European, and international military assistance to Ukraine through developing new, ad hoc frameworks for cooperation. Then, the study delved deeper into eight European case studies to assess the eight countries' strategic rationales for supporting Ukraine; the materiel, training, logistics, and operational assistance they provided; their approaches to measuring the effectiveness of their support; and the prospects of the countries doing more in the future. Through this analysis, this policy-oriented study has sought to answer the question of whether and how much the United States can rely on Europeans to sustain or even increase their military support to Ukraine in the near term. The study also aimed to shed light on the broader question of what the United States might expect from Europe in future iterations of strategic competition with Russia and China in Europe and beyond.

In April 2024, the US Congress passed a critical supplemental funding bill that will ensure continued deliveries of the equipment and ammunition Ukraine needs. Yet Ukraine continues to face an uphill struggle. Earlier in 2024, analysts described Ukraine's military as "visibly running on fumes," while soldiers on the front line waited for the promised deliveries of ammunition.¹ Ukraine's military leadership described the situation as a "stalemate" after the counteroffensive failed to break through Russia's defenses significantly at the contact line.² Given the

1. Michael Kofman, Rob Lee, and Dara Massicot, "Hold, Build, and Strike: A Vision for Rebuilding Ukraine's Advantage in 2024," War on the Rocks (website), January 26, 2024, <https://warontherocks.com/2024/01/hold-build-and-strike-a-vision-for-rebuilding-ukraines-advantage-in-2024/>.

2. The description of battlefield circumstances as "stalemate" has been debated. See "Ukraine's Commander-in-Chief on the Breakthrough He Needs to Beat Russia," *Economist* (website), November 1, 2023, <https://www.economist.com/europe/2023/11/01/ukraines-commander-in-chief-on-the-breakthrough-he-needs-to-beat-russia>.

advantages Russia currently enjoys, especially in terms of industry and manpower, Ukraine needs to adapt its strategy to prevail in a long war. Ukraine's ability to adapt depends on a series of factors, not least of which are Western commitments to provide systems and ammunition on a predictable timeline.

The eight case studies—Finland, France, Germany, Lithuania, Poland, Romania, Türkiye, and the United Kingdom—shed light both on what the countries provided Ukraine during 2022 and 2023 and on what they might be able to do in the future. The case-study section found that though the strategic rationales for assisting Ukraine are diverse, European political commitments to Ukraine remain strong. The section also found that though European defense spending is likely to continue increasing, European military assistance remains hindered by low stockpiles, low productive capacity, varying risk assessments, competing domestic priorities, and the need to fulfill NATO commitments.

In early February 2024, EU leaders authorized a long-term financing program for Ukraine after one state dropped its opposition.³ The new EU fund is worth €50 billion, or \$54 billion, and the fund will support Ukraine through the end of 2027, including providing support for the implementation of the reforms required for Ukraine's EU membership. The EU's landmark agreement showcases broad political unity in Europe in backing Ukraine. The agreement also demonstrates the EU will not allow a single state, no matter its relationship with Russia, to stand in the way. The EU's support is essential for Kyiv, given the challenges Ukraine faces in keeping basic services running while preparing for another counteroffensive and preserving morale. European unity is also important because, in the United States, aid for Ukraine has become somewhat mired in domestic politics.

The United States and its European allies and partners also face challenges in shaping and increasing defense-industrial production. Today's US and European industrial bases reflect myriad government policy choices the United States and Europe made during a different era. Government policy choices, combined with short-term budgeting, resulted in an industrial base that now lacks surge capacity. The just-in-time procurement model is at least partially responsible. To mitigate some defense-industrial production challenges, this study recommends policymakers embrace longer-term contracting and regulations that permit greater government involvement in defense-industrial priority setting in certain circumstances. This study also suggests a greater number of European allies consider moving production toward the front line. Ukraine's manufacturing is impressive given the circumstances, but Ukrainian manufacturing cannot

3. Charlotte Van Campenhout, Andrew Gray, and Sabine Siebold, "EU Agrees \$54 Billion in New Aid for Ukraine as Hungary Falls in Line," Reuters (website), February 1, 2024, <https://www.reuters.com/world/europe/eu-leaders-seek-deal-fund-ukraine-hungary-digs-heels-2024-02-01/>.

achieve the scale it needs. Major European companies are already moving closer to Ukraine and partnering with Ukrainian firms, thereby helping Ukraine help itself.

This study has also found significant burden-sharing challenges exist across the Atlantic and in Europe even though the efforts to support Ukraine are not a formal NATO requirement. In particular, European allies are confronted with the need to strengthen their own defense and deterrence efforts simultaneously and fulfill their NATO requirements, including the alliance's new family of plans and force model. Given limitations on national resources, the circumstances in Europe have created a set of trade-offs, and different governments have made different choices, depending on their strategic cultures, risk tolerances, and threat perceptions. Whether all European NATO allies have the wherewithal to navigate the balancing act between national needs and NATO requirements remains unclear. Therefore, the study recommends Washington maintain its important leadership and enabling capabilities in Europe, at least in the short-to-medium term.

At the same time, to help improve the quality of the materiel assistance and the training the United States and European allies and partners provide to Ukraine, this study also recommends US officials better integrate allied military personnel into US command-and-control structures, particularly personnel who have had experience on the ground in Ukraine and beyond Kyiv. Similarly, Western training efforts might prove more effective and efficient with greater reliance on Russia-Ukraine War veterans—especially veterans unable to return to the fight.⁴ Integrating veterans into training efforts would inject more realism into the training scenarios and field conditions and, ultimately, better prepare Ukrainian soldiers for the fight. Only by more robustly incorporating the most up-to-date information from the front line can the United States and its European allies effectively help Ukraine stay in the fight and prevail.

Even in the wake of Congress's passage of the supplemental funding bill, Kyiv needs Europe to ramp up its military assistance to Ukraine significantly. The Armed Forces of Ukraine need regular and predictable deliveries of critical systems and ammunition to craft a strategy for success. The Armed Forces of Ukraine need more materiel, training, operations, logistics, and so forth to give them the best chance of defeating Russia on the battlefield and a chance to approach any future negotiations with Moscow from a position of strength. But further increasing Ukraine's resources cannot happen overnight nor without

4. Evgeniy Maloletka, "Upward of 20,000 Ukrainian Amputees Face Trauma on a Scale Unseen since WWI," Associated Press (website), September 4, 2023, <https://apnews.com/article/ukraine-russia-war-amputees-wounded-soldiers-e2c5c47ea4b8326d980e630d3df87b77>.

US engagement and leadership. Strengthening and facilitating European efforts vis-à-vis Ukraine's struggle against Russia will ultimately pay dividends in strategic competition against both Moscow and Beijing.

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