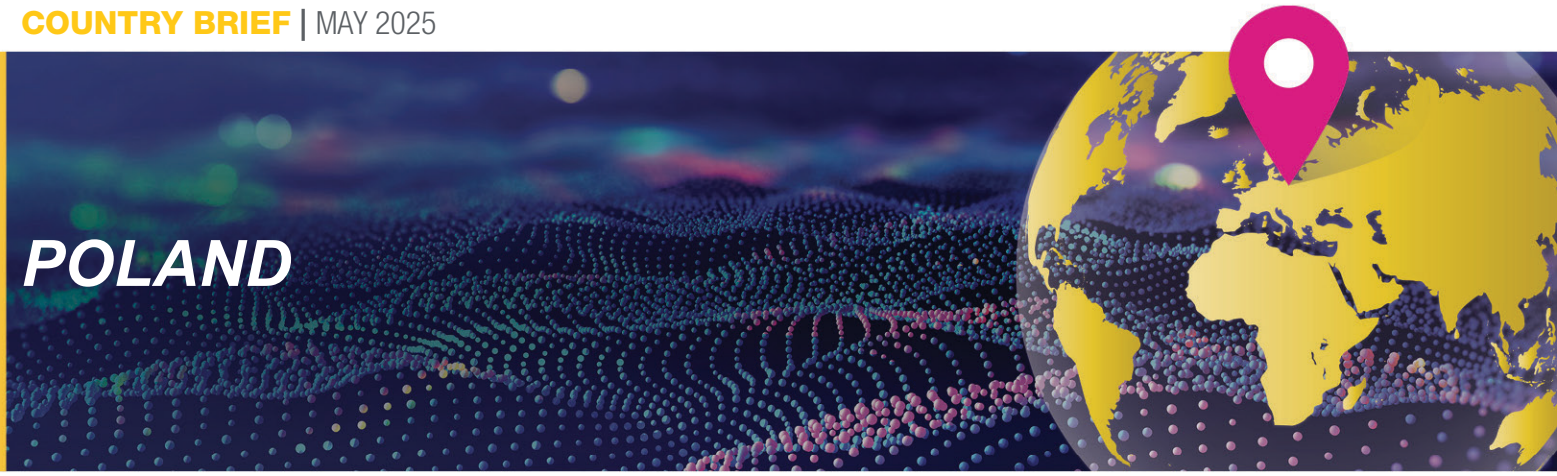
CENTER FOR SPACE POLICY AND STRATEGY

COUNTRY BRIEF | MAY 2025



POLAND

Juliana Suess and Robert S. Wilson

Space operations have become increasingly global. Whereas only a few decades ago a couple of major government powers dominated space, now over 70 countries own or operate active satellites in orbit. One of these spacefaring nations is the Republic of Poland, a relative newcomer to outer space in terms of technologies and capabilities but one of the oldest countries active in international space law and diplomacy. This brief is part of a series of country profiles that highlight specific countries' domestic context, space development, and diplomatic activity.

This brief is published jointly by The Aerospace Corporation and the German Institute for International and Security Affairs.

Introduction

In recent years, Poland has taken steps to play a more pivotal role in European security. Benefitting from one of the highest economic growth rates in Europe, the country has launched a rearmament effort that is making it one of Europe's leading militaries. It has given Ukraine valuable military support, including weapons, munitions, and equipment. Headlines have characterized Poland as the "new center of gravity in Europe" and "NATO's linchpin in the war in Ukraine"; pundits have written that the "hub of European leadership is trending…most obviously toward Poland" and that the country now plays an "indispensable role" in Europe.[1]

Poland has not historically been a major player in space, but it is seeking to expand its space activities as it takes on a larger role in European security. In June 2024, the country established its first space-dedicated defense organization, the Geospatial Reconnaissance and Satellite Services Agency, and the nation is developing its own Earth observation spacecraft. Additionally, the Polish Ministry of Defense and Polish Army are acquiring their first military satellites, and senior defense and space officials have said that the country is developing its approach to military space operations based on lessons learned from the Ukrainian conflict.[2] Poland's growing space partnerships with Europe and the United States reflect its strategic and military importance and increasing resources that could be used for space investments.

"Strategic Player": Growth, Armament, and Support to Ukraine. Described as a "strategic player" in Europe, Poland's expanding influence is reflected in its economic growth, military investment, and the crucial role it continues to have in Ukraine's defense.[3] Economically, the country now possesses the 6th highest gross domestic

product (GDP) in the European Union and 10th highest among NATO countries.[4] Of the 10 biggest European Union and 10 biggest NATO economies, it has the second highest rate of GDP growth over the last five years.[5] Poland's economic growth has led to more resources for military investment. As shown in Figure 1, from 2019 through 2022, Poland's annual military expenditures rose gradually, from $11 billion to $15 billion, then more than doubled in 2024.[6] In 2024, Poland had the fifth highest defense budget in NATO behind the United States, the United Kingdom, Germany, and France. For 2023 and 2024, Poland's defense budget comprised over four percent of its GDP, making it the highest spender on defense relative to its GDP among all NATO nations. This trend of increased military investment will likely continue: In July 2024, Poland's foreign minister said that the country will be spending five percent of its GDP on defence in 2025.[7] With these added expenditures, the country now has the third most military personnel in NATO, behind only the United States and Turkey, and boasts sophisticated military capabilities, including air launched cruise missiles, attack and support helicopters, fighter aircraft, tanks, and air defense systems.[8]

A main driver for Poland's increased military spending is Russia's war with Ukraine, which has been particularly concerning for Warsaw given the country's proximity to Russia. Since the beginning of the conflict, Poland has supported Ukraine extensively. Early in the conflict, the country sent over 200 tanks to the Ukrainian military, far more than any other NATO country, and, in 2023, became the first nation to pledge fighter aircraft for Ukraine.[9] Poland has also served as a main conduit for transfers of arms and supplies into Ukraine from other NATO nations, including from the United States.[10] This support has also extended into space with Poland, purchasing and transferring thousands of SpaceX Starlink satellite communication terminals as well as financing the subscriptions required to operate the terminals.[11]

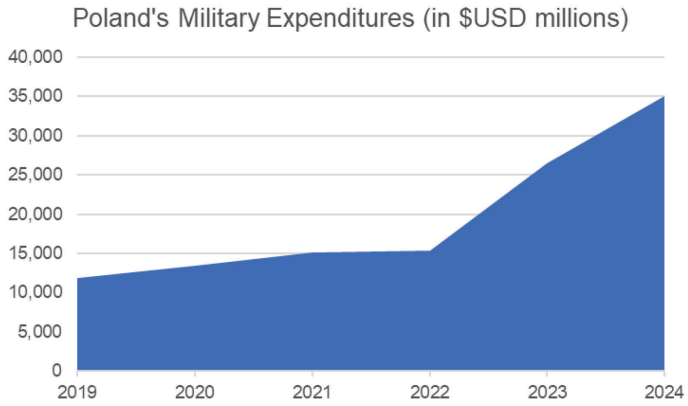


Figure 1. Poland's military expenditures over time.

The war has also spurred Warsaw to strengthen its own military capabilities, including expanding its military forces and procuring advanced exquisite military assets, such as F-35s.[12] Sharing a border with the Russian enclave of Kalinigrad that spans over 130 miles, Poland is fortifying much of its eastern borders as part of an initiative called "Eastern Shield."[13] Poland Prime Minister Donald Tusk has said that the Eastern Shield will also include a space component to monitor the border.[14]

Poland's Space Programs and Strategy

Space Organization. Although several agencies and ministries manage various aspects of space activity in Poland, the primary ministry for civilian space is the Ministry of Economic Development and Technology. It manages international space coordination, such as collaboration with the European Union and the European Space Agency, and chairs the Space Policy Group by coordinating intragovernmental activities at the ministry level.

In 2014, the country's parliament passed a law establishing the Polish Space Agency (POLSA).[15] As was noted by a domestic observer, the agency has often been victim to political changes.[16] The agency's six departments cover a wide range of specialties, including Earth observation, space safety, telecommunications, and satellite navigation.[17] The agency's mandate is broad and includes research and development of space technology; support for domestic industry; and executing the Polish Space Strategy, which was published in 2017.[18]

Space capabilities that support military activities are primarily handled by the Ministry of National Defence. This includes the procurement of commercial remote sensing, space situational awareness, and communication capabilities. Within the ministry, the newly established Geospatial Reconnaissance and Satellite Services Agency is responsible for the security and safety of satellite systems that are used by the Armed Forces.[19]

Space Strategies. The 2017 Polish Space Strategy aims to guide the country's space development to 2030. It outlines existing capabilities and names ambitions for the future.[20] A narrative throughout the document is that space is an economic opportunity for Poland. The nation sees its own strengths in its well-developed information technology, relatively low labor costs, and experience in related fields, such as its ability to produce comparable quality electronics or components for ground segments of space systems.[21] The strategy emphasizes Poland's experience in manufacturing research instruments for space missions, satellite components, and processing space data. Poland's self-perceived weaknesses include the low level of state investment in space.[22]

The space strategy acknowledges the current state of industry and capabilities, suggesting that Poland could contribute toward dual use technologies and generic technologies that can be used in other fields.[23] The strategy recommends that Polish entities strive to become subcontractors in specific fields and seek out technological niches.[24] Interests for further developments include satellite time synchronization, Earth observation systems (optical and radar), and communications.[25] One concrete goal mentioned in the strategy is for the Polish space sector to contribute at least 3 percent to the European space market.[26]

Although much of the document discusses economic aspects of Poland's space strategy, it also stresses the use of space for security and defense. It notes that the development of a space sector in Poland will help meet Poland's needs in security and defense and that the nation wants to expand its security capabilities using space and satellite technologies. The top priorities in the strategy for defense and security-related space and satellite technologies are building Earth observation satellites and a space situational awareness (SSA) system. These priorities are consistent with Poland's 2020 National Security Strategy, which lists "national integrated situational

awareness systems," along with "national Earth observations satellite systems," and "national satellite communication systems" as development needs. [27]

Contributions to ESA and European Space Programs. Some of Poland's space funding goes to both the European Space Agency (ESA) and the European Union Space Programme. The 2017 Polish Space Strategy discusses how the government sees ESA, the European Union (EU), and the country's other affiliations, such as the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), as collaborators and mechanisms for achieving national goals.

ESA is an intergovernmental organization dealing primarily with civilian space matters and receives most of its funding through its member states. Although Poland's contributions to ESA have typically been less than 1 percent of ESA's budget, the nation increased its contributions significantly in 2025, from €48 million in 2024 to €194 million in 2025 (nearly 4 percent of ESA's total).[28] The increase of Poland's contributions from 2024 to 2025 was the largest among all ESA members.

The EU has its own dedicated agency separate from ESA, the EU Agency for the Space Programmes (also referred to the EU Space Program Agency), which manages large space constellations such as Copernicus (the EU's Earth observation satellite constellation) and Galileo (the EU's navigation satellite constellation). The Polish Space Strategy states Warsaw's ambition to be involved in the development and production of the next generation of Copernicus and Galileo. Poland has also taken part in joint test activities for the Public Regulated Service (PRS) element of Galileo, which is restricted to government-authorized end-users and is meant for sensitive and military applications.[29]

Poland's Space Priorities and Capabilities. As noted, SSA is a priority area for Poland's space strategy. In recent years, POLSA established its own SSA operational center to operate its space surveillance and tracking network of over 20 globally distributed ground-based sensors.[30] Some of the sensors, which consist of assets belonging to academic institutions and private entities, feed into the EU Space Surveillance Tracking (EU SST) Support Framework and some support domestic initiatives within Poland.[31]

In addition to establishing its own SSA system, Poland is also focusing on developing its own Earth observation satellites. As noted in 2023 by Michał Wierciński, the vice president of the Polish Space Agency at the time, when the discussing the country's space needs: "First space situational awareness to see what is going on upstairs. Then our own satellite to be able to see what's going on on Earth."[32] In December 2022, the Polish and French governments announced an agreement for the Polish Armed Forces to acquire two satellites for Earth observation, built by the French company Airbus.[33] While this project is considered dual-use, supporting both civil and military purposes, ESA is also managing a separate civilian-focused project named Country Awareness Mission in Land Analysis, or Camila. Camila will consist of four satellites with electro-optical and radar capabilities that will be entirely built and operated by Polish companies.[34] Additionally, in December 2024, the Polish government contracted with the domestic company Creotech to buy microsatellites for reconnaissance assets for the Polish Armed Forces.[35]

The country's interest in Earth observation satellites is spurred, at least, in part, by security concerns. The Polish Earth observation satellites will make up part of the Eastern Shield project aimed to fortify the eastern Polish borders with Belarus and Kaliningrad.[36] Notably, for the French-Polish joint project, the deputy prime minister of Poland, Maruisz Blaszczak, said in the announcement that it would enhance "deterrence and early warning capabilities."[37]

Poland's government is also seeking to rapidly integrate space-based Earth observation imagery. At a Polish defense industry exhibition in September 2023, Polish industry and ICEYE Polska—the Polish branch of the Finnish synthetic aperture radar satellite company—showcased a mobile intelligence, surveillance, and reconnaissance system developed in response to direction from the Polish Armed Forces.[38] The capability is intended to work with synthetic aperture radar and optical sensor satellites, including commercial assets. An official from the Polish Armaments Group, a holding company established by the Polish government that is partnering on the capability, stated that "acquiring and processing satellite imagery in realtime can provide an advantage on the modern battlefield," noting that this is a lesson drawn

from the war in Ukraine.[39] The better Poland's forces can integrate commercial space systems into its military operations, the more they will be able to exploit existing commercial capabilities and services should a crisis or conflict arise.

Diplomatic Activity. Poland has been involved in space diplomacy since the beginning of the Space Age, serving as one of the 18 founding members of the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) and one of the founding nations of the Committee on Disarmament, which later became the Conference on Disarmament (CD).[43] The country has signed the four fundamental space treaties—the Outer Space Treaty, Astronaut Rescue and Return Agreement, Liability Convention, and Registration Convention—and the nuclear Limited Test Ban Treaty.[44] It is also a member of the International Telecommunication Union (ITU).

Lessons from Ukraine

As noted, Polish leadership has cited lessons from the Ukraine war as they have developed their military space capabilities.[40] One of the surprising developments in the conflict has been in the relative effectiveness with which the two combatants have used space. Russia has more than six decades of experience in the domain and a few hundred satellites at its disposal; however, Ukraine, particularly early in the war, used space more effectively.

Recent analyses attribute Ukraine's surprising success in space to a few variables, including the speed and agility with which Ukraine has integrated commercial space-based data into its military operations.[41] Whereas Russia struggled to translate its sovereign space-based electro-optical capabilities into timely and tactically relevant information for the battlefield, Ukraine has taken advantage of commercial innovations in ground-based satellite hardware and software applications to transmit information to its military forces quickly. One of the commercial systems Ukraine has leveraged is the Starlink satellite communications system, which has small terminals the size of a pizza box, making them easy to carry among mobile teams.[42] Ukraine also tracked Russian force movements using space-based Earth observation imagery and synthetic aperture radar data from commercial spacecraft, an approach that Poland may be trying to replicate.

Poland has participated in the EUMETSAT program since 2009, has been a member of ESA since 2012, signed the Artemis Accords in 2021, and joined the EU SST Partnership Agreement in 2022.

Poland typically makes a national statement during sessions of the COPUOS subcommittees and aligns itself with the EU statements. In these statements, Polish diplomats voice support for the goals of preserving a safe, secure, and sustainable space development and concern for issues like space debris. Poland has also expressed support for several key space norm development initiatives such as the follow-on working group for the Long-Term Sustainability Guidelines and the U.S.-led commitment to not conduct destructive direct-ascent anti-satellite tests. Poland voted in favor of the two key resolutions leading to the current space norm discussions in an open-ended working group (OEWG), Resolutions 75/36 and 76/23.[45]

View from Europe and the United States

For Europe and the United States, Poland represents a potential partner for deepening and expanding space collaboration. The country's growing role as a strategic player in Europe and its developments in space open new collaborations in European multilateral avenues and bilaterally with the United States.

View from Europe. Poland's growing economic might and expanding defense role has been a source of stability in Europe, especially as the region aims to become more self-sufficient in both a defence and space context. Overall Europe is still greatly dependent on the United States and while the former builds up its own systems, the challenge in a multilateral context will be for European nations to avoid unnecessary duplication of effort while complementing each other's expertise and capabilities. There are three main multilateral avenues for collaboration: ESA, the EU, and NATO. As noted, Poland's increased funding for ESA will benefit the agency. EU strategic documents have increasingly mentioned space security and potential threats to its assets, signaling a shift in thinking about the protection of its own assets.[46] Since 2005, NATO has not acquired its own space assets but procures commercial services and uses assets of its member nations, in addition to recently declaring space as an operational domain and developing

its own space policy.[47] As such, Poland's investments in space security technologies could be valuable for NATO, in addition to the other multilateral European organizations. Similarly to the strengths and weaknesses stated in the Polish space strategy, other European nations benefit from conducting realistic assessments of their own capabilities to explore where capacity building is most effective and where collaboration would be valuable.

View from the United States. Poland's space strengths and priorities could be areas for further collaboration with the United States. The two countries already collaborate as part of an SSA services and data sharing arrangement signed in 2019 between U.S. Strategic Command and the Polish Space Agency. The agreement was updated in 2023 to include U.S. Space Command and Polish Ministry of National Defense.[48] Poland's strength in SSA makes it a promising area for continued partnership between the nations.

Recent reports indicate that U.S.-Polish space cooperation is extending to satellite communications, one of Poland's stated priorities from its 2020 National Security Strategy. In November 2024, media reports indicated that Japan and Poland were set to join the U.S. military Wideband Global SATCOM (WGS) satellite network.[49] WGS comprises 10 satellites in geostationary Earth orbit and provides broadband communications to the U.S. military and international partners, including Canada, the Czech Republic, Denmark, Luxembourg, the Netherlands, New Zealand, and Norway. The United States also has a separate bilateral agreement with Australia for WGS. The next two WGS satellites, WGS-11 and WGS-12, which are scheduled to be launched in 2025 and 2027, will serve as the primary points for Japan and Poland under the agreement to use bandwidth from the satellite constellation.

Conclusion

Poland's geopolitical ascension and its importance in the Ukraine conflict has positioned the country to be an important space partner for Europe and the United States. Although it has not had much capability in space, Poland's role in the domain will likely grow, as evidenced by its developments in SSA, plans for space-based Earth observation, and growing investment in ESA. As is happening with EU and ESA projects, as well as with WGS, Europe and the United States should continue exploring opportunities to integrate and pursue interoperability with Polish space systems. From an economic and security perspective, Europe and the United States benefit from a more mature Polish space program.

Acknowledgments

Thank you to Evan Cooper; Aga Lukaszczk; Jamie Dronen; Colleen Stover; Tony Tang; Tomasz Noga from Ad Astra. Center for Space Policy and Law; Mariusz Kloda from New Technologies and Space Exploration in Commercial Law – Laboratory (Nicolaus Copernicus University in Toruń, Poland); and Pawel Bernat from the Polish Air Force University for their review and comments. Thank you also to Katie Melbourne for serving as editor of the brief.

References

[1] Ishaan Tharoor, "How Poland became the new 'center of gravity' in Europe," *The Washington Post*, April 7, 2023; "Why Poland has become NATO's linchpin in the war in Ukraine," *The Economist*, March 12, 2022; Steven Erlanger, "Ukraine War Accelerates Shift of Power in Europe to the East," *The New York Times*, January 26, 2023; Chels Michta, "NATO's new center of gravity," *Politico*, February 21, 2023; Eoin Drea, "The EU's Balance of Power is Shifting East," *Foreign Policy*, June 21, 2022.

[2] Karol Badohal, "Poland to launch military satellites in 2025, deputy defence minister says," *Reuters*, February 29, 2024.

[3] Michael Kranz, "How the Russia-Ukraine Crisis Is Turning Poland Into a Strategic Player," *Foreign Policy*, February 23, 2022.

[4] "GDP (current US$) – European Union," World Bank Group, Accessed on October 24, 2024.

[5] "GDP growth (annual %)," World Bank Group, Accessed on October 24, 2024.

[6] "Defence Expenditure of NATO Countries (2014-2024)," NATO Press Release, June 12, 2024.

[7] Piotr Skolimowski, "Poland to Boost Defense Spending to 5% of GDP, Sikorski Says," *Bloomberg News*, July 13, 2024.

[8] "Analysis – Poland Leads NATO on Defence Spend – but Can it Afford it?" *Reuters*, *U.S News*, and *World Report*, October 23, 2024; Robert Czulda, "Poland's future armed forces take shape," *European Security & Defence*, (September 2024).

[9] "Number of disclosed main battle tanks committed to Ukraine as of January, by type and donor country," Statista, Access on November 1, 2024; Drew Hinshaw and Natalia Ojewska, "Poland Has Sent More Than 200 Tanks to Ukraine," The Wall Street Journal, April 29, 2022; Antonia Mortensen, Duarte Mendonca, Luke McGee, and Kevin Liptak, "Poland becomes first to pledge fighter jets to Ukraine," *CNN*, March 16, 2023.

[10] "Why Poland has become NATO's linchpin in the war in Ukraine," The Economist, March 12, 2022.

[11] "Poland pays for Starlink terminals used by Ukrainian military," *The New Voice of Ukraine* (October 10, 2024).

[12] U.S. Embassy & Consulate in Poland, "Poland's Purchase of F-35 Fighters – Fact Sheet," January 31, 2020.

[13] Jasmine Laws, "Poland Starts Building Fortifications on NATO's Border With Russia," *Newsweek*, November 1, 2024.

[14] Ibid.

[15] Act on Polish Space Agency, Polish Journal of Laws of 2014, item 1533. See also, Katarzyna Chałubińska-Jentkiewicz and Filip Radoniewicz, "Cybersecurity in Poland: Legal Aspects," edited by Tadeusz Zieliński, Springer: 2022).

[16] Interview with Pawel Bernat, Senior Lecturer, Polish Air Force University, conducted in person in London, February 2024.

[17] POLSA, "Organizational Structure," Accessed on November 25, 2024.

[18] Resolution No. 6 of the Council of Ministers of 26 January 2017 on adopting the Polish Space Strategy, Official Gazette of the Government of the Republic of Poland of 2017.

[19] Adam Ujazdowski (ed.), "Poland Establishes Geospatial Intelligence and Satellite Services Agency to Enhance National Defense Capabilities," *Poland Insight*, Accessed on November 25, 2024.

[20] Polish Space Strategy, Council of Ministers (February 17, 2017), item 203.

[21] Ibid.

[22] See also, Marta Balcer, dr Aleksandra Bukała, Zbigniew Burdzy, John Hall, Patrycja Karwowska, dr inż. Jakub Kowalewski, Anna Stańczyk, Marzena Świderska, and Oskar Zdunek. "Polish Space Sector 2020. Analysis of the current state, trends and technologies in the national and international context," Polish Space Agency (May 2021).

[23] The currently most promising areas are named as: space and ground software, optics, optoelectronics, correction systems, material technologies and composites, and materials technologies propellants (including clean propulsion systems and fuel and small rockets, as well as systems supporting ground tests). Polish Space Strategy, Council of Ministers (February 17, 2017), item 203.

[24] Polish Space Strategy, Council of Ministers (February 17, 2017), item 203.

[25] Ibid.

[26] Ibid.

[27] "National Security Strategy, The Republic of Poland," 2020; Polish Space Strategy, February 17, 2017.

[28] The European Space Agency, Adopted Budget 2025, Accessed on February 17, 2025, https://www.esa.int/About_Us/Corporate_news/Funding; The European Space Agency, Adopted Budget 2024, Accessed on February 17, 2025, https://www.esa.int/ESA_Multimedia/Images/2024/01/ESA_budget_2024.

[29] Krzysztof Bronk, Adam Lipka, Rafal Niski, "Preparations for Galileo PRS in Poland", Sensors (Basel), February 4, 2023;23(4):1770. doi: 10.3390/s23041770.

[30] Tomasz Zubowicz, Mikołaj Kruzynski, Krzysztof Arminski, Mikołaj Karawacki, Krzysztof Szyszka, Marcin Teofilewicz, Artur Makarewicz, Edwin Wnuk, Zygmunt Anioł, and Tymoteusz Trocki, "POLSA sensor network capabilities under different operating modes," Advanced Maui Optical and Space Surveillance Technologies Conference (AMOS); Maciej Konacki, Adrian Malacz, Arkadiusz Chimicz, Paweł Lejba, Piotr Sybilski, Rafał Pawłaszek, Stanisław Kozłowski, Tomasz Suchodolski, Krzysztof Kozłowski, Agnieszka Sybilska, Beata Rogowska, Dariusz Pazderski, Michał Żołnowski, Andy Shearer, Agnieszka Słowikowska, Maciej Pilichowski, Marek Malawski, and Marcin Gędek,, "Optical, laser and processing capabilities of the new Polish Space Situational Awareness Centre," 2019 Advanced Maui Optical and Space Surveillance Technologies Conference (AMOS).

[31] Małgorzata Polkowska, Arkadiusz Chimicz, "Status of SSA activities in Poland and recent SST developments", Journal of Space Safety Engineering, Volume 9, Issue 4, December 2022, pgs 629-635.

[32] Max Blenkin, "Polish Space Agency builds operational capabilities," *Australian Defence Magazine* (March 9, 2023).
[33]Ministry of National Defence, Republic of Poland, "Observation satellites will strengthen the reconnaissance capabilities of the Polish Armed Forces," December 27, 2022; European Investment Bank, "Polish Earth Observation Satellite Constellation," May 22, 2023, Accessed December 16, 2024.
[34] Ian Mundell, "The Ecosystem: earth observation missions will lift Poland's space tech sector," *Science Business*, June 5, 2024, Accessed December 16, 2024.
[35] Ministry of National Defence, Republic of Poland, "Observation satellites will strengthen the reconnaissance capabilities of the Polish Armed Forces," December 27, 2022; Robert Wall, "Poland Acquires Military Earth-Observation Satellites," *Aviation Week* (December 20, 2024).
[36] Jasmine Laws, "Poland Starts Building Fortifications on NATO's Border With Russia," *Newsweek*, November 1, 2024.
[37] Ministry of National Defence, Republic of Poland, "Observation satellites will strengthen the reconnaissance capabilities of the Polish Armed Forces," December 27, 2022.
[38] Laura Heckman, "JUST IN: Polish Companies, Military Launch Satellite Mobile ISR," *National Defense Magazine* (September 5, 2024).
[39] Bartosz Głowacki, "Polish defense firms ink deals for new satellite reconnaissance capability," *Breaking Defense* (September 5, 2024).
[40] Nibedita Mohanta, "War in Ukraine Proves 'Resilience is Crucial,'" *Geospatial World* (September 4, 2024); "Poland to launch military satellites in 2025, deputy defence minister says," Reuters (February 29, 2024).
[41] Michael Gleason, *Russia's War in Ukraine: Key Observations about Space*, The Aerospace Corporation (October 2024). Robin Dickey and Michael P. Gleason, "Space and War in Ukraine: Beyond the Satellites," *Aether,* Vol. 3, No. 1: Spring 2024; Sandra Erwin, "On National Security: Drawing Lessons from the First 'Commercial Space War,'" *SpaceNews* (May 20, 2022); Jonathan Beale, "Space, the Unseen Frontier in the War in Ukraine," BBC (October 5, 2022).
[42] Robin Dickey and Michael P. Gleason, "Space and War in Ukraine: Beyond the Satellites," *Aether,* Vol. 3, No. 1: Spring 2024.
[43] "Report to the Nations of the Conference of the Eighteen-Nation Committee on Disarmament," United Nations General Assembly (seventeenth session) Disarmament Commission, September 18, 1962, "Conference on Disarmament," United Nations Office for Disarmament Affairs, (Accessed on January 9, 2025); United Nations General Assembly Session 13 Resolution 1348. Question of the peaceful use of outer space A/RES/1348(XIII) (December 13, 1958).
[44] "Status of International Agreements relating to Activities in Outer Space," United Nations Office for Outer Space Affairs (Access on January 9, 2025); "Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water," U.S. Department of State, Bureau of Arms Control, Verification, and Compliance, Signed at Moscow August 5, 1963, Entered into force October 10, 1963.
[45] United Nations, "Reducing space threats through norms, rules and principles of responsible behaviours: resolution/adopted by the General Assembly," (75th session: 2020-2021).
[46] For example, see: European Union, "European Union Space Strategy for Security and Defence," March 2024.
[47] "NATO's Approach to Space," NATO's Strategic Warfare Development Command, Accessed on February 17, 2025.
[48] "USSTRATCOM, Polish Space Agency sign agreement to share space services, data," U.S. Strategic Command Public Affairs (April 11, 2019); "USSPACECOM, Polish Ministry of National Defence, and Polish Space Agency Sign Space Situational Awareness Sharing Agreement," U.S. Space Command (April 19, 2023).
[49] Sandra Erwin, "Japan, Poland to join U.S. military satellite network," *SpaceNews* (November 5, 2024).

About the Author

Juliana Suess is an associate with the Strategic Threat Analysis and Nuclear (Dis-)Order (STAND) Project at the German Institute for International and Security Affairs (SWP). She also hosts the podcast *War in Space*. Suess is an associate fellow at the Royal United Services Institute (RUSI), where she was previously the research fellow for Space Security.

Robert Samuel Wilson is a systems director at The Aerospace Corporation's Center for Space Policy and Strategy, where he is responsible for leading work on the nexus of commercial and national security space, comparative space, and missile issues. Prior to joining Aerospace, he served as a senior analyst in the Defense Capabilities and Management division at the U.S. Government Accountability Office. Wilson received his bachelor's degree from the University of Virginia in political theory and his master's degree from the University of Virginia's Batten School in public policy.

About the Center for Space Policy and Strategy

The Center for Space Policy and Strategy is dedicated to shaping the future by providing nonpartisan research and strategic analysis to decisionmakers. The center is part of The Aerospace Corporation, a nonprofit organization that advises the government on complex space enterprise and systems engineering problems.

The views expressed in this publication are solely those of the author(s), and do not necessarily reflect those of The Aerospace Corporation, its management, or its customers.

For more information, go to www.aerospace.org/policy or email policy@aero.org.